

A System of Care for Children's Mental Health:  
Expanding the Research Base  
March 6 - 9, 2005, Tampa, Florida

# 18th Annual Proceedings



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for Children's Mental Health

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### About the Center . . .

The Center is part of the Department of Child and Family Studies at the Louis de la Parte Florida Mental Health Institute, University of South Florida. Since its inception in 1984, the Center has conducted an integrated series of research, training, consultation, and dissemination activities to achieve its mission of improving service delivery systems for children with serious emotional or behavioral disabilities and their families. The Annual Research Conference represents one of the events coordinated by the Center to encourage the development and sharing of information on effective service systems.

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# Preface

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We are pleased to present the Proceedings of the *18th Annual Research Conference: A System of Care for Children's Mental Health — Expanding the Research Base*, held March 6-9, 2005, in Tampa Florida. The Proceedings are designed to capture the discussions, papers, and posters presented at the Annual Research Conference, and to inform future research and practice on many aspects of the design, implementation, and evaluation of systems of care for children and their families. The Annual Research Conference presenters are selected for their commitment to high quality research, and the summaries of their presentations reflect their dedication to improving the lives of children and their families.

For almost 20 years now, the main policy response at all levels of government to addressing the needs of children with serious emotional disturbance and their families has been to support the development of integrated, community-based systems of care. There has been considerable progress in implementing these systems of care, and there is evidence to show that children and families have benefited from such systems. However, developing, implementing, and sustaining large system changes, which systems of care represent, is a complex and challenging task, and there is considerable research to suggest the need for improvement at all levels.

Recently, the President's New Freedom Commission called for a complete transformation of the U.S. mental health system. In that report, the President directed the Commission members "to study the problems and gaps in the mental health system and make concrete recommendations for immediate improvements that the Federal government, State governments, local agencies, as well as public and private health care providers, can implement." (New Freedom Commission, 2003, p. 2). In keeping with the Commission's report, our challenge today is to add a public health approach to children's mental health and their families and find ways to implement "what works" within the framework of systems of care. Given this challenge, the Center is increasingly interested in research that reflects the practicalities of implementation.

You'll find that the summaries in this volume reflect the vision and challenges of the New Freedom Commission, with some emergent themes. For example, this year several of our authors examine evidence-based practices and how to integrate them into emerging systems of care. Another key theme attends to moving family-driven systems beyond family inclusion to family voice and choice, where service development emerges from family preference and provider effectiveness. Another theme concerns data-driven decision making to promote the use of community-based care and the implementation of continual quality assurance. Other topics in this volume, also reflective of the Commission's goals, include: wraparound and issues regarding access to appropriate services, collaboration among child serving systems, support for youth transition to independence, financing strategies and organizational readiness for change, workforce development, emerging research and evaluation methods and instrumentation.

Each year, we find ourselves impressed by the quality of research presented at the conference and by the amount of effort required to produce such outstanding work. The summaries reflect an interdisciplinary approach to children's mental health research, and continue to capture trends that influence the work we do for children and their families. The Proceedings are designed to provide a "thumbnail" sketch of the conference presentations and we encourage you to contact the authors for more information about their work. With sincere appreciation for our authors, reviewers, and to our colleagues in the field, thank you for your insight, hard work, and dedication to the field of children's mental health research. We hope you will find the Proceedings of theoretical interest and practical use.

## **The editors:**

Catherine C. Newman, Cindy J. Liberton, Krista Kutash, and Robert M. Friedman

Reference: New Freedom Commission on Mental Health (2003). *Achieving the promise: Transforming mental health care in America*. Final report. Rockville, MD: U.S. Dept of Health and Human Services (Pub. No. SMA-03-3832). Retrieved 1/24/06: <http://www.mentalhealthcommission.gov/reports/Finalreport/FullReport.htm>

## A Special Thank You...

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Each year, as the Research Conference concludes, we look ahead to the Proceedings. The first step, of course, is to invite our presenters to share their work, and we are grateful that so many agree to do so. Thanks to all for their timely submissions, and patience with edits, suggestions and requests.

Upon receipt, each submission is matched with two expert reviewers from the University of South Florida's Louis de la Parte Florida Mental Health Institute faculty and staff. Their thoughtful comments and suggestions continue to contribute enormously to the quality of this volume.

This year's review team included: Ilene Berson, Karen Blase, Richard Briscoe, Hewitt "Rusty" Clark, Nicole Deschenes, Norin Dollard, Albert Duchnowski, Kathleen Ferreria, Dean Fixsen, Robert Friedman, Paul Greenbaum, Mario Hernandez, Sharon Hodges, Mary Ann Kershaw, Krista Kutash, Nancy Lynn, Carol MacKinnon-Lewis, Tom Massey, Teresa Nesman, Robert Paulson, Don Policella, Steve Roggenbaum, Stephanie Romney, Amy Vargo, Bobbie Vaughn, Frances Wallace, and Stevlana Yampolskaya. Much interdisciplinary expertise is represented by this list. Thank you.

The research conference is characterized by the collaboration of many disciplines; this is true for the production of this volume, as well. The Department of Child and Family Studies (CFS), which is home to the Research and Training Center, contributes support for production of the Proceedings. The department's CFS Communication staff members have worked on the Proceedings project for many years, and have created numerous strategies that make this publication possible. A special thank you goes to the leader of our desktop publishing team, Dawn Khalil, for her expert guidance in transforming hundreds of tables and figures into publication-ready digital images. We also want to thank Taylor Johnson and Jon Wilson for their tireless administrative support throughout the publication process.

And last, but not least, we are thankful for the continued leadership and support of our funders: the National Institute on Disability and Rehabilitation Research, U.S. Department of Education, and the Center for Mental Health Services, Substance Abuse and Mental Health Services Administration. These agencies' commitment to excellence and to improving services for the nation's children and their families is strong. Our goal is for these Proceedings and all products disseminated by the Center is to reflect their vision.

**The editors:** Catherine C. Newman, Cindy J. Liberton, Krista Kutash,  
and Robert M. Friedman

### On The Web...

*The Proceedings are available on the World Wide Web. Go to <http://rtckids.fmhi.usf.edu>, and you will find a route to this Proceedings in its entirety, as well as past issues.*

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## **Chapter One**

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### **Implementing Systems of Care**





# ***A Model for Implementing Effective Systems of Care***

Robert M. Friedman

## **Introduction**

Since the mid 1980s, the main policy response of the mental health field to meeting the needs of children with serious mental health challenges and their families has been through the development of community-based systems of care (Holden, Friedman, & Santiago, 2001; Stroul, 1996; Stroul & Friedman, 1986). Such systems of care are very complex and challenging to develop and implement. There are a number of indications that while there has been considerable progress in the field, there have also been significant problems in implementing effective systems of care (Brannan, Baughman, Reed, & Katz-Leavy, 2002; Center for Mental Health Services, 2003; Friedman, 2004; Friedman, Fixsen, & Paulson, 2004; Rast & Bruns, 2003; Vinson, Brannan, Baughman, Wilce & Gawron, 2001; Walker & Schutte, 2003). Such implementation problems led to the release of a priority statement by the National Institute of Disability and Rehabilitation Research (NIDRR) for the establishment of a Center to study the “development and implementation” of systems of care (NIDRR, 2004, p. 32,797).

In response to this priority statement by NIDRR, and the concern about implementation of effective systems of care, the Research and Training Center for Children’s Mental Health of the University of South Florida developed a model of factors to guide its research that it believes contribute to effective systems. The Center’s model was developed based on:

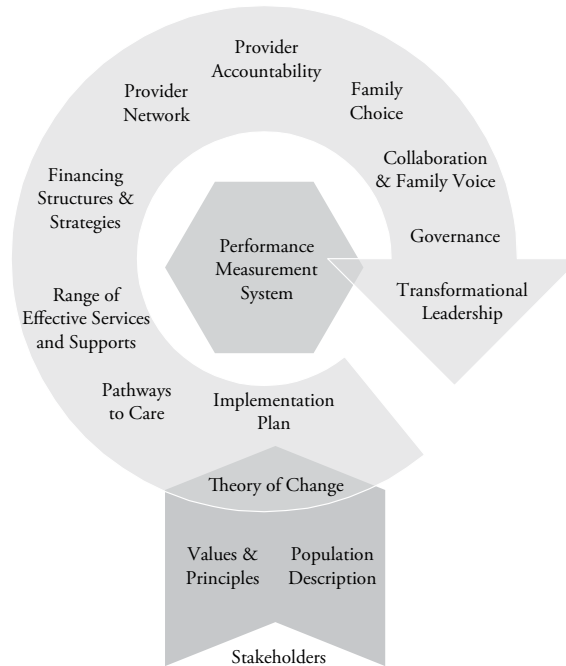
- A review of the research and theory on systems of care for children with serious mental health challenges and their families (e.g., Friedman et al., 2004; Holden, De Carolis, & Huff, 2002; Meridian Consulting Services, Inc., 1999; Pires, 2003; Pumariega, Winters, & Huffine, 2003; Rosenblatt & Woodbridge, 2003; Stroul & Friedman, 1996);
- A review of research and theory in related fields, such as comprehensive community initiatives (Gray, Duran & Segal, 1997; Kubisch, Auspos, Brown, Chaskin, Fulbright-Anderson et al., 2002); prevention (Bond & Hauf, 2004; Nation, Crusto, Wandersman, Kumpfer, Seybolt, et al. 2003; Wandersman & Florin, 2003); substance abuse (Chinman, Imm, Wandersman, 2004; Wandersman, Imm, Chinman, & Kaftarian, 2000), and program and organizational effectiveness (Collins, 2001; Greenberg, 2001);
- The experiences of the Center in conducting research within systems of care, and providing consultation and technical assistance to leaders of systems (e.g., Friedman, Fixsen, & Paulson, 2004; Friedman & Hernandez, 2002; Hernandez, Gomez, Lipien, Greenbaum, Armstrong, et al., 2001; & Hernandez & Hodges, 2003);
- Feedback on a preliminary draft of the model from the Center’s Board of Advisors, state directors of children’s mental health, and other parent and professional leaders in children’s mental health.

## **Overview of the Model**

The Center’s model includes 14 implementation factors (see Figure 1). The model builds on, and is consistent with, the original system of care monograph by Stroul and Friedman (1986), but places a greater emphasis on important processes of system development. The model proposes that while none of the 14 factors may be sufficient by itself, and most of them may not be absolutely necessary, each one can and does contribute to the implementation of effective systems of care.

The model builds on systems theory, which emphasizes that systems are composed of interrelated components that interact to affect each other in such a way that the whole is greater than the sum of its parts (McBubbin & Cohen, 1999; Phelan, 1999; Plsek, 2001; von Bertalanffy, 1968). This concept of

**Figure 1**  
**Factors Contributing to Implementation of Effective Systems of Care**



interdependence and interlinking of various components is essential to systems theory. As Plsek indicates, “the real power lies in the way the parts come together and are interconnected to fulfill some purpose” (Plsek, 2001, p. 309).

Systems theory emphasizes not only inputs and outputs but also dynamic processes, feedback loops, stocks and flows, and time delays. From the Center’s perspective, systems of care are “complex adaptive systems,” which Plsek defines as “a collection of individual agents that have the freedom to act in ways that are not always predictable and whose actions are interconnected such that one agent’s actions changes the context for other agents” (Plsek, 2001, p. 313). The challenge therefore, for system of care designers and implementers as it is for designers of other complex systems (Senge, 1990), is to move beyond traditional linear ways of conceptualizing problems and instead to highlight the complexity and inter-relatedness of factors, in which functioning in any one area is affected by and in turn affects functioning in other areas and in which short-term consequences of actions and longer-term consequences may often differ.

The Center model, in addition to emphasizing the importance of a systemic and holistic perspective, also emphasizes the importance of community and cultural context. The most important issues are likely not the implementation of each factor but rather how the pieces of the system fit together, and how they match up with the cultural and community context in which they are to be applied.

### Factors in the Center Model

The 14 inter-related factors in the Center model are listed and briefly described in Table 1. Within this description of 14 factors, there are several that are discussed here; they are considered to represent basic foundational pieces to implementing an effective system.

**Table 1**  
**Implementation Factors**

|  |  |
|--|--|
| Pathways to Care                         | Outreach mechanisms and clear pathways that facilitate access into and flow through effective care for all individuals in the identified population of concern. A system cannot be effective unless it provides access to effective care. This is an especially important issue for children from racial and ethnic minority groups where access to care has historically been less effective than it has for other groups.                      |
| Range of Effective Services and Supports | A broad and comprehensive range of effective services and supports, including care coordination, to support the development of individualized, culturally competent, and comprehensive treatment plans that assist the child and the entire family.  |
| Population Description                   | A population of concern that is clearly defined and well-understood within the local context. For a system to be effective, there must be adequate information on the needs, strengths, and overall characteristics of the population of concern, including their culture and help-seeking patterns, and the organization and functioning of the entire system.  |
| Values and Principles                    | A statement of values and principles, consistent with system of care values and principles, that has been developed through an inclusive, participatory process, and serves as a foundation for system development and evaluation efforts.   |
| Theory of Change                         | A clear and widely held local theory of change that is developed through a participatory process and describes the population of concern, goals of the system, and mechanisms through which the community expects to be able to achieve the goals. Such a theory of change, often presented visually in the form of a logic model, becomes a guiding document for system development efforts.  |
| Implementation Plan                      | An implementation plan describes the steps that will be taken to achieve the desired goals and includes timelines and a listing of individuals responsible for the actions to be taken. Such a plan is regularly updated and recognizes the complexity and challenge of taking statements of intended action, and actually implementing them as intended.  |
| Performance Measurement                  | A performance measurement system that includes both process and outcome measures, is based on the theory of change, and provides ongoing information about the performance of the system which can be used to improve the system.  |
| Financing Structures and Strategies      | A comprehensive financing plan that is consistent with the goals of the system, the system values and principles, and the needs of the population of concern. Such a plan should identify expenditures across major child serving systems, utilize varied sources of funding, promote fiscal flexibility and incentives, maximize federal entitlements, and re-direct spending from restrictive placements to home and community-based services. |
| Provider Network                         | A provider network that is diverse in background, culturally competent, skilled in providing services and supports consistent with the values and principles promoted by the system, and of sufficient capacity to provide family choice.  |
| Provider Accountability                  | An accountability system at the provider level in which the use of particular providers and the provision of funding to them is clearly tied to their performance so that incentives are created for high quality and family-responsive performance.   |
| Family Choice                            | Mechanisms to ensure that families are provided with choice of services and providers in collaboration with their treatment team.  |
| Collaboration and Family Voice           | Mechanisms to promote collaboration between key service sectors and between families and professionals at all levels of the system.  |
| Governance                               | Governance mechanisms that maintain the focus on the system values, goals, and theory of change, and the use of systematic data and stakeholder inputs to continuously strengthen the system, and that provide for clear and efficient decision-making about the system.   |
| Transformational Leadership              | Leadership that appreciates the inter-relatedness of each of implementation factors and their functions within a system and recognizes the importance of community-specific contextual factors. To be transformational, such leadership must be able to tie together all of the processes and functions into an integrated system and must be able to create and carry partnerships and collaborations to a high level.                          |

The first part of the foundation is a statement of values and principles, developed in a participatory manner with parents and professionals and youth working together, and with representatives from various service sectors. Such a statement of values and principles need not be identical to those presented in the original monograph in which the framework is presented for systems of care (Stroul & Friedman, 1986), but they must be consistent with those presented in the monograph. Each community may wish to define cultural competence or individualized care slightly differently, for example, but to have a system of care a community must demonstrate initially through its statement of values and principles and subsequently through its actions that it is committed to cultural competence and individualized care.

The next foundational piece is a clear statement of the population of concern for the system of care—what is the group of children and families that the system seeks to serve and support? The statement should be accompanied by descriptive information on the needs and strengths of the population, and on the organization and functioning of the existing system. The description of the population must have a special emphasis on the racial, ethnic, and socio-economic make-up of the population of concern, while also looking at developmental stages and gender specific issues.

The next important process is the development of a clear local theory of change (Hernandez, 2000; Hernandez & Hodges, 2003) that includes the description of the population of concern, the short-term and long-term goals of the system, and the mechanisms by which the community expects to be able to achieve the goals. Such a theory of change, often presented visually in the form of a logic model, helps community stakeholders be explicit about what they are trying to accomplish and what they think it will take to accomplish their goals, and becomes a guiding document for system development efforts.

Next is the development of an implementation plan. Increasingly there is recognition that good ideas and good intentions are not sufficient by themselves, but rather require careful attention to implementation (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). Fixsen et al., present a general conceptual model of implementation that emphasizes a number of components that operate in an integrated and compensatory manner in relation to each other. An implementation plan has to recognize that implementation goes through multiple stages, requires service and resource development, and includes critical processes such as careful staff selection, training, coaching, and performance feedback.

Another very central process is the development of a performance measurement system. Such a system should be based on the theory of change and implementation plan, and must provide ongoing information about the performance of the system that is practical and can be used to continuously improve the system (Bickman & Noser, 1999; Friedman, 2003; Kubisch et al., 2002; Leff & Woocher, 1998; & Wandersman & Florin, 2003). In talking about effective organizations, Collins (2001) talks about the necessity of having information systems that “confront the brutal facts” (p. 13) of present performance, and do this in such a way as to promote continuous improvement. Wandersman and colleagues (2000) refer to this as a results-based accountability system. Such a decision-support system is part of a data-based culture in a community and essential to efforts to implement and then continually improve a system.

## **Present Status of the Model**

The Center’s model of implementation of an effective system of care is currently being tested in a series of research projects being conducted by the Center. It is anticipated that as results from these projects, and results from other research around the country, come in, the model will be re-visited and modified where needed. At the same time as the model is being tested through research, the Center is disseminating it and welcomes input on its helpfulness from stakeholders around the country.

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# Case Studies of System Implementation

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## Introduction

This paper describes a newly funded study of system of care implementation that is part of the research agenda of the University of South Florida's Research and Training Center on Children's Mental Health. The systems of care concept has been described as an explicit organizational philosophy that is intended to create and provide access to an expanded and coordinated array of community-based services and supports for children with serious emotional disturbance and their families (Stroul, 1993; Stroul & Friedman, 1986). Although systems of care have been found to positively affect the structure, organization and availability of services (Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001; Rosenblatt, 1998; Stroul, 1993), the implementation of systems of care is significantly challenged by a lack of understanding regarding the factors that contribute to system development and how these factors interact to establish well-functioning systems (Hernandez & Hodges, 2003a). The purpose of this study is to identify strategies that local communities undertake in implementing community-based systems of care and to understand how factors affecting system implementation contribute to the development of local systems of care.

The research questions guiding this study are: (1) What structures and processes produce systems of care? (2) Are there certain conditions that trigger successful system implementation? (3) Are there fundamental mechanisms for change? (4) What is the relationship among factors that affect system implementation?

## Study Design

The design for this study is based on the Center framework for systems-of-care implementation, which hypothesizes that when certain systems-of-care implementation factors are active within a community, then children with serious emotional disturbance and their families will have improved access to and availability of mental health and related services and supports. This study takes a holistic approach to understanding how systems of care are implemented in local communities. Rather than conceptualizing qualitative and quantitative methods as dichotomous, this study blends methods from both traditions in order to carry out a holistic and pattern-focused investigation (Langhout, 2003). This investigation will use a multiple-case embedded case study design (Yin, 2003) to compare how communities with established systems of care operationalize and implement the system implementation factors with those communities that demonstrate commitment to systems-of-care values and principles but have not yet developed a system of care.

*Case study approaches.* For the purpose of this investigation, a case study is an exploration of a bounded system over time through detailed and in-depth data collection efforts that make use of multiple sources of information (Cresswell, 1998, 2003; Stake, 1995; Yin, 2003). Case studies are particularly useful when phenomena are investigated within their real-life context and when the boundaries between phenomena and context are not clearly evident (Yin, 2003). They can be used to investigate phenomena that are greatly influenced by the overall socio-cultural-geographical context, and in studies that seek to provide information about important processes as they evolve over time, in addition to describing structures and outcomes. Further, case studies are useful for studying the effectiveness of social policies that are not under control of the researcher and do not lend themselves to experimental study.

## Site Selection

**Replication logic.** The design of this explanatory case study is based on replication logic for which the goal is analytic generalization to a theory, rather than statistical generalization to a population (see Table 1). Replication logic is analogous to designs used in multiple experiments, in that effort is made to replicate findings by investigating additional cases (Yin, 2003). Conclusions are based on whether the findings support the theoretical propositions set forth in the study: in this case, that system implementation factors facilitate the establishment of a system of care for a specific population of children with serious emotional disturbance and their families. In order to test the theoretical framework of the Center using replication logic, participating sites will be selected for their perceived ability to predict both similar and contrasted results across sites. Participating sites must be carefully selected on the expectation that they predict either similar results across cases, known as literal replication, or results that are contrasting for predictable reasons, known as theoretical replication (Yin, 2003). In this study, similar findings regarding system implementation factors will be sought by comparing sites with an active theory of change for their local system of care with one another and sites that do not have an active theory of change with one another; this will be considered evidence of literal replication. Contrasting findings regarding system implementation factors will be sought by comparing sites with an active theory of change for their local systems-of-care sites with sites identified as not yet having an active theory of change; this will be evidence of theoretical replication. Findings will only be considered robust and generalizable with evidence of replication.

**Table 1**  
**Replication Logic for Testing Theoretical Framework**

|   |   |                     |
|---|---|---------------------|
| Pilot for Explanatory Case Studies  | PSOC Site<br>Case 1   | ESOC Site<br>Case 2 |
| Phase I: Initial Replication Strategy for Explanatory Case Studies                              | PSOC Site<br>↓ Literal Replication in which similar results are expected ↓<br><b>within PSOC and within ESOC sites</b>  | ESOC Site           |
| Theoretical Replication → in which contrasting results are expected between ESOC and PSOC sites | Case 3<br>Case 5  | Case 4<br>Case 6    |
| Phase II: Extended Replication Strategy for Explanatory Case Studies                            | PSOC Sites<br>↓ Literal Replication in which similar results are expected ↓<br><b>within PSOC and within ESOC sites</b> | ESOC Sites          |
| Theoretical Replication → in which contrasting results are expected between ESOC and PSOC sites | Case 7<br>Case 9  | Case 8<br>Case 10   |

A total of 10 cases will be selected for this study: five communities identified as having established systems of care (ESOCs) and five communities identified as potential systems-of-care sites (PSOCs). The initial pool of potential sites for Phase I and Phase II will be identified through the results of the Center Study 1, the National Survey, and document review and telephone interviews will be conducted to confirm their qualifications for participation. ESOCs are sites that can be identified as having an active theory of change for their system of care and PSOCs are sites that, although they have an expressed commitment to systems-of-care values and principles, do not have an active theory of change. For this purpose, an active theory of change will be defined as one that is: (1) Grounded in systems-of-care values and principles and addresses the three key elements of a systems-of-care theory of change: an identified local population of children or youth, desired system-level outcomes for that population, and

the implementation of strategies intended to achieve those outcomes; (2) Clearly articulated and widely held across multiple stakeholders; and (3) Can be documented through interviews and document reviews related to service planning and delivery activities.

### Data Collection and Analyses

Data collection and analysis for the explanatory case study (outlined in Table 2) will include a combination of qualitative and quantitative methods which have been selected in order to provide four kinds of evidence: (a) personal qualitative data for the purpose of providing evidence regarding perceptions, attitudes, and beliefs; (b) aggregate qualitative data for the purpose of providing organizational-level evidence; (c) personal quantitative data for the purpose of quantifying personal beliefs and attitudes; and (d) aggregate quantitative data for the purpose of general evidence not subject to the bias of group or self interest (Upshur, 2001).

**Table 2**  
**Explanatory Case Study Data Collection and Analysis**

|  |   |
|--|---|
| <p><b>Personal Qualitative Methods</b><br/><b>Semi-Structured Key Informant Interviews</b> – for the purpose of providing individual accounts of ways in which specific factors have or have not contributed to system development.</p> <p><b>Direct Observation</b> of Service Delivery Structures and Processes – for the purpose of confirming or disconfirming the presence of system implementation factors and the reported levels of access and availability.</p> | <p><b>Data Analysis</b><br/>Narrative data generated through direct observation and interviews and will be analyzed for emergent themes using Atlas.ti qualitative analysis software.</p>   |
| <p><b>Aggregate Qualitative Methods</b><br/><b>Document Review</b> – for the purpose of establishing a chain of evidence regarding the implementation of specific factors that can be triangulated with individual and observational accounts.</p>   | <p><b>Data Analysis</b><br/>Documents will be analyzed for emergent themes using Atlas.ti qualitative analysis software.</p>  |
| <p><b>Personal Quantitative Methods</b><br/><b>Key Informant Pattern Matching</b> for the purpose of understanding differences among key informant ratings of the importance and effectiveness of system implementation factors in relation to their contribution to the development of local systems of care.</p>   | <p><b>Data Analysis</b><br/>Average ratings of importance and effectiveness across informants will be analyzed using SPSS statistical analysis software. Results will be compared and contrasted across respondents and across sites.</p>   |
| <p><b>Aggregate Quantitative Methods</b><br/><b>Documented Aggregate Outcome Data</b> for the purpose of substantiating that established sites having a theory-of-change are achieving outcomes related to the stated goals of their system.</p>   | <p><b>Data Analysis</b><br/>Aggregate outcome data will vary across sites, but will be specifically linked to the identified target population and strategies. Analysis will include an assessment of whether the reported results reflect the achievement of stated goals for the identified population of children and youth.</p> |

Narrative data, including interviews and direct observation, will be analyzed for emergent themes using Atlas.ti qualitative software (Scientific Software Development, 1997). The analysis will involve independent review and coding of the data by multiple investigators and the identification of themes that are common across sites and specific to individual sites. Atlas.ti software allows for multiple levels of analysis that can be conducted in an iterative fashion and includes breaking down primary documents into passages, (a) coding according to identified categories, and (b) adding comments that are linked to specific passages, codes or families of codes. Initial coding schemes will be developed on the basis of the research questions. In addition, the use of Atlas.ti will facilitate the development of additional codes as the analyses are conducted. Themes and patterns emerging from the data will be identified.

The analysis of informant ratings of the importance and effectiveness of the systems-of-care implementation factors will be completed using SPSS statistical analysis software (SPSS, Inc., 2001) and will produce both consensus and outcome pattern matches. Consensus pattern matches, represented by ladder graphs, will be used to analyze the ratings of subgroups within a site by comparing subsets of participant responses on the importance or effectiveness of a specific factor. For example, this analysis will allow investigators to compare and contrast how interagency partners from education rate the importance and effectiveness of collaboration in comparison to how interagency partners from the mental health agency rate that same factor, thus providing insight into multiple perspectives on specific aspects of systems-of-care development. Similarly, subgroup responses can be compared across sites, providing information about how subgroups of key informants at different sites rate the importance or effectiveness of the same factor. Outcome pattern matches, also represented on the ladder graphs, is a cross-rating analysis that compares average participant ratings of importance for each factor to average participant ratings of effectiveness. This analysis can be done both within and across sites to better understand how key informant ratings of the importance of systems-of-care implementation factors compares to their ratings of effectiveness, allowing investigators to better understand the importance and effectiveness of the factors in relation to one another. Finally, established systems-of-care sites will be asked to provide outcome data related to their stated goals for the identified population of concern. The format and content of these data will vary depending upon the outcomes being reported.

## **Conclusion**

It is hoped that these case studies will result in knowledge development of practical and applied significance in five broad areas: (1) New knowledge and better understanding related to how system implementation factors are operationalized and their role in creating systems of care. (2) New knowledge and better understanding of how system implementation factors relate to one another to achieve systems-of-care goals and what unique combination of factors may contribute to systems-of-care development. (3) New knowledge and better understanding of how factors are organized to carry out theories of change for systems of care across different local contexts. (4) New knowledge and better understanding of a value and principle-based foundation for the development of local theories of change for systems of care. (5) Finally, it is hoped that this study will build understanding of and give credence to the strategies local communities undertake in developing systems of care and will provide greater understanding of how communities develop systems of care that meet the unique needs of their children with serious emotional disturbance and their families.

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## **Chapter Two**

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### **Issues in Implementing Evidence-based Practice**





# ***The Top Five Strategies to Enable the Use of Evidence-Based Programs: Results from the Research Conference***

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Dean Fixsen  
Karen Blase  
Sandra Naoom  
Frances Wallace

## **Introduction**

Evidence-based programs and practices are being emphasized as answers to long-standing criticisms of variable, often ineffective, and sometimes harmful practices in human services (Institute of Medicine, 2002). The field is searching for better ways of implementing them with fidelity and good outcome (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). At the 17th Annual Research and Training Center (RTC) conference (March 2004), participants were informally interviewed to gain insight into reasons *not* to adopt evidence-based practices and programs. The top five reasons were:

1. Research base is not convincing
2. Evidence-based programs are difficult to implement
3. Evidence-based programs require too much change
4. Evidence-based programs are incomplete given the problems we face
5. Infrastructure for implementation does not exist or is not supported

The purpose of the survey reported here was to obtain information on some of the reasons *for* adopting evidence-based practices and programs.

## **Methods**

At the poster session sponsored by the 18th Annual RTC Conference (March, 2005), the authors developed an interactive presentation on *The Top Five Strategies to Enable the Use of Evidence-Based Programs*, in which the authors interviewed conference attendees who passed by the poster location. RTC Conference attendees who voluntarily participated in this interactive presentation were asked if they were currently involved in using an evidence-based program. If the participant replied in the affirmative, the authors asked what their experience had been on the front end when the evidence-based program was being considered and just starting to be implemented. If the participant replied in the negative (not using an evidence-based practice), the authors then asked them about the reasons they might have for considering using an evidence-based program. Participants were then asked if they would like to contribute their comments to the authors' list of strategies to enable the use of evidence-based programs. Participant's comments were then placed on the poster, where other participants and conference attendees could see their comments.

## **Results**

The authors categorized the participant's comments to arrive at the top five strategies to enable the use of evidence-based programs. The reasons for using evidence-based programs (with a few comments from participants) are briefly summarized below.

1. Enhance effectiveness of interventions
  - Change what we are doing to be more effective
  - Get past fragmentation
  - Produce good outcomes (get rid of "flim-flammers")
2. Improve provider organizations
  - Training and ongoing supervision
  - Mechanisms to maintain fidelity
  - Have the evidence-based program drive the organizational structure

3. Availability of funding for evidence-based practices and programs
  - Funding available for evidence-based practices
  - Most evidence-based practices and programs are affordable
  - Promote policies that support funding for implementation of evidence-based practices and programs
4. Adaptability of evidence-based practices and programs
  - Allow different cultures to modify evidence-based practices and programs to fit their culture
  - Flexibility of evidence-based practices and programs and their implementation
  - Allows for evolution from a known base
5. Availability of useful information
  - Systematic reviews (Campbell Collaborative equals credibility)
  - Clinicians have ready access to internet to get information
  - Regional conferences and trainings

## Discussion

These interviews were conducted to gain insight into the views of practitioners and administrators in the field. Needless to say, the sample was self-selected and the results are not generalizable. However, they do provide a glimpse of what some people are thinking and they might stimulate some discussion and thought. It was interesting that evidence-based practices and programs were seen not only as good ways to promote better practices but also as good ways to change provider organizations. It was encouraging to note that information about evidence-based practices and programs is seen as readily available and funding for better practices and their implementation is viewed as accessible.

Comparing the items generated at the 17<sup>th</sup> RTC Conference (reasons *not* to use evidence-based practices and programs) with those generated at the 18<sup>th</sup> RTC Conference (reasons *for*), we found many similarities. The similarities in the pros and cons tell us that the reasons/strategies that facilitate the use of evidence-based practices and programs for some may be barriers for others and may depend on the context/environment in which they are implemented. Although we have a lot of evidence about “programs that work,” we have much less knowledge about the implementation and dissemination of evidence-based practices and programs in real world settings. There is still much more to be learned from program developers and implementation sites that are implementing evidence-based practices in the field.

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# **State Activities in Implementing Evidence-Based Programs for Children, Youth, and Families**

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Jacqueline Yannacci  
Jeanne Rivard  
Vijay Ganju

## **Introduction**

This summary presents preliminary results of a state survey conducted by the National Association of State Mental Health Program Directors (NASMHPD) Research Institute. The survey was designed to obtain detailed descriptive information on state mental health agencies' (SMHA) policies, strategies, and mechanisms for implementing evidence-based practices (EBP) in mental health service systems for children, youth, and families. The study was conducted in the national context of the U.S. Surgeon General's Report (U.S. Department of Health and Human Services, 1999), which highlighted the discrepancies between the scientific knowledge base of effective interventions and routine practice in mental health service delivery settings, and the more recent report of the President's New Freedom Commission on Mental Health (New Freedom Commission on Mental Health, 2004), which underscored the pressing need for access to effective mental health interventions.

Demonstration projects have revealed the challenges faced by providers, practitioners, and consumers/families engaged in implementing evidence-based practices and strategies to overcome barriers (Bachman & Duckworth, 2003; Dixon et al., 2001; Drake et al., 2001; Hoagwood, Burns, Kiser, Ringeisen & Schoenwald, 2001; McFarlane, McNary, Dixon, Hornby, & Cimett, 2001; Schoenwald & Hoagwood, 2001; Torrey et al., 2001, 2002). Consideration has also been given to the policy-level implications (Goldman et al., 2001; Ganju, 2003) of incorporating EBPs into statewide mental health service systems. By documenting current state activities and implementation strategies, the field can understand the current scope of EBP and promising practice implementation, identify successful strategies for replication, and pinpoint areas for change and further research.

## **Methods**

The survey instrument was developed in collaboration with states and other stakeholder partners and was composed of primarily open-ended questions covering the following topic areas:

- Types of EBPs and promising practices being planned or implemented
- Integration of EBP initiatives with other major initiatives
- How EBPs are implemented in rural and frontier areas
- Description of policy, procedural, or programmatic approaches used to integrate EBPs into practice settings
- Financing strategies
- Mechanisms used for training, coaching, and technical assistance
- Strategies used for evaluating and monitoring fidelity and outcomes; and methods for incorporating these data into management information systems
- Mechanisms used to collaborate with other agencies on initiatives related to EBP implementation
- Differential implementation strategies and needs for varying EBPs
- Facilitators of EBP adoption and implementation
- Needs for future implementation and dissemination

The sample included 50 states. Primary respondents were SMHA directors of adult and child/family mental health services. The survey was conducted during the period from December 2003 to June 2004 through telephone interviews lasting 1 to 1.5 hours. Interviews were audio taped and transcribed. Qualitative data from the transcribed interviews were collated into tables containing responses to each topic area from all states. Data in each table were then reviewed for emerging themes and categorized.

## Results

A sample of findings from the larger survey results are presented in three areas: (a) cross-cutting issues faced by most states in implementing EBPs in both adult and child systems, and general approaches/strategies used; (b) types of EBPs being implemented across the states in children's mental health; and (c) examples of specific strategies being used to implement children's EBPs.

### Cross-Cutting Issues

*SMHA Governance and Structure of State Mental Health Systems.* EBP initiatives are greatly influenced by the varied and somewhat unique governance and administrative structures of SMHAs. These vary by type (e.g., single state agency or divisions of larger health and human services agencies), extent of direct or indirect influence over regional or county community mental health centers, and whether provider agencies are public or private organizations. Some SMHAs are administratively linked with State Medicaid Authorities, which can facilitate restructuring of Medicaid programs to cover EBPs.

*Motivation for EBP Initiatives.* Most evidence-based practice initiatives were stimulated by leadership influences and the demand to transition high-need target populations from hospitals and other institutional settings into community-based treatment settings. Existing public-academic partnerships often were vehicles to start initiatives through collaborative demonstration grants.

*Stage of EBP Initiatives and Competing Initiatives.* States in early-stage initiatives of limited scope focused their responses more on implementation plans, consensus building, training efforts, and evaluation. States with a longer history of EBP implementation focused on how to promote statewide dissemination and make changes in the infrastructure to support EBPs. In these states more examples of innovative strategies were evident. States also faced the challenge of trying to integrate children's EBPs with other important initiatives and demonstrations related to Systems of Care, trauma interventions, early intervention, and violence prevention.

*Promising and Emerging Practices.* The need for more research on promising and emerging practices was most frequently expressed for child/family interventions such as wraparound approaches, respite, use of paraprofessionals for behavioral interventions, family support, and practices effective for more diverse cultural, ethnic, and geographic populations.

*Monitoring Fidelity and Outcomes.* Monitoring fidelity of EBPs remains an important concern of states in early phases of implementation. Some states in later stages of implementation have eased up on compliance to the original EBP standards, but acknowledge the need to focus on adherence more intensively. In contrast other states in later implementation stages have made adherence to fidelity a contract stipulation.

*General Approaches and Strategies for Incorporating EBPs into Service Systems.* The survey revealed states using an amalgam of approaches and strategies to bring EBPs and promising practices to their service delivery systems. Examples of the types of approaches include:

- Special legislative initiatives to fund EBPs
- Pooling funds from multiple agencies, and other forms of leveraging finances
- Statewide planning initiatives used to build consensus with multiple stakeholder groups
- System reform/deinstitutionalization as the driver of EBP initiatives
- Nesting EBP initiatives in quality improvement initiatives
- Nesting EBP initiatives in systems of care
- Building on existing service platforms
- Building new relationships with providers
- EBP information dissemination
- Interagency collaboration

**Types of Practices Being Implemented**

Table 1 outlines the proportion of states that reported implementing a particular evidence-based or promising practice in children’s mental health services. However, with the exception of Multisystemic Therapy (MST) and Functional Family Therapy, the other practices listed do not signify adherence to a particular model. In addition, states reported having varying program standards and reporting criteria. The table shows a broad range of evidence-based and promising practices being implemented, but a relatively low proportion of states using most practices.

**Specific Strategies for Implementing Children’s EBPs**

Following are a few examples illustrating strategies used to implement some of the most frequently utilized evidence-based and promising practices.

*Multisystemic Therapy.* The 27 states implementing MST reported collaboration with juvenile justice, the courts, and/or child welfare, often for children being diverted or transitioning from the juvenile justice system or out-of-home placements. Funding is accomplished through a variety of structures—sometimes using funds from Medicaid, juvenile justice, child welfare, and/or state funds. Medicaid is used, either by billing as an in-home service (using the rehabilitation option), or as the Medicaid managed care organization providing an enhanced service package. Initial training is typically conducted by MST services. In a few states the responsibility has been transferred to the state training and supervision infrastructure. One state has a state coordinator co-located at MST services.

*School-based Mental Health.* Many states report that they are working with schools to provide mental health services in schools, either through locating mental health counselors in schools or collaborating in school-based mental health centers. South Carolina has been instituting a best practices model which is currently in 467 elementary and middle schools. Therapists provide direct services and referrals to community mental health centers, and are jointly funded by the state mental health agency and school districts. In West Virginia 17 school-based mental health centers have been created through a collaborative initiative between mental health, schools, and primary health care that is funded through block grant, state dollars, Medicaid, and/or foundation dollars. These centers are reported to be effective in increasing access to mental health services in rural mountain areas.

*Clinical Interventions.* Many states reported providing clinical EBPs, such as functional family therapy, cognitive behavior therapy, dialectical behavior therapy, multidimensional family therapy, and intensive in-home psychiatric services. The states of Hawaii, Connecticut, and New York have public-academic relationships to provide the infrastructure for training clinicians. In New York school-based mental health counselors are being trained in a range of clinical EBPs, and the state is also collaborating with child welfare to implement family functional therapy.

*Wraparound Services.* Wraparound is reported in 24 states, with the Vandenberg model most frequently mentioned (VanDenBerg & Grealish, 1996). Funding for the program is pooled from the State Mental Health Authority, other state agencies, state general funds, block grant dollars, Medicaid (targeted case management) or system of care grants. Training is provided by the state for certification, or national experts are utilized with the responsibility then transferred to the state. Family members are also used as trainers in some states.

**Table 1**  
**Types of Evidence-Based or Promising Practices Implemented Across States**

| <i>Evidence-Based or Promising Practice</i> | <i>Percent of States Implementing (N=44)</i> |
|---|--|
| Therapeutic Foster Care                     | 86 %   |
| Multisystemic Therapy                       | 61%  |
| Wraparound                                  | 55%  |
| School-based Mental Health                  | 45%  |
| Clinical Interventions (CBT,MDFT)           | 43%  |
| Functional Family Therapy                   | 30%  |
| Intensive Home Intervention                 | 27%  |
| Family Support                              | 27%  |
| Trauma Interventions                        | 27%  |
| Respite                                     | 23%  |
| Independent Living Skills                   | 18%  |
| Early Childhood Interventions               | 18%  |
| Medication Guidelines or Algorithms         | 11%  |
| Crisis Intervention                         | 11%  |
| Telepsychiatry                              | 9%   |
| Parent Management Training                  | 9%   |
| Screening/Assessment Support                | 5%   |

## **Conclusion**

This qualitative survey allowed for a broad-brush assessment of state EBP and promising practice implementation scope, strategies, and challenges. However, because of the variation in state mental health agency structures and reporting criteria, the mental health authority may not know every EBP being planned, piloted, or offered (especially clinical ones). The frequency and types of practices reported here are most likely lower than if we also included county-level mental health authorities. The results show that most states are still in the implementation phase, versus dissemination stage. This involves exploring, trying out, and working through how to integrate EBPs in the current service system and how to change the system as needed. The next step is to conduct more focused, in-depth studies of specific EBPs and strategies integrating process and outcome data for better understanding of impact and effectiveness.

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# **Symposium**

## **Evidence-based Practices in the Community-based Service Setting: Findings from the Evidence-based Treatment (EBT) Survey of Providers**

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### **Symposium Introduction**

Angela K. Sheehan

In efforts to understand the gap between research and practice, it is important to understand the status of evidence-based practice (EBP) knowledge, use, and the factors that influence use from the provider perspective. This symposium included three papers that summarized findings from the Evidence-Based Treatment (EBT) Survey, administered to providers affiliated with Center for Mental Health Services (CMHS)-funded systems of care to explore provider knowledge of EBPs and the factors that influence the use of EBPs among various subgroups of providers. The goal of the symposium was to provide an understanding of EBP knowledge and use among providers affiliated with CMHS-funded systems of care. The first summary focuses on provider knowledge of EBP and explores the relationship between the correct definition of EBP and provider characteristics. The second summary looks at training and treatment implementation factors related to the use of the six most commonly identified evidence-based practices. Descriptive analyses were used to summarize provider demographic and workforce characteristics and training and treatment implementation factors by type of EBP reported as used. The third summary focuses on differences between providers affiliated with Native American communities and those affiliated with non-Native American communities. Differences related to EBP familiarity, perceived effectiveness and use and relationships between groups on demographic and workforce characteristics and factors considered when deciding to use an EBP were explored. Dr. Sylvia Fisher, Director of Evaluation for the Child Adolescent and Family Branch at the Center for Mental Health Services was the discussant. Dr. Fisher discussed the implications of the EBT survey findings and future directions for the field related to the transfer of knowledge and use of evidence-based practices with children with severe emotional disturbances.

#### *Chair*

Angela K. Sheehan

#### *Discussant*

Sylvia Fisher

#### *Authors*

Wendy L. Struchen-Shellhorn et al.

Angela K. Sheehan et al.

### **Understanding the Evidence-based Practice Knowledge Base of Mental Health Providers Serving Children with Severe Emotional Disturbance**

Wendy L. Struchen-Shellhorn, Thomas Burrus & Mario Hernandez

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#### **Introduction**

Changes in the mental health care system, such as the increase in managed care environments, over the past few decades have begun to demand that mental health service providers truly integrate science with practice resulting in a shift toward the more efficient use of evidence-based practices (EBPs). However, there is some division in the field regarding the use of a standardized format for treatment, with some individuals placing a higher value on the use of research to support practitioner training while others place greater value in training for practice (Chwalisz, 2003; Hoshmand, 2003). Chwalisz (2003) suggests that the use of an EBT model that advocates for an expansion of the notion of scientific evidence can help bridge this gap. The process of integrating EBTs has been slow (Schor, 1997), in part because of the variety of educational backgrounds and degrees of practicing mental health providers that support the differing research-based and client-based mindsets. As a result, there is a need to better understand the variations in their ongoing EBP training needs so that effect of therapeutic interventions can be maximized.

## Method

For a number of years, the Center for Mental Health Services (CMHS) has provided resources to facilitate implementation of the system of care (SOC) approach across multiple child- and family-serving agencies (Eber, Sugai, Smith, & Scott, 2002; Webb & Jones Harden, 2003). Subsequently, efforts to document and evaluate activities within SOC communities led the CMHS to sponsor a national evaluation of the initiative. The national evaluation has included child and family descriptive and outcome data collection and system-level assessments within funded SOC communities, as well as special studies such as the comparison of outcomes between children served in SOCs to those served in service-as-usual settings (Holden, Friedman & Santiago, 2001; Hernandez et al., 2001; Stephens et al., 2005).

The cross-sectional study described in this summary includes data gathered from mental health professionals working with children identified as having severe emotional disturbance. These professionals were affiliated with 26 system-of-care communities funded in 1997/98 and two non-funded communities that participated in the comparison study. A modified snowball sampling approach was used to recruit respondents providing services in the target communities to complete a web-based or paper copy of a 65-item survey regarding EBP knowledge, use and practice. A total of 422 respondents completed all items under investigation. In addition to descriptive statistics, Pearson correlation coefficients, and regression analyses were calculated. Study limitations include voluntary participation, limits to randomness in recruitment, and lack of racial/ethnic diversity among respondents.

Respondents were mostly women (67.1%), White (88.9%), and averaging 42 years old with 9.4 years of experience. Most (76.1%) were licensed with at least a Master's degree (MA; 89.3%). Degrees included counseling/social work (56.4%), psychology/psychiatry (25.4%), medical (2.1%) and other fields of study (9.2%). Respondents were asked to define the term evidence-based treatment. The open-ended definitions were then classified into five categories; these included definitions which made reference to: *proven effective through research* (64.7%), *documented change in clients* (16.4%), *developed individualized outcomes* (10.0%), *proven to work* (7.3%), and *Other* (1.4%). For the purpose of this study, proven effective through research was identified as a correct definition of EBT. The category proven to work was dropped from analyses due to a lack of clarity regarding whether it was based on individual client outcomes or research. The remaining categories were combined and defined as an incorrect definition.

## Results

Characteristics of respondents varied greatly. For example, on average, men were older (43.6 years) than women (41.2 years;  $p < .05$ ). Men were more likely to have earned a higher degree (professional or doctoral degree, 48.1%) than not (29.6,  $p < .01$ ) and were more likely to have a degree in psychology/psychiatry (42.1% vs. 29.8%,  $p < .01$ ). There were also racial differences with Whites (17.9%) being more likely to have a higher degree than Blacks (8.3%,  $p < .05$ ). Bivariate correlations revealed that age, education, years of experience and licensure were significantly correlated with one another. A multivariate logistic regression model of the correct definition of EBT with age and education (<MA, MA, >MA) identified a negative association with age ( $p = .02$ ) and a positive association with education ( $p < .05$ ). Neither age, race, nor ethnicity was significant when subsequently added to the model.

In addition to being asked to define EBTs, respondents listed up to three advantages and disadvantages to using evidence-based treatments. The leading advantages to using EBTs were that the practices were an effective and efficient approach to treatment and that protocols and guidelines provided standardized structure. Respondents indicated that EBTs offered measurable outcomes of client change and that EBTs were supported by research of their effectiveness. Finally, respondents indicated that EBTs offered consistent, valid approaches that increased client satisfaction with the intervention. The most common disadvantages included the belief that EBTs were too structured and lacked flexibility

to address individual differences among clients, thereby limiting their usefulness at the practice level. There were also concerns regarding the quality and generalizability of the research, especially across cultural differences. Finally, it was reported that the use of EBTs were resource intensive and inhibited the development and use of other therapies.

Another set of survey questions asked respondents to identify, from a list of known evidence-based treatments, which ones they: (a) believed resulted in positive outcomes; (b) did not believe resulted in positive outcomes; (c) were familiar with but were not sure whether it resulted in positive outcomes; or (d) were not familiar with the practice. Based on the beliefs of the respondents, the EBTs most commonly reported as being effective in producing positive outcomes included social skills training, family education and support, medication, cognitive behavior therapy, anger management, modeling, problem solving training, case management, mentoring and relaxation training. For some practices, there were statistically significant differences between the proportion of respondents with differing education levels that indicated the approach was effective, including cognitive behavioral therapy, stimulant medication for Attention Deficit Hyperactive Disorder, anti-depressants for mood disorders, systematic desensitization, mentoring, exposure therapy, and voucher-based contingency management.

## **Conclusions**

Knowledge regarding EBTs is provided through formal academic training and continuing professional development activities, which have evolved over time. Younger professionals with higher degrees are likely to have received more academic training regarding EBTs while older professionals who may be more likely to have received their training prior to the focus on EBTs may lack adequate knowledge in their use. Conversely, professionals without higher levels of academic training or licensure also need additional, and yet different, training foci based on their knowledge base.

Previous literature has indicated that variations in the workforce exist and that those variations should be considered when targeting future professional development activities. For example, older providers have been found to serve fewer patients and receive less managed care funding than younger professionals (Pignitore, Scheffler, Schwalm, Zarin & West, 2002). This may be an indication that they are spending more of their time practicing outside the growing mainstream of managed care. As a result, it may be more efficient to focus professional development training efforts regarding specific EBTs on younger professionals, especially those with a Master's degree or less. In addition, identifying differences in the knowledge base of various types of mental health professionals will help to identify subpopulations to target for professional development training. These differences can also provide guidance regarding the types of EBT approaches that should be included in that training. Finally, understanding specific professional development training needs regarding EBTs for different mental health providers can help tailor learning opportunities to succinctly meet those individual needs and can improve provider skills and ultimately improve the treatment outcomes for children identified with severe emotional disturbance.

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## **Evidence-based Practice in the Community-based Service Setting: Factors that Influence Mental Health Provider Use**

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### **Introduction**

An evolving mental health care environment has focused attention on the need for research-based practices that support effective treatment for mental disorders. Local, state and federal level officials have called for enhanced service quality specifically for children, through the practice of research-based clinical interventions (Burns & Friedman, 1990; Burns, 1999, US Department of Health and Human Services [USDHHS], 2001). As a result, more attention has been given to studying the efficacy and to a lesser extent the effectiveness of treatment interventions in the community-based setting (Burns & Hoagwood, 2002; USDHHS, 2001). However, there is a growing consensus that what is known about treatment interventions have not been adequately transferred into clinical practice (Burns, Hoagwood, & Mrazek, 1999; Jensen, Hoagwood, & Petti, 1996; Wells, 1999; National Advisory Mental Health Council Workgroup, 2001; Hoagwood, 1997; Simpson, 2002; Weisz & Donenberg, 1995). Difficulties transferring knowledge to the practice setting have been attributed to many factors, including workforce issues.

This study attempted to provide an understanding of the status of evidence based practice (EBPs) use in Center for Mental Health Services (CMHS)-funded systems of care by exploring factors that influence mental health providers' use of EBPs in the community-based setting. Data from the Evidence-based Treatment Survey of providers affiliated with the federally funded Comprehensive Community Mental Health Services for Children and Their Families Program (CMHS, 2001) were used to describe provider characteristics and address issues of whether adequate implementation of EBPs is occurring, as evidenced by follow-up training activities and full implementation of the treatment protocols.

### **Methods**

*Sample and Measures.* The EBT Survey was designed as a 65-item web-based survey (with available hard copy) of direct mental health service providers to children with serious emotional disturbance (SED) and their families affiliated with the Comprehensive Community Mental Health Services for Children and Their Families Program. The Survey was conducted as part of the mandated national evaluation of this federal initiative with a subset of communities. More detail about the national evaluation is provided elsewhere (Holden, Stephens, & Santiago, 2001).

The EBT Survey contained questions related to (a) provider knowledge about existing evidence-based practices; (b) provider use of evidence-based practices; (c) the training received in evidence-based practice approaches; (d) the extent to which evidence-base practices are implemented according to guidelines; and (e) provider demographic information, including age, gender, race, primary employer, current position, highest degree earned, years as a mental health service provider, years in the current service system, and years as a children's mental health service provider. Training characteristics included type of initial training received and year since initial training. Frequency of follow-up training activities and treatment guideline characteristics included the extent to which respondents indicated their full implementation of the EBP protocol.

*Procedure.* A two-stage process (i.e., modified snowball approach) was used to identify a comprehensive list of mental health clinicians from each targeted community. The first stage involved a structured phone contact with the community director during which they were asked to identify all agencies and organizations that provide mental health services to children eligible for or enrolled in system of care services. The second stage involved contact with each agency/organization identified

at stage one, and a request for a list of their mental health clinicians (1,669 appropriate respondents identified; range 1 – 90 per agency; average number of appropriate respondents per stage two contact = 5.5). A proportional sample (using an average of 50 respondents per community for a total of 1,402 respondents as the target) was selected from the list of identified potential respondents. Sampling was performed within any system-of-care community where 80 or more potential respondents were identified. A five-stage mailing process was used to recruit selected potential respondents for the cross-sectional EBT Survey.

**Participants.** Data collection for the EBT Survey began in late August 2003 and continued through January 2004. Survey responses were received from 616 individuals from 28 communities who were identified via 26 system-of-care sites funded in 1997/98 and two comparison sites for a 44% response rate.

Six hundred and sixteen individuals responded to the survey. Of those, 556 (90%) indicated they were direct mental health service providers and 446 (80%) of those identified that they used at least one known evidence-based practice other than medication in the course of their work. The 446 direct service providers who identified the use of at least one documented EBP were included in the current study sample. The majority of respondents in the current sample had received a Master's or Doctoral degree (89%) as their highest level of education. Most respondents were employed by a mental health agency (57%) and were licensed mental health providers (77%) with primary positions as clinicians or therapists (51%). Respondents in the current study had worked an average of 6.1 ( $SD = 5.9$ ) years in their current service system, 9.2 years ( $SD = 7.4$ ) serving children with SED, and 11.2 years ( $SD = 8.4$ ) as mental health providers. The majority of respondents were female (67.6%), White (85.4%), and had an average age of 42.2 ( $SD = 10.8$ ) years.

## Results

Respondents were asked to identify up to three evidence-based practices other than medication used in the course of their work. The most commonly identified EBPs were Cognitive Behavioral Therapy (CBT; 65.0%), wraparound (18.4%), followed by anger management, social skills training, family education and support, and case management, which were all identified by over 10% of respondents. Descriptive analyses were used to summarize the demographic and workforce characteristics of providers of the six most frequently identified EBPs and the training and treatment implementation factors related to those EBPs. CBT was the most commonly identified EBP used in the course of work, with 65.0% of respondents identifying it as one of their three primary EBPs. Wraparound was the second most frequently identified (18.4%), followed by anger management, social skills training, family education and support, and case management, which were all identified by over 10% of respondents.

### Demographic and Workforce Characteristics

The majority of providers across the six most commonly identified EBPs were female, White, with an average age ranging from 40.8 for social skills training to 44.5 for family education and support (see Table 1). Table 1 also shows that for each of the six most commonly identified EBPs, the majority of respondents were highly educated, particularly for CBT with over 95% of CBT users having an advanced degree. Most were employed by a mental health agency, but were not required by their agency to implement EBP.

### Training and Treatment Implementation

The study focused on the training and treatment implementation factors for the six most commonly identified EBPs. Provider training activities and implementation factors differed depending on the practice identified as used (see Table 2). Within each practice, providers of anger management, social skills training, and family education and support varied widely in their training and treatment implementation experiences. For example, initial training for anger management providers was evenly split across graduate school, conferences/workshops, agency sponsored/in-service, and other or

no training. Among social skills training providers, a similar percentage indicated *never or less than annually* participating in follow-up activities as indicated *at least monthly follow-up*. This suggests that these practices are provided with greater variability within the service settings. CBT providers, wraparound providers, and case management providers seemed to share similar training and treatment implementation experiences within each practice. For example, the majority of CBT providers received initial training in graduate school and the majority of wraparound and case management providers received instruction through *agency sponsored or inservice training*.

Overall, there was a lack of full treatment implementation for providers of all six practices, particularly CBT. Interestingly, a little over half of wraparound providers and case management providers reported implementing the full protocol, which is somewhat surprising given the lack of a clear formalized protocol for these practices.

**Table 1**  
Demographic and Workforce Characteristics for Most Commonly Identified EBPs

|   | CBT<br>(n=256) | Wraparound<br>(n=75) | Anger<br>Management<br>(n=64) | Social Skills<br>Training<br>(n=56) | FES<br>(n=60) | Case<br>Management<br>(n=54) |
|---|----------------|----------------------|-------------------------------|-------------------------------------|---------------|------------------------------|
| <b>Demographic characteristics</b>                  |                |                      |                               |                                     |               |                              |
| Female  | 68.8%          | 65.3%                | 73.0%                         | 71.4%                               | 65.0%         | 72.2%                        |
| Age [Mean (SD)]                                     | 42.8 (11.0)    | 41.1 (10.7)          | 42.7 (11.4)                   | 40.8 (10.7)                         | 44.5 (10.6)   | 40.4 (9.9)                   |
| White   | 92.6%          | 90.7%                | 82.8%                         | 87.5%                               | 90.0%         | 81.5%                        |
| <b>Workforce characteristics</b>                    |                |                      |                               |                                     |               |                              |
| Advanced degree                                     | 95.4%          | 77.3%                | 82.8%                         | 82.5%                               | 88.3%         | 83.3%                        |
| Employed by Mental Health Agency                    | 58.0%          | 73.7%                | 57.8%                         | 55.4%                               | 60.0%         | 66.7%                        |
| Agency required use of EBP                          | 36.2%          | 54.7%                | 34.9%                         | 35.1%                               | 41.0%         | 41.5%                        |
| Years in current delivery system [Mean (SD)]        | 6.1 (5.9)      | 5.3 (5.1)            | 6.4 (6.2)                     | 5.4 (6.1)                           | 7.8 (7.0)     | 5.6 (4.7)                    |
| Years as mental health provider [Mean (SD)]         | 11.2 (8.6)     | 10.4 (6.9)           | 10.9 (8.2)                    | 11.9 (8.5)                          | 13.5 (9.1)    | 10.7 (7.0)                   |
| Years as provider for children with SED [Mean (SD)] | 9.1 (7.5)      | 8.6 (7.0)            | 8.0 (7.1)                     | 9.5 (7.6)                           | 11.1 (8.4)    | 9.1 (7.2)                    |

**Table 2**  
Training and Treatment Implementation Factors for Most Commonly Identified EBPs

|  | CBT<br>(n=256) | Wraparound<br>(n=75) | Anger<br>Management<br>(n=64) | Social Skills<br>Training<br>(n=56) | FES<br>(n=60) | Case<br>Management<br>(n=54) |
|--|----------------|----------------------|-------------------------------|-------------------------------------|---------------|------------------------------|
| <b>Training Activities</b>               |                |                      |                               |                                     |               |                              |
| <i>Source of initial training</i>        |                |                      |                               |                                     |               |                              |
| Graduate School                          | 68.8%          | 6.8%                 | 25.0%                         | 25.0%                               | 24.1%         | 18.0%                        |
| Conf/Workshop/Cont. Ed                   | 12.9%          | 23.0%                | 28.3%                         | 32.1%                               | 24.1%         | 10.0%                        |
| Agency sponsored or in-service           | 4.7%           | 54.1%                | 25.0%                         | 25.0%                               | 18.5%         | 40.0%                        |
| Other or no initial training             | 13.7%          | 16.2%                | 21.7%                         | 17.9%                               | 33.3%         | 32.0%                        |
| <i>Follow-up Frequency</i>               |                |                      |                               |                                     |               |                              |
| Annually                                 | 47.2%          | 43.8%                | 41.4%                         | 36.5%                               | 39.1%         | 38.1%                        |
| At least monthly                         | 23.6%          | 37.5%                | 19.0%                         | 32.7%                               | 30.4%         | 45.2%                        |
| Never/Less than annually                 | 29.2%          | 18.8%                | 39.7%                         | 30.8%                               | 30.4%         | 16.7%                        |
| Years since initial training [Mean (SD)] | 10.7 (7.0)     | 6.2 (5.6)            | 9.5 (6.2)                     | 9.6 (6.2)                           | 12.7 (8.5)    | 9.4 (7.2)                    |
| Full implementation of protocol          | 35.4%          | 68.0%                | 54.1%                         | 50.8%                               | 50.0%         | 58.8%                        |

## **Discussion**

The results of this study yielded a number of interesting findings for consideration, as policies are developed to increase and improve the EBP training efforts among frontline service providers, and ultimately the use of evidence-based interventions for children and their families at the community practice level. Providers responding to the survey reported the use of 25 practices with an existing evidence base in these service systems. Of the most commonly identified EBPs, CBT, anger management and social skills training share many of the same features in terms of theoretical background and therapy procedures. Alternatively, wraparound, family education/support and case management are emerging intervention approaches that do not strictly satisfy the research criteria to be considered evidence-based (Burns & Hoagwood, 2002), but are used with increasing frequency with children displaying complex and chronic mental health disorders that require interagency involvement and collaboration (Bruns, Burchard, Suter, Leverentz-Brady & Force, 2004). In terms of initial training, it is clear that sources of initial training vary, particularly for those who provide anger management, family education and support, and social skills training. There was less variation for CBT, wraparound and case management. The high percentage of initial training received through agency sponsored or inservice training for wraparound and case management providers was not surprising considering the respondents were affiliated with systems of care, which utilize family involvement, case management and wraparound as the cornerstone of their approaches (Holden et al., 2003).

Interestingly, there was a low level of full treatment implementation across all six practices, particularly for CBT. This suggests that the use of these practices may be occurring in the absence of ongoing training and implementation fidelity supports, and that the resources targeted toward training and supporting the implementation may not be fully realized. A little over half of wraparound providers and case management providers reported implementing the full protocol, which is somewhat surprising given the lack of a clear formalized protocol for these practices. As more attention is given to the need to provide evidence-based practice in the community-based service setting, it is important to understand EBP use and the training and treatment implementation experiences of mental health providers. Morris & Stuart (2002) attributed challenges in implementing treatment interventions to financial constraints placed on child-serving agencies. As a result, policy makers and administrators must develop strategies to maximize scarce resources. Ensuring that effective treatment is provided in the service setting and that service providers are trained and adequately implementing treatment protocols is essential.



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## **Native American Community Affiliated Mental Health Providers for Children with Severe Emotional Disturbance: Evidence-based Practice Knowledge, Perceptions and Factors that Influence Decisions**

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### **Introduction**

In a 1990 assessment of mental health needs of American Indian and Alaska Native adolescent health issues, the U.S. Congress, Office of Technology Assessment (1990) found existing data to be scarce regarding the mental health needs of Native American and Alaska Native children. A recent issue of *The Journal of the National Center* (2004) indicates this problem continues. However, what little data does exist suggests American Indian and Alaska Native children have a higher degree of mental health issues compared to the rest of the U.S. population (Freeman, Iron Cloud Two-Dogs, Novins, & LeMaster, 2004). According to a 1996 study, there was an estimated 93,000 Indian children with serious emotional disturbance in the United States (Deserly & Cross, 1996). Given the prevalence of severe emotional disturbance in Native American children, strategies to meet their mental health needs, such as implementing evidence-based practices, are needed. The purpose of this study is to explore the knowledge and use of EBP's by providers that serve Native American children and to compare Native American affiliated providers to non-Native American affiliated providers on factors that influence their decisions to use an EBP with a child and family.

This study described EBP knowledge and use among providers that serve Native American children with severe emotional disturbance (SED) and compares providers affiliated with CMHS-funded Native American communities (NA providers) to providers from non-Native American CMHS-funded communities (non-NA providers) on demographic and workforce characteristics and factors that influence decisions to use EBP's with children. Data from the Evidence-based Treatment (EBT) Survey of providers affiliated with the federally funded Comprehensive Community Mental Health Services for Children and Their Families Program (Center for Mental Health Services [CMHS], 2001) were used.

### **Methods**

**Sample and measures.** The Evidence-based Treatment (EBT) Survey was designed as a 65-item web-based survey (with available hard copy) of direct mental health service providers to children with serious emotional disturbance and their families affiliated with the Comprehensive Community Mental Health Services for Children and Their Families Program. The Survey was conducted as part of the mandated national evaluation of this federal initiative with a subset of communities. More detail about the national evaluation is provided elsewhere (Holden, Friedman, & Santiago, 2001).

Survey respondents were identified through contacts with agencies involved with 28 communities affiliated with the Comprehensive Communities Program, 26 of which were funded as part of the program and two not funded but selected as comparison sites. Of the 28 communities, four were communities serving Native American children and families. Six hundred and sixteen individuals responded to the survey, 76 of which were affiliated with Native American communities. Of total respondents, 556 (90%) indicated they were direct mental health service providers and 467 (76%) of those identified the use of EBP's in the course of their work. Of the 76 providers affiliated with Native American communities, 67 (88%) were direct service providers and 59 (78%) identified the use of EBP's in the course of their work. Available data were used for each respondent.

## Results

### Bivariate Relationships

Table 1 summarizes bivariate relationships between provider community affiliation and provider characteristics. NA providers differed significantly from non-NA providers by gender, race, and primary employer. Females accounted for a smaller percentage of NA providers compared to non-NA providers. A higher percentage of NA providers were of American Indian or Alaska Native backgrounds, with more NA providers employed by residential treatment facilities compared to non-NA providers. NA providers did not differ significantly from non-NA providers on factors of age, education level, field of discipline, and primary position, with the majority in both groups being highly educated, serving as clinicians or therapists, and having degrees in psychology or social work. NA providers were as experienced if not more experienced, with more years as a mental health provider and a higher percentage of licensed mental health providers. A significantly smaller percentage of NA providers were required by their agency to provide EBPs.

**Table 1**  
Demographic Characteristics for EBT Survey Respondents

| <i>Provider Characteristics</i>                                   | <i>NA<br/>Affiliated<br/>Provider</i> | <i>Non-NA<br/>Affiliated<br/>Provider</i> | <i>Statistical<br/>Tests</i> | <i>Odds Ratio<br/>(SE)</i> |
|---|---------------------------------------|---|------------------------------|----------------------------|
| <b>Race (n=425)</b>   |                                       |   |                              |                            |
| White   | 82.4%                                 | 85.6%                                     | $\chi^2(2) = 8.550^*$        | 18.4 (1.3) *               |
| American Indian or Alaska Native                                  | 3.9%                                  | 0.3%                                      |                              |                            |
| Other or Not Specified  | 13.7%                                 | 14.2%                                     |                              |                            |
| <b>Gender (n=424)</b>   |                                       |   |                              |                            |
| Female  | 54.9%                                 | 69.7%                                     | $\chi^2(1) = 4.513^*$        | ns                         |
| Male  | 45.1%                                 | 30.3%                                     |                              |                            |
| <b>Primary Employer (n=426)</b>                                   |                                       |   |                              |                            |
| Mental Health Agency  | 58.8%                                 | 57.6%                                     | $\chi^2(2) = 15.841^{***}$   | Reference                  |
| Residential Treatment   | 11.8%                                 | 1.9%                                      |                              | 5.362 (.71) *              |
| Other   | 29.4%                                 | 40.5%                                     |                              | ns                         |
| <b>Advanced Degree (n=428)</b>                                    |                                       |   |                              |                            |
| Yes   |                                       | 88.5%                                     | 89.4%                        | ns                         |
| No  | 11.5%                                 | 10.6%                                     |                              |                            |
| <b>Primary Field of Discipline (n=393)</b>                        |                                       |   |                              |                            |
| Psychology  | 36.7%                                 | 28.8%                                     | ns                           | not entered                |
| Social Work   | 15.2%                                 | 27.6%                                     |                              |                            |
| Counseling  | 10.2%                                 | 20.6%                                     |                              |                            |
| Other   | 18.4%                                 | 23.0%                                     |                              |                            |
| <b>Primary Position (n=370)</b>                                   |                                       |   |                              |                            |
| Clinician/Therapist   | 57.5%                                 | 50.9%                                     | ns                           | not entered                |
| Clinical Social Worker  | 17.5%                                 | 13.0%                                     |                              |                            |
| Other   | 25.0%                                 | 36.1%                                     |                              |                            |
| <b>Agency Requirements (n=376)</b>                                |                                       |   |                              |                            |
| Yes   | 23.1%                                 | 40.2%                                     | $\chi^2(1) = 5.653^*$        | ns                         |
| <b>Licensed Mental Health Provider (n=376)</b>                    |                                       |   |                              |                            |
| Yes   | 94.2%                                 | 73.7%                                     | $\chi^2(1) = 10.639^{***}$   | 4.6 (.76) *                |
| <b>Age (n=425)</b>  |                                       |   |                              |                            |
|   | 44.8 (9.2)                            | 41.8 (11.0)                               | ns                           | not entered                |
| <b>Years as a mental health service provider (n=423)</b>          |                                       |   |                              |                            |
|   | 14.2 (8.4)                            | 10.9 (8.3)                                | $F(1.1) = 3.3^{**}$          | 1.04 (.02) *               |
| <b>Years as a mental health service provider for kids (n=420)</b> |                                       |   |                              |                            |
|   | 10.9 (8.3)                            | 14.2 (8.5)                                | ns                           | not entered                |
| <b>Years in the current delivery system (n=408)</b>               |                                       |   |                              |                            |
|   | 7.4 (7.0)                             | 5.8 (5.5)                                 | ns                           | not entered                |

\* $p < .05$ , \*\* $p < .01$

Table 2 summarizes bivariate relationships between provider community affiliation and the factors they considered when deciding to use an EBP. Interestingly, NA providers did not significantly differ from non-NA providers on the extent to which child factors were considered when deciding when to use an EBP, with the exception of home situation and treatment setting. Specifically, although one might expect NA providers to consider the child's race or cultural background to a greater extent than non-NA providers, neither group endorsed these factors, with less than 25% of both groups always/almost always considering these factors.

**Table 2**  
**Factors That Influence the Decision to Use EBP with a Particular Child and Family**

| <i>Child's Factor</i>              | <i>NA Affiliated Provider</i> | <i>Non-NA Affiliated Provider</i> | <i>Statistical Tests</i> | <i>Odds Ratio (SE)</i> |
|------------------------------------|-------------------------------|-----------------------------------|--------------------------|------------------------|
| <b>Child's Age</b>                 |                               |                                   | ns                       | not entered            |
| Always / almost always             | 56.9%                         | 60.6%                             |                          |                        |
| Sometimes                          | 29.4%                         | 24.1%                             |                          |                        |
| Never / almost never               | 13.7%                         | 15.2%                             |                          |                        |
| <b>Child's Gender</b>              |                               |                                   | ns                       | not entered            |
| Always / almost always             | 16.0%                         | 17.7%                             |                          |                        |
| Sometimes                          | 26.0%                         | 22.7%                             |                          |                        |
| Never / almost never               | 58.0%                         | 59.6%                             |                          |                        |
| <b>Child's Race</b>                |                               |                                   | ns                       | not entered            |
| Always / almost always             | 23.5%                         | 19.5%                             |                          |                        |
| Sometimes                          | 35.3%                         | 28.0%                             |                          |                        |
| Never / almost never               | 41.2%                         | 52.5%                             |                          |                        |
| <b>Child's Cultural Background</b> |                               |                                   | ns                       | not entered            |
| Always / almost always             | 23.5%                         | 23.5%                             |                          |                        |
| Sometimes                          | 43.1%                         | 38.8%                             |                          |                        |
| Never / almost never               | 33.3%                         | 37.7%                             |                          |                        |
| <b>Child's Caregiver</b>           |                               |                                   | ns                       | not entered            |
| Always / almost always             | 54.9%                         | 47.4%                             |                          |                        |
| Sometimes                          | 29.4%                         | 34.5%                             |                          |                        |
| Never / almost never               | 15.7%                         | 18.2%                             |                          |                        |
| <b>Child's diagnosis</b>           |                               |                                   | ns                       | not entered            |
| Always / almost always             | 76.5%                         | 68.5%                             |                          |                        |
| Sometimes                          | 15.7%                         | 18.4%                             |                          |                        |
| Never / almost never               | 7.8%                          | 13.1%                             |                          |                        |
| <b>Child's home situation</b>      |                               |                                   | $\chi^2(2)=6.07^*$       | ns                     |
| Always / almost always             | 72.5%                         | 55.3%                             |                          |                        |
| Sometimes                          | 21.6%                         | 29.7%                             |                          |                        |
| Never / almost never               | 5.9%                          | 15.0%                             |                          |                        |
| <b>Child's treatment setting</b>   |                               |                                   | $\chi^2(2)=8.295$        |                        |
| Always / almost always             | 71.4%                         | 49.6%                             |                          | 3.1 (.59)*             |
| Sometimes                          | 18.4%                         | 31.4%                             |                          | ns                     |
| Never / almost never               | 10.2%                         | 19.0%                             |                          | Reference              |

Notes: \* $p < .05$

## **Logistic Regression Analyses**

To identify whether a provider's community affiliation was associated with their demographic characteristics, employment characteristics, and factors that influence their EBP use, a backward stepwise logistic regression analyses was performed. Only those factors and characteristics that resulted in bivariate relationships with provider community affiliation at a significance level of  $p \leq .10$  level were entered into the model and results are summarized in Table 1. The results indicated a significant association between provider affiliation and race, primary employer, licensed mental health provider, years as a provider, and consideration of the child's treatment setting (see Table 1),

## **Providers' Community Affiliation and their EBP Knowledge, Effectiveness, and Use**

After exploring the association between community affiliation and demographic and workforce related characteristics, and child related factors that influence EBP, differences in EBP knowledge and use by community affiliation were explored. Significant differences in practice familiarity between NA providers and non-NA providers were found, with NA providers indicating significantly less familiarity with certain practices and more familiarity with other practices (although not significant). For example, NA providers indicated less familiarity than non-NA providers with brief strategic family therapy (81.1% vs. 91.8%),  $\chi^2(1) = 6.22, p < .05$ , Webster Stratton's parent child series (5.7% vs. 19.8%),  $\chi^2(1) = 6.31, p < .05$ , systemic desensitization (85.2% vs. 93.3%),  $\chi^2(1) = 4.06, p < .05$ , and functional family therapy (62.3% vs. 75.3%),  $\chi^2(1) = 4.06, p < .05$ . NA providers demonstrated a higher familiarity with a number of practices compared to non-NA providers although these differences were not significant (e.g. multi-systemic therapy, wraparound, case management, cognitive behavioral therapy (CBT), mentoring, family education and support, social skills training, emotive imagery therapy, common sense parenting).

Similarly, perceived effectiveness for the entire study sample was relatively high, with a few exceptions. Interestingly, those who did not perceive a practice to be effective indicated that they did not know the effectiveness rather than that the practice was not effective. For example, of the nine practices with only a minority of respondents believing it to be effective, only two practices had over 5% of respondents believe it to be ineffective. These included emotive imagery therapy (8.3%) and exposure therapy (8.0%). The only significant differences in perceived effectiveness between NA providers and non-NA providers were found for wraparound and stimulant medication for Attention Deficit Hyperactive Disorder, with 64.2% of NA providers believing wraparound to be effective compared to 77.5% of non-NA providers,  $\chi^2(1) = 4.5, p < .05$ , and 81.5% of NA providers believing stimulant medication for ADHD to be effective compared to 86.8% of non-NA providers,  $\chi^2(2) = 6.53, p < .05$ . However, neither provider group found wraparound to be ineffective; rather, a higher percentage of NA providers did not know of the practice's effectiveness (35.8%).

The most commonly used EBPs by all respondents were CBT (62.1%), wraparound (17.6%), anger management (14.6%), family education and support (14.3%), social skills training (13.1%), and case management (11.8%). A few significant differences between provider groups were found. For example, a higher percentage of NA providers identified assertiveness training (8.5%) than non-NA providers (2.9%),  $\chi^2(1) = 4.50, p < .05$  and exposure therapy compared to non-NA providers (6.8% vs. 1.5%),  $\chi^2(1) = 4.5, p < .01$ . In addition, a significantly higher percentage of NA providers identified solution-focused therapy compared to non-NA providers (13.6% vs. 5.4%),  $\chi^2(1) = 5.72, p < .05$ , and respite compared to non-NA providers (3.4% vs. 0.5%),  $\chi^2(1) = 5.10, p < .05$ . Conversely, a higher percentage of non-NA providers identified wraparound (19.1%) compared to NA providers (6.8%),  $\chi^2(1) = 5.42, p < .05$ .

## **Discussion**

The findings suggest that providers affiliated with Native American communities are as experienced if not more experienced than non-Native American affiliated providers, do not differ in terms of familiarity, perceived effectiveness, and use of most EBPs, and do not differ on what factors influence the decision to use an EBP with a child and family. The implications of these findings have multiple interpretations.

Although providers affiliated with Native American sites differ in some respects from non-Native affiliated providers in terms of demographic and workforce characteristics, it seems that for the most part they do not differ by the factors they consider when deciding to use EBP, with the exception of the child's treatment setting, and do not differ in terms of EBP knowledge, perceived effectiveness, and use, with a few exceptions. Although NA providers indicated not knowing the effectiveness of wraparound at a higher rate, this is not surprising given that NA providers were as familiar if not more familiar with wraparound, and there is a lack of effectiveness research for wraparound.

The seemingly similar perceptions and use of EBP is encouraging from the perspective of consistency in treatment and EBP use for Native American children and non-Native American children alike, but less encouraging when considering Native American cultural implications. Retraditionalization, defined by LaFromboise, Trimble, & Mohatt (1990) as the reliance on cultural beliefs and customs to overcome Native American problems and achieve self-determination, has been identified as essential to the revitalization of American Indian and Alaska Native communities (Morris, Crowley, & Morris, 2002). The findings of the EBT survey suggest that providers serving children in Native American communities are fairly similar in terms of EBP use to providers working in non-Native American communities, which, given that most EBPs have not been specifically developed for Native American children and Native American culture, seems to contradict the call for retraditionalization.

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## **Symposium Discussion**

**Sylvia Fisher**

The Evidence-based Treatment (EBT) Survey provides important information on the types of treatments being used with children with severe emotional disturbance (SED) in the community-based setting. Although the survey has limitations, the findings provide a better understanding of EBP knowledge and use from the provider perspective. A few limitations that must be considered when interpreting these findings include how well the survey sample represents providers serving children participating in systems of care and providers in non-system of care settings. Another limitation of the survey is that it is not clear how much the child population being served (i.e. diagnoses, age, etc.) influences the use of specific EBP in these service systems, which may have impacted the EBPs that were endorsed by providers.

The use of a modified snowball sampling is certainly an appropriate choice of sampling technique for this type of survey study. However, it should be noted that snowball sampling typically relies upon relationships between people who know each other or at least know of each other. This type of referral process has a small potential problem: people who refer others for a snowball sampling study may be quite likely to refer people who are very similar to them and/or who hold similar opinions. This dimension is difficult to assess when using snowball samples, but should be considered as a potential limitation of the design.

Even with these limitations, there are a few interesting implications of the survey findings. Surveyed providers seem to be well educated and have an overall understanding of EBPs, with the majority providing a correct definition. This suggests that the gap between research and practice may have more to do with the service providing agencies than the individual providers, calling for more education at the agency level. The findings from the survey provided an interesting picture of providers affiliated with Native American sites. It was somewhat surprising that more Native American affiliated providers did not endorse wraparound, although this may be due to these providers using different language when describing a similar approach. Survey findings also suggest that there is clearly a need for resources dedicated to bringing more males into the mental health profession. In addition, the lack of full treatment implementation brings into question whether resources are being properly allocated and suggests that more focus be placed on monitoring the administration of EBPs beyond initial training.

The information gathered through the EBT Survey is important to better understand EBPs in the system of care context. Future efforts should focus on organizational factors that influence the use of EBPs in the service setting and broaden the information gathered to address practice-based evidence.

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# **Organizational Readiness for Change and Implementation of Evidence-Based Practices in Children’s Mental Health**

Melanie Barwick  
Katherine M. Boydell  
Elaine Stasiulis  
H. Bruce Ferguson  
Karen Blase  
Dean Fixsen

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## **Introduction**

Evidence-based practice is an emerging concept that reflects a burgeoning effort to build quality and accountability in mental health service delivery. Though not yet formally recognized on the national Canadian health care agenda, the concept conveys a fundamental belief that children with emotional and behavioral disorders should be able to count on receiving care that meets their needs and that is based on the best scientific evidence available; there is a fundamental concern that for many of these children, the care that is delivered is not effective care (Huang, Hepburn & Espiritu, 2003). Bringing evidence-based treatment to Ontario requires a dual effort: (1) to provide the financial resources and public agenda to see that children receive services on the basis of need, not availability, and (2) to ensure that the services provided are of the highest quality and most scientifically sound. While the government must address the financial aspects of this course, the children’s mental health sector is challenged to move forward on the accountability and quality front.

If Ontario’s children’s mental health system is going to tackle the implementation of evidence-based practices, then what do we need to know to get the job done? This question provides the main focus of the work described here<sup>1</sup>. A survey of Executive Directors and clinical staff in 80 children’s mental health service provider organizations was conducted in order to better understand the barriers and facilitators to their use of research knowledge, their capacity to link with the evidence based literature, their use of evidence-based treatments, and their characteristics relative to organizational readiness for change.

## **Methodology**

### **Procedure and Instrumentation Package**

Two data collection forms were used to survey clinical staff and Executive Directors from the 80 Children’s Mental Health Ontario (CMHO) member organizations. Clinical staff and Executive Director survey forms were developed using a web-based survey application. A letter describing the purpose of the project and providing the URL links to the two surveys was sent by electronic mail from the office of CMHO to the Executive Directors of member organizations, with a request that they complete the Executive Director’s survey and circulate the clinical staff survey to practitioners within their organization. In addition, a Microsoft Word file format version of the clinical staff survey was included in the email communication to be circulated to clinical staff for whom the web version presented a barrier. In order to increase the response rate, the letter and its attachments were re-circulated to Executive Directors on a weekly basis, beginning with the onset of the survey (June 21, 2004) to the last week (July 19, 2004).

### **Organizational Capacity for Research Utilization: Acquire, Assess, Apply, Adapt**

One section of the survey conducted with Executive Directors and clinical staff working for CMHO member organizations involved members’ capacity for research utilization. The four A’s concept – Acquire, Assess, Apply, and Adapt was proposed by the Canadian Health Services Research Foundation (CHSRF, 2004) to capture the essential elements of an organization’s capacity for knowledge/research utilization. According to the CHSRF, “many organizations would like to make better use of research but aren’t sure where to start. Others feel they are doing well, but would also like to know if there are areas in which they could improve” (CHSRF, 2004).

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<sup>1</sup>For the full report, visit <http://www.cmbo.org/documents/KTandIofEBP.pdf>

Survey questions on this topic explored whether the organization can find the research evidence it needs (Acquire), can assess whether the research is reliable and of high quality, relevant and applicable (Assess), can adapt the information to suit its needs, client population, environment (Adapt); and whether the organization can implement and adopt the research information in their context (Apply). This framework was also used in an earlier research study with multiple stakeholders and sectors involved in Ontario's children's mental health system (Barwick, Boydell, & Omlin, 2002).

### **Organizational Readiness for Change**

Another section of the survey addressed factors related to organizational readiness for change. The literature identifies major factors seemingly involved in transferring evidence-based practices (EBPs) to practitioners; however, understanding how to do it needs improvement (Simpson 2002). Simpson and colleagues have incorporated these major factors as elements in an integrated framework. This kind of infrastructure is particularly important for conducting systematic studies of efforts to disseminate feasible and effective treatment innovations.

Although change at both the personal and organizational levels is constant and universal, making it intentional and positive requires attention and planning. This is especially true at the organizational level, which incorporates the collective attitudes, actions, and relationships of a group of individuals. There is growing consensus that problems in transferring research to practice are more likely to be due to organizational factors (e.g., leadership attitudes, staff resources, organizational stress, regulatory financial pressures, management style, tolerance for change) than how materials are disseminated (e.g., packaging, training, roll-out).

### **Texas Christian University (TCU) Program Change Model**

Simpson (2002) presents a process model of program change that describes the introduction of new knowledge into a program or organization. This process includes exposure to new knowledge (i.e., new practice), adoption of the practice or knowledge, implementation or exploratory use, and practice or routine use. If fully realized, the transfer process can then lead to program or organizational change and improvement. Each of these stages of transfer can be impacted by organizational attributes. Of particular importance are institutional and individual readiness (e.g., motivation and resources), and organizational dynamics, such as climate for change and staff attributes. The literature identifies several important factors that appear to influence the change process.

The TCU Organizational Readiness for Change (ORC) assessment includes 115 Likert-type items (5-point Likert response) on 18 content domains that take 10 minutes to complete. It has satisfactory reliability and validity with samples in the addictions field. The ORC focuses on the following dimensions and subscales: motivation for change (program needs, training needs, pressure for change), program resources (office/staffing, training, equipment), and organizational dynamics (staff—growth, efficacy, influence, adaptability, and orientation; and climate—mission, cohesion, autonomy, communications, stress, and change). The ORC was modified for purposes of this study by altering terminology to fit the CMH sector and through the elimination of several items in order to reduce completion time and improve response rate.

*Provision of Evidence-Based Treatments.* Respondents were also provided with a list of evidence-based interventions / programs and asked to identify those provided within their service setting.

## **Results**

**Respondent Characteristics.** Three-quarters of 80 Executive Directors surveyed responded. They predominantly had backgrounds in social work, had over 16 years of clinical and managerial experience, and represented organizations providing a wide range of clinical services. Among an estimated population of 3,951 clinical staff, 12.2% responded. The majority had backgrounds in social work, had over 16 years experience, and were affiliated with a range of clinical services. Of these respondents, 65.7% were clinical staff, 16% were clinical managers also providing service, and 18.3% were clinical managers not providing service. Half the responding agencies had annual budgets in the \$1 to \$5 million range.

**Linking to the Internet & to the Evidence Base.** Among both Executive Directors and clinical staff, over 65% thought it was “likely” that their colleagues would turn to the Internet as a resource. About two-thirds of clinical staff and 77% of Executive Directors link with a college or university. Fewer than 40% of CMHAs have organizational access to a university or college library.

**Utilization of Research Information.** Both Executive Directors and clinical staff regard their organizations' ability to access, assess, adapt, and adopt research information as “somewhat well”—this provides a useful benchmark for future comparison, and suggests there is possibility for improvement.

**Organizational Readiness for Change.** Results indicated that clinical staff and their Executive Directors share many attitudes and perceptions about their readiness to deal with organizational change. There were two exceptions: clinical staff perceive higher pressure for change and Executive Directors sense greater need for program improvements. Curiously, pressure for change is not perceived as coming from agency boards or consumers, but rather from supervisors (62.5%), other staff (52.6%), funders (39%). Fewer than one-third of respondents from both groups perceive pressure for change from consumers, and fewer than one-quarter of Executive Directors perceive pressure for change from their board of directors. Such pressures need to increase to a point where they will be sufficient to motivate change

**Use of Evidence-based Treatments.** The 10 most commonly used EBTs were cognitive behavior therapy (65%), COPE (42.7%), wraparound (42.5%), behavioral parent training (41.2%), brief strategic family therapy (39.2%), narrative therapy (38.8%), “The Incredible Years” (36.4%), multisystemic therapy (35.9%), “Stop Now and Plan” (32.4%), and “Right from the Start” (29.3%). Among Executive Directors, half perceived their services/programs to be supported by research evidence “somewhat,” while the majority of clinical staff were more optimistic (40% said “pretty much”). This information provides a useful benchmark against which to measure improvement.

## **Conclusion**

A seemingly simple task of transferring a number of evidence-based practices to the field is anything but simple. It requires involvement from all stakeholders, good planning and resourcing, and a system that can develop a culture of evidence-based practice delivery and accountability. This will not be a quick and easy journey. Changing practice is a formidable task that occurs at a painstakingly slow pace often requiring changes in practice behavior, program restructuring, and reallocation of resources. This is especially difficult in an environment of tight budgets and competing priorities. It will require engaging policy and decision-makers, leaders, and practitioners; educating and supporting the absorption of new knowledge and ways of doing things; planning and patience. There will be opportunities and the challenge will be to find them and take them up. This research leaves some important questions unanswered and, thus, some future directions: who are the champions of change, what are the incentives for change, and how can we balance the importance of professional development with the onslaught of service need?

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## **Symposium**

# **Challenges in Implementing Evidence-based Treatments in a State System of Care**

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### **Symposium Introduction**

**Martha Morrison Dore**

According to a report from the National Advisory Mental Health Council (NIMH, 1999), transporting models of mental health treatment whose efficacy has been well established in rigorous clinical trials to application in daily practice is a top priority. Further, taking such models to scale, that is, implementing them throughout a public service system, is essential to insure their widespread application as well as to demonstrate their effectiveness in the “real world,” outside the highly controlled environment of the laboratory. Further, without large-scale application of these models of mental health treatment, their effectiveness within a range of service settings, under a variety of conditions, and with various client populations cannot be determined.

Despite the recognized importance of large-scale implementation of evidence-based mental health treatments (EBTs), few studies have examined the process of implementing these models on a statewide basis. While there is an extensive and growing literature on *technology transfer* that looks at what it takes to move an EBT from the laboratory to the field, particularly in the substance abuse field, most of the previous work in this area has studied the experience of a single agency or organization in adapting a new treatment technology and focused on the organizational variables that facilitate or impede implementation. The processes involved in large-scale technological innovation carried out on a statewide basis are largely unexplored. Further, the work that has been done on technology transfer has focused primarily on adult services. There are few, if any, studies of this process with regard to EBTs in the children’s mental health field.

Five years ago Connecticut’s Department of Children and Families, which provides mental health, juvenile corrections, and child welfare services to children and families, moved to implement evidence-based, family-focused children’s mental health services state-wide as part of the local systems of care. Three nationally recognized EBTs, as well as one promising practice model developed locally at the Yale Child Study Center, were selected for implementation. In this symposium, those involved in this effort examined the processes involved in implementing, developing, and adapting evidence-based treatments for children within a state system of care.

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### **Setting the Context for a State-Wide System of Care**

**Judith Meyers**

Integrating research-proven psychosocial treatments in a newly developed community delivery system has been an important mechanism of child mental health reform in Connecticut. These efforts to enhance local systems of care by implementing evidence-based treatments (EBTs) are both the culmination and beginning of a process of systems change that began in 1975 when Connecticut established a consolidated state children’s agency, the Department of Children and Families (DCF), which included child welfare, child mental health, and juvenile reform services.

### **Chair & Discussant**

**Martha Morrison Dore**

### **Authors**

**Judith Meyers**

**Janet Williams**

**Joseph Woolston**

One of the mandates of the newly formed agency was to create a children's mental health system that connected all Connecticut children with mental health needs to appropriate and timely care. However, unlike many other states, Connecticut did not have a history of investing in community-based mental health services for children and families, nor did it have the kind of strong family advocacy and support system that brought system of care changes in other states. Despite this, in 1997 legislation was passed that mandated DCF to adopt system of care principles and approaches to service delivery. By 1999, approximately 18 communities had developed local systems of care collaboratives, thereby laying the groundwork for the expansion of the system of care initiative by DCF.

By 1999, Connecticut was investing more than \$200 million dollars a year in mental health services for children, primarily in residential treatment and acute psychiatric hospital care. These programs were administered by five separate state and local systems, resulting in a complex, fragmented system of care that was difficult for families to access and unresponsive to the mental health needs of children. A state budget crisis precipitated the state legislature to request a study of the state system of mental health care for children including service utilization and expenditures across state agencies. This report, which was prepared under the direction of the Child Health and Development Institute (CHDI), a not-for-profit policy, research and educational organization, was issued in 2000 and contained a series of recommendations to improve the quality and integration of children's mental health services state-wide. These recommendations included significant restructuring in the way services were organized, financed and delivered to build capacity at the local level, using community-based, family-centered, culturally competent, systemic approaches to treatment rather than a "bricks and mortar" approach that would increase residential capacity. Among recommendations were the following:

- Organize and develop a local care delivery system;
- Change the practices of providers which focused on out-of-home care of children and were individually rather than family-based;
- Use scarce resources in a more integrated, efficient fashion;
- Challenge communities to develop new community resources, both formal and informal; and,
- Involve families in care decisions and processes.

In mid-2000, in response to the CHDI report and a report from the Governor's Commission on Mental Health, the state's General Assembly charged the DCF and Department of Social Services (DSS) commissioners with developing a plan to reform the delivery and financing of children's mental health services in Connecticut. This plan, which was presented to the General Assembly in January 2001, outlined the initiative entitled Connecticut Community KidCare, which built on and expanded the existing community collaborative structure to develop local systems of mental health care for children and their families. The KidCare initiative, which began operation in July 2002, called for re-allocating state funds to develop a wider range of community level services, including intensive home-based mental health services. Since that time, over 21 million dollars have been allocated annually to fund local services such as mobile crisis teams, care coordination, intensive in-home services, as well as a state-wide family advocacy organization and KidCare Institutes designed by CHDI to bring state and provider agencies and family members together to learn how to work with a community-based, family-centered, strengths based approach.

Since its inception, CHDI has provided technical assistance, consultation, and facilitation in the design and development of the KidCare plan. For example, DCF contracted with CHDI to manage an evaluation of the initiative. The first year of this multi-year evaluation process focused on how the initiative was implemented and on establishing baseline measures to assess its impact on service delivery. The evaluation will address questions such as whether KidCare services are being implemented as planned, whether these services are child and family-centered, whether families are satisfied with the services they are receiving under the KidCare initiative, and whether system capacity and responsiveness are improving as intended.

In early 2001, CHDI sought foundation support to establish a Center for Effective Practice (CCEP) in children's mental health and substance abuse services. CCEP was designed as a collaborative endeavor among the major state child-serving agencies in Connecticut and its two premier academic institutions, Yale University and the University of Connecticut, to advance the level of children's mental health care through development, evaluation, training and dissemination of evidence-based prevention and treatment services. CCEP assumed responsibility for oversight of the implementation and expansion of one evidence based treatment (EBT), Multisystemic Therapy, statewide, as well as the identification and transportation of other EBTs into the KidCare system of care.

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## **Contextual and Organizational Factors Impacting Growth of Connecticut's MST Service System**

**Janet Williams**

Researchers have begun to examine the contextual factors and variables (organizational and extra-organizational) that influence the transportability of evidence-based treatment (EBT) models from research to real world settings (Schoenwald & Hoagwood, 2001). During the past three years, Connecticut has implemented several EBT models within the children's public service system. During that time, one particular EBT, Multisystemic Therapy (MST), has been disseminated state-wide. Beginning with three MST teams piloted in two private, non-profit provider organizations, the MST service system in Connecticut now includes twenty-four MST teams hosted in eight agencies, funded by two large collaborating state child-serving systems. In addition, there is a MST support system within Connecticut established specifically to handle MST training, program management and quality assurance. Attention to developing this state infrastructure to support MST dissemination was a key factor in facilitating the adoption and expansion of this EBT model across the state. Important contextual and organizational factors in the implementation process are examined here because of their significance in Connecticut's success in transporting MST successfully from a controlled research setting to real world Connecticut practice.

The Connecticut Department of Children and Families (DCF) made the initial decision to bring MST to Connecticut in 2001, based upon several driving factors. First, was a pressing need to create services for serious juvenile offenders with mental health needs who were returning to the community from residential placements and training schools. Second, was the opportunity for DCF to utilize a federal funding stream (Juvenile Accountability Block Grants) for new program development awarded by the state Office of Policy and Management. Third, was the well-documented success with conduct disordered youth of the MST program and the offer from model developers for technical assistance with planning, training and quality assurance mechanisms.

Connecticut's interest in growing a community-based service system filled with empirically supported children's treatments led to DCF pilots of several comprehensive, family-based EBP models with research evidence demonstrating treatment efficacy. MST increasingly was being showcased nationally as being cost effective, performance-driven and enhanced by techniques for measuring the model adherence of program staff (Barnoski, 2004).

Connecticut began with three DCF-initiated MST pilots that eventually expanded to nine teams serving post-adjudicated youth under DCF guardianship. The clear rationale was the comparative cost advantages in setting up community-based MST programs versus the steadily rising costs of out-of-home treatments and institutions for treating juvenile delinquents with emotional and behavioral disorders. DCF established goals to move delinquent children within the juvenile justice and child welfare service systems into predominantly community-based services. This was consistent with the principles of the evolving statewide system of care, officially adopted by the state legislature in early 2001.

DCF developed an MST program request for proposals (RFP) with the assistance of MST Services, Inc., the technical assistance arm of MST dissemination, offering agencies a training and quality assurance package helpful in planning and adopting the MST model. The RFP included program development details such as referral criteria, staffing requirements and quality assurance mechanisms necessary to implement MST programs within agency settings. A competitive bid process among Connecticut non-profit community providers resulted in the selection of two private provider agencies with experience in serving youth with conduct disorders. Key participants in those selected agencies began working closely with DCF and MST Services, Inc. to develop a shared program vision and to define specific procedures for program outcomes and adherence monitoring.

One important aspect of DCF MST development was the careful assessment of potential program sites. Transportability studies (Schoenwald, Sheidow, Letourneau, & Liao, 2003) have identified certain organizational variables as influencing EBT implementation. Organizational variables that have been found to influence service delivery and model effectiveness are the size and organizational stability of an agency; the leadership style and commitment to EBP from agency administrators; the availability of qualified staff, and; the reputation and networking ability of agencies with the larger service system (Elliot & Mihalic, 2004).

The two initial MST host agencies were Connecticut-based but belonged to larger parent service organizations with multiple agency sites in Connecticut and in other states. For both host agencies, there was compatibility evident between the agency's organizational mission and MST program principles. Both agencies had strong and innovative leaders, successful reputations serving the target population, and managers with enthusiastic commitment to MST. There also was compatibility and agreement between the provider agency and DCF, who was responsible for both making the MST referrals and funding the agency's contracts. These factors contributed to ease of model implementation and program start-up for new MST host agencies.

Other organizational factors have been identified as influencing staff adherence to the specific EBT model and the achievement of desirable treatment outcomes (Henggeler, Schoenwald, Liao, Letourneau & Edwards, 2002). In the MST host agencies, there were correlations between these variables that were probably mediated by organizational factors such as work climate, job satisfaction, opportunity for rewards and organizational advancement. These positive agency characteristics contributed to workforce stability within MST programs, staff satisfaction and the development of theoretical and clinical skills necessary for effective MST program implementation.

Some contextual variables presented barriers to effective MST model dissemination. Access to funding streams to support MST model implementation and expansion in Connecticut was challenging. State and federal funding streams were generally categorical, time-limited, and difficult to coordinate across service systems and often limited in the flexibility needed to support community-based program development. This was particularly evident in piloting MST programs for multi-problem children and families that appealed to the needs of several state agencies serving that target population (e.g., Education, Juvenile Justice, Mental Health, etc.). Additional capacity for these state services agencies to contribute to the development, implementation and sustainability of a state MST system would have facilitated financing infrastructure building and program dissemination of MST. It was also challenging to build EBT services within a state system where service dollars do not able follow the child, thus creating financial disincentives for EBT adoption. Higher reimbursement rates for institutionalization



and restrictive treatment services worked against MST dissemination efforts, despite the opportunity to achieve cost savings, earlier treatment intervention and superior service outcomes. In spite of strong state commitment to empirically supported, community-based children's services, state and federal funding mechanisms and service disincentives sometimes worked against the MST adoption efforts.

Workforce development was another area that proved difficult and was ultimately a limiting factor in the rate of state-wide MST service dissemination. In spite of competitive salaries and attractive work environments, there were not sufficient numbers of trained therapists or supervisors to keep pace with the demands of new program development and usual rates of staff turnover. Efforts were made to enlist the help of local universities and training institutions; out-of-state recruitment efforts and creative hiring incentives were necessary to recruit adequate staff numbers to open new programs without adversely impacting existing MST programs. Resources designated for continuous staff training and professional development were helpful in supporting the demands created by the rapid growth and development of an MST service system within Connecticut.

The variety of conditions and processes to be described herein reflect the range of contextual variables and organizational factors that come into play when adopting an established and well researched treatment model within a state public service system. Completing four stages of implementation—including the preparation, planning, development and expanding of MST pilots in Connecticut—provided the experience and lessons necessary to support a statewide implementation process. The mechanics of successful state adoption of MST was only a first leg of a technology transfer process. The subsequent legs of evaluating the effectiveness of the implementation and resulting service outcomes now lie ahead.

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## ***Transforming IICAPS into an Evidence-Based Practice (EBP)***

**Joseph Woolston**

Most evidence-based treatments have been developed under nearly ideal conditions that support careful selection and training of intervention staff and allow for the considered selection of patients to eliminate the possibility of confounding disorders. In addition, these treatments are generally guided by a treatment manual, have well-developed adherence and treatment effect measures and technically sophisticated mechanisms for data management. Under these conditions, new treatments have maximal opportunities to demonstrate efficacy or effectiveness and prepare for their transport into the messy real world of community based clinical care. Such was not the case with the Intensive In-Home Child and Adolescent Psychiatric Service (IICAPS).

The IICAPS was developed at Yale in 1996 to address the gridlock resulting from the constantly escalating numbers of children presenting at psychiatric hospitals and emergency rooms with serious psychiatric disturbances and the problems of shrinking access to and availability of treatment resources (Woolson, 2003). Although originally implemented in one of Connecticut's larger cities and funded by managed Medicaid, within six years of its initial implementation, IICAPS was selected for statewide replication by the Connecticut Department of Children and Families (DCF) as one of several home-based models of behavioral health treatment. In a one-year period, IICAPS was replicated in fifteen different behavioral health sites across the state as part of KidCare, an innovative public mental health initiative. Almost none of the essential elements for establishing an evidence based treatment (EBT) described above were in place. This model's effectiveness would have to be established in the real world of day-to-day practice in a wide range of situations. This summary describes how the developers of IICAPS put mechanisms in place to begin this process.

IICAPS is a structured, manualized intervention informed by theories derived from developmental psychopathology, systems change theory and transactional risk models. IICAPS services are provided by a two-member team consisting of a master's level clinician and a bachelor's level mental health counselor. This team provides a continuum of psychiatric and other comprehensive services to the child and family in their own home and community. All teams are supervised regularly by a child psychiatrist, who also serves as IICAPS Medical Director and presides at weekly rounds, and by a senior clinician. Children appropriate for IICAPS are those who are in transition between psychiatric hospital and home, who can be diverted from psychiatric hospitalization following a visit to the Emergency Department, or whose needs are not being met through traditional outpatient care. IICAPS services include: (1) direct psychiatric assessment and treatment of youth with serious emotional disturbances; (2) intensive, comprehensive assessment and intervention for all household members as needed; and (3) availability of 24/7 mobile crisis intervention.

Although seen as a promising practice, the rapid proliferation of IICAPS programs in Connecticut presented a significant challenge to the developers' interest in refining the model and assessing its effectiveness. Serious questions arose about the ways in which fidelity to the model could be insured and clinical effectiveness could be sustained when there was considerable variance in the skill level of the clinicians providing the service and in their understanding of the model, and when direct supervision by IICAPS' developers was not always possible.

Phase-specific tools developed and refined in the field as mechanisms for insuring treatment fidelity and adherence to the program's aims. These IICAPS tools are used to create tasks that are shared by the family and treatment team, resulting in specific documents, action steps and treatment phases that lead to the specific outcomes desired by the child and family. The multiple purposes served by IICAPS tools as simultaneous structures for engagement, assessment, treatment, supervision and quality assurance are unique to the model. Three distinct treatment phases of Assessment and Engagement, Work and Action, and Ending and Wrap-Up, and four domains of intervention—Child, Family, School and Environment and other Systems—are defined by the use of these tools. These tools and others such as a three

generation Genogram, Main Problem identification, an Eco-domain Map, a pictogram representing the child's strengths and vulnerabilities, and goal attainment scaling provide the programmatic infrastructure that forms the basis for measurement of fidelity to the model. This infrastructure is further supported by training, case conferencing, supervision and consultation.

With this structure in place, field-based studies of programmatic effectiveness in multiple sites and with widely varying populations are able to move forward to inform further model development as well as practice in the field. Next steps in the establishment of IICAPS as an EBT include: (1) development of, and measurement of fidelity to a treatment manual; (2) assessment of the relationship between adherence to the IICAPS model and treatment outcomes for children and their families; (3) development of a web-based data management system accessible by clinicians and supervisors as well as the model's developers; and (4) generating additional funding for further evaluation of the model's effectiveness across problems and populations.

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## **Symposium Discussion: Moving into the Future**

**Martha Morrison Dore**

Lessons learned in Connecticut's efforts to implement evidence-based treatments (EBTs) state-wide include the need for increased interagency collaboration between those advocating for adoption of EBTs in the public and private sectors and the community-based clinicians who must implement these models. The experiences in Connecticut illustrate both problems and progress in taking EBTs to scale. One ongoing issue in the state has been the absence of an integrated information management system that can aid in insuring treatment fidelity, track treatment progress, and capture the relationship between implementation of EBTs and treatment outcomes. In addition to the construction of such a data management system, the need for technical support and access is ever present. Setting a standard of empirical inquiry for all service providers with the expectation that service delivery will be evaluated and subjected to continued improvement is essential to supporting a statewide commitment to evidence-based treatments. In addition, the implementation of a learning organization model, which establishes a collaborative network across agencies and positions, aims to open up dialogue among researchers, clinicians, managers, consumers and other key stakeholders regarding best practices in children's mental health services. Facilitating such cross-agency collaborations in empirically-based knowledge development can help support the public agencies' need for accountability to legislators and other audiences, and respond in a timely fashion to cross-cutting workforce training and development issues and needs which are key to treatment fidelity in implementing EBTs.

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# **Symposium**

## **Enhancing and Adapting Treatment Foster Care**

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### **Symposium Introduction**

**Elizabeth M. Z. Farmer**

Treatment Foster Care (TFC) is considered to be an evidence-based treatment for youth. This symposium discusses research findings and research focused on existing TFC programs, factors related to positive outcomes, and an ongoing research project to improve “real world” practice in TFC. Background from Chamberlain’s evidence-based model of TFC and from our observational study of TFC in real world practice provide a backdrop for a new randomized trial of “enhanced real world” TFC, “Together Facing the Challenge.” This symposium highlights findings, provides rationale and details on modifications of evidence-based TFC, and discusses research challenges and opportunities in this type of work.

### **What We Learned and Where It Led Us**

**Elizabeth M. Z. Farmer**

#### **Introduction**

Treatment Foster Care (TFC) is one of few community-based treatment options for youth that is viewed as evidence based. Available evidence, though, comes almost exclusively from a small set of studies conducted by Chamberlain and colleagues on TFC delivered via the Oregon Social Learning Center (OLSC; Chamberlain, 1994, 2002). Little is known about implementation or outcomes of TFC in other settings. From 1998-2002, our group conducted a National Institute of Mental Health (NIMH)-funded naturalistic study of TFC in North Carolina to examine how TFC is used within systems of care, to examine variation in implementation of TFC, and to determine whether variations in implementation were associated with variations in outcomes for youth (Farmer, Burns, Dubs, & Thompson, 2002; Farmer, Wagner, Burns, & Richards, 2003).

This work suggested substantial variation in implementation and significant deviations from established standards of care, but also identifiable factors related to improved outcomes for youth. Hence, we used these findings, in conjunction with the framework provided by Chamberlain’s evidence-based model, to develop an enhanced version of TFC to use in existing TFC agencies in an attempt to improve the overall quality of TFC and to address the needs of agencies, families, and youth. The resulting model, called “Together Facing the Challenge,” is now being tested in an NIMH-funded randomized trial. The current study examines whether enhanced TFC, Together Facing the Challenge, results in better practice and outcomes than “usual practice” TFC.

#### **Method**

The initial study, Therapeutic Foster Care in a System of Care, was conducted between 1998 and 2002 throughout North Carolina. Preliminary findings from this study have previously been summarized in these *Proceedings* (Farmer, Allred, Breland-Noble, Elbogen, & Burns, 2004). Quality of implementation of TFC was assessed in two ways: (1) the degree of conformity to the Foster Family-based Treatment Association’s Standards of Care for TFC (FFTA, 1995), and (2) the conformity to elements of Chamberlain’s evidence-based model (Chamberlain & Mihalic, 1998; Chamberlain,

#### **Chair**

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2002). The study included 183 youth and their treatment foster families served by 46 TFC programs. Data were collected at study entry, every four months, at discharge, and at six, 12, and 18 months post-discharge.

Findings from this study were used to develop the model and methodology for the ongoing NIMH-funded randomized trial of enhanced TFC. In the current study, 18 of the original agencies are participating: nine in the intervention condition, and nine as control sites (150 families in each condition). Training and consultation are provided to intervention sites for TFC supervisors, treatment parents, and clinicians. Data are collected at baseline, and every two months for two years.

## **Results and Discussion**

Results from the initial study showed tremendous variation in implementation of TFC (Farmer, Burns, Dubs, & Thompson, 2002). Overall conformity to the FFTA Standards of Care was not related to outcomes. However, better conformity on the Program Standards subscale of the FFTA standards was related to several process variables that are core elements in Chamberlain's evidence-based model of TFC. TFC agencies with higher conformity on the Program Standards portion of the FFTA Standards showed more frequent meetings between treatment parents and supervisors ( $p < .05$ ), better supervision of youth ( $p < .01$ ), and more consistent consequences for youths' problematic behaviors ( $p < .05$ ). All of these are core elements or mediators related to better outcomes in the evidence-based model.

In addition, we assessed correspondence between usual practice TFC and Chamberlain's evidence-based model. As noted above, evidence-based TFC is based upon a growing body of work by Chamberlain and colleagues at the OSLC (e.g., Chamberlain, 2002, 2003; Chamberlain, Ray, & Moore, 1996; Smith, Stormshak, Chamberlain, & Bridges-Whaley, 2001). In addition to work conducted by Chamberlain and colleagues, TFC is built upon decades of work on social learning and the development/prevention/treatment of antisocial behaviors. TFC at OSLC is an integrated, coherent, well-staffed program. It is clearly an ideal type of TFC. As with other community-based comprehensive services, it uses its resources to provide individualized services to youth and support to treatment parents. Most of the services are provided by in-house providers, hired and supervised by the TFC program or OSLC. Evidence-based TFC is based firmly in the tenets and practices of social learning, with a strong emphasis on proactive and positive approaches (this is operationalized, concretely, in consistent use of a points and levels system within treatment homes). It also provides very consistent supervision and support to treatment parents (e.g., daily contact, weekly group meetings).

Data from the initial study suggested that usual practice TFC was quite different from Chamberlain's evidence-based model. For example, OSLC provides brief didactic pre-service training for new treatment parents and then includes extensive in-home support and training once a youth is placed with a family. In contrast, most of the usual practice TFC agencies provided longer didactic pre-service training (97% required some pre-service training, and 71% required at least 30 hours of such training), however, only 21% of agencies provided at least 24 hours of in-service training annually. While the OSLC treatment parents had almost daily contact with supervisors or other program staff, this was virtually unheard of in our usual practice sample, and only 29% of the treatment parents reported meeting weekly with their supervisor. A points and levels system, a standard part of OSLC TFC, was being used in 18% of our sample of TFC homes.

As in the OSLC model, however, our data show that improved outcomes for youth were related to better implementation of some of these elements. For example, youth outcomes were more positive in homes with closer supervision of the youth ( $p < .10$ ), increased training for treatment parents ( $p < .05$ ), and increased contact between treatment parents and their supervisors ( $p < .05$ ).

However, interviews with agency directors suggested elements of evidence-based TFC that would be very difficult to replicate in our sample. For example, a cadre of in-house therapists, skill trainers, and close relationships with other agencies (e.g., schools, juvenile justice) were not available or feasible in

our agencies. There was also a strong ideological concern about comprehensive use of points and levels systems within TFC homes (agency directors repeatedly said that this was “something that’s done in group homes or residential treatment, not something people should do in their homes.”). Therefore, rather than disseminating the entire package of OSLC TFC, we focused on strengthening two elements of evidence-based TFC that were weak in existing TFC agencies but could be reasonably improved. The focal elements were: (1) improved supervision of treatment parents, and (2) improved training and supervision of treatment parents to implement effective (and, where possible, proactive) behavioral strategies for youths’ problem behaviors.

In addition to this lack of correspondence between usual practice TFC and Chamberlain’s evidence-based model, findings also suggested some significant differences in the mission and nature of usual practice TFC. Of primary importance was length of stay. Evidence-based TFC is designed to be a relatively short-term treatment (i.e., six to nine months). In our usual practice sites, in contrast, TFC was often a relatively long-term placement for youth—nearly half of the sample remained in care for longer than two years (Farmer, Wagner, Burns, & Richards, 2003). This shift in length of treatment provided opportunities and needs that are not focal in the evidence-based version of TFC. Two of these appeared to be particularly central: treatment for prior trauma (particularly sexual abuse), and activities related to preparation for adulthood.

Therefore, these findings were used to build an enhanced approach to TFC for community-based TFC agencies. This enhanced model, Together Facing the Challenge, includes elements from three sources: (a) elements that are core to evidence-based TFC and were also evident in the majority of existing usual practice TFC programs, (b) elements from the evidence-based model that appeared particularly key for producing outcomes (and that were viewed as feasible in usual practice), and (c) elements not currently included in evidence-based TFC or usual practice (i.e., apparent gaps). Table 1 provides an overview of these components. The shaded area indicates components that are the focus of implementation and training for the ongoing intervention study. From Chamberlain’s evidence-based TFC, we have incorporated increased supervision/support for treatment parents and increased training/support for treatment parents to implement proactive behavioral strategies (see Murray’s summary below). In addition, to fill apparent gaps in both evidence-based TFC and usual practice, we have added an emphasis on trauma-focused treatment and preparation for adulthood (see Dorsey’s summary below).

**Table 1**  
**Development of Together Facing the Challenge**

|  | <i>Evidence-based model</i> | <i>Found in “usual practice”</i> | <i>Together Facing the Challenge</i> |
|--|-----------------------------|----------------------------------|--------------------------------------|
| Service Coordination/Case Management             | Yes                         | Yes                              | Yes                                  |
| Treatment Parents as key providers/change agents | Yes                         | Yes                              | Yes                                  |
| Team approach to treatment                       | Yes                         | Yes                              | Yes                                  |
| Respite  | Yes                         | Yes                              | Yes                                  |
| Work with youth’s family                         | Yes                         | Yes                              | Yes                                  |
| Reduce association with deviant peers            | Yes                         | Yes                              | Yes                                  |
| Intensive Supervision/Support                    | Yes                         | No                               | Yes                                  |
| Proactive approach to behavior problems          | Yes                         | No                               | Yes                                  |
| Preparing for transition to adulthood            | Not systematic              | No                               | Yes                                  |
| Addressing previous trauma and sequelae          | Not systematic              | No                               | Yes                                  |

## Conclusion

TFC is an evidence-based treatment for youth. Current evidence comes from a limited number of randomized trials conducted by Chamberlain and colleagues in Oregon. Current efforts in North Carolina build from this evidence-based approach to develop and test an enhanced model of TFC aimed at improving practice in usual care TFC programs. This enhanced model, Together Facing the Challenge, builds from existing TFC programs, incorporates elements of evidence-based TFC, and extends TFC to fill gaps in usual care TFC. This enhanced model is currently being implemented and tested, via randomized trial.

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## **Together Facing the Challenge: Adapting Evidence-based TFC**

Maureen Murray

### **Introduction**

Together Facing the Challenge is a model of care that incorporates many of the elements of evidence-based Treatment Foster Care (TFC). This model has included additional components from other well established resources. This summary highlights the approach for modifying the TFC-specific components of evidence-based TFC into “real world” practice.

### **Method**

Our intervention involves the following components: in-person training with TFC supervisors; in-person training with TFC parents; in-person training with clinicians working with TFC kids; and follow-up consultation, training, and support. In this summary we describe the interventions aimed at the treatment parents and their supervisors. The implementation is guided by a desire to change practice in the participating agencies. Therefore, training with supervisors is used as an opportunity to engage these individuals in the TFC approach and to prepare them to work intensively with their treatment families. The initial two-day training leads them through an accelerated version of the parent management training for the treatment parents and lays the foundation for our partnership with them. One of our goals is to provide supervisors with the needed information and training that will enable them to co-facilitate the upcoming parent sessions with our staff.

The parent training consists of a standardized six-week curriculum that addresses core concepts of the Oregon Social Learning Center approach to behavior management. This training is conducted one evening a week for 2.5 hours and includes a meal. Although adaptations to this structure have been made based on agency request and/or need, we have found that the training is most effective when administered over the six-week period. The weekly interval offers parents an ideal opportunity to practice the skills being presented in the training and to obtain feedback from the leaders about specific problems or issues faced while trying out some of the parenting strategies during the week. We also encourage supervisors to follow-up with their families between sessions to prompt, encourage, and assist families as they practice these newly acquired parenting skills.

Follow-up consultation with supervisors begins when the parent training ends, and continues for one year. The goal of this component is to teach, support, and coach supervisors as they work with their assigned families. The consultation consists of bi-weekly or monthly in-person or phone meetings with each agency. These meetings are generally an hour in length and the agenda is tailored to best meet the individual needs of each group. Some of the topics covered during the sessions include: development of a structured form for supervisors to use during individual meetings with treatment parents; dealing with challenging parents; problem solving difficult child behaviors; developing action plans; using a supervisor worksheet and guide; and planning for a follow-up booster session with parents. In addition, supervisors are encouraged to e-mail or call between scheduled meetings for consultation or support as needed.

A key to our success thus far in implementing the enhanced model of TFC within real world TFC agencies is the amount of time and effort we put forth at the start. The “up front” time spent building that foundation has been well worth the effort. We have learned the importance of providing support at both the direct staff (supervisor) and administrative levels. Although we had the advantage of having a previously established relationship with these agencies, maintaining those ties continues to be a very important variable in effectively implementing our enhanced model of TFC.

In order to move forward, we needed to overcome barriers confronted along the way. Agency staff initially voiced concern about getting parents to attend the trainings. Although this issue has come up across agencies, we have consistently had high turnout over the course of the six-week parent training. Being pro-active and identifying potential problems upfront (child care needs, food, reinforcements,

location), has helped us to avoid some of these problems that agencies have previously faced. Once we completed the initial trainings for treatment parents and their supervisors, we next confronted the challenge of figuring out how to be most effective and efficient in working to reach our ultimate goal of changing practice in the participating agencies. We are currently in this phase of our implementation across sites and are actively working toward “bringing it all together” by collaborating with agency staff and treatment parents in an effort to bring about change in practice.

## **Results and Discussion**

It has been exciting to watch agency staff and treatment parents incorporate various components of our enhanced model of care into their usual practice. Some examples of this include: videotaping training sessions for future use; using a bi-weekly form (one of our materials) to replace existing required documentation; establishing or re-establishing parent groups; and incorporating our training materials into their on-going training packet.

We have currently completed initial training for agency supervisors and treatment foster care parents at five of the nine agency sites that comprise the intervention condition of our study. We have trained a total of 60 agency supervisors and 250 treatment foster parents across the five sites. The number of supervisors trained per site ranged from 5 to 20 with treatment parent groups ranging from 15 to 57.

We are presently working in a collaborative effort in follow-up consultation with each of the agencies that have completed the initial (Phase 1) component of the enhanced model of care project. The follow-up component (Phase 2) consists of bi-weekly or monthly in-person and/or phone contacts with each site. This formal consultation continues over a 12-month period. In addition, booster sessions for treatment parents are conducted at 6 months and one year post initial training.

As previously mentioned, the initial stage of establishing and building relationships with staff at individual agency sites is critical to providing the foundation for the ongoing collaboration which will follow. This level of intervention within a real world setting requires a significant level of time, energy, and commitment on the part of each staff member. If staff are not invested in the project and do not think it will truly benefit them, the intervention will likely fail. Our goal is to train the supervisors, then offer them continuing support through the consultation model in an effort to sustain the intervention once the study has come to an end. This train-the-trainer model is viewed as a viable method of sustaining the training over time, and incorporating it into “practice as usual.”

The feedback we have received from the supervisors has been very positive across sites. Many of the comments pertained to the usefulness of the training materials, and the supervisors reported that they could readily apply the specific parenting skills and techniques presented during the training with families on their caseload. One supervisor, reflecting back over the training, stated: “It’s like we now have a common language or common ground in which to talk about parenting strategies during our individual meetings with treatment parents.” Supervisors also mentioned that they enjoyed the interactive style of the presenters and the hands-on activities presented throughout the training.

Although treatment parents initially balked about the length and duration of the trainings, the vast majority attended each session. After an initial meeting, one treatment parent said to me, “You know if I didn’t get anything out of coming here this evening I wouldn’t be back. See you next week.” Being able to engage the treatment parents in the training and making it meaningful to them was an essential ingredient in having such a high rate of attendance throughout the six-week period. Across sites, individual agencies required that their treatment parents attend the training. Agency staff were not convinced that parents would show up for the training. Many had previously experienced a significant degree of difficulty in this area. Some incentives that we provided and found to be effective included earning required training hours, nightly raffles, and providing dinner and child care. Some agencies offered additional incentives including money, or a larger raffle such as a weekend getaway or \$100 gift certificate. The catch was that you needed to be in attendance for all six sessions to qualify for participation in the drawing.

Evaluations from the parent training were very positive from both the seasoned treatment foster parents (e.g., “Even after 13 years of experience it’s helpful to hear new/different views in caring for kids in care.”), as well as from those new to the field (e.g., “This training has helped prepare me for bringing a child into my care.”). A few of the comments pertained to a desire for more advanced training, training in specific areas such as sexual abuse, dealing with reclusive kids, working with children with mental disabilities, and condensing the training into fewer sessions.

At each phase of our intervention, we make every effort to work collaboratively with the staff and encourage them to take on more of a co-facilitator role as we initiate training with their treatment families. By doing so we are laying the foundation for the on-going consultation (Phase 2) component of the intervention.

Thus far we have found that follow-up work with agency staff is necessary in order to facilitate the process of putting the enhanced model of care into practice as usual. Regularly scheduled in-person meetings and phone calls help to prevent potential problems from becoming insurmountable barriers to implementation. The consultation offers a forum for on-going dialogue with the supervisors of the treatment parents and provides them a vehicle to process issues and concerns they experience as they try to assist their treatment families in implementing the various skills and techniques presented in the parent training.

## ***New Additions to “Together Facing the Challenge”***

**Shannon Dorsey**

### **Introduction**

Evidence for the effectiveness of Treatment Foster Care (TFC) comes almost exclusively from a small set of studies conducted by Chamberlain and colleagues on TFC delivered via the Oregon Social Learning Center (OSLC; Chamberlain, 1990, 1994). Our initial National Institute of Mental Health (NIMH)-funded naturalistic study of TFC in North Carolina has suggested that TFC, as widely practiced, differs significantly from the OSLC-delivered model (Farmer, Wagner, Burns, & Richards, 2003). One important difference involves length of stay: The OSLC version of TFC is designed to be a short-term intervention of approximately six to nine months (Chamberlain, 1990, 1994). In contrast, youth in North Carolina remained in TFC for significantly longer periods of time—over half of the youth were in care for at least two years. In addition to longer lengths of stay, TFC also appeared to be the least restrictive placement for a substantial proportion of youth who were no longer in the custody of their parents and did not appear to have more permanent placement options. Many youth were reaching the age of 18 while in TFC.

Based on these findings of significant differences between the evidence-based TFC and “real world” TFC, it appeared that as initial behavioral difficulties were addressed, additional treatment needs became increasingly evident. Two particular areas were identified by key stakeholders: access to evidence-based trauma treatment for youth and assistance planning for transition to adulthood. However, neither of these areas, due to OSLC’s explicit focus on short-term treatment, had been systematically integrated into the evidence-based model of TFC.

Therefore, in an attempt to improve outcomes for youth in real world TFC in North Carolina, we are currently testing an enhanced model for real world TFC called “Together Facing the Challenge” in an NIMH-funded randomized trial. This enhanced model (in addition to providing increased training for TFC agency staff and parents—a crucial element of the evidence-based version), explicitly targets both of the additional identified treatment needs for youth (i.e., access to evidence-based trauma treatment and assistance in planning transition to adulthood). This summary discusses these additions, the gaps they address, and the challenges in their incorporation.

## **Implementation Issues**

Data and information come from interviews with agency representatives and treatment parents in the state of North Carolina, and from our experience with developing and implementing these additional treatments. The newly incorporated elements address prior trauma, particularly sexual abuse, and preparation for adulthood. The evidence-based trauma treatment component entails providing training and consultation for clinicians serving TFC youth in Trauma-focused Cognitive Behavioral Therapy (Deblinger & Heflin, 1996). The preparation for adulthood component also involves providing training and consultation to TFC staff and parents and is based on the work of Clark and colleagues (Clark, Deschenes, & Jones, 2000).

As previously mentioned, data from the initial study of TFC in North Carolina suggested that TFC was often a relatively long-term placement for youth; nearly half of the youth in that sample remained in TFC for longer than two years (Farmer et al., 2003). This is in marked contrast to the evidence-based model, for which six to nine months is the expected length of stay. Because externalizing behavior problems continue to be a clinical focus throughout the course of care, Together Facing the Challenge maintains and strengthens this focus through training and consultation with supervisors and training with treatment parents on effective behavior management strategies.

However, in addition to the behavioral focus, data from interviews with treatment parents show that as youth remained in care, the types of concerns shifted to include prior trauma that had gone untreated (particularly sexual abuse). Furthermore, agency staff and parents reported that there were not knowledgeable clinicians in their communities trained to address such issues. Exposure to trauma was prevalent in TFC youth: Nearly three-quarters of youth in the initial North Carolina TFC sample had experienced serious physical abuse, and half had experienced sexual abuse. Rates of abuse were somewhat higher among youth who remained in TFC for extended periods (more than nine months) than for youth who were discharged quickly.

In addition, as youth remained in care, treatment parents and agencies raised concerns about their level of preparedness for adulthood. Approximately 28% of our initial sample left TFC by “aging out” (i.e., by turning 18) and many of the TFC youth were in care during their adolescent years. Treatment parents and agency representatives reported that, overall, there were few resources in their communities to provide effective linkages for such youth and that treatment teams tended to focus on short-term and immediate needs/goals rather than on longer-term planning.

Together Facing the Challenge, therefore, incorporates specific elements in an attempt to fill these gaps. Trauma-focused Cognitive Behavioral Therapy training and follow-up consultation is provided to therapists who are working with youth in the TFC agencies randomized to the intervention condition. These therapists include a mixture of clinicians in public and private practices, the majority of whom work via contract with the TFC agencies (a marked difference from the in-house therapists in evidence-based TFC). TFC intervention agencies identified clinicians who serve their youth, and these clinicians were then invited to participate in the training. Specifically, this component involves providing an initial two-day training with clinicians, structured follow-up consultation on a bi-weekly basis for six months, once a month consultation for three additional months, and ongoing as-needed consultation. Challenges to implementing this component of the enhanced model include ensuring appropriate selection of clinicians, maintaining clinician participation over the course of the consultation period, and obtaining measures of treatment fidelity.

To begin filling the gap on preparation for adulthood, Together Facing the Challenge incorporates elements from Clark’s Transition to Independence Process (TIP; Clark, Deschenes, & Jones, 2000) program. Elements of this approach have been incorporated into training for TFC supervisors and parents and in ongoing consultation/supervision with supervisors. Unlike the other elements—supervisor training, treatment parent training, clinician training—that are fairly self-contained within TFC, implementation of this transition piece requires more substantial involvement and linkages with the

broader service system. As such, incorporation of TIP into Together Facing the Challenge encouraged parents and supervisors to talk regularly with youth about their goals and how to work toward them, as well as how to identify and utilize available resources in the existing system. Challenges encountered with implementing this component include limited resources within communities, as well as the ability of parents and supervisors to deal with the competing treatment goal demands of current and pressing treatment needs (e.g., behavioral problems) along with needs that involve looking to the future to plan for successful transitions.

In conclusion, it is hoped that the addition of these elements will enhance the ability of intervention agencies to effectively address these gaps in service provision to improve outcomes for TFC youth.

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## **Symposium Discussion**

**Elizabeth M. Z. Farmer & Barbara J. Burns**

Ongoing research on “Together Facing the Challenge” adopts a somewhat unusual approach to disseminating and testing evidence-based treatments. Rather than adopting a straight-forward dissemination model, it incorporated information from prior observational research to identify current practice, promising factors, and gaps. This information was then used, in conjunction with an evidence-based model, to develop an adapted version of TFC for testing in a randomized effectiveness trial. Overall, this set of presentations has pointed to both the nonlinear dimensions of advancing the evidence base as well as the complexities involved when conducting intervention studies in usual care practice.

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# **Symposium**

## **Implementing Evidence-based Practices in Publicly-funded Clinics**

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### **Symposium Introduction**

Teresa L. Kramer

The mental health care system is in need of substantial retooling in order to offer evidence-based practices (EBPs) for youth and families. Organizational, provider, and consumer factors influence successful implementation of EBPs, yet there are few conceptual models to guide this work or innovative methods to systematically assess the initiation and process of change at each level. Presentations in this symposium highlighted emerging areas in the implementation of EBPs in public sector programs. It is anticipated that a multiple case study approach in which the process of EBP adoption and relevant variables are compared will contribute to theory building for EBP diffusion.

### **Chair**

Teresa L. Kramer

### **Authors**

J. Randy Koch et al.

Gregory A. Aarons

Teresa L. Kramer et al.

Phyllis C. Panzano et al.

### **Initial Assessment of Adoption Barriers to EBP Treatment for Adolescents with Co-occurring Psychiatric and Substance Use Disorders**

J. Randy Koch, Teresa L. Kramer, Robert Cohen, & Shirley G. Ricks

#### **Introduction**

The need, as well as the challenges, associated with translating research into practice in mental health and substance abuse treatment has been well documented (Institute of Medicine, 1998). Obstacles to bridging this gap include a paucity of applicable research results in some areas, administrative and fiscal disincentives, cultural differences between researchers and practitioners, and insufficient infrastructure at the local level to support effective translation and application (Marinelli-Casey, Domier & Rawson, 2002).

In this context, the Virginia Department of Mental Health, Mental Retardation and Substance Abuse Services (VDMHMRSAS) and Virginia Commonwealth University (VCU) have formed a partnership to initiate research on the adoption of EBPs within the public behavioral healthcare system. An EBP Steering Committee, comprised of representatives from VDMHMRSAS, VCU, community services boards, other public and private behavioral health care providers, and advocates and consumers, has been established to guide the development and implementation of this effort. Although the Steering Committee will ultimately address the dissemination of EBPs for all populations served by the VDMHMRSAS, it has chosen as its initial focus adolescents with co-occurring psychiatric and substance use disorders (SUDs). This population was selected based on previous research documenting high rates of co-occurring disorders among adolescent treatment populations (e.g., Kramer, Robbins, Phillips, Miller & Burns, 2003; Wise, Cuffe & Fischer, 2001) and the relative lack of focus on this population both within the state and nationally when compared to adults. Thus, there is a great need and an opportunity to dramatically improve services to a highly vulnerable group of youth, while providing a model for improving services to other populations. In order to gather empirical data to guide the development of an effective dissemination strategy, the Steering Committee conducted a survey of community behavioral health agencies on current services and attitudes about EBPs for adolescents with co-occurring mental health and SUDs.

#### **Methods**

A survey was mailed to each of the 40 agencies responsible for the delivery of public behavioral health care services in Virginia (i.e., community services boards; CSB) to collect information about the extent and nature of co-occurring disorders among adolescents served, the types of treatment offered, current levels of EBP adoption, screening and assessment practices for detecting co-occurring disorders, and perceived barriers to EBP adoption. Thirty-eight of the 40 CSBs responded to the survey.

## Results

Results indicate that 12.4% of the adolescents (ages 13 through 17) served in FY 2004 ( $N = 16,152$ ) had both a psychiatric and substance use diagnosis. The CSBs reported that an additional 15.0% of the adolescents served had a psychiatric diagnosis and a substance use “problem” (i.e., substance use that did not meet criteria for a formal substance abuse or dependence diagnosis). However, 27 of the 38 reporting CSBs do not capture data on the existence of substance use problems and could only estimate the number of adolescents. Although 36 of 38 CSBs reported that they routinely screen for an SUD among youth referred for a mental health problem, only 16 (42%) reported that they use a formal screening instrument.

The CSBs reported they provide a wide range of treatments for youth with co-occurring disorders. EBP rates for this population were cognitive behavioral therapy (CBT; 94.7%), motivational enhancement therapy (MET; 73.7%) and multisystemic therapy (MST; 31.6%). However, it is possible each of these services may have been provided by only one therapist at the CSB, and therefore not available to the majority of clients who may have benefited from them.

Many CSBs had attitudes supportive of providing CBT, MET and MST and planned to expand their use. For example, 43.2% had sponsored or conducted training in MET during the past year (28.9% for CBT and 10.8% for MST), and 97.3% were *very interested* or *somewhat interested* in initiating or expanding the use of CBT (83.8% for MET and 75.7% for MST). Over half (51.4%) of CSBs reported that the likelihood that they will expand the use of MET is *very good* or *good*, while the comparable figures for CBT and MST were 36.1% and 24.3%, respectively. In addition, the CSBs have relatively positive attitudes about these three EBPs, with 97.3% reporting that they have *very positive* or *somewhat positive* attitudes toward CBT, 86.5 toward MET and 73.0% toward MST.

While the CSBs appear to have positive perceptions of the three EBPs, they also identified several obstacles to their use. Results to an open-ended survey question about the three most significant obstacles to implementing CBT, MET and MST are presented in Table 1. There was a generally consistent pattern in obstacles identified for each EBP, with staff time (including staff time available for training) identified as the most significant barrier for CBT, MET and MST. The most notable difference across the models is the perceived cost/lack of sufficient resources for implementing MST compared to the other models.

**Table 1**  
**Frequency with which Specific Factors Were Identified as Obstacles**  
**to the Implementation of EBPs**

| <i>Obstacle</i>  | <i>CBT (%)</i> | <i>MET (%)</i> | <i>MST (%)</i> | <i>Total</i> |
|--|----------------|----------------|----------------|--------------|
| Staff time (including time for training)                             | 21 (55)        | 9 (24)         | 13 (34)        | 43           |
| Cost of training/lack of training funds                              | 15 (40)        | 9 (24)         | 10 (26)        | 34           |
| Staff factors (staff resistance/<br>commitment to other models)      | 10 (26)        | 8 (21)         | 6 (16)         | 24           |
| Treatment model factors (e.g.,<br>appropriateness for their clients) | 10 (26)        | 8 (21)         | 9 (24)         | 27           |
| Funding/Resources/Cost of the Model                                  | 9 (24)         | 8 (21)         | 18 (47)        | 35           |
| Lack of training/qualified staff                                     | 7 (18)         | 8 (21)         | 2 (5)          | 17           |
| Organizational Factors (e.g.,<br>structure/lack of state support)    | 4 (11)         | 5 (13)         | 3 (8)          | 12           |
| Lack of qualified trainers   | 3 (8)          | 2 (5)          | 2 (5)          | 7            |
| Other  | 7 (18)         | 3 (8)          | 6 (16)         | 16           |



The survey also addressed factors that may influence the adoption of EBPs. In particular, 30 CSBs (78.9% *agree* or *strongly agree*) indicated that individual clinicians decide what treatment models they use with their clients. However, 37 (97.4%) reported that the clinicians at their CSB are interested in learning new treatment models and that there are opportunities for clinicians to regularly exchange information on new treatment models. Finally, across all CSBs, it was reported that clinicians had an average of 31.4 ( $SD = 21.7$  hours) hours per year for clinical training. However, this ranged from a low of eight hours per clinician to 100 hours.

## Discussion

The rates of co-occurring psychiatric and substance use disorders found in this study (12.4%) are comparable or somewhat higher to the rates reported in other studies of adolescent outpatient mental health population (e.g., Kramer, et al., 2003; Wilens, Biederman, Abrantes & Spencer, 1997), indicating a sufficient need to implement EBP for co-occurring disorders. Although the results of this survey suggest that the providers of public behavioral health care services in Virginia may be relatively receptive to the adoption of EBPs, it is clear that any attempt to initiate change across CSBs must target individual clinicians. Generally, they decide what treatment model they will use, and staff factors (including resistance to specific EBPs and commitment to other treatment models) were identified as major obstacles to dissemination. In addition, any successful dissemination effort would need to address the perceived lack of staff time to participate in training, particularly in settings where there is minimal time to do so. The results of this survey will be used to develop a research and action plan for EBP dissemination across organizations and providers.

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## Changes in Attitudes: New Research on Evidence-based Practice Implementation

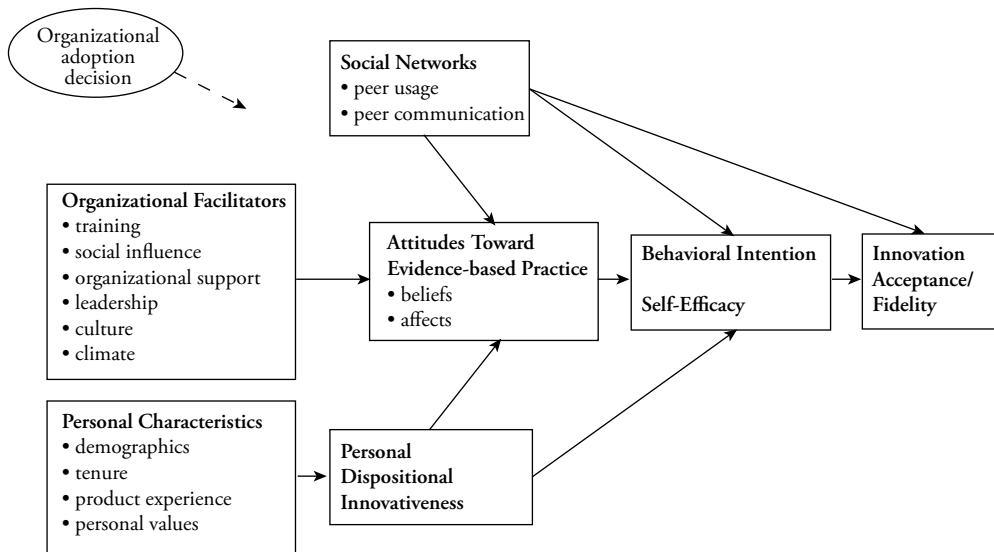
Gregory A. Aarons

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### Introduction

The dissemination and implementation of evidence-based practices (EBPs) is an important priority area in children's mental health. A number of theories have been developed to improve our understanding of attitudes and attitude change in organizations. Frambach and Schillwaert (2002) recently proposed a model of innovation adoption in organizations. The model posits that attitudes can be an important factor in the adoption of innovation in the workplace (Aarons, 2004; Aarons, 2005). Klein and Sorra (1996) also outline aspects of organizational climate for innovation. Evidence-based practices can be considered innovations in mental health services and principles of individual and organizational influences on the use of EBP may inform research and practice (e.g. Schoenwald, Ashli, Letourneau, & Liao, 2003). As shown in Figure 1, Aarons (2005) has recently adapted innovation implementation models to EBP implementation.

**Figure 1**  
**Conceptual Model of Factors**  
**Influencing Service Provider Evidence-Based Practice Implementation**  
(Aarons, 2005; adapted from Frambach & Schillewaert, 2002)



EBP implementation can best be facilitated if researchers and practitioners take into account the complexity inherent in real-world service settings (Fraser & Greenhalgh, 2001; Hasenfeld, 1992; Henggeler & Schoenwald, 2002; Jankowicz, 2000; Simpson, 2002). Such complexity includes federal, state, and county policies and regulations, contracting provisions, leadership, supervision quality and process, organizational norms and expectations, and organizational culture and climate (Aarons, 2005; Glisson, 2002). There have been several calls for research suggesting the need for a better understanding of the context into which evidence based practices (EBPs) are likely to be disseminated (e.g., Burns, Hoagwood, & Mrazek, 1999; Glisson, 2002; Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001; Schoenwald & Hoagwood, 2001).

Common technology transfer methods in social services such as treatment manuals and off-site training sessions generally fail to account for real-world complexity (Addis, 2002; Backer, David, & Soucy 1995; Backer, Liberman, & Kuehnel, 1986; Henggeler & Schoenwald, 2002; Strupp & Anderson, 1997). The guiding premise of this discussion is that provider attitudes toward adopting EBP are related to organizational context and provider characteristics. Providers are embedded within the complex organizational context of mental health service systems (e.g., Burns, Hoagwood, & Mrazek, 1999; Garland, Kruse, & Aarons, 2003; Glisson, 1992, 2002; Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001).

Data from two studies are presented to illustrate how attitudes are associated with contextual and individual provider factors. In addition these two studies illustrate how to assess multilevel factors that are likely to affect the evidence-based practice implementation (EBPI) process. Finally, this summary describes how the second study (a statewide EBPI) links organizational and individual characteristics to EBPI.

## **Method**

### **Study 1—Organizational Factors in San Diego**

Participants were 322 clinical and case management service providers and 51 program managers from 51 public sector programs providing mental health services to children and adolescents and their families in San Diego County, California. Eighty percent of respondents were full-time employees and primary disciplines included marriage and family therapy (33.9%), social work (32.3%), psychology (22.4%), psychiatry (1.6%), and “other” (9.9%; e.g., criminology, drug rehabilitation, education, public health). Interns were less prevalent in the service system (24.9%) relative to fully employed staff (75.1%), and interns represented disciplines of marriage and family therapy (46.8%), social work (24.7%), psychology (20.8%), psychiatry (1.3%), and “other” (6.5%). Participant programs were publicly funded child/adolescent mental health programs providing outpatient treatment (52.9%), day treatment (23.5%), case management (11.8%), wraparound services (7.8%), and inpatient treatment (3.9%). Most programs were contracted with the county to provide services (83.7%) in contrast to operating under county administration structure (16.3%).

### **Study 2—Oklahoma EBP Effectiveness Study**

Participants were 111 case-managers delivering either an EBP to decrease child abuse/neglect or services as usual in a statewide effectiveness trial in Oklahoma. Most (94.6%) of respondents were full-time employees and primary disciplines included social work (45.3%), psychology (25.3%), human relations (12.8%), marriage and family therapy (8.4%), child development (6.3%), and drug/alcohol counseling (2.1%). Interns were less prevalent in the service system (18.8%) relative to fully employed staff (81.3). Participant programs were publicly funded child welfare and children’s services child/adolescent mental health programs providing in-home services.

## **Measures**

For both studies provider surveys were used to assess organizational culture and climate, attitudes, and individual level variables. The provider survey incorporated questions regarding provider demographics including education level and professional status as indicated by whether the respondent was an intern or employed professional. Primary discipline was identified as marriage and family therapy, social work, psychology, psychiatry, and “other.” The “other” category included disciplines that were not one of those mentioned above (e.g., criminal justice, drug rehabilitation, education, public health). Organizational climate and culture were assessed with the Children’s Services Survey (Glisson, 2002). Other factors assessed included personal dispositional innovativeness, social influence, and training.

## Procedure

*Study 1.* Programs were participants in a study of organizational factors in child and adolescent mental health services in San Diego County. Permission was obtained to interview each program manager and to survey service providers who worked directly with youth and families. Surveys were completed at the program site in a group administration format.

*Study 2.* Programs were participants in an effectiveness study of an evidence-based intervention to decrease child abuse and neglect and increase child well-being. The implementation study examines factors associated with the implementation of the intervention. Permission was obtained to survey service providers who worked directly with families. Surveys were completed through web-based interface.

## Results

*Study 1.* Organizational variables associated with attitudes toward EBP included organizational culture, organizational climate, type of program (e.g. outpatient, wraparound, day treatment), level of bureaucracy, and having formalized policies about practice. Individual provider characteristics associated with attitudes toward EBP included provider educational attainment and intern status.

*Study 2.* Preliminary analyses suggest that social influence processes, organizational factors, and provider characteristics are associated with attitudes toward adopting EBP.

## Discussion

While many factors influence the adoption of innovation, it is important to understand how organizational context, provider characteristics, and attitudes may facilitate or hinder implementation efforts. Further research should examine attitudes in relation to organizational and provider characteristics in order to better tailor implementation strategies to be most effective.

Little is known regarding the interaction of organizational characteristics and provider characteristics when an EBP is implemented. For example, organizational culture provides norms for behavior within an organization. If attitudes toward adoption of EBP are weak and culture is strong, then the effect of culture may overpower attitudes. However, strong attitudes can be congruent or incongruent with organizational norms. To the degree that attitudes toward adoption of EBP are at odds with organizational norms and proposed organizational change, staff may perceive the climate as stressful and poor work attitudes, poor job performance, and staff turnover may result. This is just one example of how organizational and individual factors can interact and more study of such factors is needed.

The effectiveness of implementation efforts will likely be impacted by provider attitudes toward EBP, the specific type of EBP, organizational climate for innovation, and the fit between personal values and those of the organization. This “innovation-values fit” can be maximized by providing a strong implementation climate, ensuring skill in the innovation, providing incentives for its use, and removing obstacles to the use of the innovation. An organization can provide incentives for employees through praise, encouragement by supervisors, and the provision of tangible and valued rewards. Some obstacles may be overcome by including participative decision making about the innovation, allowing ample time for learning about the innovation, and responding to questions and complaints about the innovation by employees. EBPI may also be facilitated through strong commitment to and support of the innovation by the organization, and communication and information sharing throughout the implementation process.

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## **Stages of CBT Implementation: Appraisal through Assimilation**

**Teresa L. Kramer & Barbara J. Burns**

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### **Introduction**

Few studies in health care have systematically monitored implementation of evidence-based practices (EBP) over time or identified variables that contribute to successful progression from initial awareness of an intervention to full-scale adoption. Such empirical work will contribute to development of measures that will allow for more careful investigation of the diffusion process of EBP in usual care. This information is also critical to identifying strategies that will enable administrators, clinical managers and researchers to predict the success or failure of dissemination efforts and tailor change interventions to best suit the needs of key stakeholders.

A considerable bulk of the work on science-to-practice models has used diffusion theory (Rogers, 1995) to describe the stages associated with implementation of EBP: (1) knowledge acquisition, (2) persuasion, (3) decision-making, (4) implementation, and (5) confirmation. Although the diffusion of cognitive behavioral therapy (CBT) was examined from knowledge acquisition through confirmation using a multi-method assessment process (MAP; Kairys et al., 2002; Crabtree et al., 2001), for the purposes of this report, we focus exclusively on the later stages. CBT was selected because it meets several of Rogers' innovation criteria essential for diffusion ease, including relative advantage, trialability and compatibility.

### **Methods**

Two public-funded, urban mental health centers participated in this study. Clinicians were eligible to participate if they anticipated treating at least two depressed adolescents in an outpatient or school-based setting per month. Of the 35 eligible clinicians, 25 agreed to participate. Clinicians were randomized into usual care ( $n = 10$ ) versus CBT training ( $n = 9$ ); six clinicians dropped out. Investigators collected qualitative data through 16 key informant interviews audiotaped and transcribed; field notes; review of medical records; audiotaping of select therapy sessions; and notes of supervision with intervention clinicians. Data were preserved in their textual form in Ethnograph, and content analysis conducted to generate categories for data coding. A two-step process was employed in which we completed modified open coding and subsequently organized the components under overarching themes, using modified axial coding. Adolescents were screened for the study using a cut-off of 12 on the Children's Depression Inventory (CDI; Kovacs, 1992).

### **Results**

The implementation phase consisted of clinicians screening adolescents for depression, introducing CBT to adolescents and parents, and engaging in CBT as the treatment of choice. During this phase, 66 adolescents screened positive on the CDI, 49 agreed to be contacted, and 39 were deemed to be eligible for the study. Of the 39 eligible adolescents, 34 agreed to participate; 16 were assigned to the 9 intervention clinicians. Five of the trained clinicians treated 11 of these adolescents using the CBT protocol, based on medical record review, audiotaping and supervision notes. Only two clinicians continued to provide CBT as trained in the confirmation stage. Table 1 illustrates the multiple inhibiting or activating variables at each phase influencing adoption (the process of offering and providing CBT to adolescents) or assimilation (sustaining CBT in the practice setting). The variables are organized into five categories (adolescent/family, intervention, clinician, organization, and external environment), similar to those identified by Schoenwald and Hoagwood (2001).

**Table 1**  
**Inhibiting and Activating Variables at Adoption and Assimilation**

|                          | <i>Adoption</i>  | <i>Assimilation</i>   |
|--------------------------|--|---|
| <b>Youth/<br/>Family</b> | <p><b>Activating</b></p> <ul style="list-style-type: none"> <li>• Adolescent or family initiates CBT</li> <li>• Adolescent adheres to CBT</li> </ul> <p><b>Inhibiting</b></p> <ul style="list-style-type: none"> <li>• Adolescent besieged with “crises”</li> <li>• Comorbid disorders interfere with CBT adherence</li> <li>• Adolescent/family request other intervention</li> </ul>   | <p><b>Activating</b></p> <ul style="list-style-type: none"> <li>• Adolescent’s symptoms improve with CBT</li> <li>• Adolescent and family attribute symptom improvement to CBT</li> <li>• Adolescent able and willing to continue CBT</li> </ul> <p><b>Inhibiting</b></p> <ul style="list-style-type: none"> <li>• Adolescent’s symptoms do not improve with CBT</li> <li>• Adolescent non-adherent to CBT protocol</li> <li>• Adolescent/family discontinues treatment</li> </ul>  |
| <b>Clinician</b>         | <p><b>Activating</b></p> <ul style="list-style-type: none"> <li>• Clinician initiates CBT with several adolescents</li> <li>• Clinician receives feedback on initial performance, modifies behaviors and implements CBT consistently</li> <li>• Clinician allows for crisis interruption but resumes CBT when crisis is resolved</li> <li>• Clinician participates in ongoing supervision</li> <li>• Clinician is flexible in using CBT for use with adolescents with multiple problems</li> </ul> <p><b>Inhibiting</b></p> <ul style="list-style-type: none"> <li>• Clinician prefers other treatment</li> <li>• Clinician tries to assimilate CBT into other interventions</li> <li>• Clinician priorities/concerns shift</li> </ul> | <p><b>Activating</b></p> <ul style="list-style-type: none"> <li>• Clinician confident with CBT implementation</li> <li>• Clinician has access to and uses feedback on CBT adherence</li> <li>• Clinician continues to treat target group</li> <li>• Clinician provides positive feedback to other clinicians regarding CBT success</li> <li>• Clinician maintains position in organization</li> </ul> <p><b>Inhibiting</b></p> <ul style="list-style-type: none"> <li>• Clinician not confident with CBT</li> <li>• Clinician drops out of supervision</li> <li>• Clinician leaves agency or is assigned to ineligible population (e.g., ages 0-5)</li> </ul> |
| <b>Intervention</b>      | <p><b>Activating</b></p> <ul style="list-style-type: none"> <li>• CBT amenable to adoption by front-line clinicians</li> <li>• Fidelity measures easily implemented</li> <li>• Supervision provided within the structure of the organization; meets learning needs for clinician</li> <li>• Adolescent homework assignments feasible</li> <li>• CBT has positive results for adolescent</li> </ul> <p><b>Inhibiting</b></p> <ul style="list-style-type: none"> <li>• CBT manual does not address comorbid disorders</li> <li>• Training schedule and duration are not compatible with “real world”</li> </ul>  | <p><b>Activating</b></p> <ul style="list-style-type: none"> <li>• CBT manual reproducible, easily disseminated</li> </ul> <p><b>Inhibiting</b></p> <ul style="list-style-type: none"> <li>• Training not easily replicable as new clinicians join organization</li> <li>• Training not easily disseminated</li> </ul>   |
| <b>Organization</b>      | <p><b>Activating</b></p> <ul style="list-style-type: none"> <li>• New patients referred to clinicians trained in CBT</li> <li>• Organization creates monitoring system to assist implementation</li> <li>• Organization coordinates intervention training and supervision</li> </ul> <p><b>Inhibiting</b></p> <ul style="list-style-type: none"> <li>• Organization’s finances require shift in clinician focus</li> <li>• Leadership does not provide incentives for CBT</li> <li>• Organizational climate of low staff morale</li> </ul>   | <p><b>Activating</b></p> <ul style="list-style-type: none"> <li>• Service delivery model remains consistent</li> <li>• Organization supports ongoing coordinator role for CBT</li> <li>• Organization offers training and supervision for new clinicians</li> <li>• Clinician turnover is low</li> </ul> <p><b>Inhibiting</b></p> <ul style="list-style-type: none"> <li>• Train-the-trainer model not feasible due to high turnover</li> <li>• Organization shifts to new EBP focus</li> <li>• Champion leaves organization</li> </ul>   |
| <b>Environment</b>       | <p><b>Activating</b></p> <ul style="list-style-type: none"> <li>• Payer reimburses for depression care</li> </ul> <p><b>Inhibiting</b></p> <ul style="list-style-type: none"> <li>• Burdensome payer requirements conflict with clinical quality</li> <li>• Payer system does not reinforce implementation of EBP</li> </ul>   | <p><b>Activating</b></p> <ul style="list-style-type: none"> <li>• Payer continues to reimburse for depression care</li> </ul> <p><b>Inhibiting</b></p> <ul style="list-style-type: none"> <li>• Environment not conducive to learning.</li> </ul>   |

## Discussion

The findings parallel previous work on individual and organizational change with a strong emphasis on the vulnerability of the innovation at later stages of implementation. Successful adoption was attributed to clinician interest in and motivation to implement CBT. Despite barriers, clinicians who implemented and sustained CBT had (a) a high level of clinical skill to balance between adolescent and family needs, incorporate client strengths and weaknesses into treatment and deal with crises within the context of CBT, and (b) professional adaptability to external requirements and constraints, e.g., meeting productivity, completing paperwork, etc. Of the clinicians who consistently provided CBT, none stated that organizational or environmental factors *facilitated* their work. On the other hand, clinicians who did not consistently provide CBT described multiple organizational and environmental variables that diminished their ability to learn and apply CBT. They were more likely to attribute their lack of implementation on paperwork, productivity requirements, and limited staffing support for screening. This finding suggests an interaction between activating and inhibiting variables. When a motivated, competent clinician chooses to adopt an EBP, organizational and environmental factors may play a negligible role in the dissemination process, whereas clinicians with fewer skills or flexibility may need stronger organizational or environmental incentives to initiate or sustain such practices.

Findings from this study have numerous implications for practice. Training manuals and other dissemination tools must allow for flexibility in the treatment process. Guidance should be provided on addressing comorbid symptoms, particularly trauma, aggression and substance use; incorporating individual differences of adolescents; and targeting adolescent resistance and non-adherence. In addition, EBPs will not be effectively disseminated through manuals or toolkits alone. Often referred to as a “passive educational strategy” (Grol & Grimshaw, 1999), this approach will be unlikely to result in behavioral change. The findings also emphasize that clinicians need organizational support to cope with environmental threats.

Because this case study consisted of only two Center for Mental Health Services sites, the results may not be generalizable. Future research should be conducted to confirm whether these stages are congruent with other implementation efforts, to refine measures to assess activating and inhibiting factors at each phase of diffusion, and to test strategies to facilitate the implementation process.

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## Four Models from Ohio’s Innovation Diffusion and Adoption Research Project (IDARP)

Phyllis C. Panzano & Dee Roth

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### Introduction

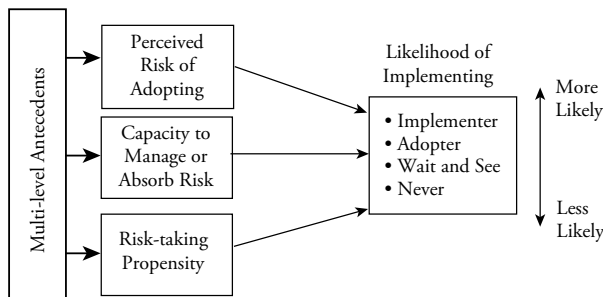
The Ohio Department of Mental Health’s (ODMH) Quality Agenda involves taking action in three arenas: consumer outcomes, quality improvement, and evidence-based practices (EBPs). ODMH hopes to improve quality of care by facilitating the adoption and assimilation of EBPs by service providers in Ohio. Coordinating Centers of Excellence (CCOE) have been established as structural mechanisms to accomplish this goal. Each CCOE is seen as the statewide technical expert with regard to the implementation of a particular practice.

The Innovation Diffusion and Adoption Research Project (IDARP) draws on an extensive research base (Panzano, Roth, Crane-Ross, et al., 2002; Panzano et al, in press) to address two broad questions: (a) What factors and processes influence the adoption of innovations (EBPs) by behavioral healthcare provider organizations? (b) What factors and processes contribute to the longer-term assimilation and impacts of innovations by adopting organizations? The four models that guide the project are briefly described below.

**Model 1: Decision to Adopt an Innovation as a Decision Under Risk.** The first model deals with the decision to adopt (or not to adopt) an innovation such as an EBP. The adoption decision has been widely studied and a myriad of factors have been linked to it. However, this research has been criticized for lacking a theory base. We are proposing a theory base.

The adoption decision is seen as an organizationally-important (i.e., strategic) decision which involves risk (see Figure 1). Following this logic, the decision to adopt is expected to be negatively related to the perceived risk of adopting, and positively related to the organization’s (a) capacity to manage implementation-related risks, and (b) historic propensity to take risks. IDARP directly assesses these three risk-related factors as well as a host of antecedent variables that are expected to explain them. Examining antecedents is key to identifying actions that can be taken to modify the three risk-related perceptions.

**Figure 1**  
**Model 1**



**Model 2: Multi-level Model of Implementation Success.** The second model suggests that factors at many different levels from the environment (e.g., professional norms) to features of an EBP (e.g., strength of scientific evidence) impact implementation success. Following Klein and Sorra (1996), we have defined implementation success in terms of two classes of outcomes: measures of implementation effectiveness (e.g., fidelity) and measures of innovation effectiveness (e.g., positive outcomes for customers). In addition, implementation effectiveness is expected to be positively related to innovation effectiveness.

**Model 3: Cross-phase Effects on Implementation Outcomes.** Our third model represents the important idea that aspects of each of three key phases of the innovation adoption process (i.e., initiation, decision, and implementation; e.g., Rogers, 1995) are important to consider due to their likely impact on implementation success. Accordingly, IDARP examines factors linked to the initiation, decision and implementation phases. For example, with regard to the decision phase, we gathered information about: (a) the organization’s commitment to the decision to adopt the EBP, (b) the perception that adequate information was available to decision makers (c) the extent to which the decision was objective, and (d) the extent to which the decision process was participatory.

**Model 4: Effects of Implementation Climate on Outcomes.** The fourth model suggests that a positive climate for implementation is necessary for achieving desired outcomes (e.g., Klein & Sorra, 1996; Conn, Klein, & Sorra 2001). Certain factors are key (e.g., top management support, access to technical assistance, dedicated resources, goal clarity) to maintaining a positive climate. We examined the extent to which climate for implementation, as defined by a range of measures, explained implementation success.

## Methods and Progress to Date

The study focuses on four EBPs and 91 projects involving those practices. The four EBPs and associated numbers of projects are: (a) Cluster-Based Planning, involving the use of a research-based consumer classification scheme ( $n = 23$  projects); (b) Multi-systemic Therapy for youth, a model of intensive home-based treatment ( $n = 16$  projects); (c) the Ohio Medication Algorithm Project, an adaptation of the Texas Medication Algorithm Project ( $n = 15$  projects); and (d) Integrated Dual Disorder Treatment, a treatment model for individuals with mental illness and substance abuse issues ( $n = 36$  projects). The four EBPs were judiciously selected by a team of experts with an eye on maximizing the generalizability of findings to other practices.

IDARP employed a longitudinal design involving three rounds of data gathering over a three-year period. At first contact, projects varied in terms of stage of implementation. In other words, some organizations already had decided not to adopt a particular EBP (non-adopter projects); some had not yet made a final decision (wait and see projects); others had recently decided to adopt (adopter projects); others were already engaged in implementation (implementer projects), and; others had decided to rescind the adoption decision (de-adopter projects).

The first round of data gathering involved 91 projects and focused on determining stage of adoption (see Table 1), aspects of the initiation and adoption phases and, in some cases, early implementation efforts. Second and third contacts were made with adopter and implementer projects at intervals of 9 to 12 months to gather information about ongoing implementation and outcomes.

**Table 1**  
**Participating Projects by Stage**

|                | <i>Non-adopter</i> | <i>Wait &amp; See</i> | <i>Adopter</i> | <i>Implementer</i> | <i>De-adopter</i> | <i>Total</i> |
|----------------|--------------------|-----------------------|----------------|--------------------|-------------------|--------------|
| First Contact  | 12                 | 17                    | 9              | 47                 | 6                 | 91           |
| Second Contact | 1                  | 1                     | 2              | 42                 | 4                 | 50           |

Face-to-face interviews with key informants, follow-up surveys, and archival materials were our data sources. Data typically were collected from between two and five key informants for each project, at each data gathering point. The number of informants is related to the project’s stage of implementation, with fewer informants for projects at early stages such as the “wait and see” stage ( $M = 3.2$  informants), than for projects engaged in implementation ( $M = 4.9$  informants). To date, the response rate for follow-up surveys among interviewees is ninety-one percent (91%).

## Results

Preliminary analyses provide support for the four models. Most variables were measured with multi-item scales where  $\alpha = .70$ . Findings reported below are significant at least at  $p < .05$ .

**Model 1: The Adoption Decision.** Analyses related to Model 1 are based on first contact data from 91 projects. As predicted, the likelihood of adoption was negatively related to the perceived risk of adopting ( $r = -.51$ ) and positively related to the organization's capacity to manage risk ( $r = .38$ ), and the organization's past propensity to take risks ( $r = .20$ ). Expected links also were found with key antecedents to these three risk-related assessments.

**Model 2: Multi-level model of implementation success.** As expected, implementation effectiveness was positively related to innovation effectiveness. For example, a positive relationship was found between the extent to which fidelity was high and a wide array of positive outcomes. In addition, findings support the idea that implementation success is linked to variables spanning multiple levels. For example, inter-organizational-relationship level variables (e.g., identification with the CCOE,  $r = .41$ ), project-level variables (e.g., performance monitoring,  $r = .63$ ), and EBP-level variables (e.g., availability of scientific evidence,  $r = .53$ ) were positively related to indicators of implementation success.

**Model 3: Cross-phase Effects on Implementation Outcomes.** Findings supported Model 3. For example, initiation phase constructs (e.g., trust in the CCOE) and decision phase variables (e.g., objectivity of the adoption decision) gathered at first contact were found to be correlated with indicators of implementation success (e.g., positive outcomes) reported at second contact ( $r = .58$ ;  $r = .61$ , respectively). Thus, aspects of earlier phases of adoption/implementation process appear to have enduring effects on implementation outcomes.

**Model 4: Effects of Implementation Climate on Outcomes.** Data were not available to fully test model 4 because the third round of data gathering is not yet complete. However, data gathered during the second round provide strong preliminary support that climate for implementation impacts the success of implementation efforts. For example, strong positive relationships were found between a composite implementation climate measure and measures of both implementation effectiveness and innovation effectiveness ( $r = .77$ ;  $r = .75$ ), respectively. This suggests that climate for implementation is key to achieving implementation success, lending support to the work of Klein and colleagues (e.g., Klein & Sorra, 1996; Conn, Klein, & Sorra, 2001).

## Implications

Results to date support the explanatory power of the four models that guide IDARP. Findings suggest numerous potential leverage points for influencing the decision to adopt EBPs and for facilitating successful implementation among those organizations that decide to adopt.

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## **Chapter Three**

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### **Family Voice and Choice**



# **Symposium**

## **Family Driven Approaches to Services, Supports, and Research**

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### **Symposium Introduction**

Trina Osher

Goal 2 of the President's New Freedom Commission calls for a transformation to consumer and family mental health systems and services. The Center for Mental Health Services and the Federation of Families for Children's Mental Health are collaborating to define and conceptualize "family driven." This process has been informed by an expert panel, open forum discussions, feedback from stakeholders, and a literature review. The three presentations in this symposium informed participants about the need for change, presented and explained the definition of "family driven" and how it was developed, and provided an example of a family driven research project.

The methodology for the first discussion was historical and conceptual. The authors analyzed system of care documents and evaluation data along with data from focus groups, and historical sources. These data were used to describe and analyze how family-agency-professional relationships have been viewed and operationalized in the past, and how these relationships and the organizational cultures and structures which frame these relationships are changing. The summary suggests how family-agency-professional relationships can be conceptualized and operationalized for service delivery and research purposes.

The second summary is descriptive; it presents details about the data gathered to draft an initial definition of family-driven care and the method used to refine and develop consensus among a wide range of individuals. The definition itself, the principles that support it, and the characteristics of family-driven care are also presented.

Third, an example of a family-driven research project conducted with scientific rigor is described. The research focuses on what facilitates the developmental pathway parents and family members follow to achieve the level of self advocacy that is commonly called empowerment. Aspects of the research discussed include the development of the research questions, the design of a randomized trial in a real world setting where family values prevail, strategies for dissemination, and what helped the partnership between families and researchers flourish.

### **Conceptualizing Family-Professional Relationships**

David Osher & Trina Osher

#### **Background**

Service delivery involves a multiplicity of transactions between families, youths, and providers. These transactions are mediated by how participants view each other's role as well as by the needs, policies, procedures, organizational culture, and resources of providers and the agencies in which they work. The ways in which family-professional relationships are conceptualized help frame service delivery and policy development as well as services research (Hobbes, 1982; Osher, VanAker, Morrison, Gable, Dwyer, et al., 2004). Families can be ignored in children's mental health, with intra-psycho interventions only focused on the child. Or, families can be viewed as problems that must be changed or overcome in order to improve children's outcomes. At the same time, families can be treated as the passive receivers of services that are provided by agencies and professionals, usually through professional bureaucracies. Typically professionalized services are limited and determined by agency needs, and evaluated on the basis of agency-defined outcomes. Sometimes families are punished or rewarded based upon their compliance

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with the demands of agencies and the professionals who the agencies employ (Cloward & Piven, 1974; Sjoberg, Brymer, & Farris, 1966). Alternatively, families and youth can be viewed as allies who can implement and support professionally-driven approaches. Finally, families can be treated as active agents in the development, implementation, and evaluation of interventions (Osher & Osher, 2002).

Traditional children's mental health services ignored families, or blamed them for their children's disorder. These services were provider-driven in that professionals and agencies were viewed as the key force in solving problems. By virtue of their training, professionals were assumed to possess expertise and tools to diagnose problems; to have unique knowledge to prescribe solutions; the precise skills to implement, monitor, and evaluate the prescribed interventions; and the capacity to do all of this in a manner that is consistent with professional ethics and agency procedures. Professionals asked the questions, identified and interpreted the symptoms, dictated the treatment, and evaluated the results. Professionals were expected to employ their professional expertise to fix presenting problems, and in some cases, the clients themselves. Professionals, socialized into this delivery role expected compliance from relatively passive clients, as well as deference from other professionals and paraprofessionals in acknowledgement of their expertise. Similarly, many agencies were organized around a model that viewed the agency as the key source of change. Under this provider-driven paradigm, assessment was deficit oriented and specific to isolated problems. Specific problems were conceptualized as being located in the child or family (Ryan, 1972), and were focused upon and addressed accordingly. Given the resource limitations, the focus on deficits and the need to manage, expectations were low and modest.

### **Family Focused Care**

Systems of care for children's mental health represented an advance on in comparison to the victim-blaming approach that ignored the child's ecology. Systems of care focused on families, not just the individual child, calling for "the needs of the child and family" to dictate "the types and mix of services provided" (Stroul & Friedman, 1986, p. xxiv). Families, under this model, "should be full participants in all aspects of the planning and delivery of services" (Stroul & Friedman, 1986, p. xxiv). This model and the implementation of the Comprehensive Mental Health Services for Children and their Families Program, initiated in 1992, started to transform the relationships between families, professionals, and agencies, and in some cases, youth (Osher, deFur, Nava, Spencer & Toth-Dennis, 1999 ). Systems of care also challenged agency-driven practices which involved resource-driven planning by isolated agencies. They called for individualized service planning and employed flexible funds. Over time the model was elaborated to include culturally competent strength-based approaches, which also affected attitudes toward families. However, as conceptualized in the 1980s and implemented in the 1990s, the system of care model was *family-focused*, not *family-driven*. The language of family focus could promote and support the type of strengths-based family-professional partnerships that were part of good wraparound planning (Kendziora, Bruns, Osher, Pacchiano, & Mejia, 2001). However, the language of family focus could also continue to support more paternalist approaches, which, while focusing on families, and addressing family needs, *wrapped the services* around families and children, and evaluated services based on professional and agency criteria. In fact, practices in many communities still revolve around the needs, expertise, and resources of professionals and agencies.

### **Family Driven Care**

The development of a robust family movement in children's mental health, as well as the more widespread use of strength-based individualized approaches to service planning in the 1990s, stimulated changes in service delivery and agency culture. These changes are consistent with consumer-driven approaches to service delivery in adult education (e.g., Osher & Webb, 1994), family-centered approaches to early intervention (Dunst, 1997), calls for collaboration with families in education (U. S. Department of Education, 1994), community-building approaches (Dunst, Trivette, Starnes, Hamby, & Gordon, 1993), and consumer-directed approaches to health care and disability support (National Council on Disability, 2004).



Where family-driven approaches have flourished, families are viewed and treated as having important and even expert knowledge gained from experience and/or training. Families are expected to contribute to defining the nature of the presenting problems, the various factors contributing to them, and the range of strategies that could effectively resolve these problems. In these settings and communities, service planning and access are truly based on how the needs of a specific child or group of children and their families can best be met. Now families and youth determine what services and supports are “wrapped” and in what manner. For example, the team planning services now consider the family’s schedule, childcare, work responsibilities, and transportation needs in selecting and scheduling specific services from among all the providers in the community.

## Conclusion

The paradigm shift in family role, however, has not been fully addressed in the literature on systems of care. The failure to elaborate the distinctions between being family-focused and family-driven in the system of care literature has led to ambiguous research and policy. For example, professionals can target the passive parent while focusing on the family, or deliver family-focused treatments at a time and place that is convenient to them and their employer. This ambiguity can lead to unfulfilled expectations on the part of families and service providers alike due to confusion of distinct approaches at a rhetorical and a conceptual level. Similarly the failure to compare, contrast, and align conceptualizations of family driven approaches with conceptualizations of family-centered approaches and youth directed approaches may confound systemic change, practice change, and services research at a time when communities are starting to align different systems (e.g., early intervention and mental health) and the consumer youth movement is developing a model of youth directed care.

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## **Family Driven Care**

**Gary Blau & Trina Osher**

### **Introduction**

To promote the transformation of children's mental health care called for by *Achieving the Promise*, the Center for Mental Health Services commissioned the Federation of Families for Children's Mental Health to develop an operational definition of family driven care. This summary presents the definition, the method used to develop it, and the literature that supports it. The guiding principles of family driven care and the conditions that exist in a family driven care model are also presented.

During the 1990s children's mental health underwent a paradigm shift from provider-driven approaches, which focused on families to family-driven approaches (Osher & Osher, 2002). This paradigm shift moved from viewing families as the passive receivers of services who were expected to carry out professional prescriptions to partners in the development, monitoring, and evaluation of services. The development of the family movement in children's mental health, the roles played by families in systems of care (e.g., Osher, deFur, Nava, Spencer & Toth-Dennis, 1999), calls for family-professional collaboration in the education of children with serious emotional disability (SED; U.S. Department of Education 1994), and the conceptualization of Family Centered Approaches in Early Intervention work (Dunst, 1997) contributed to this paradigm shift. The President's New Freedom Commission recognized this shift when it called for family and consumer driven services. The Center for Mental Health Services continued this process by commissioning an effort to define and conceptualize family-driven care.

Systematically making the transformation to family-driven care is dependent upon having a common understanding of what family-driven care is, the principles that support it, and the conditions that exist in systems, programs, and services that operate in accordance with those principles. From the beginning, we recognized that the definition of family-driven care needed to be acceptable to diverse families, be applicable in a wide variety of settings, and be usable by a widely varied professional, paraprofessional, and volunteer workforce. It also needed to be concise and free of jargon and technical terms.

### **Methodology**

#### **Gathering Data**

There were several methods used to collect information to use in formulating the definition of family driven care. These included a literature review, intensive and in-depth conversations with an expert panel, and interviews with recognized leaders in the family movement. Themes that emerged appear in Table 1.

**Table 1**  
**Themes Identified to Shape Definition of Family-Driven Care**

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*Valuing Families and Youth*

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- Voice of families and youth are welcomed, heard, and responded to
- Every family is included
- Systems, programs, and provider hear the ideas, concerns, and needs of families and use these to make decisions and service changes
- Families and youth are in the driver's seat as well as have a voice at the table
- Safety for families and youth to disclose
- True Partnership with Families and Youth
- Genuine respect for families and youth
- Sharing power, resources, authority, control, and responsibility for outcomes
- Partnership is standard operating procedure, default, continual, and routine
- No longer make decisions without families and youth giving input
- Family and youth participation is supported and funded
- Formal credentials get respect but no special privilege
- Comfort and trust zone for families, youth, and professionals
- Family-driven practice is evident in all systems, programs, service teams, and services
- Everyone takes responsibility for transforming systems to be family-driven
- Risk management is a collective responsibility and aims to do what is in the best interest of families and youth
- Procurements, require and treatment approaches incorporate family-driven practice
- Training and Support
- Every one gets initial and ongoing training and support to participate in a family-driven system of care
- Family-driven practice is infused in preservice training in all disciplines
- Cultural Competence
- Family-driven practice and cultural competence are inextricably linked
- The cultures of families and communities provide the overarching framework for operating family-driven system of care

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### **Field Testing and Revision**

The initial definition was released in June 2004 and widely circulated with a request for feedback. Open forums to gather reaction and comments were held at the Training Institutes conducted by the National Technical Assistance Center for Children's Mental Health, Georgetown University Center for Child and Human Development. Detailed notes were made to record all recommendations. A second draft was released in September 2004. This version was circulated electronically and incorporated into workshops, panel, presentations, and keynote addresses for a wide variety of audiences. The third version (October 2004) made adjustments based on audience reaction to these presentations. It became evident that the concise definition could not stand alone. Therefore, the fourth version incorporated the principles and conditions that exist in family driven care models. Refinements were made in November 2004.

## Results

The definition presented and discussed was the 10<sup>th</sup> version. It is called the working definition because we see it as a living definition that may evolve over time as we gain further insights from its implementation. Family-driven means *families have a decision making role in the care of their own children as well as the policies and procedures governing care for all children in the community, state, and nation*. This includes choosing supports, services, and providers; setting goals; designing and implementing programs; monitoring outcomes; and determining effectiveness of all efforts to promote the mental health of children and youth.

Ten guiding principles that support the definition and implementation of family-driven care were identified. These are:

1. Families and youth are given accurate, understandable, and complete information necessary to make choices for improved planning for individual children and their families.
2. Families and youth embrace the concept of sharing decision-making and responsibility for outcomes with providers.
3. Families and youth are organized to collectively use their knowledge and skills as a force for systems transformation.
4. Families and family-run organizations engage in peer support activities to reduce isolation, gather and disseminate accurate information, and strengthen the family voice.
5. Providers embrace the concept of sharing decision-making authority and responsibility for outcomes with families and youth.
6. Providers take the initiative to change practice from provider-driven to family-driven.
7. Administrators allocate staff, training, support and resources to make family-driven practice work at the point where services and supports are delivered to children, youth, and families.
8. Community attitude change efforts focus on removing barriers and discrimination created by stigma.
9. Communities embrace, value, and celebrate the diverse cultures of their children, youth, and families.
10. Everyone who connects with children, youth, and families continually advance their cultural and linguistic responsiveness as the population served changes.

Six conditions that exist in family-driven care model have been identified. They are:

1. Family and youth experiences, their visions and goals, their perceptions of strengths and needs, and their guidance about what will make them comfortable steer decision making about all aspects of service and system design, operation, and evaluation.
2. Family-run organizations receive resources and funds to support and sustain the infrastructure that is essential to insure an independent family voice in their communities, states, tribes, territories, and the nation.
3. Meetings and service provision happen in culturally and linguistically competent environments where family and youth voices are heard and valued, **everyone** is respected and trusted, and it is safe for everyone to speak honestly.
4. Administrators and staff actively demonstrate their partnerships with all families and youth by sharing power, resources, authority, responsibility, and control with them.
5. Families and youth have access to useful, usable, and understandable information and data, as well as sound professional expertise so they have good information to make decisions.
6. All children, youth, and families have a biological, adoptive, foster, or surrogate family voice advocating on their behalf.

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## Results Matter: Building an Evidence Base for Family Support

Jane Adams, Corrie Edwards, Sarah Adams, & Kimberly Kendziora

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### Introduction

This part of the symposium described the process and content of a collaboration between Keys for Networking, Inc., and the American Institutes for Research to develop an evidence base for family support. The collaboration had four components. The first component conducted the first experimental assessment of the impact of parent-to-parent support on child and family outcomes. The second component examined the implementation of a process for data-driven decision making for parents and their advocacy experiences. A third examined dissemination of a parent support model to diverse state contexts. Last, the collaboration offered an example of rigorous family-driven research.

### Background

For decades, family-run organizations have provided support and advocacy to caregivers of children with mental health, child welfare, special education, or juvenile justice involvement, often at no cost to the families. The interventions provided by these organizations have never been systematically studied; therefore, there is currently no empirical evidence base to support their work. The development of such an evidence base would facilitate progress toward major policy goals for family support organizations, including strengthening their role in systems of care and securing coverage for their services in public and private insurance.

### Keys for Networking

Keys for Networking, Inc. (Keys), a nationally prominent consumer-run family support organization headquartered in Topeka, Kansas, has contracted with the American Institutes for Research (AIR) to assist them in planning a scientifically valid impact evaluation of their work. Keys maintains a comprehensive database that allows for active tracking of the families they serve. Keys knows whom they serve, what callers want, and what interventions are provided. This solid collection of *process* information facilitates the design of an *impact* evaluation.

At the beginning of the collaboration, Keys focused on the impact of Targeted Parent Assistance on parents. Data from their existing records were able to demonstrate that parents who were clients of the agency did indeed move from information-seeking, overwhelmed (level 1) to problem solvers (level 4) to levels of progressively greater advocacy for others.

Additional research questions have emerged as our work has evolved. Here we present these questions and the status of our thinking about them and working on them. The set of questions addressed includes:

- Is Targeted Parent Assistance any more effective at leading to positive family and child outcomes than parent support as usual?
- What is the impact of Targeted Parent Assistance on family outcomes?
- What is the impact of Targeted Parent Assistance on the systems in which children are served and in which parents advocate? (Specifically, how does Targeted Parent Assistance affect child educational outcomes as they pertain to IDEA and the No Child Left Behind Act?)
- How can the process of being evaluated help those delivering Targeted Parent Assistance prepare parents to assume collaborative leadership roles with schools by teaching them to make data-driven decisions for their own child and for classroom and schoolwide improvements
- How can the model of Targeted Parent Assistance be disseminated, transported, and implemented in new states? Specifically, how can results of this work be transferred to state and national parent networks, and school communities to influence approaches to parent support?

## Components of the Research

### The Randomized Trial

The gold standard for knowledge of whether an intervention is effective involves comparing outcomes for participants who receive it with those who do not. The current environment of accountability and differential promotion of practices with demonstrated effectiveness demands that knowledge about parent support be raised to meet this gold standard. Therefore, within a context of a commitment to high-quality service to families, Keys and AIR have proposed testing the proactive Targeted Parent Assistance parent support model against the more reactive support-only models that many parent support organizations use in early stages of development. This effectiveness trial will establish which model produces better parent and child outcomes for which families.

In the Targeted Parent Assistance condition, we will call each family no less often than every 30 days to assess the usability of the recommendations from the last contact, apply interventions for the level at which the parent is currently identified, and then offer interventions that would boost the parent to the next level. In the support-only condition, parents who call Keys will still receive the same high-quality response they would get if they were in the Targeted Parent Assistance condition. The difference is that we will not call them back every 30 days, and we will not specifically recommend training unless they request it. They will be eligible to get whatever services we have available—but they must *ask* for it.

### Promoting Data-Driven Decision Making

In our collaboration, we have been studying how parents' empowerment affects individual child academic outcomes as mediated by parent engagement with educators. We also examine the impact of parental use of Getting to Outcomes (GTO; Chinman et al., 2004), an empowerment process for collaboratively planning, implementing, and evaluating any initiative. In our context, parents use the GTO process to define their own desired school outcomes, access information, evaluate reliable resources, master basic research methodologies, and network with other parents to influence decisions with a collective, reasoned voice.

GTO is a user-friendly process to help community groups navigate the maze of designing prevention and treatment programs. In GTO, the innovative characteristic is an approach that helps users link all the necessary program elements together into a logical and carefully planned coherent whole, thereby increasing the likelihood of achieving desired outcomes and demonstrating accountability to key stakeholders. With increased ownership of the evaluation process, practitioners may better realize the importance of evaluation, understand evaluation methods, and promote capacity among staff and stakeholders. If effective, GTO provides parents with direction on how best to use their time and energy

to support their own child's progress and success. Parental use of GTO can provide teachers, for example, with direction to prioritize the various parent invitations to participate in classroom activities. Further, this component of our research can help school and district decision makers establish effective parent outreach opportunities for families and provide state and national family organizations with direction to allocate very limited and sparse dollars to efforts that provide the most payback for parents and for children.

### **Dissemination and Transportability to Additional Sites**

An increasing research base provides information on how best to diffuse effective innovations to new settings. As a part of our research we collect data on the process of training and implementing Targeted Parent Assistance in at least four additional sites that currently employ the standard support model. To maximize learning, dissemination sites should represent a variety of geographic contexts, including large and small cities, suburbs, rural environments, and frontier environments. We have prepared for transportability in three ways. First, Keys and AIR will deliver an annual workshop at the Federation of Families for Children's Mental Health Conference. The workshop will focus not only on implementing Targeted Parent Assistance, but also on extending the evaluation work to their sites. Second, the executive director and member of the technology and program staff of the dissemination will visit Keys for three days of training in the model and the evaluation. Third, Keys staff who are expert in both Targeted Parent Assistance and management information/data collection will visit dissemination sites to provide additional training and technical assistance.

### **Family-Evaluator Collaboration**

It is worth noting that one reason for the paucity of research in this area is the challenge of conducting research that is consistent with the values of the broader parent support movement (Kagan & Weissbourd, 1994). In a report from a national meeting of leaders in family support evaluation, Diehl (2002) proposed three criteria for meaningful evaluations of family support programs.

1. Families and other stakeholders must be included in the development and implementation of the evaluation framework. We accomplish this goal by establishing a Research and Ethics Council for logic model refinement and data interpretation, employing only family members as data collectors, and involving family members in reporting and presenting findings.

2. Evaluation methods and tools must be appropriate to capture the work of family support initiatives. We accomplish this goal by using several cutting-edge research tools, such as "journey mapping" scores, which capture numerically a highly qualitative concept, and a growth curve approach to data analysis, which allows the data that tell a family's story to unfold gradually over time.

3. Evaluation must be culturally relevant and evaluators must be culturally competent. As we move toward disseminating this model to more racially, ethnically, and linguistically diverse communities, we will pay special attention to composing evaluation staff who reflect the community served. We work toward achieving this goal by continuing to respect individual family cultures in the evaluation through our partnership-based approach to this research.

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## **Topical Discussion**

# **Building Creative Partnerships: Sustaining Family Involvement in Evaluation**

Sheila Bell  
Norin Dollard  
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### **Introduction**

One of the core values in a system of care is that the service system be family centered and family driven. This value charges systems to involve family members in more than just planning for their child's services, but to also enrich the system itself by involving families at all levels. Successful systems of care ensure that families are involved not only at the service delivery level, but also at the administrative levels which involve budgeting, planning, policy making, and evaluation. This summary describes best practices identified by three Substance Abuse and Mental Health Services Administration system of care grantee communities—Austin, Texas, Tampa, Florida, and Pittsburgh, Pennsylvania—for involving families in evaluation processes over a six-year implementation period. Areas discussed below include: family members as evaluation staff, family members on evaluation committees, and providing training and technical assistance opportunities for family involvement in evaluation.

### **Family Members as Evaluation Staff**

Discussions revealed that hiring a family member as an evaluation staff member is a rewarding best practice standard for all systems of care. There are several evaluation positions a family member can fill. In some grantee communities, family members are hired as the data collection staff for the national evaluation. In others, a Family Evaluator position is created to work directly alongside the Evaluation Director. In such instances, it appears important that the person hired is able to act foremost in his/her family capacity, that is, as a family member with the personal expertise as a caretaker of a child with a serious emotional disturbance. Some professional evaluators may also be family members; however, their professional roles may make it difficult to put their family experiences first in their jobs.

There were several challenges described which systems must face in order to hire a family member as a staff person. For example, the hiring entity may require specific credentials or educational requirements that could hinder the hiring of a family member in an evaluation role. In this case, discussants stressed it is important to keep working at changing the system to allow for flexible hiring practices for family members so the family expertise for which they are hired is valued and compensated. The provision of training and support to family members was identified as an essential element to ensure that the family perspective effectively guides the evaluation. Many family members are also advocates for their children and they utilize data and information in this work; if this is written on a resume, their knowledge and experience relevant to evaluation is documented.

Another challenge for families hired as evaluators is working alongside evaluation professionals who may feel threatened by their presence. Most program evaluators have completed extensive college training in the areas of statistics and research. Hiring a family member who may not have a background in this area may make the professional evaluator feel research skills are devalued and may cause tension between staff. This is especially true when family members are involved in more than the data collection phase, such as data interpretation and reporting of results. Just as family members need training and support to fulfill their roles in the evaluation, program evaluators need training and support to understand their own roles as mentors and teachers to family members, the diverse ways in which family members can be involved in evaluation and how they, and the evaluation products, will benefit from that involvement. There should also be clarity about the roles of the program evaluator and the family evaluator. Although the family member may not be running the statistics or choosing a study design, they can still be involved in those activities in meaningful ways that will enhance the evaluation overall. In some instances, rather than being judged on the quality of their work, family members have been dismissed as being unable to be objective in the conduct of the evaluation solely because of their status of *family member*.

There are several benefits to overcoming the challenges discussed above. Family members who take these roles can benefit by having new ways to advocate due to their involvement with collecting and interpreting data. Family members hired can also help to train other family members on the importance of evaluation and can explain to others why research studies are being conducted and how they can participate. Family members as data collectors can add a level of trust to the interview process so that the data collected are more reliable and valid. Finally, family members benefit by changing the system in a role other than as an advocate. Professional evaluators have much to gain by this partnership. They should experience a new appreciation for the data they are collecting, as the family member helps them to see the questions and results from their viewpoints. Professionals also benefit by seeing high retention rates when families collect data or help others to understand the importance of data. Surveys designed by parent-professional partnerships are also better, as family members can monitor the questions for language and content so that respondents will be more likely to answer. In the end, hiring a family member evaluator can be a win-win situation for all parties involved.

### **Family Members on Evaluation Committees**

Another way to involve family members in evaluation is to form an evaluation committee where family members and system partners have the opportunity to come together to evaluate and interpret data. A committee structure can also provide opportunities for staff to form ad hoc or standing subcommittees pertaining to specific evaluation or quality improvement/assurance issues.

One of the activities an evaluation committee can take on is to decide what information is needed to guide decision making processes. This involves prioritizing and monitoring what types of data are collected and how they are collected. The committee provides a good forum for reviewing surveys and focus group questions. The committee also can help to interpret outcomes gathered through the data collection process. Further, a committee can look for ways to improve the quality of services and supports for children and families, based on what the team sees in the collected outcomes. This continuous quality improvement process helps youth and families select those services that are right for them and helps system-of-care staff find services that youth and families want and need. This information can also be used by family committee members to let policy makers and system funders know what is working and what should be funded.

Subcommittees may develop specific projects that support evaluation, such as use of data in social marketing, involving youth in evaluation, presenting data to key audiences, training others about evaluation, creating targeted outcome reports, helping to hire evaluation staff members, and writing proposals to obtain funding for evaluation studies and activities.

There are several challenges to establishing and maintaining an evaluation committee. The first is funding. To ensure the opportunity for family members to attend, childcare and transportation should be provided. Stipends or honorariums should also be offered to family members who sit alongside paid professionals at these meetings since they are there for their family experience expertise. Finally, the offering of refreshments at these meetings can help to “break the ice” among members. However, these items can become costly, especially if the committee meets frequently. Some strategies to meet this challenge could include partnering with a local family organization, soliciting refreshment donations, combining evaluation meetings with an existing committee, having fund raisers, and seeking funding through a grant or foundation.

There are several benefits to establishing and maintaining evaluation committees with family membership. First, the partnerships that form between professionals and family members often cross over into other areas of the system of care beyond the evaluation components. Working with the committee also affords a richer system-of-care evaluation as multiple voices are heard in the process. Committees can

review questions and evaluation reports for content to make them more reader-friendly. They can also help collect data and design studies that will best meet the needs of the population, ensuring a greater chance at successful implementation and the likelihood of participation. Finally, holding an evaluation committee is a learning opportunity for professionals and family members alike. Each party learns something about where the other is coming from, which in turn can help change systems for the better.

### **Providing Training and Technical Assistance Opportunities for Family Involvement in Evaluation**

In order to include family members as key participants, it is crucial that systems of care offer training and technical assistance opportunities for families in evaluation. Many local and national organizations offer these types of trainings. For example, the Federation of Families for Children's Mental Health offers three levels of evaluation training for parents. Supporting families through grantee dollars to participate in this training can help to provide a starter group of family members for an evaluation committee. Systems could also design their own evaluation training and eventually have parents co-train. Another opportunity for family members could include co-presenting at conferences on data and evaluation topics. Evaluation staff also can offer technical assistance to families who need assistance with data for advocacy or for their own evaluation studies.

Again, funding can present a challenge to providing extensive training and technical assistance opportunities. However, many conferences and training events have stipends for family member attendance. The role of trainer can also become a part of professional evaluation staff job descriptions so that this component can continue. Recruiting family members for this type of work can sometimes be challenging (many find data and evaluation to be a somewhat boring topic or irrelevant to what they do). However, the onus is on the trainers to make the topics relevant and interesting to those they want to involve. Data are powerful tools for advocacy and system change. Framed this way, many family members and professionals are likely to want to learn more.

Without a comprehensive and regular training and technical assistance component for family members about evaluation, their involvement may dwindle and even be non-existent. It is critical for professionals to "level the playing field" by ensuring that family members have the information they need to sit as equal partners at the table and participate in evaluation and quality assurance efforts in the system of care.

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# **Youth Involvement in Systems of Care: Youth and Youth Coordinators' Perspectives**

Natalie Henrich  
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## **Introduction**

Involving youths in their own services is an emerging phenomenon that still faces resistance but is becoming increasingly accepted. Youth report significant benefits associated with their involvement, such as developing positive relationships with adults, learning responsibility and new skills, and feeling positive about themselves and contributing to their community (Linetzky, 2000; Quinn, 1995). But benefits from youth involvement do not accrue only to youth. When youth participate in organizations' activities and decision-making, adults who work with the youth develop improved perceptions of youth and become increasingly engaged in their organizations and communities, and organizations are better able to target programs to youth needs and to use youth as effective spokespersons for fundraising (Zeldin, McDaniel, Topitzes & Calver, 2000).

Recognizing the value of youth involvement, the Substance Abuse and Mental Health Services Administration (SAMHSA) mandated youth involvement in all SAMHSA-funded system-of-care communities that have been awarded grants since FY2002. While the mandate specified that all of these systems of care were required to hire a youth coordinator, the details of the youth coordinators' role and the nature of youth involvement were left vague (Department of Health and Human Services, 2002). Consequently, each system of care is working to determine what youth involvement will mean in its community and how this involvement will be implemented. Although the mandate for youth involvement in systems of care is new, many systems of care that began receiving funding prior to the mandate have engaged youth in different ways and to varying extents.

At this recent convergence of voluntary and mandated youth involvement, the national evaluation of the Comprehensive Community Mental Health Services for Children and Their Families Program of the Center for Mental Health Services (CMHS) has included a longitudinal assessment of the status of youth involvement in systems of care. The first stage of this assessment involved focus groups with youth coordinators and youths from across the nation. The findings from these focus groups shed light on (a) how youths are currently engaged in their communities, (b) areas in which youth involvement is absent or minimal, (c) the role of youth coordinators in developing youth involvement, (d) the challenges to youth involvement and strategies for overcoming the challenges, and (e) the benefits to youth from being involved in their systems of care. In addition to increasing awareness about youth involvement in systems of care, the focus group findings will also be used to inform the development of a youth interview that will be administered longitudinally to youths in all federally-funded systems of care as part of the CMHS national evaluation.

## **Method**

Between May and October 2004, focus groups were conducted with youth coordinators and youths from system-of-care communities funded between 1999 and 2003. The two youth coordinator discussions were held at a national system-of-care meeting and a national youth coordinators training conference. A total of 11 youth coordinators representing systems in varying stages of development and diverse geographical areas participated in the discussions. The topics discussed in these focus groups were (1) the role of youth coordinators and youth in their systems of care, (2) the challenges that youth coordinators confront in conducting their work and in trying to get youth involved, and (3) strategies for addressing the challenges.

Of focus groups with youths from system-of-care sites, one was conducted at a national system-of-care conference, and the remaining two youth focus groups were held in system-of-care communities. A total of 22 youths (ages 14-22; 6 White, 16 African American/Black) participated in these focus groups.

Topics covered in the youth discussions were youth groups, and youth involvement in the infrastructure (e.g., governance, conducting of trainings, quality monitoring) and service components of systems of care. Each focus group lasted 1.5 hours and participants were compensated \$50 for their participation (youth coordinators received gift cards and youths received cash). Thematic analyses were conducted using Atlas.ti (Scientific Software Development, 1997).

## Results

Consistent patterns about youth involvement emerged from the youth and youth coordinator focus groups. Both types of respondents identified youth groups as the key mechanism for youth involvement, and it was heavily stressed that these groups need to have a strong social emphasis. Primarily because of issues related to stigma, youth resist joining groups that are about emotional and behavioral problems. However, the youth do appreciate the opportunity to discuss their problems and get emotional support from other youths and staff within a context of coming together to form friendships and participate in fun activities. Stigma was identified as occurring on two levels: (a) the youths do not want to be associated with a group for people with emotional and behavioral problems because of what people outside the system of care will think of them, and (b) some youths do not want to be in a group because they think that people who participate in youth groups have more severe problems and thus they do not identify themselves as being similar to group members.

Youths who are involved in youth groups derive significant benefits from the experience. They value the support they receive from their peers and the staff and the relationships they form in the group. The group also provides a safe place to go and this helps keep the youths out of trouble. As well, youths credit participation in the youth group with helping them develop strategies for coping with their problems.

Other than in youth groups, youth involvement in systems of care is limited. There was little evidence of youths being involved in planning their services, providing feedback on the services they receive, providing trainings or other services, or participating in the decision-making process for their system of care (such as through membership on committees and boards). It appeared that youths were often unaware that they *could* be involved in these activities, although the youth coordinators were aware of the different domains in which youth could participate. In fact, some youth coordinators felt that system-of-care administrators were actively trying to prevent youth coordinators from informing youths about their rights and involvement options because of a general resistance to involve youth. Other barriers to youth involvement include an absence of a true commitment to creating environments in which youths are able, or feel welcome, to participate such as when board meetings are held during school hours or food and transportation are not provided. Youth coordinators report that they are actively working to engage youths in these domains from which they are currently excluded.

Youth coordinators identified several key challenges to youth involvement. Most significant was a lack of support from the system-of-care community and a pervasive “tokenism” mentality. This lack of buy-in for real youth engagement impacts programmatic decisions such as budget allocations for youth involvement, which was often insufficient or unstable. A general lack of support for youth involvement also impacted how youth coordinators are perceived and treated, and many find an unwillingness of system staff to share information about youths and a lack of power to make or implement decisions.

Youths and youth coordinators suggested strategies for increasing youth involvement and addressing societal and system-level barriers to involvement. These strategies include community outreach and education to reduce stigma, creating a social or youth-friendly atmosphere at system-of-care activities in order to increase youth attendance, and clarifying and formalizing the youth mandate so that there is consistency and stability related to youth involvement.

## **Conclusion**

Both the youths and the youth coordinators conveyed similar experiences of youth involvement in systems of care, such as a lack of awareness by youths about the ways in which they could be involved in their communities, the importance of including social activities in youth groups, and an absence of a youth voice in decision-making arenas within systems of care. This consistency is important because two of the three youth focus groups were conducted in system-of-care communities and thus cannot be assumed to be representative of youths from other systems of care. However, the youth coordinator focus groups included youth coordinators from eleven systems of care and thus their experiences are more likely to capture the range of youth involvement across the nation. The congruity between descriptions of youth involvement increases the likelihood that the patterns of youth involvement that emerged from the focus groups may reflect the youth experience in many systems of care. Though it is unlikely that all of the experiences are shared by all of the communities, the findings identify areas that system of care administrators and youth coordinators can review to determine whether the identified shortcomings of youth involvement are present in their communities and take steps to address problem areas. Given the benefits of youth involvement, to both youth and the systems/organizations with which they are involved, finding ways to increasingly and effectively involve youth in their systems may be an important way to improve outcomes for youth in systems of care and enhance the services, infrastructure, and sustainability of these systems.

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# ***The Meaning of Diagnosis: Implications for Clinician-Parent Partnership in Child Mental Health***

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## **Introduction**

Traditionally children's mental health services research has focused on identifying child and parent characteristics that influence access, utilization, and continuity of care as well as assessing the fragmentation of community-based care (Costello, Pescosolido, Angold, & Burns, 1998; Stroul & Friedman, 1986; Burns, et al., 1995; Farmer, Burns, Phillips, Angold, & Costello, 2003). Far less is known about the mechanisms by which parents navigate the complex, and often uncoordinated, systems to obtain mental health services for their child. This study was undertaken to describe the process by which parents sought services, including their interactions with clinicians, and to describe providers' perspective on the delivery of mental health care to children.

## **Study Design**

Grounded theory informed the research design which consisted of successive iterations of interviewing, inductive analysis of the data, and development of theory grounded in the data (Glaser 1976, 1992; Glaser & Strauss, 1967). This qualitative study incorporated several stages of data collection so that on-going data analysis could inform each subsequent stage. In the first stage, two in-depth interviews were done with a caregiver/parent within one month. This was followed by semi-structured interviews with providers. The final stage consisted of a focus group with parent/caregivers. This study was initially undertaken as part of a qualitative methods course at Johns Hopkins Bloomberg School of Public Health (JHBSPH). All study procedures and materials were reviewed and approved by the Committee on Human Research, which is the Institutional Review Board, at JHBSPH.

Using a purposive sampling strategy, parents with experience seeking mental health care services for their child were sought to participate in the study. Two consumer advocacy organizations recruited eligible parents for the study. The 10 individuals who agreed to join the study were all middle-aged. The majority of participants were female ( $n = 9$ ), served as the parent ( $n = 9$ ), were White ( $n = 9$ ), and were married ( $n = 9$ ). The children whose parents participated in the study were primarily males (75%) aged 6 to 25 years (mean age = 14 years). Bipolar disorder was the most common psychiatric diagnosis reported by parents. Other parent-reported diagnoses included: autism, attention-deficit hyperactivity disorder, attachment disorder, mood, depression, and anxiety disorders.

Child and adolescent mental health clinicians were identified through professional contacts of several members of the research team. The eligibility criterion was that the provider was involved in the administrative or clinical management of child mental health care services. The seven child and adolescent mental health clinicians who were interviewed consisted of three psychiatrists, a mental health hospital administrator (and former clinician), a psychologist, and two school mental health professionals (one clinical social worker and one licensed clinical professional counselor).

## **Data Analysis**

Text from the transcribed interviews and focus group, in addition to field notes were analyzed using the constant comparative method (Glaser 1976, 1992; Glaser & Strauss, 1967). Logic diagrams, data matrices and memos helped us delineate the relationships between the concepts that emerged from initial analyses. Through various iterative steps in the constant comparative analysis, we were able to develop and refine a theoretical construct.

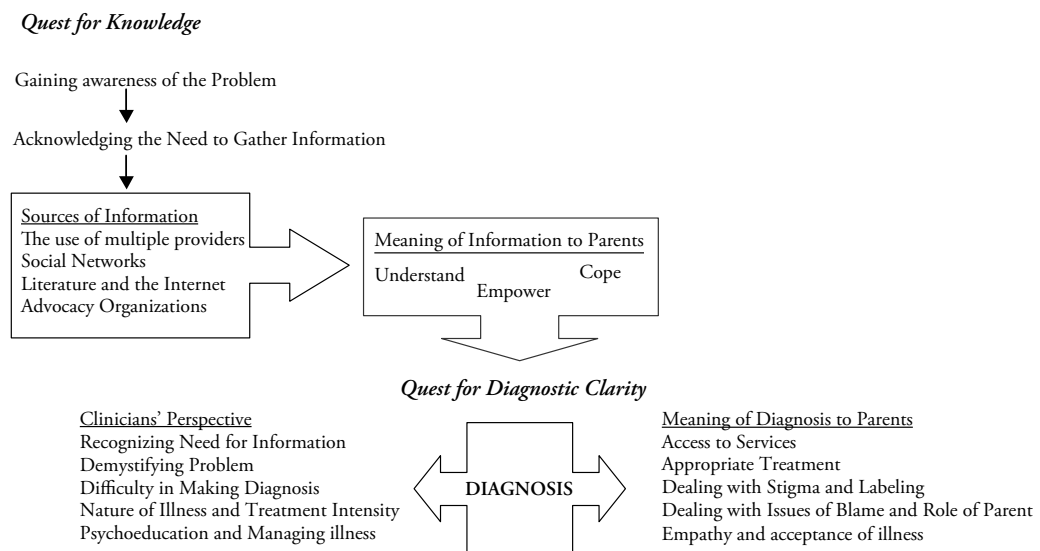
The credibility and quality of our findings were achieved through a triangulation of sources (interviews with both parents and providers), methods triangulation (in-depth interviews and focus group), and the use of member checks (follow-up interviews with parents, and the use of the parent focus group).

## Findings

*“I can’t do anything without knowledge...you know it’s like working in a dark room trying to find a thread in a dark room. No matter how much searching you do you’re not going to be able to help the person who needs help.”*

The process by which parents sought information regarding their child’s mental health was identified as a critical step toward coping with their child’s illness. Parents’ search for information, their *quest for knowledge*, embodied the situations and individual experiences that led parents to recognize their child’s problems and seek mental health services for these problem(s) as well as the various sources of information parents’ used. The ultimate goal of this quest was *diagnostic clarity*, which referred to parents’ need for a “name” for their child’s mental health condition. Figure 1 outlines the process, including the relationship between these two concepts.

**Figure 1**  
**Parents’ of Children with Mental Health Problems Search for Information**



## Quest for Knowledge

*“The early signs were there but no one hands you a book in the beginning when you have a child.”*

Parents uniformly expressed frustration about the delayed recognition of their child’s mental health problems which subsequently postponed accessing needed care.

This delayed awareness, and subsequent impact on obtaining services, was attributed to a number of sources. Pediatricians’ ability to identify and diagnose the problem was questioned by parents. Parents themselves acknowledged uncertainty distinguishing between normal and abnormal behavior, and admitted that they did not fully recognize key signs of developmental delays. A critical incident, cues from other individuals, or their child’s experiences at school/day care often made parents aware of their child’s mental health problem. Finally, parents’ own fears delayed their full awareness of the seriousness of their child’s illness.

Once parents became aware of their child’s mental health problems, some parents expressed a “need to know” about their child’s illness and available services early on, while for others it emerged from their

frustrating experiences accessing mental health care for their child. The search for information was often prompted by requirements that limited access to certain specialized services to children with a particular set of diagnoses. In addition, parents described their frustration with providers knowing or sharing little with them about potential resources, including services that might be available to their children, thus prompting them to seek out the information from other sources.

These alternative resources or strategies parents described included using more than one provider, accessing websites on the Internet, reading both popular and academic books regarding child mental health or experiences raising children with mental health problems, attending seminars and parent support groups provided by consumer advocacy organizations and exchanging information with other parents of children with mental health problems.

### **Consequences of the Quest for Knowledge: Diagnostic Clarity**

*“And things were...not getting any better... But when the knowledge was there — the diagnosis — then that’s when the big guns came out... Up until that point we didn’t have any knowledge. We didn’t know what we were working with. So there wasn’t anything to argue about. And they were not giving us any help... If you needed any help you had to prove it... Prove that you need the help.”*

From the parents’ perspective, this quest for knowledge led to diagnostic clarity, understanding the exact nature of their child’s mental health problems. The consequences of this process for parents were multi-fold: enabling them to better deal with the service system, empowering them to act as advocates on behalf of their child, and helping them and their family better understand and cope with their child’s mental health problems.

Clinicians attached a different meaning to diagnosis. According to clinicians, diagnosis was only one of several different sources of data that they reviewed when making treatment decisions. The importance that clinicians placed upon diagnostic information depended upon the context, including the nature of the illness and the type of treatment prescribed. Because making a diagnosis in children and adolescents is sometimes difficult, diagnosis was more likely to be discussed when a medication was to be prescribed for the child’s illness, and less likely in situations where there was more uncertainty about the illness and treatment. Clinicians reported educating parents about managing their child’s illness rather than communicating a diagnostic label.

### **Implications**

These findings suggest that providers’ and parents’ differing perspectives regarding the utility and value of diagnosis may affect the exchange of information between them about mental illness, potentially contributing to sub-optimal community mental health service use for children. Clinicians can play an important role in providing comprehensive psycho-education or referring parents to programs that educate parents about mental illness. Helping parents discern between developmentally appropriate and problematic behaviors is critical towards identifying children in need of mental health services early. In addition, communicating the nuances of the diagnostic process to parents may be challenging, but it has the potential to encourage parents to be more active partners in the treatment process. The early identification of mental health problems and the importance of information exchange surrounding mental illness should be emphasized in clinical training programs. In addition, this study’s findings suggest the important role that consumer advocacy groups play in educating and empowering families.

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# **What Caregivers are Saying about Wraparound**

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**Christina Breault  
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## **Introduction**

While there has been much literature examining the effects of wraparound services over the past decade, little is known regarding caregivers' thoughts about this service delivery approach. The critical role of caregivers in the wraparound process suggests many research questions including: What is it about wraparound services that meet caregivers' needs? What aspects of wraparound do caregivers feel work best for their child and family? Are there components of wraparound that could be improved? Answers to these questions could be instrumental in keeping providers knowledgeable of families' needs; further, they may give weight to the wraparound services philosophy of how essential it is for families to have "voice and choice" to make the program most effective. Findings could suggest strategies for informing and potentially improving services to children with severe emotional disturbances (SED) and their families.

This summary describes lessons learned from analysis of comments offered by families during an evaluation of a wraparound program in Massachusetts. Four themes derived from data on family perceptions of the wraparound approach can inform future research and program planning.

## **Method**

Coordinated Family Focused Care (CFFC) is a wraparound program for children and youth with SED ages 3-18 in five Massachusetts' communities. Each child and family is assigned a Care Manager, who is a Master's level clinician, and a Family Partner, who has been a primary caregiver for a child with SED. Families work with their Care Manager, Family Partner and other identified supports to form a wraparound team to assess family strengths and needs, to develop a crisis and treatment plan, and to provide support and advocacy for the child and family.

With a grant from the Center for Health Care Strategies, a team from the Center for Mental Health Services Research (CMHSR) at the University of Massachusetts Medical School is conducting an evaluation of the CFFC program. Of the many outcomes being measured treatment fidelity is considered one of the most critical. Although wraparound has become a popular strategy for systems that treat children with serious emotional or behavioral disorders, there is no single set of standards that can be used to implement high quality wraparound.

The Wraparound Fidelity Index (WFI; Bruns, Burchard, Suter, Leverentz-Brady & Force, 2004) is being used by the evaluation team to assess how closely to the model the five CFFC sites are implementing wraparound. The WFI includes caregiver ratings of the philosophical elements of the wraparound process; these elements include:

- Voice and Choice
- Youth and Family Team
- Community-Based Services
- Cultural Competence
- Individualized and Strength-Based Services
- Natural Supports
- Continuation of Care
- Collaboration
- Flexible Resources
- Outcome-Based Services.

The WFI is a structured measure that includes four questions per element on a three point Likert-type scale. Interviews are conducted three months ( $n = 142$ ) and nine months ( $n = 74$ ) after enrollment into services. Participants are paid \$10 for each interview they complete.

In the course of completing the structured WFI interview, interviewers have found that caregivers spontaneously offer additional information. Interviewers are careful to record all of these unsolicited comments. In addition, caregivers are asked three open-ended questions at the end of the interview: (a) What is your favorite thing about the program? (b) What would you change, if you could? And (c) Do you have anything else to say about the team that I haven't touched on?

Responses to these questions, as well as the spontaneous comments offered by caregivers during the interview, were recorded. These data were coded into thematic categories by two raters; an inter-rater reliability of 93% was computed.

## **Results**

Four themes emerged from the analysis of the data: encouragement to participate in treatment planning; support during the wraparound process; focus on child and family strengths; and concerns surrounding discharge.

### **Caregivers were encouraged to participate in the treatment planning process**

Caregivers reported that teams listened to their ideas and didn't make decisions without them. "They listen to everything we have to say even if they don't like it. We're never pushed into anything we don't like." One caregiver stated, "I run the meetings, suggest the changes, and they make it happen."

### **Caregivers felt supported**

Caregivers described receiving generous amounts of concrete and emotional support from CFFC. "They are there to help in every sense of the word." Concrete support, for example providing transportation and helping to navigate complex service systems, was identified as very important to caregivers. "One good thing is they will pick me up if needed and drive me home. They are really good about that stuff [and I need it] because I don't have a car."

Emotional support, such as encouragement, respect, and overall caring about the families was also identified by many caregivers as an important factor in their care. One mother explained, "they don't only help [my child], but they help me." In addition, some caregivers reported receiving help from parent support groups coordinated at some sites—"I go to group every Wednesday. They're there to support me, they are my family...I've learned a lot and I really enjoy the group."

### **Wraparound teams focus on the strengths of children and families**

Caregivers reported that wraparound teams maintained a focus on the strengths of their children and the family, and that identifying and focusing on strengths helped caregivers feel hopeful about the future. "They are constantly reminding me of his strengths," said one parent. Another parent noted that her team tries "to get us to focus on the positive on days when [it feels] there are none." Another caregiver explained, "I used to spend too much time on the negative, but they've changed my ways."

### **Caregivers were concerned about discharge from planning**

Some caregivers expressed concerns about discharge planning; many caregivers wanted the program to continue after their child met graduation goals. One caregiver noted, "We are about to graduate and I feel we aren't ready; we still need the support." Another parent suggested it would be helpful to have "better planning for when we are ready to leave." A number of families stressed the need for better preparation before leaving CFFC services.

## **Conclusion**

Findings from the CMHSR evaluation suggest that in general caregivers feel supported and encouraged by wraparound teams in CFFC, and desire to stay in the program for as long as possible. As one caregiver noted, “This is the first [service plan] I found that works. The only one I have felt comfortable with.”

These results suggest future areas of research regarding the experiences of caregivers with wraparound services. For example, caregivers identified the significance of receiving emotional and concrete support from the CFFC program. Additional research could explore these themes further and ascertain what specific types of emotional and concrete support are most useful to caregivers. Understanding “what works” for caregivers could help wraparound teams to focus on the types of support recognized as most helpful. Future research could also explore caregivers’ concerns about early discharge from the wraparound program to determine as needed supports to families as they transition from wraparound services.

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# **What Youth in Foster Care Think about Mental Health Services**

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## **Introduction**

Concerns about the quality of mental health services have led to increased solicitation of consumer feedback, especially among adult consumers. While there are exceptions (Garland & Besinger, 1996; Shapiro, Welker, & Jacobsen, 1997), there remains a paucity of research that investigates youths' perceptions of the services they receive (Jensen, Hoagwood & Petti, 1996). More commonly, parents or other caregivers are surveyed about their satisfaction with a youth's services (Brannan, Sonnichsen, & Heflinger, 1996; Magura & Moses, 1984; Martin, Petr, & Kapp, 2003). By narrowly defining the consumer as the individual with legal responsibility or insurance coverage, the unique perspectives of youths are lost.

Understanding youths' experiences and their relationships with providers may shed light on underutilization or early termination of services among this age group (Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2003). Additionally, identifying what youths like and dislike about their care has implications for quality improvement efforts in service delivery. In this study, youths were given an opportunity to voice their positive and negative experiences with mental health services, as well as share what they like about specific providers. The purpose of this qualitative study is to identify and describe the concepts youths value in relationships with mental health professionals and the services they receive.

## **Methods**

As part of a larger, longitudinal study assessing the experiences of older youth transitioning from the foster care system (McMillen, Zima, Scott, Ollie, Munson, et al., 2004), 406 youths in the Missouri foster care system were interviewed in person near their seventeenth birthdays (90% of those eligible). Additional data for this study were obtained during an interview six months later, by phone to 371 youths (91% retention). Data collection occurred between December 2001 and May 2003.

The sample was 56% female and over half were youth of color (57%). The sample consisted of youths in varied living situations. Ninety-six percent ( $N = 389$ ) reported a history of using at least one type of mental health service; 73% had received out-patient therapy, 77% had experienced residential treatment, and 42% had received in-patient psychiatric care. Thirty-seven percent were receiving prescribed psychotropic medications at the time of the first interview (McMillen, et al., 2004).

During the first interview, youth were asked to describe "particularly positive" or "particularly negative" experiences with mental health professionals. At the interview six months later, youths currently receiving out-patient therapy were asked what they liked about their therapist, and youths who were receiving residential treatment were asked what they liked about their favorite direct care worker and their residential program therapist or case manager. Answers were transcribed by the interviewers.

Comments from youth were reviewed independently by two reviewers. Through several readings of the responses, empirically observable regularities or patterns could be identified. Each reviewer compiled a list of emerging themes and then the two compared their findings. Similar themes had been identified by each reviewer and the resulting themes were jointly named. After developing coding schemes, two reviewers reread the transcripts and coded 30% of the responses to measure inter-rater reliability. An overall kappa score of .75 was achieved (.71 - .79 for each individual question). Discrepancies were mutually reconciled. The remaining responses were coded by one reviewer. The frequency of each theme's appearance was tabulated to identify the themes most commonly found.

## Results

As stated above, the focus of the first interview was on “particularly positive” or “particularly negative” experiences with mental health professionals. Of the 389 youths who had used mental health services, 144 (37%) described a positive experience with a mental health professional while 101 youths (26%) shared a negative experience. Themes that emerged from the comments are described below.

### Positive Experiences

Youths reported positive experiences that were classified into two broad categories: benefits of mental health services and their relationship with a mental health professional. Frequencies of youth comments by category and theme, based on the number of youths who reported a positive experience, are shown in Table 1.

**Table 1**  
**Youth Comments on Positive Experiences with Mental Health Professionals**  
**(N = 144)**

| <i>Theme</i>   | <i>N</i> | <i>%</i> |
|--|----------|----------|
| <b>Benefits of Mental Health Services</b>              |          |          |
| Help with personal and emotional issues, coping skills | 29       | 20       |
| Helped me feel better                                  | 22       | 15       |
| General helpfulness                                    | 18       | 13       |
| Promoted behavior change                               | 14       | 10       |
| Help develop insight/self-awareness                    | 13       | 9        |
| Catharsis/emotional release                            | 10       | 7        |
| Advocated to help me get what I needed/wanted          | 10       | 7        |
| Help with practical and concrete matters               | 9        | 6        |
| Medication management                                  | 6        | 4        |
| <b>Relationship with Mental Health Professional</b>    |          |          |
| Listening/attending                                    | 29       | 20       |
| Engagement   | 10       | 7        |
| Consistency/accessibility                              | 7        | 5        |
| Felt supported   | 5        | 3        |
| Empathy/understanding                                  | 3        | 2        |
| Authenticity   | 2        | 1        |
| Other personality characteristics                      | 9        | 6        |

**Benefits of Mental Health Services.** Youths remarked on several benefits from mental health services, including help with emotional issues and coping skills, experiencing positive behavior change, developing insight, and experiencing a therapeutic catharsis. By choosing to articulate the benefits of care, youths may be indirectly responding to social pressures that challenge their participation.

*“Mr. \_\_\_ helped me cope with my father and brother’s deaths. Pushed me to cope even though I got mad.”*

*“Helped me get my life on track – kept me in school, stopped me from some bad stuff”*

*“One kept me from harming myself.”*

For youths, observable behavior changes offer further evidence of the validation of their participation in mental health care.

**Relationship with mental health professionals.** Youths articulated several desirable characteristics of mental health providers. Major themes within this category included the provider’s listening and attending skills, consistency and support.

*“Every experience with my therapist is positive. She listens and doesn’t see [me] as something to diagnose.”*  
*“She would always come talk to me, even if she didn’t really have time.”*  
*“I can count on him.”*

These central themes suggest that youths appreciate it when providers make time for them.

**Negative Experiences**

Youths reported negative experiences that were classified into three categories: treatment concerns, relationship with mental health provider, and unprofessional or questionable behavior. Table 2 displays the frequencies for each category as well as the specific themes shared by youths.

**Table 2**  
**Youth Comments on Negative Experiences with Mental Health Professionals**  
**(N = 101)**

| <i>Theme</i>  | <i>N</i> | <i>%</i> |
|---|----------|----------|
| <b>Treatment Concerns</b>                           |          |          |
| Medication issues                                   | 23       | 23       |
| Ineffective/not helpful                             | 10       | 10       |
| Coerced/mandated treatment                          | 7        | 7        |
| Physical restraint                                  | 4        | 4        |
| It made me worse                                    | 2        | 2        |
| <b>Relationship with Mental Health Professional</b> |          |          |
| Didn’t listen                                       | 28       | 28       |
| Didn’t get along/ didn’t like                       | 10       | 10       |
| Stigma  | 5        | 5        |
| Doesn’t care about me                               | 4        | 4        |
| Allied with system/guardian                         | 4        | 4        |
| Unprofessional                                      | 29       | 29       |

**Treatment concerns.** When sharing negative experiences, several youths commented on the treatment they received. Medication management figured prominently among youths’ negative experiences. Additionally, when youths experienced little change as a result of their mental health care, they perceived these services as ineffective.

*“They try to drill it in my head that I need medicine.”*  
*“Their doctors try to put you on meds that don’t work.”*  
*“They talk, but when I leave, everything is the same as before.”*  
*“They don’t seem to do much.”*

Other themes that emerged in this category include experiencing iatrogenic effects of care, being forced to participate in treatment, and hands-on behavioral interventions (i.e. restraint).

**Relationship with mental health professionals.** Youths also shared negative experiences with a service provider. The detrimental characteristics youths articulated were often the inverse of the previously mentioned sought-after traits. Communication issues with a mental health professional were frequently cited by youths as problematic. Youths expressed feeling ignored and misunderstood.

*“They put words in your mouth.”*  
*“We clashed, so therapy was no good.”*

To improve understanding, one youth offered a practical suggestion.

*“Sometimes psychologists don’t get what you are trying to say. It would be good for psychologists to go back over what you are trying to say just to make sure.”*

Additional difficulties within the therapist-client relationship included feeling stigmatized or feeling the provider was allied with the system or guardian.

**Unprofessional behavior.** Twenty-nine youths cited situations where professionals demonstrated a disregard of the knowledge or ethical standards of their position. These assertions varied from suspected dishonesty to demeaning acts.

*“One therapist told me I was a black male and that I needed to be more masculine and not gay.”*

*“I didn’t like one counselor. She told the staff at the center something that was confidential and I got teased by other patients.”*

*“In order to get me to talk, my therapist would wrap me up in a blanket and my foster mom would sit on me. My therapist would make me sit on her lap like I was a little kid and I was 13.”*

These comments suggest that youths are knowledgeable about the behaviors expected of professionals and are concerned about breaches in judgment.

### **Feedback for specific professionals**

All youths who reported receiving outpatient services from a primary therapist ( $n = 89$ ) or who identified a residential case manager ( $n = 110$ ) or favorite direct care worker ( $n = 113$ ) were asked what they liked about these mental health providers. Since these individuals serve in diverse capacities of service delivery, one might wonder if youth expressed different preferences by provider type. Results suggest that youths appreciate similar characteristics among providers regardless of their role. Youths valued relationship skills, professionalism and helpfulness across provider types. Below are youth comments related to these broad categories with the specific provider referenced after each quotation.

*“I like that she genuinely cares about what is going on.” (Residential case manager)*

*“He’s a great guy, basically a father to me.” (Primary therapist)*

*“He knows what he is talking about.” (Primary therapist)*

*“He treats us with respect and doesn’t lie.” (Direct care worker)*

*“He is helpful when it comes to man-to-man problems. He helps me make better decisions.” (Direct care worker)*

### **Discussion and Conclusions**

Results from this study provide evidence that youth are able to assess their care and have formed opinions about what they like and dislike about their mental health service providers. Consistent with similar work (Garland & Besinger, 1996; Shapiro, et al., 1997; Pickett, Lyons, Polonus, Seymour & Miller, 1995), the broad emergent categories focused on interpersonal aspects of youths’ relationships with providers and the perceived value of the treatment services. However, medication management, a theme not found in earlier studies, featured notably in this sample’s comments. Characteristics unique to this population (McMillen, et al., 2004), as well as growing rates of medication utilization (Warner, Pottick, & Mukherjee, 2004), may explain this emphasis.

In a system of care, youth may interact with several mental health professionals. This study examined what youth like about their primary therapist, residential case manager or therapist, and residential direct care worker. Preferences voiced by youth have implications for staff selection and training.

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# **Using Family Perceptions to Shape the Research and Policy Agenda on Intervention Development**

Jeanne C. Rivard  
Ranilo M. Laygo

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## **Introduction**

As the field of children's mental health moves forward to incorporate evidence-based practices into state and local service arrays, it is essential to consider the existing evidence presented by families and children themselves. This was a major conclusion of a meeting of stakeholders in children's mental health in August 2003 that focused on building state and community capacity to implement evidence-based practices (National Association, 2003). Family members, family organizations, state directors of children's mental health services, researchers, and funders advocated for research that focuses on the implementation and effectiveness of services that families value. Meeting participants endorsed an approach to advancing evidence-based practices (EBPs) that gives communities and families responsibility for selecting EBPs that fit with the needs, context, culture, and values of their neighborhoods—and imbeds EBPs in local service arrays within family-driven, quality-improvement oriented systems of care. In an initial effort to respond to this call, an existing data set was utilized to examine family perceptions regarding the extent to which various types of services are used and the extent to which these services actually meet the needs of children and their families.

## **Methods**

A secondary data analysis was conducted using data collected in the Center for Mental Health Services-funded National Evaluation of the Comprehensive Community Mental Health Services for Children and Their Families Program (Holden, Friedman, & Santiago, 2001; Manteuffel, Stephens, & Santiago, 2002). Data used in the present analysis were primarily drawn from items of the Multi-Sector Service Contacts (MSSC) instrument, the Family Satisfaction Questionnaire, and the Descriptive Information Questionnaire (National Evaluation Team, 2004). This analysis was not part of the evaluation, but was conducted as a cross-sectional examination of service use at one point in time. The service data analyzed were collected at six months following intake, and were selected because they represented a time period as close to baseline as possible. Demographic and other descriptive information was used from the intake period because the service items of interest inquired about services received during the first six months since intake. Data were analyzed for all children in the longitudinal study for whom the MSSC was first administered in 2002 or 2003 ( $N = 2,167$ ).

## **Results**

Child ages ranged from 0 to 22 years. The mean age was 11.74 years ( $SD = 3.52$ ); the median age was 12 years, and the mode was 14 years. Sixty-seven percent of children were boys and 33% were girls. The following data were reported for the race of the children: White, 60.7%; Black or African American, 27.6%; Hispanic origin, 12.5%; Bi-racial or multiracial, 8.5%; Asian, .7%; American Indian or Alaska native, 5.4%; Native Hawaiian or Other Pacific Islander, .5% and; Other 1.1%. Because individuals may claim more than one racial background, the race variable may add to more than 100%.

The number of problems that children presented with at intake ranged from 0 to 27; the mean was 6.8 ( $SD = 5.5$ ); on the Child Behavior Checklist (CBCL; Achenbach, 1991), 61.4% of children scored in the clinical range of internalizing problems; 76.4% scored in the clinical range of externalizing problems; and 70% of children scored in the clinical range for total problems.

Results showed that 93% of children and families had received services related to any emotional or behavioral problems experienced by the child within the prior six months. During this time period, children received an average of six different services ( $SD = 2.9$ ).

Table 1 shows the proportions of children who received 23 types of services, as well as the average caregiver rating of how well the service met their child and/or family's needs. Services were rated on a Likert-type scale that was rated as follows: 1 = *not at all*; 2 = *somewhat well*; 3 = *moderately well*; 4 = *very well*; 5 = *extremely well*.

**Table 1**  
**Services Received and Ratings of Met Needs**

| <i>Service Type</i>                         | <i>Percent that received the service</i> | <i>Mean rating of how well the service met the child/family's needs</i> | <i>SD</i> |
|---|--|---|-----------|
| Individual therapy                          | 79% ( <i>n</i> = 2,005)                  | 3.35 ( <i>n</i> = 1,492)  | 1.14      |
| Case management services                    | 76% ( <i>n</i> = 2,006)                  | 3.64 ( <i>n</i> = 1,472)  | 1.14      |
| Medication treatment-monitoring services    | 66% ( <i>n</i> = 2,013)                  | 3.47 ( <i>n</i> = 1,281)  | 1.11      |
| Assessment or evaluation services           | 63% ( <i>n</i> = 1,992)                  | 3.30 ( <i>n</i> = 1,160)  | 1.14      |
| Family therapy services                     | 39% ( <i>n</i> = 2,005)                  | 3.42 ( <i>n</i> = 749)  | 1.16      |
| Group therapy                               | 35% ( <i>n</i> = 1,999)                  | 3.29 ( <i>n</i> = 652)  | 1.11      |
| Recreational activities                     | 35% ( <i>n</i> = 2,009)                  | 3.80 ( <i>n</i> = 681)  | 1.04      |
| Caregiver or family support services        | 30% ( <i>n</i> = 1,991)                  | 3.70 ( <i>n</i> = 545)  | 1.09      |
| Flexible funds                              | 26% ( <i>n</i> = 1,992)                  | 4.16 ( <i>n</i> = 482)  | .96       |
| Transportation services                     | 25% ( <i>n</i> = 1,998)                  | 4.13 ( <i>n</i> = 473)  | .93       |
| Crisis stabilization services               | 20% ( <i>n</i> = 2,003)                  | 3.35 ( <i>n</i> = 379)  | 1.25      |
| Behavioral therapeutic aide services        | 19% ( <i>n</i> = 2,009)                  | 3.53 ( <i>n</i> = 370)  | 1.10      |
| Respite care                                | 17% ( <i>n</i> = 2,007)                  | 3.80 ( <i>n</i> = 320)  | 1.15      |
| Family preservation services                | 14% ( <i>n</i> = 1,990)                  | 3.50 ( <i>n</i> = 261)  | 1.14      |
| After school programs or child care         | 14% ( <i>n</i> = 1,940)                  | 3.76 ( <i>n</i> = 266)  | 1.07      |
| Day treatment                               | 13% ( <i>n</i> = 2,009)                  | 3.40 ( <i>n</i> = 257)  | 1.30      |
| Inpatient hospitalization                   | 10% ( <i>n</i> = 2,010)                  | 3.00 ( <i>n</i> = 190)  | 1.26      |
| Residential treatment center                | 10% ( <i>n</i> = 2,009)                  | 3.55 ( <i>n</i> = 182)  | 1.18      |
| Therapeutic group home                      | 6% ( <i>n</i> = 2,010)                   | 3.54 ( <i>n</i> = 115)  | 1.10      |
| Therapeutic foster care                     | 6% ( <i>n</i> = 2,009)                   | 3.59 ( <i>n</i> = 109)  | 1.14      |
| Resid. therapeutic camp or wilderness prog. | 4% ( <i>n</i> = 2,008)                   | 3.77 ( <i>n</i> = 74)   | 1.09      |
| Independent living services                 | 3% ( <i>n</i> = 1,999)                   | 3.60 ( <i>n</i> = 57)   | .98       |
| Transition services                         | 2% ( <i>n</i> = 2,000)                   | 3.87 ( <i>n</i> = 52)   | 1.10      |

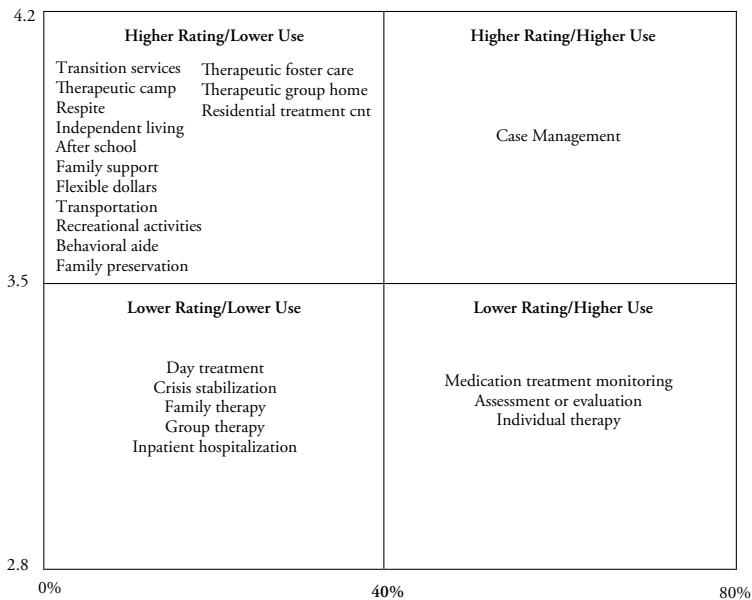
The *n*'s reported in Column 2 of Table 1 indicate the number of caregivers who reported whether or not their child and/or family received the service in question. The numbers shown beside the average ratings in Column 3 are lower because only caregivers who reported receiving the service provided a rating of how well that service met their needs. Both sets of numbers were also affected by missing data (i.e., not applicable, refused, unknown, missing for other reason).

Among the highest used services were individual therapy (79%), case management (76%), medication-treatment monitoring (66%), and assessment/evaluation services (63%). While 79% of families reported having used individual therapy in the prior six months, this service was among the lowest rated in terms of meeting the needs of children and families. The highest rated services were supportive-type services including flexible funds, transportation services, transition services, recreational activities, and respite care. While slightly over a third of families received recreational activities, fewer families received flexible funds (26%), transportation (25%), transition (2%), and respite care (17%) services.

Figure 1 displays a summary of the results of a scatterplot of the same two variables reported above: "proportion of services received" (X axis, with proportions ranging from 0 to 80%) by "ratings of the extent to which the services met the child's needs" (Y axis, with mean ratings of 2.8 to 4.2). Dividing the plot into four even quadrants graphically shows that most of the supportive-type services fall into the "higher rating/lower use" quadrant, along with residential services.



**Figure 1**  
**Display of Services Received by Ratings of Met Needs**



To explore these findings further, a logistic regression analysis was conducted to examine factors associated with families’ satisfaction with their child’s progress in the prior six months. The Family Satisfaction Questionnaire was used to obtain this dependent variable, which covered the same time period as the services data. For this analysis, the ordinal-level variable, families’ satisfaction with their child’s progress in the prior six months, was dichotomized where responses rated as *very dissatisfied*, *dissatisfied*, and *neutral* were scored as 0; and responses rated as *satisfied* and *very satisfied* were scored as 1.

Child age, number of problems, CBCL internalizing and externalizing scores, overall satisfaction with services, and number of services used were entered into the equation along with “met needs” ratings of the three treatment services that were used most by families (i.e., individual therapy, case management, and medication-treatment monitoring). With 655 cases included in the analysis, significant positive associations were found between families’ satisfaction with their child’s progress in the prior six months and the following three variables: greater overall satisfaction with services ( $p < .001$ ), higher “met needs” ratings on medication-treatment monitoring ( $p < .001$ ), and higher “met needs” ratings on individual therapy ( $p < .001$ ). Families were less likely to perceive progress when their child’s externalizing scores were higher ( $p < .001$ ; see Table 2).

**Table 2**  
**Factors Associated with Satisfaction in Progress at Six Months**

|                                    | <i>B</i> | <i>P</i> | <i>Exp(B)</i> |
|------------------------------------|----------|----------|---------------|
| Age                                | -.02     | .61      | .98           |
| Number of problems                 | .01      | .63      | 1.10          |
| Internalizing raw score            | .00      | .76      | 1.00          |
| Externalizing raw score            | -.06     | .00      | .94           |
| Overall satisfaction with services | .74      | .00      | 2.09          |
| Medication treatment monitoring    | .43      | .00      | 1.54          |
| Individual therapy                 | .40      | .00      | 1.49          |
| Case management                    | -.13     | .23      | .88           |
| Number services received           | -.05     | .21      | .95           |
| Constant                           | -2.26    | .00      | .11           |

**Conclusion**

In discussing family perspectives on evidence-based practices, Flynn (2005) noted that some of the areas of highest interest to families included: family engagement, family education, caregiver support, and promoting independence and emancipation for adolescents. A major finding of the cross-sectional analysis presented here was that families generally rated these types of supportive-type services higher in meeting their needs than more traditional clinical services; but small proportions of families reported

receiving these types of support services. The lower proportions of children and families receiving supportive services may simply reflect the lower availability of these types of services. The higher ratings of these same services might indicate that it is somewhat easier to meet support needs than treatment needs. However, it is important to document that families report that these types of supportive services do meet their needs, and to use this additional evidence as validation for further research, policy, and program development in this area.

That residential services also fell into the same quadrant as support services (i.e., higher rating/lower use) shows that families perceive that residential services meet their needs, and probably reflects the trend in children's mental health to place fewer children in reducing out-of-home care. It is important to note here that the source of service data analyzed were families participating in system of care communities where program goals often focus on preventing or reducing out-of-home care.

Although some of the traditional treatment services were rated lower in meeting needs, results of the logistic regression analysis showed that when families perceived that more progress was made by their children, they also rated individual therapy and medication-treatment monitoring as better meeting their child's needs. This might suggest that more effective treatment services yielded better outcomes. The data set that was used in the present analysis inquired about generic types of services that children and families used. It is not known which of these services might have been evidence-based. However, studies that compare the use of traditional treatment services with evidence-based interventions, such as those being undertaken by the National Evaluation Team of the Comprehensive Community Mental Health Services for Children and Their Families Program, will begin to document the differential effects on community levels.

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# **The Relationship Between Family Empowerment and Youth Mental Health Outcomes**

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## **Introduction**

While some researchers have begun to analyze predictors and correlates of family empowerment, few have examined the effects of family empowerment on youth mental health outcomes. Those researchers who have investigated the effects of family empowerment on youth outcomes have found mixed results (Bickman, Heflinger, Northrup, Sonnichsen, & Schilling; 1998; Cunningham, Henggeler, Brondino, & Pickrel, 1999; Resendez, Quist, & Matshazi, 2000; Taube, Tighe, & Burchard, 2001). We were interested in studying whether, for youth and their families enrolled in the PEN-PAL Project, family empowerment would increase over time, and whether family empowerment and youth outcomes would be inversely related.

## **Program and Participant Characteristics**

### **PEN-PAL Description**

The Pitt-Edgecombe Nash-Public Academic Liaison (PEN-PAL) Project was established in 1994 as a partnership among state and local child-serving agencies, community groups, parent advocacy groups, and East Carolina University to build a system of care for children and adolescents with special needs and their families in Pitt, Edgecombe, and Nash Counties of North Carolina. The Project was initiated and administered by the Child and Family Services Section of the North Carolina Division of Mental Health, Developmental Disabilities, Substance Abuse Services, and received federal funding from the Center for Mental Health Services (CMHS/SAMHSA; CMHS, n.d.). Children served were 6 to 18 years old; had serious behavioral, emotional, or mental problems; showed impairment in school, family, and/or social function; were separated or at risk of separation from their families; and needed help from more than one agency to meet their unique needs.

## **Method**

It was hypothesized that (a) participation in the PEN-PAL Project would increase scores on the Family Empowerment Scale (FES; Koren, DeChillo, & Friesen, 1992), particularly on the Family and Service System subscales, over time; (b) the FES, particularly the Family and Service System subscales, would be negatively correlated with the total score on the Child and Adolescent Functional Assessment Scale (CAFAS); and (c) the FES, particularly the Family and Service System subscales, would be negatively correlated with the Total Problem, Internalizing, and Externalizing *T*-scores on both the Child Behavior Checklist (CBCL; Achenbach, 1991a) and the Youth Self Report (YSR; Achenbach, 1991b).

The CAFAS is a clinician rating scale used to assess child functioning, with higher scores reflecting greater problems. Scores may range from 0-150, with scores of 70-80 or above generally reflecting significant functional impairment. CBCL and YSR scores are reported as *T* scores (Mean of 50, *SD* of 10). Higher scores reflect greater problems on the behavior scales; lower scores reflect greater problems on the social scales. The FES Family and Service System subscales range from 12 to 60, and the Community subscale from 10 to 50, yielding a total FES score of 34 to 170, with higher scores indicating relatively more empowerment in each respective area.

Data were collected through interviews with caregivers and by completion of questionnaires by caseworkers on intake records. Interviews were completed within 30 days of the child's entry into services. All data for the study were archival, having been obtained at the time the child entered the system with follow-up scheduled at six months, 12 months, and annually after that.

**Participants.** Participants were youth ages 6-17 and their families. Youth had serious emotional disturbance, impaired family, school, and/or social functioning and were separated or at risk of being separated from their families. These youth were in need of services from multiple agencies. Over half of the sample was male (65%), and over half of the sample was Black (66%), followed by White (33%). Eighty-three percent of families made < \$25,000 annually, and 61% made < \$15,000 annually.

## Results

At the time of intake, enrolled clients showed a high level of adjustment difficulty (mean CAFAS score was 80.9, mean CBCL Total Problems score was 70.4). CAFAS scores, however, showed a wide range of scores (CAFAS standard deviation was 36) with a number of clients having CAFAS scores between 0 and 20, suggesting no impairment or very minimal impairment in functioning. Of the adolescent clients who completed a self-rating using the Youth Self-Report, mean Total Problem scores, internalizing scores, and externalizing scores were fully within the average range, suggesting a tendency to minimize the report of problems (see Table 1).

**Table 1**  
FES, CAFAS, CBCL, and YSR Scores at Intake, Six Months, and at One Year

|               | <i>Intake</i><br><i>n = 206</i> |           | <i>6 Months</i><br><i>n = 77</i> |           | <i>1 year</i><br><i>n = 25</i> |           |
|---------------|---------------------------------|-----------|----------------------------------|-----------|--------------------------------|-----------|
|               | <i>M</i>                        | <i>SD</i> | <i>M</i>                         | <i>SD</i> | <i>M</i>                       | <i>SD</i> |
| FES Total     | 133.2                           | 22.6      | 135.6                            | 23.5      | 131.7                          | 26.4      |
| Family        | 49.2                            | 7.9       | 49.4                             | 8.4       | 48.3                           | 10.5      |
| Service Sys   | 51.0                            | 7.0       | 51.2                             | 8.1       | 50.6                           | 9.4       |
| Community     | 33.2                            | 9.8       | 34.9                             | 9.2       | 33.1                           | 10.2      |
| CAFAS         | 80.9                            | 36.4      | 74.2                             | 33.1      | 70.5                           | 32.7      |
| CBCL          |                                 |           |                                  |           |                                |           |
| Total         | 70.4                            | 9.8       | 67.4                             | 10.6      | 65.0                           | 9.8       |
| Internalizing | 65.0                            | 10.3      | 62.4                             | 10.0      | 58.4                           | 11.0      |
| Externalizing | 69.1                            | 11.2      | 66.9                             | 12.0      | 65.8                           | 10.5      |
| YSR           |                                 |           |                                  |           |                                |           |
| Total         | 59.1                            | 14.0      | 58.2                             | 4.4       | 51.8                           | 13.3      |
| Internalizing | 55.8                            | 12.9      | 53.1                             | 12.2      | 49.1                           | 14.3      |
| Externalizing | 61.1                            | 29.6      | 58.3                             | 12.0      | 53.3                           | 13.8      |

*Notes.*

Possible FES Total Scores range from 34 to 170. Possible FES Family and Service System subscale scores range from 12 to 60. Possible FES Community subscale scores range from 10 to 50. CAFAS scores range from 0 to 150. CBCL and YSR scores are T-scores. At Intake, 6 months, and 12 months, the *ns* for each scale were as follows: CAFAS (246, 142, 94), CBCL (230, 117, 68), YSR (113, 59, 39).

Change scores were computed for CBCL and FES scores and CAFAS groupings (minimal or no improvement, mild, moderate, and severe impairment). CBCL change scores were grouped into those who improved, remained the same, or declined.

Using the Reliable Change Index score criteria of 1.96 to indicate meaningful change (Jacobson, Roberts, Berns, & McGlinchey, 1999), 21.3% of participants still receiving services at one year showed significant reduction in CBCL Total Problems Score, with 17.6% showing improvement in CBCL Internalizing Scores and 18.5% showing improvement in CBCL Externalizing Scores. The greatest improvement was found in those children rated in the severe range on the CAFAS at intake (30.8%). Based on CBCL scores, approximately 5% of children were rated as worse after one year of treatment with approximately 75% showing no significant change.

Family Empowerment Scores (FES) tended to be high on intake (mean of 133 out of a maximum possible score of 170). These scores showed no improvement over time (see Table 1). At intake, Total FES, Family FES, and Service System FES scores showed small but statistically significant correlations with CBCL Internalizing scores. The more troubled the child was rated by the parent, the less empowered the parent felt. At one year, FES scores showed consistent high negative correlations with CBCL Total, Internalizing, and Externalizing scores. The more problems the child was having, the less empowered the parent felt (see Table 2).

**Table 2**  
**Correlations of CBCL with FES Scores on Intake and at One Year**

|                        | <i>Total</i> | <i>Family</i> | <i>Service</i> | <i>Community</i> |
|------------------------|--------------|---------------|----------------|------------------|
| <b>FES at Intake</b>   |              |               |                |                  |
| CBCL Total             | -.12         | -.14          | -.09           | -.10             |
| CBCL Int               | -.15*        | -.18*         | -.15*          | -.11             |
| CBCL Ext               | -.11         | -.10          | -.07           | -.13             |
| <b>FES at One Year</b> |              |               |                |                  |
| CBCL Total             | -.60*        | -.56*         | -.33           | -.68**           |
| CBCL Int               | -.71**       | -.73**        | -.43           | -.68**           |
| CBCL Ext               | -.52*        | -.52*         | -.23           | -.60**           |

## **Discussion**

The PEN-PAL program did not lead to improvements in most children's behavior or in parents' sense of empowerment in dealing with their troubled children or in dealing with the mental health care system. However, this project was one of the early CMHS initiatives, begun in 1993. Parents who rated their children as having the most problems tended to experience the lowest levels of empowerment in dealing with the situation.

The lack of change in empowerment may be a function of the empowerment scores at intake being high compared to those of other programs (e.g., Cunningham et al., 1999). It is interesting that empowerment ratings are high given the high levels of poverty of the families; many were struggling to meet basic needs. Examination of the salience and relevance of the FES content to the families' lives would be informative.

The high variance of the CAFAS scores also raises some questions about the reliability of the data, as it was unclear how well the interviewers were trained on that instrument. Other problems with the data set involved high frequency of missing data, low sample sizes, and significant attrition across the participants.

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# **Family Empowerment as a Mediator between System of Care and Changes in Child Functioning: Identifying an Important Mechanism of Change**

Kelly N. Graves  
Terri L. Shelton

## **Introduction**

The emerging trend toward positive psychology and resiliency shifts the conceptual focus from a deficit-based view to a more family-centered system of service delivery for children's mental health (Akos, 2001; Dunst, Boyd, Trivette, & Hamby, 2002). One innovative model of service delivery lies within the family-centered systems of care philosophy (Stroul & Friedman, 1986; 1996). The systems of care philosophy views families as fully capable of making informed choices given that professionals provide the additional support and resources needed to empower families and to foster the development of new skills to create long-term change. The present longitudinal study examines how the family-centered element of the system of care philosophy relates to changes in children's problem behaviors over a one-year period as well as how family-centered care influences levels of family empowerment.

Previous research has documented the link between perceived adherence to the system-of-care philosophy with both positive child outcomes and satisfaction with services (Graves, 2005). However, there continues to be a lack of information regarding the specific *mechanisms* of change. That is, what is it about delivering services consistent with the system-of-care philosophy that leads to better outcomes? The present study begins to address this question by investigating family empowerment as a possible mechanism of change.

Based upon previous research and theory (e.g., Dunst et al., 2002; Graves, 2005; Stroul & Friedman, 1996; Taub, Tighe, & Burchard, 2001), it was hypothesized that:

1. children's problem behaviors would decrease over a one-year period while levels of family empowerment would increase
2. greater perceived adherence to the family-centered element of the system of care philosophy would be linked to greater change in child functioning
3. greater levels of family empowerment would be linked to greater change in child functioning, and
4. family empowerment would mediate the relationship between family-centered care and change in child functioning.

## **Method**

### **Participants**

Participants were 117 children with severe emotional disturbance and their families who were enrolled in a North Carolina system-of-care program. Of those 117 families, five families declined to participate in the evaluation and 14 families dropped out of the longitudinal program evaluation within the first year (12% attrition). Data were not available for the variables of interest in 19 families. Thus, the final sample for the present study included 79 families. The mean age of the children was 12.05 ( $SD = 2.53$ ). Seventy-four percent of children were male. Fifty-five percent of caregivers identified themselves as African American, with 36% White, and 9% Hispanic or Other.

### **Procedures**

Children were referred to their local community mental health program from a variety of sources, including caregivers, child-serving agencies, and schools. Consent forms for treatment and for participation in the evaluation process were signed by the primary caregiver (or legal guardian if different from the caregiver) and the child, if age 11 or older. At baseline (Time 1; T1) and one year later (Time 2; T2), trained evaluators conducted in-home interviews lasting approximately two hours for caregivers and one hour for children. All instruments were read to both children and their caregivers to minimize possible error due to differential reading abilities. Families received \$25 for T1 interviews and \$30 for T2 interviews; children received gift certificates donated from local fast food restaurants at both T1 and T2.

## Measures

**Descriptive Information Questionnaire (DIQ; Center for Mental Health Services [CMHS], 1997).** The DIQ is a 37-item caregiver-reported questionnaire that was completed at T1. The measure describes child and family characteristics such as age, race, ethnicity, risk factors, and family structure.

**Adherence to System of Care Philosophy.** Caregivers reported on the degree to which their services were delivered consistent with a family-centered approach at T2 using the Wraparound Fidelity Index 2.0 (WFI; Burchard, 2001). Two subscales from that scale were chosen that are specifically related to family-centered care: Parent Voice/Choice and Cultural Competence. Each subscale contains four items that assessed the degree to which services were family-centered, with scores ranging from 0 = *no*, to 1 = *sometimes*, and 2 = *yes*. A total score was created by summing all of the items into a total family-centered care score, with higher scores indicating greater adherence to a family-centered approach. Internal consistency (Cronbach's alpha) for the composite score was .79.

**Child Functioning.** Caregiver-report child functioning was obtained at both T1 and T2 using the Child Behavior Checklist (CBCL; Achenbach, 1991). The present study utilizes T-scores from the total problem behavior index.

**Family Empowerment.** Caregiver-reported family empowerment was obtained at both T1 and T2 using the Family Empowerment Scale (FES; Koren, DeChillo, & Friesen, 1992). The FES consists of 34 items rated on a 5-point Likert-type scale from 1 = *not true at all*, to 5 = *very true*. A composite score of family empowerment was created by averaging the 34 items separately at T1 and T2. Internal consistency (Cronbach's alpha) was .90 at T1 and .95 at T2.

## Results

Descriptive analyses for all independent and dependent variables are presented in Table 1. Consistent with hypothesis one, paired samples *t*-tests indicated that there were significant improvements in child total problem behaviors from T1 to T2,  $t(78) = 4.79, p < .001$ , as well as a marginally significant change in levels of family empowerment from T1 to T2,  $t(78) = 1.51, p < .10$ . However, in order to examine what variables were associated with change more directly, additional analyses were conducted.

To test hypotheses two through four, a series of hierarchical regression analyses were conducted. In the first analysis, perceived level of family-centered care was entered as a predictor of T2 children's problem behavior (controlling for T1 problem behavior). That analysis indicated that higher levels of family-centered care predicted lower levels of T2 problem behavior,  $t(78) = -2.12, p < .05, \beta = .27$ , even after controlling for pre-treatment levels of behavioral challenges. In the second analysis, family empowerment at T2 was entered as a predictor of T2 children's problem behavior (controlling for both T1 empowerment and problem behavior). That analysis indicated that higher levels

**Table 1**  
Summary of Hierarchical Regression Analyses  
to Predict T2 Total Problem Behaviors

| Variable                      | B     | SE   | $\beta$ |
|-------------------------------|-------|------|---------|
| <b>Regression One</b>         |       |      |         |
| Step 1                        |       |      |         |
| Total Problem Behaviors at T1 | .71   | .15  | .63***  |
| Step 2                        |       |      |         |
| Family-centered Care          | -1.77 | .84  | -.27*   |
| <b>Regression Two</b>         |       |      |         |
| Step 1                        |       |      |         |
| Family Empowerment at T1      | .30   | 2.09 | .02     |
| Total Problem Behaviors at T1 | .72   | .14  | .56***  |
| Step 2                        |       |      |         |
| Family Empowerment at T2      | -6.28 | 1.85 | -.37*** |
| <b>Regression Three</b>       |       |      |         |
| Step 1                        |       |      |         |
| Family Empowerment at T1      | .30   | 2.09 | .02     |
| Total Problem Behaviors at T1 | .72   | .14  | .56***  |
| Step 2                        |       |      |         |
| Family Empowerment at T2      | -6.28 | 1.85 | -.37*** |
| Step 3                        |       |      |         |
| Family-centered Care          | -1.18 | .82  | -1.9    |

\* $p < .05$ . \*\*\* $p < .001$ .



of family empowerment predicted lower levels of problem behavior,  $t(78) = -3.39, p < .001, \beta = -.37$ . In the third analysis, T1 indicators were entered in the first step (problem behavior and family empowerment), T2 family empowerment was entered in the second step, and perceived adherence to family-centered care was entered in the third step. That analysis indicated that family empowerment continued to predict lower levels of children's problem behavior, but the link between perceived adherence to family-centered care dropped out, indicating that family empowerment is a mediator between family-centered care and changes in child functioning. The series of regressions conducted to address hypotheses two through four are reported in Table 1.

## **Discussion**

The purpose of the present study was to begin to investigate specific mechanisms of change for children who receive system of care based services. Specifically, we examined how the family-centered care element of the system of care philosophy relates to changes in children's problems over a one-year period as well as how family-centered care influences levels of family empowerment. Findings indicate that when examined separately, both family-centered care and family empowerment predicted decreases in children's problem behavior over a one-year period. However, once the variance accounted for by change in family empowerment was parceled out, family-centered care no longer directly predicted decreases in children's problem behaviors. Thus, our findings suggest that family empowerment is a mediator between family-centered care and changes in child functioning and appears to be one mechanism of change for children who receive system of care-based services.

The findings of this study indicate that family empowerment is an important factor in children's outcomes, suggesting that additional resources and services should be directed toward enhancing the empowerment of parents. Because the system of care philosophy appears to have some impact through family empowerment, there is a need to focus on those professional activities that lead specifically to increases in family empowerment such as involving families more in treatment planning. The current findings also advocate for the continued movement toward including parents as partners in the coordination, planning, and implementing of services for children, and for viewing parents not as part of the problem, but as the central resource for the child (Lourie & Katz-Leavy, 1986; Stroul, 1996).

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# **Depression among Primary Caregivers of Children with Mental Health Needs**

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## **Introduction**

Distress experienced by children with mental health needs and their families has created a health crisis in our country associated with many unmet service needs (U.S. Public Health Service, 2000). Primary caregivers, henceforth referred to as parents, have faced tremendous challenges in caring for these children, yet we know very little about parental well-being (Crowley & Kazdin, 1998). Preliminary findings from a larger, unpublished study found high levels of depression among parents. The purpose of this study was to examine variables associated with parents' depression, including variables that mediated, moderated, or predicted depression. Information about factors associated with parents' depression can help guide interventions to improve their well-being.

In a previous study, Dunn and colleagues (2001) found that mothers of children with autism were the most seriously affected family members, with one-third exhibiting symptoms of depression. Further, Mash and Johnston (1983) found that parents' depression, self blame, and social isolation were directly associated with their child's hyperactivity, distractibility and degree of bother.

## **Methods**

A cross-sectional design was used with a convenience sample of 100 parents of a child between 2 to 19 years old, receiving community mental health services in one Midwestern state, and living at home during parents' enrollment in the study and for at least 20 of the past 24 months. Participants included biological, adoptive and foster parents, relatives and guardians. Parents were recruited from community mental health agencies. Institutional Review Board approval was obtained.

## **Sample**

Average age of participants was 37.8 years ( $SD = 8.2$ ); and 44% were married, 28% divorced, 14% single, 9% living with partner, and 5% separated. Participants were predominantly female (98%), including 84% biological mothers, 7% grandmothers, and 5% adoptive mothers. Most participants were Caucasian (85%) with 12% African American and 2% Native American. Participants were employed full-time (24%), part-time (16%), homemakers (30%), unemployed (15%), and other (15%). Average annual household income ranged from \$20,000 to \$29,999 (Median = \$10,000 to \$19,999).

Most (66%) children were males. Average child's age was 10 years ( $SD = 3.9$ ). Most children were Caucasian (76%) with 14% African American, and 2% Native American. The average length of mental health problems was 5.38 years ( $SD = 3.5$ ). Seriousness of the child's problem was rated by parents as 4.05 on a 5-point scale with 5 being *very serious*.

## **Instruments**

The Child Behavior Checklist (CBCL; Achenbach, 1991) internalizing and externalizing raw scores were used to measure antecedent variables considered a stressor for parents. In the initial model, mediators and moderators included parents' optimism, perceived stigma, social support, empowerment, personal control, and home helper. The model was adapted to also examine mediating and moderating effects of variables previously considered outcomes including subjective and objective distress, family satisfaction, and role disruption. The Parents Attribution Scale (PAS; Gerkenmeyer, 1999) had 21

items with a 5-point scale anchored by two opposite statements. Factor analysis of the PAS with varimax rotation resulted in five factors including Stigma (alpha = .89), Threat (alpha = .80), Services Helped (optimism, alpha = .69), Can Change (alpha = .68), and Blames Me (alpha = .61).

Social Support was measured by the 40-item Inventory of Socially Supportive Behaviors (ISSB; Barrera, Sandler & Ramsay, 1981). Factor analysis with varimax rotation resulted in three factors including Advice (alpha = .94), Comfort (alpha = .93), and Tangible (alpha = .82). Home Helper was measured by one item rating how much help was received from someone living with the caregiver. Empowerment was measured by the 34-item Family Empowerment Scale (FES; Koren, DeChillo & Friesen, 1992) on a 5-point Likert scale from 1 = *never*, to 5 = *very often*. Factor analysis with varimax rotation resulted in three factors including Services (alpha = .93), Community (alpha = .91), and Family (alpha = .90). Personal control was measured by the 7-item Pearlin Mastery Scale (PMS; Pearlin & Schooler, 1978) on a 4-point Likert scale from 0 = *strongly agree*, to 3 = *strongly disagree* (alpha = .75).

Distress was measured by the 19-item Parent Experiences Scale (PES), adapted by this author from Reinhard's Burden Assessment Scale (Gerkenmeyer, 1999; Reinhard, 1994). Factor analysis resulted in two factors, Subjective (alpha = .89) and Objective Distress (alpha = .81). Role functioning, measured by the 6-item SF-36 Health Survey-Adapted, used a 5-point Likert scale from 1 = *not at all*, to 5 = *a great deal*. Adapted by the author from the SF-36 (Ware & Sherbourne, 1992), it assessed disruption of parents' work and social activities (alpha = .89). Family Functioning, measured by the 5-item Family APGAR (Smilkstein, 1978), refers to how satisfied parents were with family functioning (alpha = .92).

Depression was measured on the 20-item Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). Symptoms of depression were measured on a 4-point Likert scale from 3 = *most of the time*, to 0 = *rarely*, with a possible range of 0 to 60 (alpha = .93). A score of 22 or higher indicated a possible major depression. A score of 16 to 21 indicated a possible mild to moderate depression.

## Data Analysis

Bivariate correlations between and among the CBCL internalizing and externalizing scores, mediating/moderating variables, and depression using Pearson correlations were obtained. The mediating and moderating effects of variables on depression were examined using the regression methods of Baron and Kenney (1986). Each regression model included either the internalizing or externalizing CBCL score. The relationship of each potential mediator/moderator variable to depression was examined separately.

## Findings

High levels of depression were found ( $M = 19.87$ ). Of the 100 parents, 38% had a score of 22 or greater and 56% a score of 16 or greater. Depression was found to be highly correlated with many variables (see Table 1). When examining the mediating effects of these variables, only personal control and role disruption were found to mediate the association of the CBCL internalizing score and depression (see Table 2). The family factor of the Family Empowerment Scale and subjective distress were found to moderate the association of the CBCL internalizing score with depression. Subjective distress was found to also moderate the association of the CBCL externalizing score with depression.

When conducting Step-wise regression to identify predictors of depression, only participants whose child scored 60 or greater on the CBCL Internalizing or Externalizing T-score were included in two separate analyses ( $n = 84$  for each). Variables correlated with depression at  $p < .001$  were entered into the Step-wise regression including personal control, family functioning, role disruption, FES family factor, blame, subjective distress, and objective distress. For internalizing, the predictive model was role disruption ( $\beta = .79, p < .001$ ), personal control ( $\beta = -7.34, p < .001$ ), and family functioning ( $\beta = -.56, p < .001; R^2 = .53, p = .001$ ). For externalizing, the model included personal control ( $\beta = -7.05, p < .01$ ), family functioning ( $\beta = -.65, p < .001$ ) and role disruption ( $\beta = .70, p < .001; R^2 = .50, p = .001$ ).

**Table 1**  
**Correlations**

|                         | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 9       | 10      | 11      | 12       | 13      | 14       | 15 |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|---------|----------|----|
| 1. Income               | —       |         |         |         |         |         |         |         |         |         |         |          |         |          |    |
| 2. CBCL Internal        | -.062   | —       |         |         |         |         |         |         |         |         |         |          |         |          |    |
| 3. CBCL External        | -.170   | .584*** | —       |         |         |         |         |         |         |         |         |          |         |          |    |
| 4. FES Family           | .096    | -.226*  | -.313** | —       |         |         |         |         |         |         |         |          |         |          |    |
| 5. ISSB Comfort         | .075    | -.153   | -.065   | .168    | —       |         |         |         |         |         |         |          |         |          |    |
| 6. Stigma (PAS)         | .037    | .335*** | .410*** | .284**  | .235*   | —       |         |         |         |         |         |          |         |          |    |
| 7. Threat (PAS)         | .053    | .364*** | .391*** | .450*** | .094    | .474*** | —       |         |         |         |         |          |         |          |    |
| 8. Home Helper          | .330*** | -.083   | -.097   | .085    | .153    | .138    | .002    | —       |         |         |         |          |         |          |    |
| 9. Blame (PAS)          | .186    | .345*** | .349*** | .352*** | .283*   | .470*** | .242*   | .234    | —       |         |         |          |         |          |    |
| 10. Personal Control    | .159    | .399*** | .375**  | .394*** | .244**  | .392*** | .337*** | .081    | .392*** | —       |         |          |         |          |    |
| 11. Role Disruption     | -.023   | .408*** | .391*** | -.246** | -.180   | .497*** | -.294** | -.255** | .461*** | .497*** | —       |          |         |          |    |
| 12. Subjective Distress | -.001   | .476*** | .501*** | .540*** | -.096   | .581*** | .592*** | -.077   | .481*** | .514*** | .575*** | —        |         |          |    |
| 13. Objective Distress  | .012    | .431*** | .436*** | -.273** | -.120   | .493*** | .453*** | -.237*  | .405*** | .386*** | .614*** | .625***  | —       |          |    |
| 14. Family Function     | .270**  | -.286** | -.212*  | .454*** | .509*** | .290**  | .362*** | .259**  | .324*** | .341*** | -.267** | -.361*** | -.243*  | —        |    |
| 15. Depression          | -.311** | .358*** | .391*** | .328*** | -.276** | -.265** | -.250** | -.245** | .471*** | .576*** | .519*** | .413***  | .332*** | -.497*** | —  |

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table 2**  
**Mediators and Moderators of Depression Among Primary Caregivers of Children with Mental Health Needs**

| <i>Antecedent Variable</i> | <i>Mediator</i>  | <i>Level of Significance of Mediator to Outcome</i> | <i>Decreased Level of Significance of Antecedent to Outcome</i> | <i>Moderator</i>    | <i>Significance of Interaction of Antecedent and Moderator</i> | <i>Outcome Variable</i> |
|----------------------------|------------------|---|---|---------------------|--|-------------------------|
| CBCL Internalizing         | Personal Control | $p < .0001$   | $p < .089$  |                     |  | Depression (CES-D)      |
|                            | Role Disruption  | $p < .0001$   | $p < .116$  |                     |  | Depression              |
|                            |                  |   |   | FES Family          | $p < .043$   | Depression              |
|                            |                  |   |   | Subjective Distress | $p < .008$   | Depression              |
| CBCL Externalizing         |                  |   |   | Subjective Distress | $p < .033$   | Depression              |

## Discussion

It was evident from these findings that there was a high prevalence of depression among parents caring for children with mental health needs receiving community-based care, with 56% having a score on the CES-D indicating that they might have mild to major depression and 38% that might have major depression.

Many of the study variables were significantly correlated with depression. Upon further analysis, it was discovered that a couple of these variables had a mediating effect upon the relationship of internalizing disorders with depression, including personal control and role disruption, thereby providing potential target areas for future interventions. Moderators included family-focused empowerment and subjective distress for internalizing CBCL scores' relationship with depression, and subjective distress for externalizing CBCL scores. Information about moderators of depression provides clues about risk factors for depression. For example, a parent with a high level of subjective distress would be at greater risk for depression. Predictors of depression were similar for internalizing and externalizing CBCL scores and included the two identified mediators of depression for internalizing disorders, personal control and role disruption, along with family functioning.

With such high levels of depression, there is a need to routinely assess these caregivers for depression. With increased reliance on families to care for children with mental health needs at home with ever rising levels of acuity, resources and services are needed to support parents' efforts so that they will be able to experience positive outcomes for their child, family, and themselves.

Research is needed to further examine factors associated with depression for these caregivers. Intervention research is also needed that is targeted at preventing or diminishing parents' depression. Findings from this study support focusing on interventions to increase parents' sense of personal control and to decrease role disruption as potential approaches to decrease parents' depression.

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# **Symposium**

## **The Ecology of Maternal Depression: Addressing a Silent Epidemic**

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### **Symposium Introduction**

Larke Nahme Huang

This symposium takes a developmental, ecological approach to understanding the impact of maternal depression in low-income urban communities. Research indicates an increasing prevalence of maternal depression in these communities—particularly among women of color—yet there is a limited understanding of the impact on their children and a lack of systematic intervention for this under-identified condition in traditionally under-served populations. This symposium highlights the impact of maternal depression on critical developmental tasks of young children and adolescents and how culturally diverse groups of women view depression, describe the impact on their children, and seek help. The studies are a combination of quantitative, secondary analyses of larger datasets and a qualitative focus group study of women from community-based organizations. In combination, these studies support an approach for understanding maternal depression in a family and community context and provide a foundation for developing a “family system of care.”

#### **Chair**

Larke Nahme Huang

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Bridget Goosby

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#### **Discussant**

Mareasa Isaacs

### **Pathways Between Maternal Depression and Early Child Language Development in Low-income Families**

Elizabeth Spier, Catherine Tamis-LeMonda, Barbara Alexander Pan, & Meredith Rowe

*This study is based on data collected for the national Early Head Start Research and Evaluation study. We wish to acknowledge the national Early Head Start contractors (Mathematica Policy Research and Columbia University); the funding agencies (Administration on Children, Youth and Families, National Institute of Child Health and Human Development, Office of the Assistant Secretary for Planning and Evaluation in DHHS, and the Ford Foundation); the local research universities participating in the Early Head Start Research Consortium; program directors from the participating Early Head Start programs; and all of the families who so generously took part in this project.*

#### **Introduction**

Three findings motivated this study. First, mothers living in poverty are at increased risk for depression relative to non-impooverished mothers (Petterson & Albers, 2001). Second, maternal productive vocabulary is positively related to children’s lexical development (Pan, Rowe, Singer, & Snow, in press). And third, depressed mothers speak less to their toddlers than non-depressed mothers. In turn, their children are at increased risk for delays in language development (Murray, Kempton, Woolgar & Hooper, 1993).

The following study was undertaken to examine the relationships between maternal depression, early maternal vocabulary use, and children’s later lexical development in low-income families. It was hypothesized that: (a) maternal depression would be associated with reduced maternal productive vocabulary, (b) maternal depression would be negatively associated with the size of children’s productive and receptive vocabularies, and (c) maternal depression would have a significant impact on children’s lexical development due to reduced early maternal vocabulary use.

#### **Method**

**Sample.** Participants were 116 mother-child pairs from low-income homes in the northeastern United States, with 66 families (56.9%) coming from an urban site and 50 (43.1%) from a rural site. All had applied for Early Head Start services when their children were less than one year of age. Mothers ranged in age from 14 to 43 years at the time of their child’s birth ( $M = 23$  years, 1 month,  $SD = 7$  years 5 months). Almost half of the urban mothers ( $n = 29$ , 43.9%) and four (8.0%) of the rural mothers had given birth prior to age eighteen. Forty-six (39.7%) of the mothers identified themselves as White,

non-Latino; 43 (37.1%) as Black, non-Latino; 24 (20.7%) as Latino, and; three (2.6%) as mixed or other ethnicity. All of the White, non-Latino mothers were from the rural site. At the time of their child's second birthday, 49 (42.2%) mothers had not completed high school, 34 (29.3%) had a high school diploma or equivalency degree, and 33 (28.4%) had some education beyond high school. Sixty-three (54.3%) children were boys, and most ( $n = 69$ , of all children; 59.5%) were a first born or only child.

**Measures.** Mother-child dyads participated in assessments when children were 14 (Time 1) and 36 (Time 2) months of age. Mothers completed the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) at Time 1. Mother-child dyads were videotaped in 10-minute, semi-structured play sessions at both assessments. Mothers were given a book and age-appropriate toys, and instructed to interact with their children as they normally would. CHILDES (MacWhinney, 2000) facilitated transcription and lexical analysis of videotaped interactions. The *FREQ* program in CHILDES measured maternal word-types (number of vocabulary words spoken) from the transcripts. The *VOCD* program was used to assess children's productive vocabularies at Time 2. The *VOCD* program yields a score (*D*-value) representing the diversity of vocabulary in a speech sample (McKee, Malvern & Richards, 2000). Children's receptive vocabularies were assessed at Time 2 with the Peabody Picture Vocabulary Test III (PPVT-III; Dunn & Dunn, 1997).

## Results

At Time 1, maternal CES-D scores ranged from 0 to 49, with a mean of 12.95 ( $SD = 9.93$ ). More than a third of the mothers ( $n = 40$ , 34.5%) received CES-D scores in the depressed range. Maternal CES-D scores did not vary based on any demographic variables under consideration (maternal age, maternal education, ethnicity, urban/rural, child gender, and child's birth order). During the Time 1 videotaped sessions, mothers used a mean 127.33 word-types ( $SD = 45.92$ , range 23 to 221). Maternal age was positively associated with maternal word-types,  $r = .28$ ,  $p < .01$ . Number of maternal word-types was unrelated to any other demographic variables, once maternal age was taken into consideration.

At Time 2, children's *D*-values ranged from 7.63 to 70.90 ( $M = 38.35$ ,  $SD = 12.51$ ), and were unrelated to demographic characteristics. Children's PPVT-III scores ranged from 40 to 123 ( $M = 84.23$ ,  $SD = 17.06$ ). Overall, children's PPVT-III scores fell well below age norms, and nearly half of the sample (40.0%,  $n = 46$ ) scored below the tenth percentile. Maternal age was positively correlated with children's PPVT-III scores,  $r = .29$ ,  $p < .01$ . Children's PPVT-III scores were unrelated to any other demographics, once maternal age was taken into consideration.

The higher a mother's CES-D score, the fewer word-types she used with her child,  $r = .29$ ,  $p < .01$ . Non-depressed mothers used a mean 135.51 word-types ( $SD = 44.71$ ) and depressed mothers used a mean 112.40, ( $SD = 44.84$ ),  $t(111) = 2.63$ ,  $p < .05$ . Maternal vocabulary use at Time 1 was positively associated with children's expressive vocabularies and PPVT-III scores at Time 2, with  $r = .45$ ,  $p < .001$  and  $r = .24$ ,  $p < .05$ , respectively. There was a moderate correlation between children's expressive and receptive vocabularies,  $r = .27$ ,  $p < .01$ .

The higher a mother's CES-D score at Time 1, the lower her child's expressive and receptive vocabularies at Time 2,  $r = -.28$ ,  $p < .01$  and  $r = -.23$ ,  $p < .05$ , respectively. When mothers scored in the depressed range at Time 1, their children had PPVT-III scores at Time 2 that were nearly two standard deviations below established norms ( $M = 76.59$ ,  $SD = 18.85$ ), compared with scores at the low end of normal limits for children of non-depressed mothers ( $M = 88.14$ ,  $SD = 14.71$ ).

Finally, hierarchical multiple regression analyses were used to examine the relative prediction of Time 1 maternal depression and maternal vocabulary to children's Time 2 expressive and receptive vocabularies. To predict children's *D*-values, maternal CES-D scores were entered into the equation as Step 1, and maternal word-types as Step 2. The resulting model was significant,  $F(2, 106) = 5.10$ ,  $p < .01$ , with  $R^2 = .05$ ,  $p < .05$  for Step 1;  $\Delta R^2 = .03$ ,  $p < .05$  for Step 2. To predict children's PPVT-III scores, maternal age was entered into the equation as Step 1, maternal CES-D score as Step 2, and maternal word-types as Step 3. The resulting model was significant,  $F(3, 111) = 13.20$ ,  $p < .001$ , with  $R^2 = .10$ ,  $p < .01$  for Step 1;  $\Delta R^2 = .08$ ,  $p < .01$  for Step 2; and  $\Delta R^2 = .10$ ,  $p < .001$  for Step 3.

## Discussion

Despite living in a low-income environment, nearly two-thirds of the mothers in this sample did not show evidence of depression, and their children's receptive vocabularies were developing within normal limits. However, more than one-third of the mothers showed evidence of depression. Levels of maternal depression did not differ based on mother's age, education, ethnic background, whether the family lived in an urban or rural environment, or based on the child's gender or birth order. These findings suggest that maternal depression may be pervasive across low-income families, rather than being confined to a sub-population.

All three hypotheses were supported. Maternal depression was associated with reduced maternal vocabulary, with depressed mothers' averaging 23 fewer vocabulary words than non-depressed mothers in just ten minutes of play. Maternal depression at child age 14 months was negatively associated with the size of children's productive and receptive vocabularies at age 36 months. The regression analyses did provide evidence that maternal depression had a significant impact on children's lexical development due to reduced early maternal vocabulary use. However, maternal depression did seem to have an impact on child vocabulary development beyond maternal vocabulary. Consistent with other research, we found that older mothers used more vocabulary with their children than younger mothers, and their children displayed better receptive vocabularies. We did not find a relationship between maternal age and maternal depression, so there appears to be some other reason for this influence of maternal age. Further research is needed to gain a better understanding of how maternal age and maternal depression influence children's lexical development.

Children from low-income homes are at increased risk for poor early lexical development relative to their better-off peers (Hart & Risley, 1995). Past research has shown that in low-income families, children's early productive vocabularies are good predictors of their academic progress in elementary school (Walker, Greenwood, Hart, & Carta, 1994). Our results suggest that it is important to consider maternal mental health when attempting to support children's lexical development in this at-risk population.

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## **The Influence of Maternal Well-Being on Low-Income Adolescents' Emotional and Behavioral Outcomes**

Bridget Goosby

### **Introduction**

At present, approximately 35% of children under the age of 18 live in poverty (US Census Bureau, 2003). Poverty's detrimental effects are a problem for children at all ages, yet early adolescence (ages 10 to 14 years old) remains an age group that has been somewhat neglected by sociological researchers. Evidence suggests that environmental factors following early childhood have a significant impact on outcomes in adolescence as well as in the transition to adulthood (Feinstein & Brynner, 2004). This study explores the effect of poverty duration on adolescents' internalized and externalized behavioral problems.

Adolescents who experience poverty tend to have increased levels of drug and alcohol use at earlier ages, early initiation into sexual activity, increased mental health problems, and lower levels of academic achievement. Although adolescents spend much of their time in the company of their peers, families still play an important role in their lives. Maternal behavior and mental health are affected by economic hardship, which in turn may lead to reduced adolescent well-being. These factors must be taken into account when seeking to understand how poverty affects adolescent outcomes.

The purpose of this study is to examine the pathways through which poverty impacts adolescent depression, anxiety, and social withdrawal. In addition, this study also explores the mediational influence of maternal psychological well-being on the relationship between poverty duration and their adolescent children's outcomes. The following questions guided the study:

- Do maternal depression and mastery mediate the impact of poverty on adolescent outcomes and do these outcomes vary by race?
- Does maternal mental health buffer or exacerbate youth socioemotional outcomes?

### **Methods**

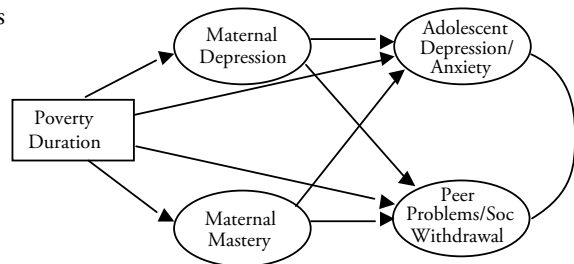
**Sample.** The sample comes from the National Longitudinal Survey of Youth (NLSY). The sample includes 854 African American and Caucasian children ages 10-14 at the time of their assessment in 1998. Maternal background and assessments were compiled into a data set separate from child assessment files. The Center for Human Resource Research (CHRR) includes mother and child identification in each data set in order to provide the ability to merge the data sets together. Because this study measures both child and maternal background characteristics, the NLSY79 data files were merged with the NLSY Children and Young Adult Files by matched mother and child identification codes.

**Measures.** The dependent variables measured were two subscales from Zill and Petersen (1986) measuring (a) depression and anxiety, and (b) peer problems and social withdrawal. The depression and anxiety construct was comprised of six items, tested for model fit; it was found that these measures together demonstrated a strong model fit (CFI = .993, TLI = .993 and RMSEA = .042) using Confirmatory Factor Analysis. Peer Problems and Social Withdrawal also included six items that assessed child social interaction and found that the model fit was acceptable for this factor (CFI = .983, TLI = .977 and RMSEA = .065).

Latent measures include The Center for Epidemiologic Studies Depression Scale (CES-D) developed by Radloff (1977) to measure depressive symptoms. The CES-D demonstrated a strong model fit (CFI = .994, TLI = .990 and RMSEA = .022). The second measure, Maternal Mastery, was measured using the items created by Pearlin and Schooler (1978); the instrument measures the extent to which the mother feels she has control over events in her life. These items also demonstrated a good model fit (CFI = .975, TLI = .957 and RMSEA = .036). The independent variables included were poverty duration, measured by averaging the number of years the adolescent spends in poverty, maternal background characteristics, race, and sex.

**Analysis.** Figure 1 illustrates the conceptual path model reported in the Structural Equation Modeling (SEM) analyses. The models estimate the relationship between the dependent latent variables, depression and anxiety and peer problems and social withdrawal, on mother's depression and mastery, the duration of time spent in poverty, and child's and mother's background characteristics. Total, direct, and indirect effects were estimated in both sets of models. It should be noted that there is an average of 1.4 children per mother, indicating nesting within families. In order to account for the non-independence of observations due to clustering, all previous and subsequent SEM analyses adjust standard errors and estimates of model fit using robust estimators (Muthén & Muthén 2004; these analyses use the *Mplus* v3.x type = complex analysis). The variances of all latent variables in the models are fixed to 1 so that coefficients represent the expected standard deviation difference in the independent variable, and so that regressions among latent variables are fully standardized (i.e., effect-sizes).

**Figure 1**  
**Conceptual Path Model**



## Results

Increased poverty duration has a very strong positive correlation with both adolescent peer problems/withdrawal and depression/anxiety. These relationships are no longer statistically significant and the coefficients decline dramatically in magnitude with the introduction of maternal depression and mastery. Mother's increase in depression increases adolescent depression/anxiety and peer problems/withdrawal. Mothers with low levels of mastery increase adolescent depression/anxiety and peer problems/withdrawal. The effects remain true in the full models where maternal background characteristics and behavior are introduced into the model.

The analyses set out to estimate the effects of poverty duration, maternal depression and mastery on adolescent outcomes. The models supported the hypotheses that maternal depression and mastery for both dependent outcomes increase depression/anxiety and peer problems/social withdrawal scores for adolescents. Within this model, the pathway through which poverty impacts adolescent outcomes is mostly explained by maternal psychological resources. These findings suggest that mothers either act as buffers for their children or exacerbate the effect of poverty on their children through their own mental and emotional well-being.

An additional step assessed what the strongest predictors of maternal depression and mastery are in the model. The model estimates the effects of poverty duration and other maternal characteristics on mother's psychological outcomes. The models show evidence that poverty duration is the strongest predictor of maternal depression and mastery. The longer mothers spend in poverty, the higher their scores on depression measures and the lower their score on mastery. Even after adjusting for all other maternal characteristics, poverty duration retained a strong association—the strongest in the model. The only other significant predictor of maternal depression was mother's AFQT scores. Mothers who scored higher on the AFQT scores have lower levels of depression. In contrast, for maternal mastery (in addition to the significant effect of poverty duration on maternal mastery), being African American increased mother's sense of mastery. In addition, there was a positive correlation between mother's age at the birth of her first child.

## Discussion

Poverty's direct effect on behavioral problems is consistent with previous studies that tested the effects of persistent poverty on later outcomes of children and adolescents. These studies found that children who were persistently poor scored higher on internalizing problems such as depression and anxiety (Bolger, Patterson, Thompson, & Kupersmidt, 1995). In addition, maternal mental health consistently helps to explain the effects of poverty on both White and African American adolescents, replicating the findings of McLeod and Nonnemaker (2000). Interestingly, the findings of that study demonstrate that the affect of maternal psychological resources on adolescent outcomes are not explained by maternal background characteristics or the level of emotional support she provides for her children. The emotional support variable does explain a small portion of effect of maternal depression and mastery. This is consistent with findings that mothers who are in good mental health engage in adaptive coping behaviors that buffer their children from the detrimental effects of economic hardship (Pearlin & Schooler, 1978; Taylor & Roberts, 1995). Also, in exploring the strongest predictors of maternal depressive symptoms and mastery, it was found that increased poverty duration increased depressive symptoms and decreased mother's feelings of mastery.

Overall, the findings indicate that persistent poverty has deleterious effects on adolescent socioemotional problems. Adolescents who engage in problematic behavior, in addition to being in poverty, generally do not have the access to structural resources available to buffer these problems. As a result, increased behavioral problems have more dire consequences for their later outcomes, including employment opportunities, school completion, and family formation. This study also demonstrates that maternal psychological resources play an important role in the lives of adolescents. The analyses also suggest that with improved mental health, mothers can serve as a buffer to the strains and stressors associated with poverty. By increasing access to mental health resources for poor mothers, creating more effective treatments, and providing information, youth well-being among children with low-income mothers could improve. Further, by alleviating economic strain for families in poverty there can be changes in the economic and psychological well-being of families and youth.

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## **Lessons from a Maternal Depression Focus Group**

Katherine Lazear

### **Introduction**

Maternal depression is a very costly and common mental health condition, affecting almost 10% of the U.S. population in a given year (NIMH, 2003). The effects of maternal depression on families can be debilitating and the effects on young children are devastating, with research studies suggesting that maternal depression increases behavior and learning problems, and predisposes these children to behavioral and affective disorders far greater than those raised in families where mothers are not depressed (Weissman & Olfson, 1995).

Although depression is a major public health problem, placing caregivers and children at risk, very few women receive treatment. Those who do receive treatment often do not receive quality care. Screening, prevention, and treatment efforts aimed at maternal depression would appear imperative. And, although we know that maternal depression is highly prevalent and under-treated in many communities of color, we do not know enough about effective, culturally appropriate ways to outreach to and engage mothers and their families in treatment or how to effectively screen and treat them for depression.

This summary provides an overview of the findings of a maternal depression focus group project and the implications these findings may have on outreach and engagement activities to families in communities with diverse racial and ethnic populations. The study was implemented to gain a better understanding of:

- how culturally and racially diverse populations across the country view depression and its impact on children
- where families, their neighbors and friends turn for help
- approaches or strategies that might be helpful, and
- how families talk about depression.

### **Participants**

The community-based organizations participating in the study were part of the Annie E. Casey Foundation community health project sites. Eighteen organizations representing racial and ethnic diversity—Cambodian, Mexican, Laotian, Samoli, Haitian, Latina, African-American, Sudanese, El Salvadorian, Central American, Vietnamese, Liberian, Congan, Burundian, Rwandan, Senegalese, and Tongonese—facilitated focus groups in the primary language of the 130 participants who were mothers of children newborn through age nine. Participants ranged in age from 17 to 66 years of age. Some had been in the U.S. for as little as one year, while others had lived in the U.S. all of their lives.

Regarding the process of bringing these women to focus groups, other women from similar cultural, racial, or ethnic backgrounds facilitated the groups. In virtually all cases, child care, transportation, food, and a monetary stipend (or equivalent) were provided. Many women were recruited through providers or agencies with whom they already were involved, such as a health clinic. Others were recruited through flyers, letters and phone calls, and others through word of mouth and contacts from other women.

### **Results**

#### **Talking About Depression**

Across all focus groups, women recognized and identified the symptoms of depression, such as feelings of sadness and crying, changes in appetite and weight, changes in sleep patterns, difficulty concentrating, avoidance of social interactions, and use of drugs or alcohol. Across virtually all focus groups, women were initially reticent to talk about or admit to experiencing depression. In virtually all

groups, however, the focus group process created opportunity and support for women, leading eventually to rich discussions about depression. When the women in these focus groups felt comfortable discussing depression, they identified it almost without exception as a major issue in their communities.

Across all focus groups, women recognized the link between emotional and physical well being, identifying stress, for example, as a factor that can cause or exacerbate physical health problems. In general, most women reported that they experienced depression more after their second pregnancies than their first, particularly if the pregnancy was unplanned or if the pregnancies were close together. Many women described what could be called a “continuum of depression,” with some problems being manageable by talking to friends or taking steps on one’s own, and others being so serious that professional help was needed.

### **Factors Contributing to Depression**

Many women described financial pressures, physical health problems, racism, sexism, language barriers, and genes as contributing factors for depression. Regardless of cultural group, women who are immigrants to the United States, particularly from war-torn, economically depressed countries, view the U.S. as providing greater opportunities and services but also view the U.S. as enormously stressful because of constant pressures to find employment, make money, resolve immigration status, learn the language, find transportation and housing, etc. Also, many of these women have left children and support systems, such as family and friends, behind in their native countries, which they report creates powerful feelings of sadness and isolation. Many of the women who are immigrants to the U.S. described feeling overwhelmed by the complexities of American life and its emphasis on money and work.

Language barriers, financial pressures, transportation, leaving family behind, isolation, racism, feeling a loss of control and having to be dependent on others—all of these were themes struck by these women as associated with depression. Many women identified domestic violence and a lack of emotional and practical support from fathers as major factors in maternal depression. In some cases, women associated use of drugs and alcohol as contributors to fathers’ lack of support and to domestic violence. Across many of the focus groups, women indicated that the way their respective cultures view and treat women (as “responsible for doing everything,” as subservient to men, as the stoic who should not have her own needs and concerns) creates stress for them, particularly because there is a perception that the status of women in the U.S. is or should be different.

### **Barriers to Seeking Help**

Across all focus groups, women indicated that stigma and a fear of being labeled “crazy” were barriers to talking about and seeking help for depression. Trust in family, friends, and providers seemed to be the single biggest factor in whether women felt comfortable talking about or seeking help for depression. With many women, because of stigma and cultural attitudes and beliefs, acknowledging depression was associated with a sense of shame. A number of women identified lack of health insurance as a major barrier to seeking help, particularly early intervention or preventive care. Many women reported that the attitudes of providers, whether they are respectful, supportive and non-discriminatory, makes a huge difference in women’s willingness and ability to access services.

### **Seeking Help**

Across virtually all focus groups, women who discussed seeking help or support for depression turned first to natural helpers (family members, friends, pastors), then to primary health care providers (health clinics and doctors), with only a few women turning to the formal mental health system or to mental health professionals. Across virtually all focus groups, women felt distrustful toward using medications for depression or other emotional problems either for themselves or for their children, and there is a perception that mental health professionals will be “quick to medicate” if approached for help.



### **Impact on Children**

Across all focus groups, women recognized and identified similar impacts of maternal depression on children, such as children “acting out,” or trying to please, or feeling responsible for their mothers’ sadness, or withdrawing. Across all focus groups, with few exceptions, women reported that the physical health of their children is good. With few exceptions, women across all focus groups recognized the importance of, and had a strong commitment to, school involvement to ensure that their children do well in school. However, also without exception, women with limited English felt disrespected and dismissed by teachers with whom they could not communicate, and language was identified as a huge barrier to school involvement. In general, (except for non-English-speaking women as noted), women reported good relations with teachers and often with primary health care providers.

### **Recommendations to Help**

Across all focus groups, women identified similar steps that could be taken to help with depression, including better access to basic supports, such as jobs, housing, and child care, opportunities to talk with other women, and access to supportive professionals in non traditional ways, such as on the telephone or in-home. Across all focus groups, women felt that simply having the opportunity to talk about depression and other life issues in a safe environment with other women who share common life experiences was helpful.

### **Implications**

Based on the findings from the study, the future work of the mental health field in addressing maternal depression will need to focus on developing trusting relationships; providing opportunities for safe discussion and disseminating accurate information; and providing services and supports that are respectful of the family and proven to be effective. The mental health discussion of a communication strategy needs to be grounded in the experiences of the community (e.g., separation experiences and isolation; stigma; and, women’s changing roles), rather than on a pharmaceutical model. The mental health sector needs to partner with public and private physical health care providers, schools and the community’s natural resources. Last, formal service providers need to work with community’s natural helpers to reach out to and engage in treatment families who have historically been distrustful of the system, or are very unfamiliar with U.S. systems.

## **Symposium Discussion**

### **Mareasa Isaacs**

These studies and findings present many challenges and raise interesting and complex questions. If the data on the prevalence of maternal depression in low-income women and women of color are so well-known, as well as the impact of maternal depression on their children, why has this not been recognized as a critical public health issue? How can we elevate the knowledge of these findings without creating another set of circumstances of “blaming the victim”? Knowing that depression has such a critical impact across generations in the same family, why do we continue to focus on individual interventions when we do provide treatment, rather than on family-focused interventions? How can we begin to distinguish the “natural” depression of being poor and living in financially stressed situations with the more clinical aspects of depression? Both need to be addressed, but interventions might be markedly different.

Finally, among low-income women and women of color, depression appears to be a cluster of conditions that co-occur: depression, trauma, anxiety, substance abuse, domestic violence. These co-occurring conditions often mean that these women are not participants in clinical trials for depression. How can we begin to address depression, regardless of the initial presenting condition that might bring these women and their children to our attention? How can we create a continuum of care that is culturally appropriate for the vast number of women who suffer, often in silence, from a treatable disease? These and other questions must be answered and addressed through our social policies.

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# **Making Time for Parents: Comments on the American Time Use Survey**

Jane Timmons-Mitchell  
Christina Kloker Young  
Patricia Ashford

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## **Introduction**

In September, 2004, the American Time Use Survey (US Department of Labor, 2004) results were released. The Survey is the first of its kind sponsored by the Bureau of Labor Statistics and conducted by the U.S. Census Bureau. Previous surveys gathered information on activity related to work activities but the present survey used daily journaling to determine what Americans do with their time each day, both in and out of the workplace. The survey estimates are derived from interviews with approximately 21,000 people who described what they did during one 24-hour time period from 4 a.m. on the day before the interview until 4 a.m. on the day of the interview. Activities described were grouped into categories for analysis. Many categories of behavior related to parenting are included in the survey. Other major headings include: work, sleep, sports and leisure, household activities, eating and drinking, attending school, and shopping.

## **Results**

On average, respondents slept about 8.6 hours; spent 5.1 hours doing leisure and sports activities; worked for 3.7 hours; spent 1.8 hours doing household activities (including parenting); and spent 4.8 hours in a combination of eating and drinking, attending school, and shopping.

*Work.* People who were employed worked an average of 7.6 hours on the days they worked. People worked longer on weekdays, and more people worked on weekdays than on weekends. People who worked on weekends were often those who held multiple jobs or were self-employed. Men worked an average of about an hour longer each day than did women. Many people worked at home; self-employed workers were more likely to do some of their work at home.

*Household.* Both women and men performed household chores, including cleaning, cooking, lawn work, and financial management, but more women (84%) performed these tasks than men (53%), and spent more time in these activities than men (2.8 hours compared with 2.1 hours).

*Childcare or parenting activities.* The grouping overall is for children age 17 and younger. A second analysis divides children into two age groups: under 6, and 6 through 17. During an average day, women spent about 1.7 hours engaged in childcare as a primary activity, and men spent about 0.8 hours. More time was spent caring for children under 6 than for children and youth ages 6 to 17. In the 6 to 17 year age range, women averaged about an hour per day in childcare activities and men spent about a half hour. Categories of caregiving included: physical care; education-related activities; reading to/with children; talking to/with children; playing/doing hobbies with children; looking after children; attending children's events; and travel related to the care of children.

*Sports and leisure activities.* Ninety-six percent of respondents age 15 and over said they engaged in some activity such as watching TV, socializing or exercising. Men spent more time doing leisure activities than women (5.4 hours compared to 4.8 hours). Women and men with children participated in fewer sports and leisure activities than did other adults, but they still participated in an average of about 4.5 hours of sports and leisure activities daily. The American Time Use Survey concludes with an invitation to researchers to request the data set for additional analyses.

## Discussion

When survey results were presented as a poster at the *18<sup>th</sup> Annual Research Conference: A System of Care for Children's Mental Health—Expanding the Research Base* (March 2005), 31 people attending the conference chose to comment on the results of the survey. Of these, 7 reported not being surprised by the findings. The majority ( $n = 24$ ) who commented found the results surprising. One of the people surprised by the results commented that the survey addresses a great need, while another said that it has great implications for research in children's mental health. Three people were surprised by the small amount of time parents spend interacting with adolescents. Two people said they thought the findings are "scary." Two people remarked that they had not slept eight hours in years.

Given the amount of time spent overall on parenting activities, it is hypothesized that the amount of time spent parenting adolescents would be quite small indeed. Yet research (Institute of Medicine, 1999) suggests that, instead of spending less time involved with adolescents, parents should spend more time monitoring and supervising them than they do at any other period of childhood except perhaps early infancy. One of the people who commented on results at the conference echoed this sentiment, saying that, "The job is not done when a child becomes 13."

How can we influence policy? There a need for a primary prevention effort to change societal expectations for parents. Primary prevention efforts that are underway to address adolescent substance use, teen pregnancy and sexual behavior focus on parenting to address the target behaviors of youth. Linking youth behavior to parental behavior could be a logical extension, but a necessary precursor to that extension is to value spending time with adolescents. If the majority of households in America do not have this value, it may be important to work on instilling it. One of the people who commented asked, "Where are the values?"

Service providers may assume that parents are willing to spend time addressing the needs of their children. If parents have the expectation that they do not need to spend time with their adolescents, these expectations may clash. Two people commented that, as providers, we "need to re-think what people have time for." Parents and advocates observed:

- In order to address the needs of youth affected with mental health challenges, parents must be available to devote time to the effort;
- It may not be helpful to suggest that parents increase the amount of time they spend with youth if parents are not inclined to do so;
- It may be that parents have the expectation that someone else should have primary responsibility for youth (i.e., schools are responsible for educating; courts and justice facilities are responsible for disciplining);
- One contributor to the expectation that others should be responsible for youth is the practice of blaming parents and disempowering them. One participant cautioned, "The danger is blaming parents, but they may need to work to survive."

Recommendations for future studies from those who commented included: (a) break the 6 to 17 year age range into 6-10, 10-13 and 14-17 years to allow for comparisons among elementary, middle school and high school age students and their families; (b) compare parenting of special needs and non-special needs youth; (c) conduct a longitudinal analysis; and (d) look at youth in Title I and non-Title I schools; and keep in mind that the child care tax credit cuts off at age 12.

Overall, if parents want to become more involved, we must be ready to offer effective tools and to work in partnership with parents on behalf of their youth.

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## **Chapter Four**

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### **Wraparound & Community Supports**





## **John Burchard Wraparound Research Symposium Research on the Wraparound Team Process**

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### **Symposium Introduction**

With the expansion of systems of care initiatives and wraparound programs across the country, program administrators, practitioners, and researchers have begun to ask questions about how to improve the effectiveness of service coordination teams (Walker, Korloff, & Schutte 2003; Walker & Schutte, 2004). The dynamics of the service planning and wraparound team process is theorized to be a key determinant of outcomes for families participating in systems of care initiatives. The papers in this symposium present models for understanding team functioning, focusing in particular on decision-making processes, use of web-based systems to support teams, different types of team structures, and the specific roles of team members. Each of the papers explores different dimensions of team structure or functioning. Together, the authors highlight the complexity of the team process and the importance of focusing more research attention in this area in order to improve the effectiveness of wraparound programs.

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- Walker, J. S., & Schutte, K. M. (2004). Practice and process in wraparound teamwork. *Journal of Emotional and Behavioral Disorders*, 12(3), 182-192.

## **Integrating Data-based Decisionmaking into the Wraparound Process within a System of School-wide Positive Behavior Supports (PBS)**

Lucille Eber & Kelly L. Hyde

### **Introduction**

Traditionally, the wraparound process has been used by mental health and other agencies to provide comprehensive supports for youth with emotional/behavioral disabilities and their families in community-based settings (Burchard, Bruns, & Burchard, 2002; Eber & Keenan, 2004). Although evaluation data of wraparound-based projects around the country have indicated the potential for positive outcomes, a research-base is lacking (Burns & Hoagwood, 2002; Burns, Goldman, Faw & Burchard, 1999; Duchnowski, Kutash, & Friedman, 2002; Eber & Keenan, 2004).

Illinois has a history of implementing wraparound through school and community-based initiatives and has been attempting to integrate the wraparound process through their school-wide positive behavior support (PBS) initiative. In the 2001-2002 school year, the Illinois State Board of Education, Emotional and Behavioral Disabilities/Positive Behavior Interventions and Supports (ISBE EBD/PBIS) Network developed a process to support the following two evaluation goals:

- integration of data-based decision-making into the student/family wraparound team process, and
- consistent measurement of common benchmarks of progress for students who are provided the most individualized and intensive level of service within the three-tiered school-wide PBIS approach.

### **Chair**

Eric R. Wright

### **Discussant**

Janet Walker

### **Authors**

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Finding existing evaluation tools lacking, the IL School-wide Positive Behavior Support Network developed a portfolio of the tools and processes useful to guide wraparound teams in designing, implementing, or monitoring the effectiveness of their teams and plans. As part of the evaluation, a data-based decision-making process is in development to assist wraparound team facilitators as they guide child/family wraparound team and plan development.

The PBIS/EBD Network continued the implementation of wraparound and data-based decision making through schools years 2002-2004. This paper presents two-year outcomes data for a sample of 22 youth while illustrating how the evaluation tools developed have been integrated into the school based wraparound process.

## Methods

The purpose of this study was to evaluate the impact on students receiving intensive school-based wraparound (“wrap”) planning within a system of positive behavioral supports. Participants in this study were Illinois public school students receiving intensive school-based wrap planning between July 1, 2002 and June 30, 2004. During this time, approximately 42 students received intensive school based supports. Data were collected on students at baseline and at three month intervals until discharge or graduation from the model. This study includes only those students with data at both baseline and three months.

A total of six assessment instruments were used to collect data on the students included in this study. The assessment tools included the following:

- Student/Family Referral Form (Baseline Only)
- Educational Assessment
- Youth and Family Checklist
- Parent Satisfaction
- Youth Satisfaction (When age appropriate)
- Quarterly Disposition of Critical Education Demographics and Indicators

The tools selected for this study were tools used during a statewide evaluation of wraparound through interagency community-based Local Area Networks from 2000-2002 with over 1,500 students receiving wraparound statewide. The original tools were used in a state-wide interagency evaluation of wraparound (results never aggregated/analyzed due to funding cuts) and they were revised to fit with school-based usage and timeframes. The group met monthly for 2 years to develop the tools. These tools were developed to support the features of wraparound including strengths-based, needs-driven intervention planning among a team representing the strengths/needs of the student and his or her family.

Data on the instruments were collected by a designated member of the Wrap Team and/or Wrap Coaching Facilitator, with the participation of the student and family. The designated data collector was also responsible for entering the data into the Full Evaluation Automated Student Tracking System. The system stores the assessment data and also allows for instant graphing of select variables across the six instruments. Data collectors are encouraged to come to the Wrap Team meeting with data generated in graph form to assist the Team members with making informed decisions relative to the best interests of the child and family.

## Results

Twenty-two of the 42 students referred for intensive supports between school years 2002 and 2004 (52%) met the criteria for inclusion in the full evaluation analysis. These criteria included students who had full data sets at both baseline and three months following baseline. While all selected students received wraparound services at school, not all were enrolled in PBIS schools. Demographic data reveal similar characteristics between those included versus not included in the study.

The data revealed that the study participants ( $N = 22$ ) were more likely to attend a school with the PBIS program (77% versus 56%) and, those students in PBIS schools were more likely to be enrolled in the program for a longer length of time than their counterparts (15.4 months versus 6.4 months). Correlational analysis suggests that longer lengths of time in the program were also significantly associated with students attending PBIS Schools (.475,  $p < .026$ ), increases in positive classroom behavior (.431,  $p < .035$ ), increases in positive social functioning in school (.545,  $p < .009$ ), increases in positive behavioral functioning in the home (.492,  $p < .010$ ), and decreases in high risk school behaviors (-.783,  $p < .001$ ).

### **Educational Assessment**

**Need for Behavioral and Academic Supports in the Classroom.** Data revealed that at baseline the study participants' need for additional behavior supports in the classroom was rated as a high area of need (1.9 rating out of 2.0, with 1.0 equaling no need, and 2.0 equaling definite need) while the need for academic supports in the classroom was less noticeable ( $M = 1.4$ ). Three months later the need for behavior supports in the classroom significantly decreased by 40%,  $t(22) = 2.94$ ,  $p < .05$ , while the need for academic supports in the classroom increased by 20%,  $t(22) = -1.45$ ,  $p = .16$ . These findings suggest that as the need for student behavioral support decreases, the need for academic assistance within the classroom may become more apparent.

**Classroom Behavior.** Twelve behaviors were collectively assessed as a construct of classroom behavior. These behaviors were assessed at the start of services and again three months later. The classroom behaviors measured included appropriate classroom behavior with peers, appropriate behavior with adults, participation in extra curricular activities, etc. The scale used a score of 1 to reflect *poor classroom behavior*, and a score of 4 to reflect *excellent classroom behavior*.

The assessment of classroom behavioral functioning revealed that at baseline the students were "sometimes" exhibiting positive classroom behavior ( $M = 2.5$ ). Three months later the students were assessed on the same set of classroom behaviors. The findings did demonstrate that classroom behaviors collectively improved by .3 ( $M = 2.8$ ) however, the difference between the two means was not significant  $t(22) = -2.02$ ,  $p = .06$ .

**Academic Performance.** Academic performance for the study participants was rated on a scale where 1 indicated *academic performance of 59% or below or failing*, and a rating of 5 equaled an *academic rating of 90% or above or excellent academic performance*. At baseline, the students assessed averaged a rating 2.4, the equivalent of unsatisfactory academic performance. After three months, the mean academic performance had significantly increased by .60 (from 2.4 to 3.0;  $t(22) = -2.59$ ,  $p < .01$ ) from a rating of unsatisfactory at baseline to a rating of satisfactory three months later.

### **Youth and Family Checklist**

The 22 students were assessed using the Youth and Family Checklist at baseline and approximately every three months thereafter. The Checklist was used to assess health and safety, social, emotional, behavior and spiritual/cultural domain functioning in the home, school and community environments. The instrument included at least five sub-areas per functional domain area. Each sub-area question was rated on a scale with 1 indicating a *high area of need*, and 4 equaling, *high area of strength*. These questions were rated for functioning in the home, school and community environments. The sub area questions were then aggregated by functioning domain and a mean score obtained for each domain of functioning. The mean scores for each domain of functioning, by environment area, were then compared across assessment period (see Table 1).

**Home Functioning.** At baseline, the mean scores for all domains of functioning in the home environment (health and safety, social, emotional, behavioral, spiritual/cultural) were assessed. The mean baseline domain scores ranged from a low score of 1.9, or *high area of need*, in the area of emotional functioning, to a high score of 3.0, or *somewhat of a strength*, in the area of health/safety functioning.

**Table 1**  
**Changes in Functioning within Youth and Family Checklist Domains**

| Domain                     | Home Environment |          |                 | School Environment |          |           |
|----------------------------|------------------|----------|-----------------|--------------------|----------|-----------|
|                            | Rating           |          | p               | M Rating           |          | p         |
|                            | Baseline         | 3 months |                 | 3 months           | 3 months |           |
| Medical/Safety functioning | 3.1              | 3.2      | $p < .21$       | 3.0                | 3.4      | $p < .08$ |
| Social Functioning         | 2.5              | 2.8      | $p < .07$       | 2.2                | 2.3      | $p < .5$  |
| Emotional Functioning      | 1.9              | 2.4      | $p < .001^{**}$ | 1.7                | 2.0      | $p < .15$ |
| Behavioral                 | 2.2              | 2.5      | $p < .01^*$     | 2.0                | 2.2      | $p < .09$ |
| Spiritual Functioning      | 3.1              | 3.2      | $p < .60$       | 3.0                | 3.2      | $p < .43$ |

Note. \* indicates significant difference ( $p < .01$ ); \*\* indicates highly significant difference ( $p < .001$ ).

While all areas of functioning increased between baseline and the three month assessment, two of the five areas of functioning increased significantly. The greatest increase noted was in the area of emotional functioning, which increased from a functioning level of *somewhat of a need* to a functioning level approximating *somewhat of a strength* (from 1.9 to 2.4;  $t(22) = -3.73$ ,  $p = .001$ ). The areas of emotional functioning assessed included anger control, feelings of belonging, knowing when and how to ask for help, responding with appropriate emotional maturity, etc. This change suggests that when team generated positive behavior support planning is initiated in the school, the positive effects are also noted in the home.

**School Functioning.** The same five domains of functioning within the school environment (health and safety, social, emotional, behavioral and spiritual cultural) were assessed for change across the two assessment periods. The mean domain scores ranged from a low of 1.7 or *high area of need*, in the area of emotional functioning, to a high rating of 3.0, or *somewhat of a strength*, in the area of health/safety, and spiritual/cultural. While all domains demonstrated increases between the two periods of assessment, there were no statistically significant changes in the means scores for the five domain areas between baseline and three months.

The greatest increase in functioning in the school environment between baseline and the Time 2 assessment was in the area of health and safety functioning. This domain is a measure of the student's ability to make responsible choices relative to health and safety. In the school environment this can include knowing when to ask for help, demonstrating life survival skills, and making choices that decrease the likelihood of involvement in violence and crime. The mean score at baseline however was 3.0, suggesting that at baseline health and safety function was somewhat of a strength. The mean domain score three months later increased by .40 to a score of 3.4,  $t(22) = -1.84$ ,  $p = .08$ . This increase, while not significant, suggests that students demonstrated the greatest gains in health and non-violent decision making.

**High Risk Behaviors.** The Youth and Family Checklist also assessed the presence or absence of approximately 15 high-risk behaviors. A rating of 1 was given if the student had not demonstrated the behavior in the last three months, and a rating of 2 was given if the student had displayed the behavior at least one time in the last three months. Examples of the high-risk behaviors rated included danger to self, danger to others, verbal aggression, lying, etc.

At baseline, 18 of the 22 youths in the study were rated as having demonstrated high risk behaviors at least one time within the past three months (see Table 2). When assessed at Time 2 for the presence of the same high risk behaviors, three of the identified high risk behaviors had significantly decreased. The most significant decrease was noted in the area of oppositional defiance in the school, which decreased by 40% from a mean baseline score of 1.9 to a three month score of 1.5,  $t(22) = -3.64$ ,  $p < .01$ . Lying and verbal abuse also significantly decreased by 30%,  $t(22) = -2.76$ ,  $p < .01$ .

**Table 2**  
**Changes in Presence of High Risk Behaviors**

| <i>Behavior</i>      | <i>Baseline</i> | <i>3 months</i> | <i>p</i>        |
|----------------------|-----------------|-----------------|-----------------|
| Oppositional Defiant | 1.9             | 1.4             | $p < .001^{**}$ |
| Lying                | 1.75            | 1.4             | $p < .01^*$     |
| Verbal Abuse         | 1.5             | 1.2             | $p < .01^*$     |
| Aggression           | 1.5             | 1.4             | $p < .10$       |
| Danger to Others     | 1.4             | 1.3             | $p < .10$       |
| Mood                 | 1.6             | 1.4             | $p < .08$       |
| Destroys Property    | 1.4             | 1.2             | $p < .08$       |
| Theft                | 1.3             | 1.2             | $p < .10$       |
| Substance Abuse      | 1.3             | 1.2             | $p < .10$       |
| Truancy              | 1.3             | 1.1             | $p < .08$       |
| Gang Involvement     | 1.2             | 1.1             | $p < .10$       |
| Suicidal             | 1.1             | 1.0             | $p < .08$       |
| Sexually Aggressive  | 1.1             | 1.0             | $p < .08$       |

\* Indicates significant difference ( $p < .01$ ).

\*\* Indicates highly significant difference ( $p < .001$ ).

## Parent Satisfaction

Parents were asked to fill out a questionnaire at baseline and approximately every three months thereafter which included an 18 item scale that assessed their overall satisfaction with the wrap planning process. On this scale, a score of 1 reflected a response of, *not at all satisfied*, a score of 4 indicated a response of *a great deal satisfied*. For this analysis, the 18 items were aggregated and a mean scale score was derived for each assessment period. The change between assessment periods was then analyzed for significant change over time.

Data were available for 22 parents at both the baseline and Time 2 assessments. The baseline satisfaction score derived for the participating parents was a mean score of 2.94, suggesting that the parents were slightly satisfied with the entire wrap planning model. When the same parents rated their satisfaction three months later, they were significantly ( $t(22) = -7.04, p < .001$ ) more satisfied with a mean satisfaction rating of 3.73, suggesting that they were extremely satisfied with the program. The overall parent satisfaction findings suggest that there is an initial and significant positive increase in the satisfaction level of the parents participating in the wrap planning process.

## Discussion

Despite the small sample size, the data presented demonstrate evidence that students receiving intensive school-based wrap planning within a system of positive behavioral supports do demonstrate improved functioning at school, home and in the community. Some improvements are noted for students within three months of initiating the wraparound process. This is encouraging considering the history of systems failure with these students, who typically experience decreased functioning rather than improved functioning. There is also evidence suggesting that students receiving these services are more likely to maintain or decrease their level of educational restrictiveness, increase academic performance, increase functional classroom behavior, decrease high risk behaviors, and significantly improve emotional functioning in the home environment.

These early improvements shown in these data suggest that when students receive intensive wrap planning and positive behavioral supports through a team based process they can demonstrate significant gains in many life domains and areas of functioning. Future research should continue to evaluate the effectiveness of the wrap planning models in an environment of school-wide positive behavioral supports. Efforts should be made to increase the numbers of students served using similar models of care. In addition, validation of assessment instruments needs to occur to assure the validity and reliability of the data gleaned from such efforts.

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## **The Structure of Service Coordination Teams: An Empirical Study**

Eric R. Wright, Jeffrey A. Anderson, Harold Kooreman & Dustin E. Wright

### **Introduction**

Service coordination teams within a system of care have been reported as being an effective approach to assisting youth with serious emotional disorders (SED; Bickman, 1996a, 1996b, 1996c; Glisson, 1994; Glisson & James, 1992). However, it is unclear whether the actual makeup of these teams (i.e., the existence or absence of particular roles) has an impact on client outcomes. In order to better understand the influence that the structure of service coordination teams may have on the likelihood of successful program completion, this study examines the demographic, clinical, and team composition characteristics of a sample of youth in a system-of-care initiative in Indianapolis (Anderson, Wright, Kooreman, Mohr, & Russell, 2003).

### **Method**

The data for this study come from an ongoing evaluation of the Dawn Project (DP), a system-of-care in Indianapolis dedicated to coordinating services for youth and families served in two or more children's social service systems. As in many systems of care, the DP uses service coordination, or child and family teams (CFTs), to develop individualized treatment plans and ensure that needed services are obtained, coordinated, and directed toward common goals for enrolled youth and their families. Subjects in this analysis included young people who had been eligible to participate in the evaluation and who had been discharged from the DP. The demographic characteristics, referring agency (child welfare, juvenile justice, special education, or mental health), final program outcome, and CFT composition were identified in the electronic treatment record for each subject and coded by a trained research assistant.

The reason for each young person's discharge from the DP was obtained from the DP's electronic charting system and used as the outcome measure for this study. Successful outcomes were those in which the client was discharged due to having met their initial treatment goals. All other reasons for discharge were considered unsuccessful outcomes.

The participating members on each CFT were obtained from team meeting minutes available in the electronic chart. Research assistants read all available CFT meeting minutes for each client and recorded the name, gender, role on the team, and agency affiliation of each unique person who attended any CFT meeting.

The severity of a young person's behavioral and emotional symptoms was assessed by using the Total Problems Scale of the Child Behavior Checklist (CBCL; Achenbach, 1991)

### **Results**

#### **Demographic characteristics**

A total of 299 young people who had been discharged from the DP were included in this analysis. Most of the young people in the sample were African-American or biracial (57.30%) and male (70.23%). Most of the youth were referred from the juvenile justice system (36.79%). The average age at enrollment to the program was 12.80 years ( $SD = 2.66$ ), with an average stay in the DP of 11.95 months ( $SD = 6.40$ ). The most commonly diagnosed psychiatric conditions were Conduct Disorders (52.51%), Attention Deficit Disorders (46.49%), and Mood Disorders (42.47%).

**Cluster Analysis**

Initially, participant categories were identified from the CFT meeting minutes. Fifteen role categories were identified:

- mother (including adoptive or step-mother)
- father (including adoptive or step-father)
- the youth
- grandparent
- other family member
- non-kin community support
- DP service coordinator
- child welfare staff member
- juvenile justice staff member
- education staff member
- community-based mental health provider
- residential treatment provider
- mentoring agency staff member
- foster care agency staff member
- legal representative

Each team was dummy-coded for the existence of the 15 categories (1 = *role present*).

The results of the hierarchical cluster analysis indicated that a four, five, or six cluster solution would be appropriate. Follow-up K-means cluster analyses (Hair, Anderson, Tatham, & Black, 1995) were performed specifying four, five, or six cluster solutions. After reviewing the results of each analysis, it was determined that the five cluster solution best described the available data. Table 1 lists the image and identity matrices for the five cluster solution. Table 2 describes the various demographic characteristics of young people in each of the five clusters.

**Table 1**  
**Image and Identity Matrices for Five Cluster Solution**

|  | Mother | Father | Grand Parent | Other Family | Youth | Non-Kin Support | Dawn Project Staff | Juvenile Justice | Education Staff | Child Welfare Staff | Community-Based Mental Health Staff | Residential-Based Mental Health Staff | Mentoring Staff | Foster Care Staff | Legal Representatives |
|--|--------|--------|--------------|--------------|-------|-----------------|--------------------|------------------|-----------------|---------------------|-------------------------------------|---------------------------------------|-----------------|-------------------|-----------------------|
| Child Welfare Cluster  | .70    | .23    | .19          | .46          | .82   | .27             | 1.00               | .20              | .25             | 1.00                | .78                                 | .39                                   | .28             | .61               | .51                   |
| Intensive Juvenile Justice Cluster                                       | .74    | .52    | .41          | .80          | .98   | .52             | 1.00               | 1.00             | .65             | .24                 | .98                                 | .59                                   | .81             | .46               | .06                   |
| Standard Juvenile Justice Cluster  |        |        |              |              |       |                 |                    |                  |                 |                     |                                     |                                       |                 |                   |                       |
| Mother Head of Household   | .97    | .31    | .03          | .27          | .91   | .11             | 1.00               | .94              | .13             | .06                 | .76                                 | .33                                   | .21             | .11               | .00                   |
| Standard Juvenile Justice Cluster, Other Family Member Head of Household | .03    | .16    | .72          | .69          | .84   | .13             | 1.00               | .72              | .09             | .41                 | .66                                 | .41                                   | .06             | .16               | .16                   |
| Education Cluster  | .93    | .40    | .13          | .27          | .93   | .25             | 1.00               | .13              | .95             | .13                 | .92                                 | .33                                   | .82             | .02               | .02                   |
| Child Welfare Cluster  | 1      | 0      | 0            | 0            | 1     | 0               | 1                  | 0                | 0               | 1                   | 1                                   | 0                                     | 0               | 1                 | 1                     |
| Intensive Juvenile Justice   | 1      | 1      | 0            | 1            | 1     | 1               | 1                  | 1                | 1               | 0                   | 1                                   | 1                                     | 1               | 0                 | 0                     |
| Standard Juvenile Justice Cluster  |        |        |              |              |       |                 |                    |                  |                 |                     |                                     |                                       |                 |                   |                       |
| Mother Head of Household   | 1      | 0      | 0            | 0            | 1     | 0               | 1                  | 1                | 0               | 0                   | 1                                   | 0                                     | 0               | 0                 | 0                     |
| Standard Juvenile Justice Cluster, Other Family Member Head of Household | 0      | 0      | 1            | 1            | 1     | 0               | 1                  | 1                | 0               | 0                   | 1                                   | 0                                     | 0               | 0                 | 0                     |
| Education Cluster  | 1      | 0      | 0            | 0            | 1     | 0               | 1                  | 0                | 1               | 0                   | 1                                   | 0                                     | 1               | 0                 | 0                     |



**Table 2**  
**Demographic Makeup Within Clusters**

| Variable                    | Cluster 1<br>(N = 83) |           | Cluster 2<br>(N = 54) |           | Cluster 3<br>(N = 70) |           | Cluster 4<br>(N = 32) |           | Cluster 5<br>(N = 60) |           | χ <sup>2</sup> |
|-----------------------------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|----------------|
|                             | N                     | (%)       | N                     | (%)       | N                     | (%)       | N                     | (%)       | N                     | (%)       |                |
| <b>Outcome</b>              |                       |           |                       |           |                       |           |                       |           |                       |           | 24.17***       |
| Met Goals                   | 71                    | (85.54)   | 31                    | (57.41)   | 35                    | (50.00)   | 19                    | (59.38)   | 38                    | (63.33)   |                |
| Did Not Meet                | 12                    | (14.46)   | 23                    | (42.59)   | 35                    | (50.00)   | 13                    | (40.63)   | 22                    | (36.67)   |                |
| <b>Race</b>                 |                       |           |                       |           |                       |           |                       |           |                       |           | 2.74           |
| White                       | 35                    | (42.17)   | 20                    | (37.04)   | 34                    | (48.57)   | 11                    | (34.38)   | 27                    | (45.00)   |                |
| Non-White                   | 48                    | (57.83)   | 34                    | (62.96)   | 36                    | (51.43)   | 21                    | (65.63)   | 33                    | (55.00)   |                |
| <b>Gender</b>               |                       |           |                       |           |                       |           |                       |           |                       |           | 11.36*         |
| Male                        | 51                    | (61.45)   | 38                    | (70.37)   | 51                    | (72.86)   | 19                    | (59.38)   | 51                    | (85.00)   |                |
| Female                      | 32                    | (38.55)   | 16                    | (29.63)   | 19                    | (27.14)   | 13                    | (40.63)   | 9                     | (15.00)   |                |
| <b>Referral Source</b>      |                       |           |                       |           |                       |           |                       |           |                       |           |                |
| Child Welfare               | 80                    | (96.39)   | 7                     | (12.96)   | 2                     | (2.86)    | 13                    | (40.63)   | 8                     | (13.33)   | 189.01***      |
| Juvenile Justice            | 3                     | (3.61)    | 34                    | (62.96)   | 58                    | (82.86)   | 16                    | (50.00)   | 7                     | (11.67)   | 133.20***      |
| Education                   | 0                     | (0.00)    | 9                     | (16.67)   | 3                     | (4.29)    | 0                     | (0.00)    | 31                    | (51.67)   | 93.08***       |
| Mental Health               | 0                     | (0.00)    | 4                     | (7.41)    | 7                     | (10.00)   | 3                     | (9.38)    | 14                    | (23.33)   | 22.64***       |
| <b>Team Members</b>         |                       |           |                       |           |                       |           |                       |           |                       |           |                |
| Mom                         | 58                    | (69.88)   | 40                    | (74.07)   | 68                    | (97.14)   | 1                     | (3.13)    | 56                    | (93.33)   | 117.09***      |
| Dad                         | 19                    | (22.89)   | 28                    | (51.85)   | 22                    | (31.43)   | 5                     | (15.63)   | 24                    | (40.00)   | 18.35***       |
| Youth                       | 68                    | (81.93)   | 53                    | (98.15)   | 64                    | (91.43)   | 27                    | (84.38)   | 56                    | (93.33)   | 11.60*         |
| Grandparent                 | 16                    | (19.28)   | 22                    | (40.74)   | 2                     | (2.86)    | 23                    | (71.88)   | 8                     | (13.33)   | 70.93***       |
| Other Family                | 38                    | (45.78)   | 43                    | (79.63)   | 19                    | (27.14)   | 22                    | (68.75)   | 16                    | (26.67)   | 50.28***       |
| Dawn Staff                  | 83                    | (100.00)  | 54                    | (100.00)  | 70                    | (100.00)  | 32                    | (100.00)  | 60                    | (100.00)  | --             |
| Non-kin Supports            | 22                    | (26.51)   | 28                    | (51.85)   | 8                     | (11.43)   | 4                     | (12.50)   | 15                    | (25.00)   | 29.73***       |
| Juvenile Justice            | 17                    | (20.48)   | 54                    | (100.00)  | 66                    | (94.29)   | 23                    | (71.88)   | 8                     | (13.33)   | 174.32***      |
| Education                   | 21                    | (25.30)   | 35                    | (64.81)   | 9                     | (12.86)   | 3                     | (9.38)    | 57                    | (95.00)   | 128.78***      |
| Child Welfare               | 83                    | (100.00)  | 13                    | (24.07)   | 4                     | (5.71)    | 13                    | (40.63)   | 8                     | (13.33)   | 181.56***      |
| Mental Health               | 65                    | (78.31)   | 53                    | (98.15)   | 53                    | (75.71)   | 21                    | (65.63)   | 55                    | (91.67)   | 22.31***       |
| Residential Tx              | 32                    | (38.55)   | 32                    | (59.26)   | 23                    | (32.86)   | 13                    | (40.63)   | 20                    | (33.33)   | 11.01*         |
| Mentor Staff                | 23                    | (27.71)   | 44                    | (81.48)   | 15                    | (21.43)   | 2                     | (6.25)    | 49                    | (81.67)   | 106.99***      |
| Foster Care Staff           | 51                    | (61.45)   | 25                    | (46.30)   | 8                     | (11.43)   | 5                     | (15.63)   | 1                     | (1.67)    | 83.33***       |
| Legal Reps.                 | 42                    | (50.60)   | 3                     | (5.56)    | 0                     | (0.00)    | 5                     | (15.63)   | 1                     | (1.67)    | 95.55***       |
| <b>Clinical Functioning</b> |                       |           |                       |           |                       |           |                       |           |                       |           |                |
| <b>CBCL</b>                 | <i>M</i>              | <i>SD</i> | <i>M</i>              | <i>SD</i> | <i>M</i>              | <i>SD</i> | <i>M</i>              | <i>SD</i> | <i>M</i>              | <i>SD</i> | <i>r</i>       |
| Internalizing               | 61.58                 | (12.57)   | 64.19                 | (10.70)   | 64.58                 | (11.60)   | 62.55                 | (13.34)   | 66.42                 | (11.46)   | 1.26*          |
| Externalizing               | 67.77                 | (13.08)   | 73.51                 | (10.19)   | 72.38                 | (10.96)   | 72.32                 | (12.63)   | 69.90                 | 9.35      | 2.18           |
| <b>Age at Enrollment</b>    | 12.46                 | (2.98)    | 12.72                 | (2.11)    | 13.47                 | (2.11)    | 13.69                 | (2.14)    | 12.08                 | (3.16)    | 3.59**         |

\*p <= .05; \*\*p <= .01; \*\*\*p <= .001

Cluster one (C1) might be described as the child welfare cluster because over 96% of the young people in this group were referred from this system. Additionally, this cluster most frequently contained a legal representative and foster care agency personnel. Conversely, C1 teams were less likely to include a father or a juvenile justice representative than other clusters. Finally, cluster one had the highest rate (85.5%) of successful outcomes.

Cluster two (C2) might be characterized as the intensive needs juvenile justice cluster, with 63% of the youth referred by this system. Just over half of the youth on the teams in C2 (57.4%) had successful outcomes. C2 teams had the most heterogeneous membership with fathers, other family members, a non-family support person, and representatives from juvenile justice, mental health, education, and residential treatment all being more likely to appear on teams in this cluster than any other. Mentors and educational personnel also were highly represented on these teams.

Cluster three (C3) was even more strongly associated with the juvenile justice system than C2, with 83% of the youth referred from this system. C3 teams also had the lowest rate (50%) of successful outcomes despite primarily serving young people who require less intensive services than those in C2. The youth in this cluster were older, on average, than youth in any of the other clusters. Teams in this

cluster were more likely than any other cluster to include the youth's mother (97.1%) and were the least likely to include grandparents, non-family supports, child welfare representatives, residential treatment representatives, foster care, or mentor staff.

*Cluster four (C4)* is the only cluster not clearly associated with a single referral source with about half of the youth referred by juvenile justice and 41% referred by child welfare. Successful outcomes were achieved by 59.4% of the teams in C4. A unique feature of this cluster was the low percentage of mothers (3%) and fathers (15.6%) participating on the treatment teams. Additionally, these teams were the least likely to include education representatives, mentors, and mental health team members. Conversely, these teams were the most likely to include grandparents and the second most likely to include other (non-parent) family members on the teams.

*Cluster five (C5)* could be considered the education cluster, with more than half the youth referred from this system; additionally, a relatively high number of youth in this cluster were referred by mental health (23%). Over sixty percent (63.3%) of young people in C5 teams achieved successful outcomes. Youth in this cluster were the youngest of any cluster and the most likely to be male (85%). These teams were the most likely to contain a mentor; participation by the youth (93.3%), mothers (93.3%), and fathers (40.0%) were also very high on this cluster. On the other hand, juvenile justice representation was lower on these teams than in any other cluster.

### **Logistic Regression**

We also examined the relationship between youth characteristics, team structures, and successful program outcomes. Demographic variables and diagnostic categories did not demonstrate any association with discharge outcome. However, youth with more severe problems upon admission to the program (as measured by the CBCL Total Problem score) were slightly less likely to be successful in meeting the CFT's treatment goals ( $OR = 0.97$ ;  $p < .05$ ). Likewise, youth referred by juvenile justice were 20% less likely to have successful outcomes than youth referred by the mental health system ( $OR = 0.20$ ;  $p < .05$ ). Among team structure clusters, youth in C1 were 4.8 times more likely to have successful outcomes than youth in the comparison category, C5 ( $OR = 4.78$ ;  $p < .05$ ). (See Table 3).

### **Discussion**

The purpose of this analysis was to empirically describe the common team structures found in a well-established system-of-care initiative that uses CFTs. Our results indicate that there are five common team structures in the program that, to a great extent, correspond with the original agencies that referred the young person to the program.

The majority of youth served in the DP meet their pre-established treatment goals. However, the rate of success varied across the clusters. C1 was clearly the most successful. While C1 teams primarily represented children referred from child welfare, the measure for the team structure effect remained significant even after controlling for referral source. This would suggest that there may be something about this team structure that is unique over and above representing the most common structure for youth referred by child welfare. At the same time, C1 also stands out from the other clusters as being in the middle in terms of both size and composition. We believe this is significant because C2 and C3 represent opposite extremes in terms of team size and complexity (i.e., larger, more complex and smaller, and less complex, respectively) while also having the lowest rates of successful discharge. Taken together, these preliminary analyses suggest that the relationship between team structure and program outcome may be curvilinear with teams of moderate size and complexity being those most likely to yield more consistent positive outcomes. Clearly, more research on a wider array of teams across different systems-of-care is needed to develop a comprehensive typology of teams; still, the findings from this study indicate that this process may be empirically feasible and potentially valuable for planning service coordination programs.

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## **Service Coordination Team Composition and Child Outcomes: An Exploratory Analysis**

Lisa A. Russell, Harold Kooreman, Eric R. Wright, Jeffrey A. Anderson & Dustin E. Wright

### **Background**

Although service coordination teams within systems of care are emerging as an effective approach for supporting youth with serious emotional disorders and their families (SED; Bickman, 1996a; Bickman, 1996b, 1996c; Glisson, 1994; Glisson & James, 1992), it is unclear whether the actual makeup of these teams (i.e., the existence or absence of particular roles such as father, mother, teacher) has an impact on outcomes. However, research related to cross-function health care teams suggests that the involvement of certain personnel on teams may impact communication patterns among team members (Cott, 1997, 1998) as well as treatment choices and patient outcomes (e.g., Haward et al., 2003; Alexander, Lichtenstein, & D'Aunno, 1996; Lichtenstein, Alexander, McCarthy, & Wells, 2004). This work was part of an ongoing longitudinal evaluation of the Dawn Project (DP), a system of care dedicated to integrating and coordinating services for youth and families served in two or more children's social service systems (i.e., special education, mental health, juvenile probation, child welfare; Anderson, Wright, Kooreman, Mohr, & Russell, 2003). In this study, the research team examined demographic, clinical, and team composition (i.e., the roles of the individuals on the team) of a sample of youth who had completed the Dawn Project, to better understand the influence specific team roles have on the likelihood of successful completion.

### **Method**

The data for this study come from the Dawn Project Evaluation Study, an ongoing study that includes both in-depth, longitudinal interviews with families and youth enrolled in the project and analyses of clinical and service-related information available through the DP's electronic charting system (Anderson et al., 2003). This analysis examined correlates of success by focusing on 230 young people for whom CFT meeting, program outcome, and clinical information were available. Using these data, evaluation personnel coded the demographic characteristics, referral source, final program outcome, and the CFT composition of participating youth. The reason for each young person's discharge from the DP was obtained from the DP's electronic charting system and used as the outcome measure for this study. Successful outcomes were those in which the children were discharged because initial treatment goals were met. All other reasons for discharge were considered unsuccessful outcomes. The roles of participating members for each CFT were obtained by reviewing minutes for each meeting, which are available in the electronic chart. Research assistants read all available CFT meeting minutes and recorded the name, gender, and role of each person attending the CFT meeting, as well as the agency affiliation of each unique person who attended each meeting. The severity of a young person's behavioral and emotional symptoms was assessed by using the Total Problems Scale of the Child Behavior Checklist (Achenbach, 1991).

### **Analyses**

Logistic regression analysis was used to examine whether demographic characteristics, severity of psychiatric problems, or team member presence, predicted successful or unsuccessful program disposition. Team member presence was defined in three different ways: (a) using dummy variables to indicate the presence or absence on the team of each role; (b) using the total number of individuals on the team who occupied each role; and (c) the natural log of the average participation on the team for each role.

## Results

Bivariate analyses comparing the demographic characteristics of the 230 young people in the current sample with the 69 young people excluded from the sample indicated no significant differences with the exceptions of age, length of time in the program, and program outcome. Youth in the analysis sample were younger at enrollment (12.6 vs. 13.6 years old, respectively), enrolled in the program longer (12.4 vs. 10.4 months, respectively), and were more likely to have a successful outcome (69.57% vs. 49.28% meeting goals, respectively; see Table 1) than those excluded from the analysis.

**Table 1**  
**Demographic Comparisons Between Youth**  
**Included in the Analysis and those Excluded from the Analysis**

| Variables                              | Included<br>(n = 230) |             | Excluded<br>(n = 69) |             | $\chi^2$ |
|--|-----------------------|-------------|----------------------|-------------|----------|
|  | N                     | (%)         | n                    | (%)         |          |
| <b>Race</b>                            |                       |             |                      |             | 0.0370   |
| Caucasian                              | 97                    | (42.17)     | 30                   | (43.48)     |          |
| African-American/Biracial              | 133                   | (57.82)     | 39                   | (56.52)     |          |
| <b>Gender</b>                          |                       |             |                      |             | 1.128    |
| Male                                   | 158                   | (68.70)     | 52                   | (75.36)     |          |
| Female                                 | 72                    | (31.30)     | 17                   | (24.64)     |          |
| <b>Referral Source</b>                 |                       |             |                      |             |          |
| Child Welfare                          | 80                    | (34.78)     | 30                   | (43.48)     | 1.726    |
| Juvenile Justice                       | 94                    | (40.87)     | 24                   | (34.78)     | 0.823    |
| Education                              | 32                    | (13.91)     | 11                   | (15.94)     | 0.178    |
| Mental Health                          | 24                    | (10.43)     | 4                    | (5.80)      | 1.345    |
| <b>Diagnoses</b>                       |                       |             |                      |             |          |
| Mood/Anxiety Disorders                 | 32                    | (13.91)     | 12                   | (17.39)     | 0.512    |
| Disruptive Disorders                   | 190                   | (82.61)     | 53                   | (76.81)     | 1.172    |
| Other Disorders                        | 8                     | (3.48)      | 4                    | (5.80)      | 0.741    |
| <b>Outcome</b>                         |                       |             |                      |             | 9.590*** |
| Met Treatment Goals                    | 160                   | (69.57)     | 34                   | (49.28)     |          |
| Did Not Meet Treatment Goals           | 70                    | (30.43)     | 35                   | (50.72)     |          |
|  | <i>M</i>              | <i>(SD)</i> | <i>M</i>             | <i>(SD)</i> | <i>t</i> |
| <b>Age At Enrollment</b>               | 12.56                 | (2.69)      | 13.58                | (2.38)      | 2.842*** |
| <b>Months Enrolled in Dawn Project</b> | 12.42                 | (6.31)      | 10.38                | (6.46)      | -2.346** |

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

## Presence or Absence of Roles

Logistic regression modeling suggested that successful program completion was predicted by having fewer behavioral symptoms at program entry ( $OR = 0.96, p < .05$ ) and having CFT member participation in specific roles (Table 2). More specifically, youth who had someone in the father role on the team were more than twice as likely ( $OR = 2.26, p < .05$ ) to have successful program completion. Similarly, youth were two times more likely ( $OR = 2.38, p < .05$ ) to successfully complete the DP if they had educational or school staff members on their team. In contrast, youth whose team did *not* include mentors or juvenile justice representatives were three times more likely to have successful program completion ( $OR = 0.35, p < .05$ ;  $OR = 0.36, p < .01$ , respectively). Demographic

variables were not significant predictors in this model. However, young people entering the DP from the educational system were almost two times more likely to have an unsuccessful program outcome than youth referred from the mental health system. Just over 19% of the variance in program outcome was predicted by this model.

**Table 2**  
**Logistic Regression Predicting Outcome in the Dawn Project**

|                                     | <i>Presence of<br/>Role on<br/>Team</i> | <i>Number of<br/>People who<br/>Held Role</i> | <i>Average<br/>Participation<br/>Rate of Role</i> |
|-------------------------------------|---|---|---|
|                                     | <i>O.R.</i>                             | <i>O.R.</i>                                   | <i>O.R.</i>                                       |
| <b>Youth Demographics</b>           |   |   |   |
| Race                                | 1.35                                    | 1.04  | 1.34  |
| Gender                              | 1.04                                    | 1.13  | 1.05  |
| Age at Enrollment                   | 0.93                                    | 0.86  | 0.93  |
| <b>Diagnostic Group<sup>1</sup></b> |   |   |   |
| Disruptive Disorders                | 0.20                                    | 0.22  | 0.23  |
| Mood/Anxiety Disorders              | 0.13                                    | 0.25  | 0.16  |
| CBCL Total Problems Score           | 0.96*                                   | 0.96*   | 0.96*   |
| <b>Referral Source<sup>2</sup></b>  |   |   |   |
| Child Welfare                       | 0.52                                    | 0.40  | 0.70  |
| Juvenile Justice                    | 0.27                                    | 0.24*   | 0.33  |
| Education                           | 0.19*                                   | 0.16*   | 0.20*   |
| <b>Team Member</b>                  |   |   |   |
| Mother                              | 0.44                                    | 0.56  | 0.85  |
| Father                              | 2.26*                                   | 1.94  | 1.19  |
| Grand Parent                        | 0.68                                    | 0.72  | 1.24  |
| Other Family                        | 1.05                                    | 1.23  | 0.91  |
| Youth                               | 2.38                                    | 2.71  | 1.04  |
| Non-kin Supports                    | 1.93                                    | 1.45  | 1.09  |
| Juvenile Justice Representatives    | 0.35*                                   | 0.79  | 0.76*   |
| Education Staff                     | 2.38*                                   | 1.22*   | 1.29*   |
| Child Welfare Representatives       | 1.06                                    | 1.94  | 0.97  |
| Community Mental Health Providers   | 1.10                                    | 0.87  | 0.96  |
| Residential Treatment Staff         | 0.60                                    | 1.00  | 0.83*   |
| Mentoring Services Staff            | 0.36*                                   | 0.98  | 0.81*   |
| Foster Care Service Providers       | 1.37                                    | 0.96  | 1.17  |
| Legal Representatives               | 1.19                                    | 0.97  | 1.04  |

<sup>1</sup>Other Diagnoses is the comparison category

<sup>2</sup>Mental Health is the comparison category

\* $p \leq .05$ ; \*\*  $p \leq .01$ ; \*\*\*  $p \leq .001$

### Number of Individuals in Each Role

When the number of individuals in each role on the team was used as a predictor in the logistic regression model, program outcome was predicted by referral source, behavioral problems, and the presence of educational representatives on the CFT (see Table 2). Specifically, successful program outcomes were more likely to occur in cases referred from juvenile justice ( $OR = 0.24, p < .05$ ) or the educational system ( $OR = 0.16; p = .05$ ) than cases referred from mental health. Additionally, successful program outcomes were predicted by having fewer behavioral symptoms at enrollment ( $OR = 0.96, p < .05$ ) and having a higher number of educational representatives on the young person's CFT ( $OR = 1.22, p < .05$ ).

### Natural Log of Participation

The final model used the natural log of the average participation rate for each role. The natural log was used in this instance to correct for the skewed distribution in participation rates. When compared with young people referred to the DP from child welfare, young people enrolled in the DP through the educational system were two times less likely to achieve successful program outcomes ( $OR = .20, p < .05$ ). As observed in the other regression models, young people with lower rates of psychological problems were more likely to achieve successful outcomes ( $OR = 0.96, p < .05$ ). Finally, a successful program outcome was predicted by higher rates of participation from educational representatives ( $OR = 1.29, p = .05$ ) and lower participation rates by representatives from juvenile justice, residential treatment, and mentoring services ( $OR = .76, p = .05$ ;  $OR = .83, p = .05$ ;  $OR = .81, p < .05$ , respectively).

### Discussion

In a model containing demographic characteristics, behavioral symptoms at enrollment, and CFT member roles, achieving a successful program outcome appears to be predicted primarily by the presence of father-type figures and the absence of juvenile justice and mentor staff. While the role of father figures in the adjustment of at-risk young people is still unclear, research suggests that paternal involvement can help reduce the risk of psychological difficulties and delinquent behaviors, particularly in males (Thomas, Farrell, & Barnes, 1996; Zimmerman, Salem, & Maton, 1995). Youth who had fewer behavioral symptoms at program enrollment were slightly more likely to complete the program successfully. The precise nature and mechanism of the relationship between program outcome and the various team roles is unclear from this analysis and the available data. However, these results do indicate that interventions targeting the actual composition of CFTs may ultimately impact program success. Further study is warranted to better understand the specific contributions of various team members, the conditions under which each role is most effective at impacting successful program outcomes, and the impact of inter-role interactions on program outcome. Future investigations should account for variations in the level of participation for each team member (e.g., intensity and consistency over time) and control for the possibility that some team roles may not be applicable across youth in the sample (e.g., foster care staff could be team members only if youths are in the foster care system).

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## **Symposium Discussion**

**Janet S. Walker**

The studies described by the papers in this symposium must be viewed as exploratory: the Illinois study due to small sample size and limited time frame, and the Dawn Project studies because of their descriptive nature. Nonetheless, the studies deserve our attention for the intriguing possibilities and further questions that they raise. What is more, taken as a group, the studies also provide evidence of the increasing sophistication of knowledge and research about the wraparound process.

The intriguing possibilities raised by the Illinois study are (a) that the dramatic positive results that appear to be generated in a short time frame could be sustained over a longer period, and (b) that other non-significant (but trending positive) outcomes would become significant given a larger sample and more time. It is of particular interest that the wraparound intervention had a quick and positive impact on academic performance, an outcome that is crucial to young people's life chances, yet often eclipsed in planning by a focus on behavior. Also important is the positive impact of a school-initiated planning process on child functioning in the home.

For the Dawn Project studies, the further questions raised by the authors revolve around *why* different team configurations might be related to successful discharge from the program. Why, for example, might the presence of a father figure on the team be associated with high probability of success? This is a question that is particularly compelling for me, given that my own research documented very low participation of fathers on a national sample of teams. What is it that fathers bring to the process, and can this be provided for teams that lack participation by a father figure? Or why is it that teams referred through juvenile justice appear to be less successful than teams referred through mental health? The authors have done us a service by using data to hone in on these questions, and by generating some intriguing hypotheses about answers. We look forward to the information that further explorations of these issues will yield.

Beyond the findings that the authors highlight in their papers, there is additional information that can be gleaned from reading a little bit between the lines. This information is important because of what it tells us about the directions being taken, and the results being achieved, in mature, successful wraparound programs. For example, I find it significant that the Dawn Project achieved a successful discharge rate of nearly 65% overall. About five years ago, as part of my own research, I asked expert care coordinators from highly regarded wraparound programs to estimate the rates of successful discharge



from their own programs. Their estimates ranged from 20% to a high of 50%. Family mobility, unstable funding, program demise, uncooperative system partners and providers, and other extra-program factors were seen as contributing to this perceived low rate. What is encouraging is that the Dawn Project has apparently addressed these underlying factors that commonly impede program success and sustainability. The Illinois study also paints a picture of a well-functioning program that has achieved the capacity not just to help children and families achieve positive outcomes, but also to gather and utilize high quality data. This enables teams to track progress and evaluate strategies; furthermore, it allows the program to implement quality assurance *and* to document outcomes. Also encouraging is that each of these programs is focused on outcomes that matter to young people and families *and* that are relatively straightforward and easy to measure. Considered as a group, these three studies are testament to the increasing ability of wraparound programs to achieve pragmatic goals while also bringing to life the vision expressed in the wraparound philosophy.

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# **Relationships between Parental Stress, Child Supports and Parental Supports for Children with Serious Emotional Disturbances**

Jennifer Taub  
Shannon Lewis

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## **Introduction**

Social support systems, or informal supports in the community such as family or friends, appear to be a significant factor in helping families deal with the stress of raising children. Caregivers of children with behavior problems and disabilities experience highly elevated levels of daily child-rearing stress (Pelham & Lang, 1999; Tsagarakis, 1999; Dyson, 1997). Previous research indicates that there is a correlation between social support and parental stress for caregivers of children with various physical and behavioral problems.

In one study, data were collected from caregivers with children ages 6-18 who either had mental retardation, chronic illness, or were of a non-disabled behavior-problems sample. The presence of significant behavior problems was related to high parental stress, more so than children's physical illnesses (Floyd & Gallagher, 1998). In a study by Tsagarakis (1999), caregivers of children with externalizing and internalizing behaviors were studied to examine how child behavior problems, resources, and coping strategies predict parental stress. Results indicated that family social support diminished the predictive relationship between child behavior problems and high parental stress, and mothers of children with externalizing behaviors experienced more stress than mothers of children with internalizing behaviors (Tsagarakis, 1999). This suggests that more social support can reduce stress when caregivers are dealing with their children's behavior, particularly externalizing behavior.

In a study looking at the link between social supports by family members and the psychological and physical health of children, Shadmon (1998) found that parental and sibling supports had the strongest relations to children's well-being. It was also found that children's well-being was hindered by maternal stress and fostered by maternal positive network orientations (i.e., mothers' tendency to utilize supports). Family supports produced the largest contribution to the variance in children's adjustment outcomes, followed by interaction variables which confirmed the importance of non-family supports in compensating for insufficient family supports (Shadmon, 1998). Support systems seem to promote children's health through reducing parental stress.

Given what we know from previous research, the question remains whether increased natural supports in the family and community can decrease parental stress, ultimately helping caregivers deal with behaviorally problematic children, such as children with severe emotional disturbances (SED). There has not been any research dealing specifically with the effects of social supports on parental stress in caregivers of school-aged children with SED.

In order to examine the relationships between social supports and parental stress for caregivers of children with SED, we utilized a sample from an evaluation study of children receiving comprehensive wraparound services designed to build on support systems for the family. This study examines the following questions:

1. Are services successful in increasing the support networks, both formal and natural supports, for children and caregivers?
2. Are fewer social supports related to greater parental stress?

## **Method**

**Participants.** Caregivers of children enrolled in the Coordinated Family Focused Care (CFFC) program in Massachusetts were eligible to participate in this study. All children in CFFC are enrolled in Medicaid, 3-18 years old (inclusive), at risk for residential or more restrictive placement, have a score of 100 or higher on the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges &

Wong, 1996) or on the Preschool and Early Childhood Functional Assessment Scale (PECFAS, Hodges 1997) and have a serious emotional disturbance. Consent for participation in an evaluation of CFFC is obtained by program staff at intake. Data for this study were drawn from the larger evaluation. Measures of parental stress are completed at intake, six and 12 months with program staff. Measures of fidelity, empowerment and caregiver involvement are completed through phone interviews with third party interviewers at three and nine months after intake. Participants are paid \$10 for their participation in phone interviews.

**Measures.** To assess parental stress, the Parental Stress Index-Short Form (PSI; Abidin, 1995) is used for parents of children ages 11 and under, and the Stress Index for Parents of Adolescents (SIPA; Sheras & Abidin, 1998) for parents of children ages 12 and over. Both measures have good psychometric properties.

To assess supports, six items from the Wraparound Fidelity Index (WFI; Bruns, Burchard, Suter, Force, & Leverentz-Brady, 2004) and one item from the Family Empowerment Scale (FES; Koren, DeChillo & Friesen, 1992), looking specifically at caregivers’ perceptions of supports, were used (see Table 1). The number and strength of child social supports also were assessed at intake.

## Results

### 1. Is the program successful in increasing the support networks, both formal and natural supports, for (a) children and (b) caregivers?

**Children’s supports.** Paired samples *t*-tests were completed to compare the intake and six month ratings of number and strength of relationships in the areas of Peers, School, Adults, Formal and Informal supports. Results indicated statistically significant increases in the overall sample in the areas of Formal Supports ( $t = -3.020$ ;  $df = 86$ ;  $p = .003$ ) and Adult supports ( $t = 2.451$ ;  $df = 86$ ;  $p = .016$ ), both in the number of supports and the strength of the relationships, between intake and six months. For adolescents only ( $n = 38$ ), there was a significant increase in Informal Supports as well ( $t = -2.154$ ;  $df = 37$ ;  $p = .038$ ; see Figure 1).

**Caregivers’ supports.** For caregivers, paired samples *t*-tests were performed for each of the seven items in Table 1, for the three- and nine-month time points. Results indicated that only one area showed a positive change, regarding the parent’s perception of the team fostering positive friendships for the child ( $t = 2.687$ ;  $df = 25$ ;  $p = .013$ ). None of the areas that were specifically regarding supports for the caregiver showed change.

**Table 1**  
**Parent Support Items**

|                                  |   |
|----------------------------------|---|
| WFI Item 7A:                     | Does the team help you receive support from your friends and family   |
| WFI Item 7B:                     | Does the team help your child develop friendships with other youth who will have a good influence on his or her behavior? |
| WFI Item 7C:                     | Does the team rely mostly on Professional Services?   |
| WFI Item 7D:                     | How many members of your team are professionals?  |
| WFI Item 2B:                     | Is there a friend or advocate of your family who actively participates on the team?                                       |
| WFI Item 8A:                     | Does the team help your family develop or strengthen relationships that will support you when the team is discontinued?   |
| Family empowerment scale Item 7: | “When I need help with problems in my family, I am able to ask for help from others”.                                     |

## 2. Are child or caregiver social supports related to parental stress?

To examine the relationships between social supports and parental stress, separate analyses were done for each parental stress measure, one set for the PSI for younger children, and another set for the SIPA, for adolescents.

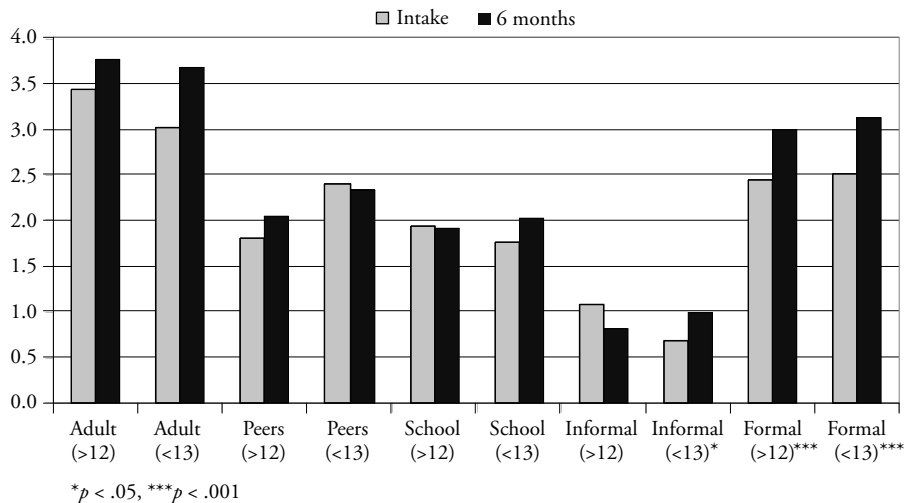
**Younger children.** To look at the relationship between the child’s social supports and parental stress, Pearson correlations were conducted between the number and strength of social supports with each of the parental stress measures. There were no significant relationships.

To look at the relationship between parental supports and parental stress, two-tailed Pearson’s Correlation tests were generated to compare each item in Table 1 with PSI and SIPA total and subscale scores. Significant inverse relationships between Total Stress ( $r = -.507$ ;  $p = .001$ ) and all three subscales were found: Child Domain ( $r = -.367$ ;  $p = .025$ ), Parent Domain ( $r = -.417$ ;  $p = .01$ ) and Parent-Child interaction ( $r = -.534$ ;  $p = .001$ ) on questions about parents’ natural supports on their teams. Specifically, parents who reported that their teams relied more heavily on professional than natural supports reported greater parental stress.

**Adolescents.** To examine the child’s supports and parental stress, Pearson correlations were conducted between the number and strength of social supports with each of the parental stress measures. There were significant relationships seen between Adult Supports ( $r = -.262$ ;  $p = .022$ ), School Supports ( $r = -.365$ ;  $p = .001$ ), and Formal Supports ( $r = -.267$ ;  $p = .02$ ) and parental stress in the Adolescent-Parent relationship domain at intake and for Adult supports ( $r = -.329$ ;  $p = .029$ ) and School Support ( $r = -.394$ ;  $p = .009$ ) at six months. That is, more child social supports in these areas were related to lower parental stress in the relationship between the parent and child.

To better understand the specific contributions of supports to parent stress, a multiple regression was performed with intake-six month change in SIPA Parent-Child Relationship Stress (PCRS) as the dependent variable. Intake PCRS was entered on the first step to covary for the initial score. Next, caregiver support items from the WFI and CAFAS intake and intake-six month change scores were entered. Results indicated that PCRS intake score accounted for 10% of the variance ( $F = 5.24$ ;  $df = 38$ ;

**Figure 1**  
**Child Social Supports—Change over Time**  
**Children ( $n = 37$ ) & Adolescents ( $n = 37$ )**



$p = .028$ ), and having a friend or advocate who actively participates on the team accounted for a unique 12.5% of the variance in PCRS change scores ( $F = 7.21$ ;  $df = 37$ ;  $p = .011$ ). CAFAS scores did not significantly contribute to the PCRS scores.

## Discussion

While we are somewhat limited by the proxies used for assessment of social supports, particularly for caregivers, the emergent pattern of results was intriguing. Results indicated increases in some areas of social supports, but only for children in the program, not for their caregivers. Children were reported to have increases in their adult support network, their formal support network, and their relationships with positive peers. This change in adult supports may be a result of the new adults brought into the child's life through the services they are receiving, but the fact that both the number as well as the level of connectedness to these adults demonstrates more positive relationships with adults over the course of services.

While this program is designed to increase involvement from caregivers' natural supports, this is not an area in which notable change was found. Since there was a substantial relationship between parent-reported involvement of a friend or advocate on their child's team, and lowered stress in the parent-adolescent relationship, this is certainly an area that programs should focus on.

Results indicated that there were significant increases in some areas of child supports and both child supports and parental supports were related to parental stress for children with SED in wraparound services, although child supports and adult supports were related to different parental stress factors. For younger children, having more professionals than natural supports on their teams was related to increased parental stress in all domains. For parents of adolescents, both the child's support network, as well as the caregiver having support in the context of their child's services, were related to lower parental stress, and reductions in parental stress, respectively.

Future directions for research will involve more complex statistical analyses to help tease out the complexities of the relationships between supports and parental stress, as well as other factors which may affect these relationships, such as family history, child functioning, income, and others.

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# **Building Community Connections with Project T.E.A.M.: A Comparison of At-risk Caucasian and Minority Youth**

Cynthia Brothers  
Susan C. McLaughlin  
Marilyn Daniel

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## **Introduction**

The wraparound process is a service delivery mechanism that recognizes family and community supports as integral to the well-being of children. As an alternative to traditional treatment, wraparound employs an integrated, multi-system collaborative approach for children and their families to help meet their unique emotional and behavioral needs across all life domains. Several core principles define the wraparound process, including community-based, individualized, and culturally competent care (VanDenBerg & Grealish, 1996).

A key mechanism in wraparound is the building of community and natural supports for each family, facilitated through the development of a child and family team. A team consists of the youth and family, and persons from the family's support system who can provide additional guidance when needed. Formal service providers also serve on the team to help with linkage and provision of services. The team works collectively to create an individualized care plan to meet family needs and develop goals, and reflects wraparound's emphasis on utilizing and expanding natural supports, from which the family can derive empowerment. The literature indicates that minority families tend to have larger social networks and a greater reliance upon informal networks for support, and that culturally-driven approaches that incorporate family and community in mental health treatment produce improved outcomes (Barrio, 2000).

The goal of this study was to examine the significance of community connectedness in the lives of at-risk youth, in particular ethnic minority vs. Caucasian youth. It explored whether youth participating in Project T.E.A.M. showed an increase in the number and strength of community connections over time, whether clinical functioning improved over time, and any relationships between formal and informal supports and individual clinical functioning. Based on past research, it was hypothesized that community connections, especially informal supports, would have a differential impact on the well-being of a sample of minority youth vs. Caucasian youth.

In 1998, King County was awarded a six-year Federal grant, from which Project T.E.A.M. (Tools, Empowerment, Advocacy, and Mastery) was designed to fulfill a gap in service options for youth involved in the juvenile justice system. Families enrolled in Project T.E.A.M. are seeking additional services and supports from the Superior Court through the At-Risk Youth (ARY) or Child in Need of Services (CHINS) petition; which allows parents of youth designated as out-of-control or truant to regain control through court-ordered services and treatment. Families are referred to Project T.E.A.M. from the Department of Children and Family Services and/or directly from the judges and commissioners in the Superior Court. All youth participating in Project T.E.A.M. meet criteria for serious emotional disturbance (SED), are multi-system involved (i.e. juvenile justice, mental health, school-based, etc.), are undergoing ARY/CHINS or Truancy Petition, *or* have been adjudicated.

Project T.E.A.M. utilizes wraparound as a mechanism for linking families to formal services, community organizations, and natural supports to better meet the needs of the family and to keep youth out of juvenile detention. Each family is assigned a Care Coordinator located regionally throughout King County, who dialogues with the family and youth to create a child and family team. This team utilizes the strengths of the family to create an individualized care plan.

## Method

All families enrolled in Project T.E.A.M. were recruited to participate in a larger longitudinal outcome evaluation. Interviews are in-home with youth (11 or older) and a primary caregiver, who are interviewed at intake into services and every six months for up to three years. The instruments are designed to capture youth behavior in home, school, and community, clinical functioning, family empowerment and resources, service utilization, and satisfaction with services received.

A sample of families from the larger longitudinal evaluation was selected for the current study. Those families that completed intake, 6-month, and 12-month interviews were included: 99 youth (62.6% male), ages seven through 17 (mean age = 14.67 years), with self-identified ethnic/racial background as 62.6% Caucasian, 10.1% American Indian/Alaska Native, 2% Asian/Asian American, 1% Native Hawaiian/Other Pacific Islander, 18.2% African American/Black, 6.1% Hispanic/Latino, and 11.1% Multiracial.

For purposes of the current study, youth were divided into two groups: Caucasian ( $n = 62$ ; 62.6%) and Minority ( $n = 37$ ; 37.4%). Over half (58.6%) were in custody of a biological mother only at enrollment, 71.7% had a history of running away, 79.8% had a history of substance abuse in the family, and 82.8% had utilized outpatient mental health or school based services (74.7%).

The CCTCQ (Vander Stoep, Williams, Green & Huffine, 2001) was developed by a group of researchers and family members from a local evaluation team to track the development of natural and system supports for youth with SED in system-of-care programs. The caregiver is asked to list all persons and activities the youth feels connected to in five categories: Family, Peers, School/Work, Community, and Formal Services. The caregiver then rates the strength of each connection (none, weak, moderate, strong) and primary type of support(s) each person provided. Formal supports include school-based services and paid professionals such as counselors or probation officers. Informal supports include natural supports such as family and peers, community activities, and others (i.e. youth pastor, coach).

The Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1994) was designed to assess the degree to which a youth's mental health or substance abuse disorder is disruptive to everyday functioning. Eight psychosocial domains are examined: Community Role Performance, Home Role, School Role, Behavior Toward Others, Moods and Emotions, Self-Harm Behavior, Substance Use, and Thinking. Higher scores on any subscale and on the total CAFAS score indicate more severe impairment.

## Results

There was no significant change in total community connections from intake to 12 months for Caucasian or Minority youth. There was a trend for increasing community connections for Minority youth ( $F = 2.67$ ;  $p < .076$ ;  $X = 18.9$ ) at 12 months, suggesting that community connections may change as a function of ethnic grouping.

There was no significant interaction between ethnicity and type of community support. The average number of formal service connections increased significantly ( $F = 3.49$ ;  $p < .05$ ) from intake to six months, then decreased to baseline by 12 months for both groups. There was an interaction trend for the average number of informal supports ( $F = 2.6$ ;  $p < .082$ ). There was no significant interaction or main effect findings for ethnicity and strength of formal service connections or informal supports over time.

There was no significant interaction between total CAFAS score and ethnicity. There was a significant improvement in functioning over time across groups ( $F = 6.73$ ;  $p < .01$ ), and a significant interaction in Home role domain between CAFAS Home Role score and minority status ( $F = 3.37$ ;  $p < .05$ ). There was a significant main effect for improvement in Moods/Emotions ( $F = 4.41$ ,  $p < .05$ ), Self-Harm ( $F = 3.76$ ;  $p < .05$ ), and Thinking ( $F = 5.5$ ,  $p < .01$ ) domains over time. Clinical impairment did not vary as a function of total number of community connections.

## **Discussion**

The lack of a significant increase in community connections over time may be explained by the higher average number of community connections of Project T.E.A.M. youth at intake. The trend increase in number of connections for minorities is supported by research indicating the role of positive family and community supports in facilitating minority well-being (Sachs-Ericson, 2004; Maton, Hrabowski III & Greif, 1998).

The significant increase in number of formal supports from intake to six months; and return to baseline by 12 months appears consistent with Project T.E.A.M.'s practice of increasing formal services at treatment initiation, then gradually reducing them while building informal supports. The interaction and increasing trend for informal supports for the Minority group may be explained by the high number of informal supports at intake and greater minority access to social networks. The lack of significant effects for strength of connectivity to formal services or to informal supports over time may suggest that youth have difficulty developing meaningful connections, and that strong connections take time to establish.

The significant improvement for total CAFAS score suggests that participation in Project T.E.A.M. helps youth progress in their everyday behavior, especially in areas of Moods & Emotions, Self-Harmful Behavior, Home, and Thinking. The significant interaction in Home Role, with increased impairment for Minority youth, may suggest that minority youth experience earlier disengagement from treatment. Youth were only assessed for number and strength of connections, which may help explain the lack of a significant correlation between community connections and clinical impairment.

Limitations include the small sample size and lack of power. The CCTCQ may lack accuracy, as it is dependent upon caregiver knowledge of a child's environment, which can vary widely between time periods. Furthermore, there was no comparison group of normalized children, which may have provided an enhanced understanding of how supports impact functioning.

Areas for future exploration include: whether minority youth are disengaging/disenfranchised from services when compared to Caucasian youth, racial/ethnic differences in intensity of services received, racial differences in family histories and risk factors, cultural differences regarding the value of informal supports, differential attitudes towards receiving formal services, and a detailed assessment (i.e. quality, frequency of contact) of what makes connections effective.

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# **The Activation of Social Networks within the Social Education Assistance in Family Settings Project (FamNet)**

Sibylle Friedrich

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## **Introduction**

*No one is an island. Everyone is part of the human continent.* With these simple words, John Donne, a British poet and contemporary of William Shakespeare, expressed what characterizes humans as social beings. Accordingly, it is very important that professionals refrain from considering single clients and families with complex needs as small islands alone in a huge, stormy ocean. Instead, their relationships to people outside the core family should be recognized and taken into account. In the project described below, a method was developed to train professionals to value these human relationships as social resources.

The methodological origin of the project lies in the resource-oriented U.S. American wraparound concept, in which nearly the whole social network of the client-family comes together regularly to plan how to support the child and family (VanDenBerg & Grealish, 1998). A professional resource coordinator leads every session. For research on program effectiveness, see Rast et al. (2005), Petersen, Rust (2005), Ferguson (2005) and Clark et al. (1996).

FamNet (Family Network Activation), the approach implemented in this project, is an adaptation of the original core concept of the German welfare setting. A *family assistant* supervises each parent in a one-on-one situation as they learn how to activate their social network independently: How to ask their neighbors, friends, and relatives and so on for help in daily life and in a crisis situation. Since German families typically are not used to disclosing their private issues and problems, they would not discuss them within a large group. Therefore, the project did not implement family teams.

## **Description of the German Setting**

The German child welfare and juvenile justice system guarantees the legal guardian a legal claim to federal support in the case that adequate education and wellbeing for a child cannot be ensured. In these cases, the Youth Welfare Department decides about options in type and amount of support. However, the families must have free choice of offered support options and ownership of the support plan. The legal guardian keeps his or her parental authority. Social Education Assistance, one of the support options offered in family settings, is regulated by the German child and youth welfare law. Educational and everyday support is supposed to be combined in order to improve the family's self-management abilities and to decrease the social isolation of the families. However, in Germany, not much network-oriented work has occurred until now within the Social Education Assistance program in family settings, even though it is demanded by the child and youth welfare law. At best, professionals focus on the social integration of their clients in the community (school, kindergarten, sports club, therapy, etc.), but mostly do not address their personal relationships. *Social integration*, without doubt, is very important for everyone, since it creates social identity. However, *personal relationships* are an equally important part of a functioning social network, because they offer various possibilities for social support (Weiss, 1974).

## **Procedures and Methods**

The purpose of this empirical study was to develop and test network-oriented intervention methods for applied social education work. Since the child and youth welfare law sets certain constraints on the existing support options, the first step was to shift the family assistants' focus to new aspects of social education (i.e., resource and network orientation) rather than create a whole new support option. Twenty family assistants from eight welfare organizations in Hamburg, Germany were trained in network-oriented intervention methods. Training was supplemented by different handouts developed to help professionals structure their discussion of social networks with families. Furthermore, handouts were

provided in order to support development of so-called “network goals” in cooperation with the family. These network goals refer to the future establishment and use of social contacts. To guide families through the process of goal-achievement, family assistants provide supervision to help families to focus on resources such as personal strengths, experiences, coping strategies and social resources (Friedrich, 2004).

Using a quasi-experimental evaluation design, twenty-six families with complex needs that received support from a social welfare program participated in the new support intervention (FamNet). A well matched comparison group ( $N = 23$  families) received traditional assistance. For nine months, the family assistants in the research group focused on the respective families’ social resources (either existing or lacking) in order to enable the clients to extend and use their network on their own. The research objective was to examine the intervention’s effectiveness and the actual degree of application of the intervention methods by the trained assistants, to promote the application’s sustainability, and to develop the concept continually, based on the study’s results. Specifically, the research hypotheses were that the families would profit from the network activation insofar as social support from family members, neighbors, and friends and so on would increase. The need for further support was supposed to decrease. No change was expected in the comparison group. The new intervention (FamNet) was hypothesized to be more effective at achieving the goals stated in the support plan than the traditional services. Data collection for the network analysis took place at the beginning and end of the intervention period using the Mannheimer Interview on Social Support (Veiel, 1987). Additionally, qualitative interviews were conducted with all families.

## Results and Discussion

### Quantitative Results

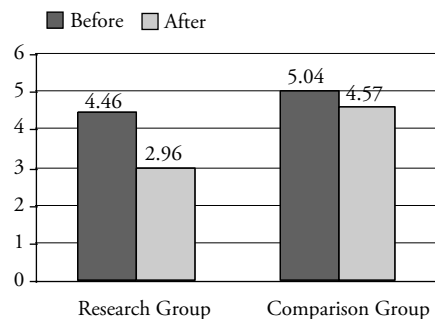
Preliminary quantitative results were as expected (main analyses are in progress); however, not all of them were statistically significant. The increase of the dependent variable *social support in daily life* due to the intervention was significant ( $z = -2.27, p < .05$ ). The increase of *social support in a crisis situation* was not significant ( $z = -1.04, p = .30$ ), although change occurred in the hypothesized direction. The *need for further support*, a variable that may be interpreted as dissatisfaction with the actual degree of perceived support options, significantly decreased in the research group ( $z = 2.50, p < .05$ ; see Figure 1).

The research and comparison groups also significantly differed with respect to the *degree of goal achievement* (as rated by the clients) during the intervention period. Nearly twice as many goals were achieved in the research group,  $\chi^2(3, N = 26) = 12.98, p < .01$ ; see Figure 2.

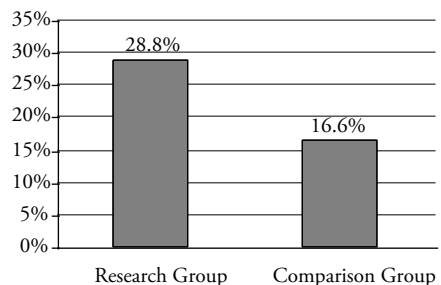
### Semi-structured Interviews with Professionals

One of the most important results, gained by qualitative interviews with the family assistants in the research group, was that fidelity to the model (i.e., transfer of the training into application) may still be improved. Reasons for the future improvement seemed to be the following, as indicated by the family assistants’

**Figure 1**  
Further Need of Social Support



**Figure 2**  
Clients View of Goal Achievement



statements: (a) a difficulty in implementing the network-oriented intervention methods in the daily social education work because of administrative problems; (b) the application of structural methods (i.e., documentation of every goal and every step in order to pursue this goal) felt strange to most of the participating professionals, and; (c) most importantly, a change in attitudes and perception (i.e., that families with complex needs are able to organize social supports within their own network) was felt to be a challenge by the professionals.

However, despite these challenges, the family assistants rated the project as a success because they felt that the activation of the informal networks of their clients had taken place in several cases. In addition, a lot of the participating professionals reported that they could profit a lot by learning new methods. For several professionals it was completely new to focus on the private network of the clients—instead of understanding networking as sufficient cooperation between different care systems.

### **Semi-structured Interviews with Family Members**

Two-thirds of the participating clients (mothers and fathers) reported that their network had changed in the last nine months. Specifically, they felt more supported after taking part in the research group intervention. The responses of the family members after participating in FamNet varied. In sum, respondents expressed satisfaction with the intervention. To illustrate this finding, the following quotes indicate what respondents believed they needed the network for: “*to feel good,*” “*not to be all by myself,*” “*to go out with someone,*” “*to get advice in times of troubles,*” “*to have somebody to talk to,*” “*to be supported in personal development,*” “*to have someone to rely on,*” “*to be looked-after,*” and “*to prevent mental illness, e.g. psychosis, depression.*” These answers show that the relevance of social networks and social support was recognized by the participating clients.

### **Conclusion**

Although there are implementation and fidelity issues to be addressed for FamNet, there is reason to be optimistic that the effectiveness of German support options can be improved by implementing aspects of wraparound. Despite the constraints discussed above, there still was better goal achievement in the research group (as rated by the participating clients). Future research therefore may show how much more successful family assistance may be when concept fidelity is fully satisfactory, implementing a resource and network oriented focus.

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# **Using Model Development Research and Fidelity Data to Guide Wraparound Curriculum and Coaching Development**

Jim Rast  
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## **Introduction**

Despite progress in scientific knowledge of effective treatment and increased funding for these treatments, there is continuing consensus that the majority of children and adolescents experiencing severe emotional disorders (SED) continue to receive inadequate and inappropriate care, often in overly restrictive settings (New Freedom Commission, 2003). As a result, these youth frequently experience school failure, dropout, delinquency, drug and alcohol abuse, and violent acts (Burns, 2002). Financing evaluations have shown that mental health resources have been disproportionately allocated to restrictive care settings, yielding estimates that the vast majority of resources (e.g., 80-87%) are allocated to a fraction of the population in need (e.g., 2-10%; Burns, Hoagwood, & Maultsby, 1998; Rast, 2005). Two developments, however, have provided hope for improvement. First, the emergence of an evidence base for specific treatments represents a major advance in the field of mental health services (see Farmer, Compton, Burns & Robertson, 2002; Kazdin & Weisz, 2003, for reviews). The second development is the evolution of the community context of systems of care to support effective treatments (Burns, 2002).

Along with the hope generated by emerging evidence on the effectiveness of community treatment options, the children's mental health field also has been both enlightened and sobered by recent research results on community-based care. Prominent among these have been evaluation studies of sites intending to implement the systems of care philosophy that show mixed or null impact on clinical outcomes for enrolled children, compared to control sites. Though target sites did in fact increase access to services for the target population, improve satisfaction among service recipients and produce positive outcomes for children, these studies found no differences between the continuum of care jurisdictions and comparison jurisdictions on clinical and functional outcomes (Bickman, Summerfelt, & Noser, 1997; Bickman, Lambert, Andrade & Penalosa, 2000). Later studies have shown some positive but inconsistent outcomes across all youth outcomes from other systems of care sites (Stephens, Holden & Hernandez, 2004). These studies have illuminated critical issues in delivering effective community-based treatments for youths with SED (Hoagwood, Burns, Kiser, Ringeisen & Schoenwald, 2001). There have been many interpretations of these problematic findings. One prominent interpretation is that clinical services in "real world" communities are not delivered with the level of fidelity that can achieve positive clinical outcomes.

## **Wraparound Fidelity and Implementation**

Evidence that supports the need to focus efforts on ensuring fidelity to evidence-based practices is found in the literature on wraparound. Wraparound has been widely used to develop services for children and youth with severe emotional disorders and their families. Wraparound was developed through "grassroots" efforts in communities across North America which resulted in many variations in the process. Only recently has there been agreement on the primary elements of the model (Burns & Goldman, 1999), a standardized method to measure the fidelity of the process (Suter, Burchard, Bruns, Force & Mehrtens, 2002), and a specific model of service delivery (Walker, Bruns, Adams, Miles, Osher, et al., 2004). Utilizing the Wraparound Fidelity Index (WFI; Bruns, Burchard, Suter, Force, & Leverenz-Brady, 2004), researchers are showing that the quality or fidelity of wraparound varies greatly and that the fidelity of the process directly correlates with the outcomes for children and families (Rast, O'Day, & Rider, 2005; Rast, VanDenBerg, Earnest, & Mears, 2004).

This paper describes experiences of purveyors who are supporting communities and states to implement wraparound, proposes a two dimensional model for implementation of high fidelity wraparound and discusses needed implementation research. For the past four years Vroon VanDenBerg

has concentrated efforts on identifying some of the key components in developing high fidelity wraparound in communities. Some of the factors that have influenced fidelity in multiple sites include:

- The expectations, job requirements and selection process for wraparound facilitators;
- The role, time commitment and levels and type of support from supervisors;
- The content and methods of training;
- Expectations and developmental readiness of people coming to training;
- Types and amount of post training support (coaching);
- Community readiness and context for providing organizational support; and
- Measurement and use of compliance and fidelity assessment and program evaluation.

Based on these experiences and work in over ten states (fifty local communities and Canada in the past four years), we have developed a model of implementation to conceptualize the process of developing high fidelity wraparound within a community. The model has two primary dimensions: *components* and *phases*. Through experience we have found that each of four components has direct impact on fidelity; they are community context, training, supervision, and quality management. We also find that communities go through phases when implementing high fidelity wraparound. There is an initial phase of preparing the community to implement wraparound preparation. There is a second phase of initiation during which staff are selected and prepared to do wraparound. In the third phase there is a focus on moving from understanding the basics of wraparound to providing it with high fidelity for children and families. In the final phase communities maintain and improve the quality and impact of wraparound in place.

## **Components of Wraparound Implementation**

### **Community Context**

Without appropriate community support it is extremely difficult to develop fidelity wraparound and very unlikely that it will be maintained over time (Walker, Koroloff, & Schutte, 2003). Wraparound is a team-based process and needs support across agencies, organizations and sources of natural supports to be successful. When wraparound is first implemented within a community it requires changes in the way services and supports are organized and provided for children and families, which in turn requires support from the decision makers within these organizations. Staff providing wraparound need flexibility in schedules, low case loads and access to flexible resources, all of which require organizational support. Some of the key activities within this component that seem to be necessary to produce high fidelity wraparound are:

- A steering committee of people who are empowered to make system decisions to support wraparound;
- An implementation plan that addresses issues such as who is going to receive the services, who is providing wraparound with appropriate staff ratios and supervision, and how system change to support wraparound will be accomplished;
- Ongoing barrier busting that is responsive to the needs of wraparound facilitators; and
- Ongoing refinement of the implementation plan and organizational supports.

### **Training**

Our experiences have clearly replicated other studies (Joyce & Showers, 2002) that show training alone does not produce fidelity wraparound. We have found, however that training can have some impact on fidelity. The content and method of training are important determinants to the impact of the training on the fidelity of the wraparound process. The primary purposes of training are knowledge development and skills rehearsal. Knowledge includes the theories of change related to wraparound and

an understanding of the specific phases and activities of the process. Some of the training activities that appear to impact fidelity are:

- Training in the theories of change and principles of wraparound for everyone involved in wraparound with the community;
- Specific multimodal training in the phases and activities of wraparound for facilitators and supervisors;
- Behavioral rehearsal in key facilitation skills for wraparound;
- Training for supervisors in strengths-based supervision and coaching; and
- Advanced training for facilitators in areas of specific youth and family need (e.g., domestic violence, substance abuse, functional assessment of behavior).

### **Supervision**

The quality of staff work is directly related to the types and amounts of supervision provided. Supervision of wraparound facilitators requires a time commitment from supervisors. This is frequently an expanded role for supervisors and the time expectation is often more than has previously been provided for care coordination/case management staff. One of the critical parts of the initial implementation plan will be to assign supervisors and dedicate enough time for this function. Effective wraparound supervisors know the wraparound process thoroughly and provide reflective and strengths-based supervision and coaching. This includes individual and group supervision and live coaching.

### **Quality Management**

Collecting and using data and information to guide development of both fidelity of the process and the organizational supports to support wraparound is the fourth component. This includes process and outcomes measures of the wraparound process that can be used at the staff level. Specific knowledge criteria and testing on these criteria is important to ensure that initial training accomplishes its goals. Using specific assessment strategies to measure fidelity to the model and guide the professional development process results in improvements in effectiveness and efficiency in coaching and in improved outcomes for children and families. Ongoing assessment of organizational climate and supports is important to focus community development efforts.

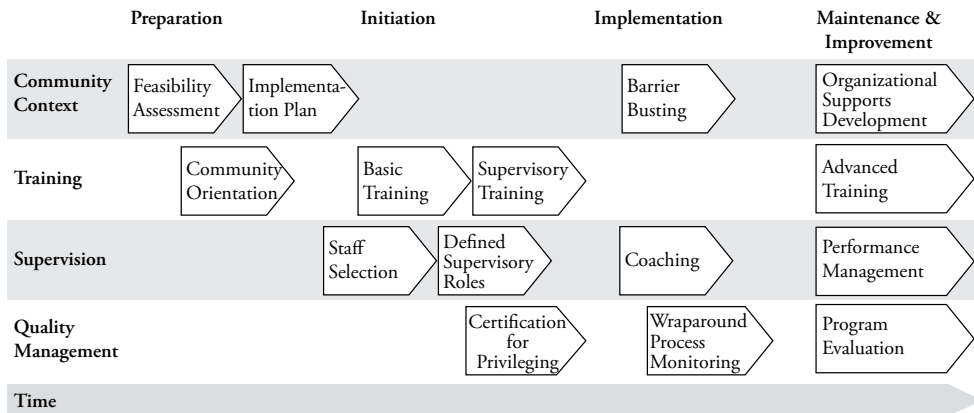
### **Phases of Wraparound Implementation**

Figure 1 shows the two-dimension model for developing fidelity wraparound. The four components are implemented concurrently through four phases. The process begins with the preparation phase during which a feasibility assessment is done to define the community context and to identify community strengths, needs and culture related to developing or expanding the wraparound service processes. This includes identifying the need for wraparound, commitment of key stakeholders to make necessary changes and current strengths of the system and stakeholders to build upon. In addition, these assessments may identify current costs of services for children and youth with complex needs. This information may be used to develop reinvestment strategies for long term financing of wraparound.

The information from the feasibility assessment is used to develop an implementation plan. Our experience suggests that this level of preparation results in wraparound fidelity being achieved more quickly and at a higher level. The initial engagement of community stakeholders to develop the implementation plan may be improved through initial orientation training consisting of the rationale and general concepts of wraparound in a way that is individualized for each community.

The focus of the second phase is to initiate wraparound. For the training component this includes training facilitators and supervisors in the process of high fidelity wraparound and supervisors in the process of strengths-based supervision and coaching. Although training alone will not produce fidelity in either process, a combination of lecture, group activities and behavioral rehearsal can teach the basics of these functions, increase fidelity and accelerate the process toward high fidelity wraparound.

**Figure 1**  
**Phases of Wraparound Fidelity Development**



*Note.* Figure 1 shows the process of developing wraparound fidelity within a community. There are four parallel processes that are occurring concurrently and the boxes within each process show an activity during that phase.

During this phase staff selection for facilitators and supervisors impacts the fidelity of the process. During the latter part of this phase supervisors begin to supervise and coach. The method, frequency and type of these activities may all impact the fidelity of the wraparound process. As part of this process the supervisor/coach begins to assess the basic skills of the facilitator. Our experience is that when this process is competency-based and measured, the eventual wraparound fidelity is higher and it takes less time to reach fidelity after training.

The third phase focuses on moving from initial wraparound implementation to consistent high fidelity wraparound. The initial implementation of wraparound requires system changes and organizational support. As these challenges are identified, successful communities form an organizational response (e.g., barrier busting committee) to address the need for these changes. Supervisors continue to coach and are now working on more advanced skills. The focus of coaching evolves from compliance of the process to competencies to do the process well. Eternal fidelity monitoring looks at the wraparound process for the process of supervision and coaching, and the organizational context and supports.

Once fidelity has been achieved there are activities in each component that seem to impact long term fidelity and outcomes. Development of organizational support is an ongoing process. Implementing systems to use program evaluation information to continually inform this change process can be effective. Facilitators and supervisors will need advanced training to add developing skills to their repertoire. When performance management systems include both basic skill levels and can measure expert skills, professional development can have an ongoing guide.

## Conclusion

Although the research to establish wraparound as an evidence-based practice is still incomplete, there are enough examples of quasi-experimental studies to suggest that it will achieve this status. More compelling is a need for research to address implementation issues. This paper provides a two-dimensional model for implementation and suggests multiple areas of needed research. One of the largest challenges in behavioral health is making the transition from science to services. The speed and effectiveness of implementation depends on knowing exactly what needs to be in place to achieve the desired results—no more, no less. Research on staff selection and supervision, training, quality management and community and organizational supports is needed to guide the process of wide scale implementation of high fidelity wraparound and will be useful for other behavioral health treatments to bring science to service.

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# **“Is it Wraparound Yet?” Determining Fidelity Standards for the Wraparound Fidelity Index**

**Eric J. Bruns  
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## **Introduction**

In recent years, the wraparound process for planning and implementing services and supports for children and youth with intensive needs has been cited as a promising service delivery option in major reviews (e.g., Burns, Hoagwood, & Maultsby, 1998) and Surgeon General’s reports on both mental health and youth violence (U.S. Public Health Service, 1999, 2001). Meanwhile, significant efforts have been undertaken to better specify the wraparound model, including descriptions of specific provider and team member activities (Bruns, Walker, VanDenBerg, Rast & Osher, 2004), refinement of the wraparound principles (Walker, Bruns, Adams, Miles & Osher, 2004), and necessary system and program supports for the model (Walker, Koroloff, & Schutte, 2003). Finally, research is beginning to demonstrate linkages between adherence to the wraparound principles and outcomes for youth (e.g., Bruns, Rast et al., in press; Bruns, Suter, Force & Burchard, 2005). Such developments have helped the wraparound process move from being perceived as merely a philosophy to a specified but flexible practice model with potential for positive impact.

At the same time, treatment fidelity, the degree to which a program is implemented as intended, has emerged as a major issue in behavioral health service delivery. As described by Salyers and colleagues (2003), fidelity assessment is “the natural union of scientific and practical needs of documenting and describing service provision” (p. 305). With the human services field becoming increasingly technocratic and focused on implementation of evidence-based practices, fidelity assessment is increasingly employed by programs or trainers who need to conduct quality assurance activities; agencies who need to make funding and accreditation decisions; and researchers who need to interpret study results and comment on program quality.

With the wraparound process gaining acceptance as a specified program model, and with agencies increasingly interested in using data to guide policy, funding, and certification decisions, there is a serious need for methods to determine when wraparound implementation in a program or community is “good enough.” Not surprisingly, to date, such practical needs have outstripped the science of fidelity measurement for this practice model. Though several fidelity measures have been developed for the wraparound process, and their reliability and validity have been established (see, e.g., Bruns, Burchard, Suter & Force, 2005), an empirical approach to determining what scores represent faithful implementation has not previously been attempted.

The current study aimed to “bootstrap” fidelity benchmarks to help programs or communities interpret scores derived from the Wraparound Fidelity Index, version 3 (WFI-3). As described by Salyers and colleagues (2003), there are two main methods for interpreting assessment results. The first is to take a norm-referenced approach, in which a score for an individual (or program site) is compared to a large group of assessed individuals (or sites) to see how they compare. The second method would be to use a criterion-referenced approach, whereby a score is compared to an external standard, such as one that is related to prediction of performance (e.g., a score that has been found to be associated with positive client outcomes or better service delivery).

In the current study, we used a combination of *norm referencing* and *criterion referencing* to make recommendations about thresholds for good fidelity to the wraparound principles as assessed by the WFI-3. To do so, we employed a two-pronged approach: (1) we examined the national WFI-3 dataset,

to determine norms for a sample of wraparound programs; and (2) we reviewed studies that collected fidelity data as well as data for one or more external criteria variables proposed to be associated with wraparound fidelity. By considering the results of these two exercises together, we hoped to be able to shed light on what “good enough” wraparound fidelity scores may be.

## Method

### Measure

The WFI-3 is a structured interview that assesses adherence to 11 core principles of wraparound (e.g., Family Voice and Choice, Individualized, Natural Supports, Team-Driven, etc.). Four items serve as indicators for each of the 11 elements, with responses ranging from 0, *low fidelity*, to 2, *high fidelity*. The resource facilitator and caregiver forms each contain 44 items while the youth form includes 32 items (the youth form of the WFI includes only 8 of the 11 elements). Total scores for each of the respondents are converted to a percent of total possible score (88 for the resource facilitator and caregiver, 64 for the youth). An overall fidelity score is also calculated that combines reports of the three respondents. Validation studies of the WFI have found adequate test-retest reliability and internal consistency for WFI total scores, as well as evidence for convergent and criterion-related validity (Bruns, Suter, Burchard, Force, & Leverentz-Brady, 2004; Suter, Force, Bruns, Burchard, Mehrtens, & Leverentz-Brady, 2005).

### Procedure

**Norm-referencing exercise.** WFI-3 data for 10 programs or communities in nine states nationally who used the WFI-3 were analyzed ( $N = 667$  families). Means and standard deviations were calculated and plotted for these 10 programs. In addition, analyses of variance with post-hoc contrast effects were conducted to determine variability across program sites and what scores represented significant differences.

**Criterion-referencing exercise.** To assess how WFI-3 scores relate to external criteria, a review was conducted of studies published, in press, or presented at a major conference that presented WFI-3 data for two or more groups that differed with respect to an external criterion. Five studies were included. Two were evaluation studies of wraparound vs. non-wraparound control groups that included WFI-3 scores for wraparound vs. non-wraparound comparison or control groups (Peterson, Gruner, Earnest, Rast, & Abi-Karam, 2004; Ferguson, 2004). One study presented WFI-3 data for a sample of programs with poorer vs. better system and organizational supports for wraparound (Bruns, Suter, & Leverentz-Brady, 2004). Another study presented WFI-3 data for wraparound facilitators with poorer vs. better child outcomes achieved (Rast, Peterson, Earnest & Mears, 2004). The final study presented WFI-3 data for three stages of a program, whereby wraparound implementation support increased at each stage (no training, training, training + coaching; Rast & VanDenBerg, 2004).

## Results

### Norm-referencing

Results of the norm-referencing exercise found that mean Overall WFI-3 scores for the 10 sites ranged from 72.2% to 80.1%, with a mean for all families assessed of 76.7% ( $SD = 2.3$ ; see Table 1). Results of ANOVAs demonstrated that sites scoring under 74% overall fidelity were significantly different from sites scoring over 79%. Individual respondents' mean total fidelity scores were 80.5% ( $SD = 3.2$ ) for Resource Facilitators, 73.7% ( $SD = 4.2$ ) for Caregivers and 73.6% ( $SD = 3.5$ ) for Youths.

**Table 1**  
Overall WFI-3 Fidelity Scores for the 10 National Study Sites

| Site               | Site mean WFI-3 score | SD   | Between-site differences |
|--------------------|-----------------------|------|--------------------------|
| 1                  | 0.722                 | 0.11 | a                        |
| 2                  | 0.735                 | 0.09 | a                        |
| 3                  | 0.735                 | 0.07 | a                        |
| 4                  | 0.751                 | 0.09 | ab                       |
| 5                  | 0.753                 | 0.12 | ab                       |
| 6                  | 0.794                 | 0.09 | ab                       |
| 7                  | 0.795                 | 0.10 | ab                       |
| 8                  | 0.797                 | 0.11 | b                        |
| 9                  | 0.800                 | 0.07 | b                        |
| 10                 | 0.801                 | 0.09 | b                        |
| Mean for all sites | 0.767                 |      |                          |

*Note:* Sites have been de-identified and presented in rank order. Between sites differences as assessed via post-hoc contrast effects are indicated by coefficients with different letters. ANOVA result:  $F(9, 656) = 5.95, p < .0001$



**Criterion-referencing**

The two studies that assessed fidelity for both wraparound and non-wraparound comparison groups found significant between-group differences in WFI-3 scores, with WFI-3 overall fidelity scores at 60% and 64% for non-wraparound groups, compared to 75% and 76% for wraparound groups. The study of WFI-3 scores for programs or sites with poorer and greater supports for wraparound (as assessed by a standardized instrument) found that sites with poorer supports achieved mean WFI-3 scores of 72% versus 84% for sites with greater supports for wraparound. The study examining WFI-3 scores for individual wraparound facilitators found that facilitators whose clients achieved poorer outcomes achieved mean WFI-3 scores of 72%, compared to 87% for facilitators who achieved better outcomes. Finally, the longitudinal study of one community that received different implementation supports over time showed that mean WFI-3 scores increased from 64% pre-training, to 72% post-training, to 86% after implementation of both training and coaching.

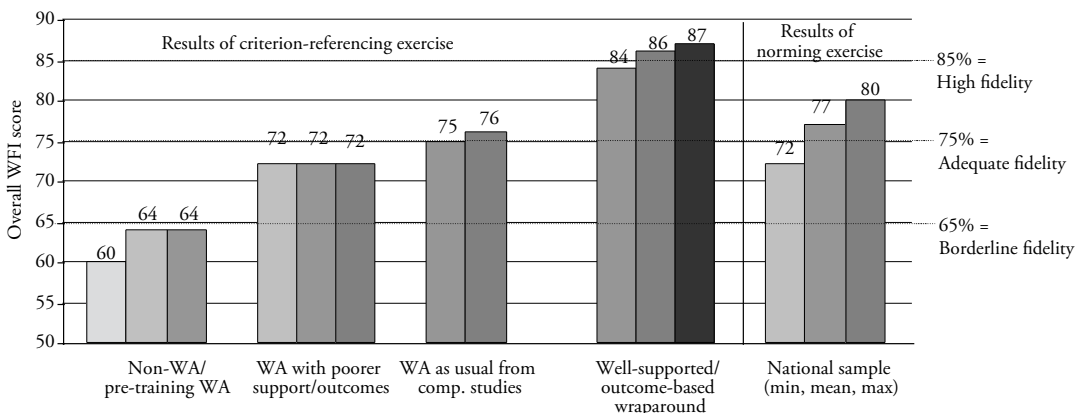
**Discussion**

The goal of the current study was to examine WFI-3 scores from many different sources of data, in order to "bootstrap" guidelines for interpreting fidelity scores. To help interpret the results, we have presented the mean WFI-3 scores from the studies reviewed as well as the national dataset for the relevant conditions in Figure 1.

As shown, there is a discernable pattern whereby WFI-3 scores increase as greater supports for implementing the model are provided. Non-wraparound comparison conditions and a program not yet formally trained demonstrated overall fidelity scores under 65%. Meanwhile, WFI-3 scores ranged from 72% to 76% for "wraparound as usual" conditions, such as wraparound programs with fewer system supports, wraparound facilitators whose children achieved poorer outcomes, wraparound with training only (not coaching), and wraparound groups from the evaluation studies. However, WFI-3 scores were found to be 84% to 87% for wraparound sites with better system supports, facilitators for whom children experienced better outcomes, and wraparound with both coaching and training.

WFI-3 scores across sites in our national WFI-3 database showed significant variability, but still fell logically within the pattern, ranging from 72% to 80% overall, with a mean of 76.7%.

**Figure 1**  
**Summary of Results of Criterion-related and Norm-Related Exercises, with Proposed WFI-3 Fidelity Standards**



Note: Bars for the criterion-referencing exercise represent mean WFI-3 total scores for 11 independent samples from the five studies included in the review; these are sorted by type of sample: non-WA or pre-training WA, WA with poorer supports or outcomes, WA as usual from comparison studies, and WA with greater supports or superior outcomes. Bars for the norm-referencing exercise represent the minimum, mean, and maximum site-level means from a national WFI-3 sample.

WFI = Wraparound Fidelity Index; WA = Wraparound.

By combining data from these norm-referenced and criteria-referenced approaches, we can begin to make some educated guesses about what represents adequate and good fidelity. As shown in Figure 1, we have proposed fidelity thresholds at 65%, 75%, and 85% overall fidelity scores. Clearly, scores below 65% are unlikely to represent true wraparound, as non-wraparound comparison groups and pre-training wraparound programs score in this range. Wraparound programs with poorer supports or that achieve poorer outcomes tend to fall between 65% and 75% fidelity, and thus are referred to as achieving “borderline” wraparound fidelity. The mean overall fidelity for the national dataset was found to be 77%, and half of the national sites scored above 75% (as did both wraparound programs in the evaluation studies), so we propose that this threshold represents “adequate” fidelity. Finally, we have proposed 85% and above as “high fidelity” because conditions of better supports or better outcomes were found to score at or above this threshold.

The benchmarking exercise we have undertaken is somewhat subjective and has several limitations. For example, different sites and studies used different methods for collecting WFI-3 data, which may have influenced scores. We also do not know much about wraparound implementation in most of the sites that were included. Nonetheless, we expect that the results of this analysis and the thresholds that have been set will be useful for programs as well as for researchers who use the WFI-3. Programs, communities, or researchers seeking to interpret their WFI-3 scores may also find the mean scores for individual respondents useful. Ultimately, the best information about what communities should be striving to achieve with respect to fidelity will come from more research on the relationship between administering the wraparound process and child and family outcomes.

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## **Chapter Five**

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### **Access to Appropriate Care**



# **Screening, Assessing and Treating the Mental Health Needs of Children in Child Welfare: A Cross System Initiative**

Betty A. Walton  
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## **Introduction**

The Indiana statewide implementation of a routine process to screen, assess, and treat children in the child welfare system with mental health needs and their families is a collaborative model of planning, service implementation, and quality improvement. Systems serving children and families in Indiana have planned and are implementing this initiative. Monitoring and quality improvement includes sharing of data across three systems: child welfare, Medicaid, and mental health, with analysis by Indiana University. This summary describes progress to date on implementation of the initiative.

## **Need**

Children in the child welfare system are at high risk for mental health problems. As many as 76% of children in foster care have developmental, emotional, or behavioral problems (Farmer et al., 2001). Using data from the National Survey of Child and Adolescent Well-being (NSCAW), Oct 1999 - December 2000, Burns and associates (2004) found nearly half (47.9%) of children in the child welfare sample, aged 2 to 14, ( $N = 3,803$ ) had clinically significant emotional or behavioral problems. For all children, less than 25% of those with serious emotional disturbances have recently received mental health care (Costello, Messer, Bird, Cohen, & Reinherz, 1998). Burns and associates (2004) found that only 15.8% of children in the child welfare study received any mental health services in the previous 12 months; one fourth of children with evidence of the highest level of need received any mental health services.

Also using NSCAW data, Hurlburt and associates (2004) found that the level of collaboration between child welfare and mental health is associated with improvements in children's mental health symptoms. Cross-system collaboration is also linked with decreased disparities in mental health service use between African-American and White children.

National child welfare and mental health policy are converging, providing catalysts for change. The New Freedom Commission for Mental Health (2003) includes early identification and intervention as one of six goals to transform the public mental health system. The Child and Family Services Review (CFSR) of state child welfare systems found that 69.9% of reviewed cases across all states were in substantial conformity with Well Being Outcome 3; that children receive services to meet their physical and mental health needs (USDHHS, 2005). For states not in substantial compliance with standards, a program improvement plan (PIP) is required. PIPs address systemic changes that impact day-to-day practice. To address deficits in child and family wellbeing, Indiana's PIP applies elements of cross system collaboration, planning, training, and monitoring.

## **The Initiative**

A cross-system team has developed and is implementing the initiative as a model of effective services for children. Partners include the Indiana Family and Social Services Administration's Division of Mental Health and Addiction, Department of Child Services (DCS), Medicaid, Federation of Families, Department of Correction, Department of Education/Division of Exceptional Learners, the Juvenile Justice Quality Improvement Committee, and the State Budget Agency. Support from other stakeholders has been sustained through quarterly public meetings.

The initiative involves screening each child who is placed into substitute care or who becomes adjudicated as a Child in Need of Services (CHINS) for mental health risks or needs using the Mental Health Screening Tool (MHST; California Institute for Mental Health, 2002). The screening is completed by child welfare's family case managers. Children with identified needs are referred to a mental health professional for assessment and recommendations. The resulting reports inform the decisions of child welfare staff and children's families.

The cross system team focused on the child welfare mental health initiative with the intention of demonstrating that effective collaboration can more effectively meet the needs of children and their families. The theory of change was made explicit using a logic model (Hernandez & Hodges, 2003). The population of concern was identified, desired outcomes were clarified, common values were endorsed, an action plan with specific strategies was developed and an evaluation/quality improvement process was designed.

A curriculum was developed to train child welfare family case managers and supervisors to use the screening tool. In June, 2004, training for the Phase I sites began, including invitations to local mental health providers. Statewide implementation was scheduled to be complete in December 2004. Local plans were developed in each of 92 counties, identifying timelines, contacts, mental health providers, referral and report content, and payment for services. Most assessment services are being billed to Medicaid.

## Methods

No one database contains the information needed to monitor and evaluate the implementation of the process and its effectiveness in better addressing children's wellbeing. The child welfare system has data regarding demographics; abuse and neglect; children placed in substitute care or who are CHINS; completion of the mental health screening; findings of the screening; and changes in placements. The mental health database includes diagnosis, substance use, a functional assessment (Newman et al., 2002) and the Restrictiveness of Living Environment Scale (ROLES; Hawkins, Ameda, Fabry, & Reitz, 1992). The database is limited to children enrolled by contractual providers of the public mental health system. Medicaid claims data include behavioral health diagnosis, type of provider, specialty of provider, services provided (including assessment and treatment), and costs. Claims data will report assessment activities and treatment by a wide range of providers. Shared, this data can follow the screening, assessment, and treatment process for children in the child welfare system. Patterns of services can be followed in the short term. Predictors of failed placements and permanency may be identified. The effectiveness of the early identification and intervention initiative can be studied. Sharing data across systems has not previously been used to study Indiana's child services.

The initial evaluation plan calls for the development of a benchmark from SFY2004 data, using a unique identifier created by Integrity software across systems, and sending data to Indiana University for matching and analysis. As there will be a six month delay in availability of data due to matching and quality concerns, evaluation outcomes such as changes in functioning, service utilization, and cost will be completed in the future. Initial reports will focus on implementation of the initiative, using the information for feedback and quality improvement. A qualitative review of local implementation plans and comments from the field supplement this database. Data from Department of Child Services regarding the screening process, number of children eligible for screening, actually screened, and screening results are reported monthly to local child welfare agencies and shared with stakeholders quarterly.

## Results

**Cross-system Training.** The training focused on the use of the screening instrument and completing the screening tool in ICWIS (Indiana's SACWA system). Over 30 training sessions were held statewide. Anecdotal feedback from stakeholders indicated that some local child welfare and mental health staff traveled to the training together, strengthening their relationships. To others, the purpose of the screening initiative, and how it could help improve the child's well being, was not always clear. Local child welfare staff were not always aware of the local plan. Training about child development, especially early childhood developmental and mental health issues is needed. Child welfare staff, after using the screening tool, with its built in prompts to aide decisions, have requested similar prompts for other assessments. Some mental health and child welfare staff did not see any need for the training.

**County Implementation Plans.** Based on 41% of plans (38 of 92 counties), referral methods, anticipated volume of referrals for assessment and source of payment were analyzed (Wright & Lawson, 2005). Local communities expected to be making 10 to 240 referrals per month for assessment by a



mental health provider with a mean of 86. The process for initiating referrals includes use of fax (59%), e-mail (8%), phone or mail (2%), and no explicit referral process for 24% of the plans. Medicaid was mentioned as the source of payment for assessment by 89% of the communities. There was little mention of the source of state match.

**Early Implementation.** As the process was implemented between July and December 2005, critical issues emerged, identified in Table 1. The initiative was implemented statewide January 2005. Table 2 summarizes January – March, 2005 screening data from Indiana’s Department of Child Services. Sixty-six percent of children who were screened had identified mental health risks.

**Table 1**  
**Emerging Critical Issues: Continuous Quality Improvement**

| <i>Issues</i>   | <i>Responses</i>  | <i>Successes &amp; Challenges</i>   |
|---|---|---|
| General Issues  | Monthly Team Meetings<br>Quarterly Stakeholder Meetings<br>Questions & Answers<br>Applied for juvenile justice grant for Qi & coordinator | Problem Solving<br>Questions continue to come to members of team and child welfare or mental health staff.<br>Grant renewed |
| Should mental health assessments be standardized?               | Assessment Committee  | Preliminary Standards: principles recommended.<br>Considering cross-system standard tools/processes                         |
| Involvement of biological parents and caretakers in assessment? | Reviewed shared values:<br>Child & family centered  | Part of recommendations.  |
| Timely connection to assessment, treatment and support?         | Part of CW QA Review Process<br>Monitor with evaluation of shared data<br>Encourage regular local cross-system meetings.                  | Mental health centers report slower than expected level of assessment referrals.  |
| Early Childhood Assessment and Services?                        | Consultation from Child Development Center, Riley, and Infant & Toddler Mental Health Association.  | Part of new grant with small training/consultation planned for child welfare trainers, foster parents, and providers        |
| What if child is already in treatment?                          | Ask provider for update; new assessment can be requested by child welfare.  |   |

**Table 2**  
**Summary Screening Report (January – March, 2005)**  
**Indiana Department of Child Services**

| <i>Screening Status</i>                | <i>Number of Children</i> | <i>% of Children</i> |
|--|---------------------------|----------------------|
| Not Screened                           | 427                       | 25.2                 |
| Rescreen*                              | 438                       | 25.9                 |
| No identified mental health risk       | 280                       | 16.5                 |
| Identified Mental Health Risk – Refer  | 130                       | 7.7                  |
| Identified Mental Health Risk – Urgent | 419                       | 24.7                 |
| Total                                  | 1694                      | 100.0                |

\*Rescreen in 30 days, insufficient information to screen

## Discussion

The short time frame requires change in both the child welfare and mental health systems. Full implementation of the early identification and intervention initiative will involve routine screening, getting children with identified mental health needs assessed, and accessing timely, effective treatment for children and their families. Early implementation data suggest a high level of compliance in the screening process and documents a high level of mental health needs. The initiative's progress and challenges support the need for collaboration and leadership from the child welfare and mental health systems to achieve cross-system changes to improve the quality of services which focus on the wellbeing of children who have been abused or neglected.

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# **“You Had Me at ‘Hello’”**

## **Characteristics of Culturally Proficient Initial Engagement Practices**

Jeannette Adames  
Katherine E. Grimes  
Katherine Frankman

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### **Introduction**

There is a large gap between need and capacity for children’s services throughout the United States. Yet even when help is available, professionals are consistently challenged in engaging families and delivering care for children with mental illness. This challenge increases when poverty, cultural and language barriers are present; in such cases, families frequently do not appear for appointments and are lost to follow-up.

In a study aimed at examining the special access barriers faced by children in poverty, results showed that 39% of children scheduled for intake appointments at a clinic serving low-income and minority children were no-shows (McKay, McCadam, & Gonzales, 1996). A key factor in getting and keeping children and their families in treatment is recognizing the challenges families face in seeking services (Staudt, 2003). However, even when ecological and total service delivery approaches are used, the drop-out rates range between 26%-29% (Staudt, 2003). This suggests that even when appropriate resources are available, some families may need additional clinical strategies in the form of sustained but respectful outreach in order to use them.

The Massachusetts Mental Health Services Program for Youth (MHSPY) provides home and community based clinical and wraparound services for children with serious emotional disturbances who are at risk of out of home placement in an original and replication site (Grimes, 2004). MHSPY is a voluntary, strengths-based, model of care coordination that is family-driven and strives for cultural proficiency. This paper examines the relationship between innovative engagement techniques with diverse, Medicaid enrolled families and chances for success in program retention.

### **Method**

Eligibility for referral to the MHSPY program includes Medicaid enrolled youth between the ages of three to 18 years. These youth are identified by juvenile justice, mental health and child welfare agencies or school personnel and referred from within the five target cities in Massachusetts. Many of the youth and caregivers referred to the program have long histories of previous attempts at service provision, often without success, and the charts carry indications of “non-compliance” with traditional patterns of care delivery. Seventy-nine percent of all youth enrolled in MHSPY have services from two or more additional state agencies, in addition to Medicaid. Historically, over 80% receive Special Education services. Sixty-eight percent (68%) of the program participants are males and fifty percent (50%) are children of color. The average age is fourteen and the average CAFAS (Hodges, 1998) score at entry is 116, well within the clinical range anticipated to need intensive services, possibly out of home.

A MHSPY stakeholder agency (child welfare, schools, juvenile justice, mental health) initiates contact with a family and introduces the idea of a referral to MHSPY. This is the first of several exchanges regarding the needs of the youth and the possibility of help for the family. Next, if the family agrees to have a consultation about program participation and benefits, the MHSPY Enrollment Manager, a licensed social worker, schedules an appointment with the caregiver for an initial interview. In addition, the caregiver and youth are sent a reminder letter and are called the day of the appointment. The program is entirely voluntary and a series of consents must be signed for participation. The program is exceptionally sensitive to the family’s capacity to engage in the referral process. The Enrollment Manager makes accommodations to facilitate the engagement process by making multiple appointments, if necessary; reading or speaking at a level that facilitates understanding of the materials; being flexible in scheduling meeting times, and addressing individual needs as necessary (such as bringing food or refreshment if family is in need of it). Family contracting, over the purpose of the referral as well as the process, is a key component to the initial

engagement phase and represents the second of the conversations identifying needs and offering hope. The Enrollment Manager also speaks in detail with the referring agency staff member, working to align the hopes of the agency with those of the family within the scope of the MHSPY process.

The program uses a number of measures to assess level of functional impairment, social competencies, and social support. Each caregiver and youth age 11 or older is interviewed at enrollment, and every six months thereafter, in order to complete standard functional measures and other program evaluation instruments. The Enrollment Manager also requests permission to collect all treatment and school records. Explanations to families and caregivers as to the purpose behind accessing these records (to allow for a broader understanding of the range of services the youth has received, facilitate collaboration with current providers, and inform our practice) serve to further establish mutual respect and trust.

Decisions about prioritized entry into the program are made by the community-based team of stakeholders based on need as reported by the caregiver and the referring agency. At times, capacity exceeds demand and referrals are required to wait to enter the program. While the youth and family wait for enrollment, the Enrollment Manager remains in contact with both the family and the referring agency. Each is encouraged to continue to update the program on any changes in the youth's status.

Once the youth is enrolled, the family is visited by a Parent Partner to extend a welcome from someone who has "walked in the family's shoes." This exchange adds still another layer of relationship-building for caregivers and process explication about what to expect. Finally, all of this is followed by the initial and follow-up meetings with the MHSPY Care Manager. The Care Manager, a social worker experienced in working with youth and families, acts as a team coordinator and process facilitator. At this stage, the needs and strengths identification begun by the Enrollment Manager is picked up and taken forward by the assigned Care Manager in an interactive care planning process of discovery and mutual empowerment. Each family's unique culture informs and guides the individualized care plan created by the care planning team of people the family invites to participate (professionals and natural supports) so that goals and interventions are expressed in language that can be "owned" and endorsed within the home. The enrollment and care planning procedures are intentionally interwoven so that the family never feels dropped or abandoned in the process and there are a series of "re-contracting" steps throughout.

## **Results**

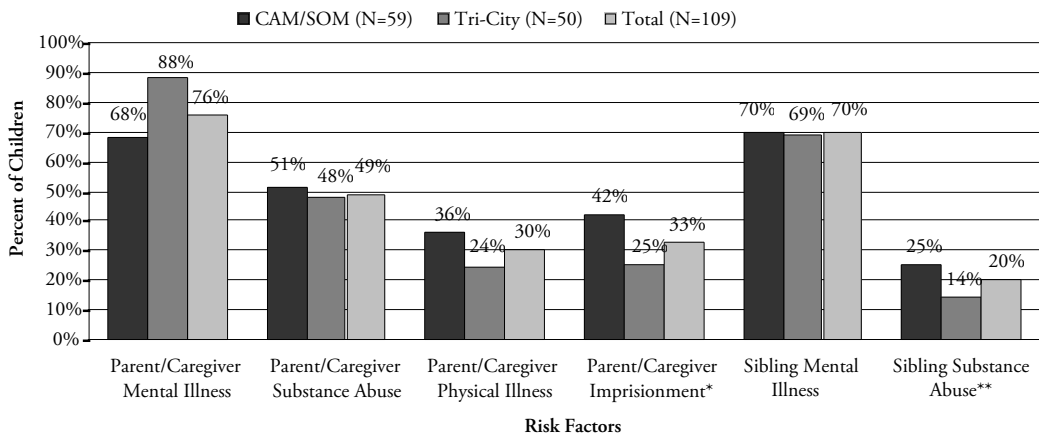
A record review for youth enrolled between 2003 and 2004 revealed that 77% of MHSPY youth had caregivers who suffered from mental illness, 50% of the caregivers reported problems with substance abuse, and 57% of caregivers had experienced domestic violence (see Figure 1). Yet, in contrast to the typical drop-out rates of over 50% for such highly burdened families, MHSPY has consistently experienced a 3% drop-out rate and an average length of enrollment of 21 months (see Figure 2).

## **Discussion**

The Massachusetts Mental Health Services Program for Youth (MHSPY) is a system of care that serves vulnerable youth ages 3-18 from diverse backgrounds who face multiple medical, mental health, educational and other needs which put them at-risk of out of home placement. Funded through a unique collaboration of state agencies, MHSPY is given flexibility to work individually with youth and families in cultivating sustainable, community based support systems for each child and family. The first step in creating sustainable support is to engage and support caregivers in the process, so they can direct their children's care.

The initial visit(s) to the home are by the MHSPY Enrollment Manager who focuses on getting to know the youth in the context of the family, school and community. These visits also (a) clarify expectations and address concerns about the process and procedures, (b) establish a collaborative relationship, (c) focus on immediate and practical concerns, and (d) address barriers to help-seeking (McKay, Stoewe, McCadam & Gonzales, 1998).

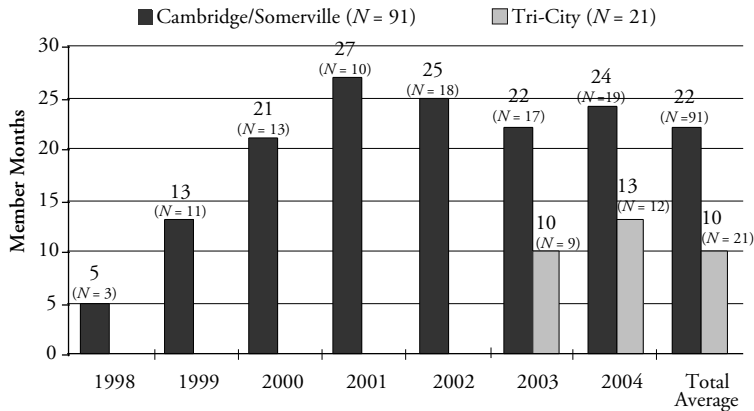
**Figure 1**  
**Family Risk Factors for MHSPY Members July 2003 – December 2004**



\*Data collection for this category of risk began 7/1/04. (Total N=15)

\*\*Based on data collected between 7/1/04 - 12/31/04, approximately 50% of teenage siblings use alcohol or other drugs.

**Figure 2**  
**MHSPY Annual Mean Length of Enrollment in Member Months by Disenrollment and Site**  
**March 1998 – December 2004**



The shared process of completing the many forms for eligibility determination and the protocols for baseline data collection strengthens the connection between the clinical program representative (the MHSPY Enrollment Manager) and the family, and establishes a contractual relationship. The forms are completed at entry by the caregivers, youth, teachers or counselors, in part based on motivational concepts that demonstrate a level of shared commitment to the process (Deane, 1991). Furthermore, the forms serve to facilitate conversation about needs and experiences of the youth and family and help lay the foundation for the subsequent definition of the family mission for the child.

The initial engagement phase is shaped by social exchange theory, which proposes that power, equity, and the creation of commitment are fundamental in human interaction and integral to the bargaining processes. Appointments are always scheduled in the family home or a public place of their choosing with sensitivity to power dynamics, mistrust of service providers, and the possible family or cultural belief

that services will not help. In addition, home-based engagement responds to transportation, time, and childcare barriers. Furthermore, it allows the family to “tell their story” in their natural environment and native language and to conduct ethnographic observations of the family system, including gathering information about family strengths.

The persistent, non-judgmental outreach by the Enrollment Manager, with the emphasis on responding to and understanding the family-defined need is viewed as a critical first step in the development of engagement in care. The intentional gathering of information, in the family’s words, regarding reason for referral, history of previous care received, persons who are currently experienced as resources, and hopes for the child at the heart of the referral, deepens the family engagement. The joint processes and rituals around completion of forms and the accomplishment of repeated meetings carry the family past the threshold of most attempts at clinical care delivery. Should there be a waiting list, the Enrollment Manager takes responsibility to maintain and foster the newly established relationship with both the family and referring agency during the waiting period. Throughout the process of enrollment, the community-based team continues to assess the needs of the youth. When a youth is enrolled the program makes every attempt to match the competencies and interests of the Care Manager, who acts as the process facilitator, with those of the youth and family. The caregiver is also offered the opportunity to partner with a Parent Partner through the process. Ultimately, 98% of the families who enter the MHSPY program, most of whom are referred based on great difficulty reaching them and/or providing services to their children, establish a connection and continue to participate for the duration of the process. This is a testimony to the engagement opportunities available in strengths-based systems of care.

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# **Comparing Needs and Strengths of Crisis and Elective Admissions to Children's Acute Care Inpatient Services**

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Lise Bisnaire  
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Kristin Schaub**

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## **Introduction**

This study was part of a comprehensive outcome evaluation of psychiatric and mental health inpatient services at the Children's Hospital of Eastern Ontario (CHEO). CHEO is a tertiary care, pediatric teaching hospital in Ottawa, Ontario, Canada, that serves Eastern Ontario, Western Quebec, and Baffin Island. This represents a catchment area of approximately 600,000 children ages 18 years and under. In 1997, provincial directives placed CHEO in the lead for delivering specialized psychiatric and mental health services to children and youth. This led to an overall increase in the number of beds for inpatient services at CHEO and specific funding to create a new 10-bed inpatient unit for children aged 12 and under, which opened in September 2003. Prior to this, children's psychiatric inpatient services were offered at the local psychiatric hospital in the form of a six to eight week treatment program. The creation of the Child Inpatient Unit at CHEO represented a dramatic shift both in philosophy and model of care, as inpatient services were now focused on providing crisis stabilization and comprehensive, interdisciplinary assessment.

The goal of the Child Inpatient Unit is to reduce, not eliminate, level of risk and symptoms, and to facilitate reintegration of the child into his or her family and community environment for ongoing care. To this end, the target average length of stay is 14 days. In addition to stabilization and assessment, the services provided include diagnostic clarification and formulation, medication review and/or adjustment, and treatment planning. Children are not admitted for a first-line assessment or diagnosis, or when the sole purpose is to provide respite to parents or caregivers or for court-ordered or custody and access assessments.

This new model of inpatient service also provided an opportunity to adopt a clinical outcomes management approach by placing central importance on the clinical information about the children, youth and families served to inform and manage decision-making at different levels of the system (Lyons, 2004). This approach was operationalized by fully integrating program evaluation activities within the clinical service, and using the clinical information for assessment and treatment planning and for informing the service at all levels.

The objectives of the current study are to review the first 15 months of data from a new psychiatric inpatient service for children, and to identify the similarities and differences between children admitted to the unit following an acute crisis versus those admitted by way of a planned, elective admission. These data will help determine whether the newly designed unit is serving its mandated population of children with acute, severe, and complex needs who are experiencing difficulty functioning in a less restrictive setting, and will inform the system of the role of appropriate hospitalization within the system of care.

## **Method**

Participants were drawn from 122 children (age 5 to 13 years) consecutively admitted for crisis stabilization and/or assessment to the Children's Inpatient Unit between September 2003 and December 2004. After excluding readmissions, parents or guardians of 104 children gave informed consent for the use of clinical information for research purposes, for a 98% consent rate. Twenty-four children (23%) were admitted following a crisis presentation to the Emergency Department, whereas 80 children (77%) were admitted directly to the unit on an elective basis. As part of routine patient care, demographic and treatment history data were collected, and standardized measures of emotional and behavioral

functioning, family functioning, and parenting stress were completed at admission by the children (age and ability taken into consideration) and their parents or caregivers. Members of the unit staff completed the Child and Adolescent Needs and Strengths-Mental Health (CANS-MH; Lyons, 1999) and Childhood Acuity of Psychiatric Illness scale (CAPI; Lyons, 1998) for each child at admission. The CAPI is a 20-item outcome measure designed to monitor change in acute care settings, and serves as the primary outcome measure. It can be used repeatedly over brief time intervals and takes 5 to 10 minutes to complete. The CAPI yields a Total score and four subscale scores: Risk Factors, Symptoms, Functioning, and Systems Support. CAPI ratings are based on the previous 24-hour period (i.e., prior to admission or prior to discharge/transfer).

## Results

Overall, the crisis and elective groups were more similar than different. However, there were several noteworthy differences between the groups. Compared to elective children, children admitted in crisis were older (10.5 vs. 9.3 years),  $F(1,102) = 6.12, p < .015$ , more likely to be admitted with no clear diagnosis (33% vs. 11%) or with a primary diagnosis of depression (21% vs. 1%), and less likely to have a primary admission diagnosis of behavior disorder (13% vs. 58%),  $\chi^2_{(Dx)} = 41.91, p < .001$ . The crisis group was also more likely than those admitted electively to present with suicidal ideation at admission (92% vs. 61%),  $\chi^2 = 7.89, p < .005$ . Significantly higher ratings were observed on the CAPI for the crisis group on items measuring acute risk behaviors,  $F(1,101) = 23.08, p < .001$ , and symptoms,  $F(1,101) = 9.13, p < .005$ . In contrast, children admitted electively were more likely to have had chronic and persistent mental health difficulties. History of community-based mental health treatment was significantly more frequent for the elective group compared to the crisis group (98% vs. 79%),  $\chi^2 = 9.88, p < .005$ , although the majority of children in each group had received community-based services.

Length of stay differed significantly between the groups. Children admitted in crisis were discharged after an average of 10.5 days, whereas average length of stay for elective admissions was 16.9 days,  $F(1,102) = 30.98, p < .001$ . Discharge diagnoses also varied significantly according to type of admission,  $\chi^2_{(Dx)} = 21.86, p < .005$ . Children admitted in crisis were more likely to be discharged with a primary diagnosis of depression (13% vs. 3%) or adjustment disorder (21% vs. 3%) than children admitted electively, who were more likely to have a diagnosis of behavior disorder (60% vs. 33%) or anxiety disorder (10% vs. 0%).

Despite these differences, the groups were much more similar than different overall. No differences were observed for gender distribution (majority male), living situation or guardianship (one or both parents), school placement (some level of special education support), or discharge destination (same living situation). Both groups of children had moderate to severe difficulties with functioning at home, school, and with peers, as evidenced by high ratings on the CAPI and CANS-MH measures. Furthermore, average ratings for each group did not differ along any dimension of functioning. Both groups also had moderate treatment needs, primarily due to the use of daily medication. There were no group differences in the profile of current involvement by various professionals (e.g. family physician, psychiatrist, psychologist, social worker or other counselor) or in history of hospital-based mental health services. No differences between the crisis and elective groups were noted on dimensions of caregiver needs and strengths on the CANS-MH. Modal ratings for both groups noted mild deficits for the caregiver's provision of appropriate supervision, involvement with the child's treatment, and knowledge of the child's needs and strengths. Similarly, no differences were observed for the strengths items, with both groups showing evidence of stable relationships over time, adequate interpersonal skills, and optimism. Finally, no differences were observed at discharge on the CAPI, with all mean ratings on risk behaviors and symptom items less than 1 (*mild*).



## **Discussion**

Children access acute care inpatient services by two different routes. Data from the first 15 months of a new Children's Inpatient Unit support the presence of different needs that are in keeping with the child's initial presentation to the unit. For example, children presenting in crisis are more likely to require stabilization of suicidal ideation and behavior and symptoms of depression or psychosis. However, the data also suggest that both children in crisis and children admitted electively to the unit have longstanding difficulties with functioning at home and school and have had extensive contact with mental health professionals prior to coming to the hospital. Profiles of caregiver needs are also highly similar.

The data lend support to the notion that these two groups of children are actually from the same population of children with acute, severe, and complex needs for which the inpatient service was designed. Thus, the unit is meeting its mandate as a tertiary care hospital setting within the broader system of care. The data suggest that the children admitted electively and their families may in fact be at high risk for future crisis situations, and that this may be prevented by admitting the child before the situation escalates. Thus, the unit can respond to children's urgent versus emergent needs and provide stabilization or comprehensive assessment. Furthermore, understanding the clinical needs of the children and families served leads to the development of evidence-based approaches on the unit. Therefore, the data inform the inpatient team about the shared and unique needs of the children who access the service through different pathways and guide the future development of the service. This ultimately leads to better service that is individualized to accommodate children's specific needs.

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## **Chapter Six**

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### **Resilience & Early Intervention**



# **Symposium**

## **Promoting Resiliency in Families: Innovative Program in Schools, Courts, Child Welfare, and Mental Health**

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### **Symposium Introduction**

Kay Hodges

One of the recommendations of The President's New Freedom Commission on Mental Health is to accelerate research to promote recovery in adults and resilience in children. This symposium summary describes four programs aimed at promoting resilience in youths and their caregivers, as well as the innovative measures used by these programs to assess resilience. Two of the programs are housed in schools, one in juvenile court, and another in child welfare. Rosas reports on the results of a cluster analysis conducted on the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges 2000) for elementary school-aged children who received school-based prevention services. Outcomes for these different groups of children, some of whom were pervasively impaired, are presented. Timmons-Mitchell and her colleagues describe an innovative program in which Multi-Systemic Therapy (MST) was delivered within a school-based program. They report impressive outcomes on the CAFAS for these high school students with conduct-disorder. Hull and colleague describe a resiliency-based approach to working with parents receiving reunification services in a child welfare setting (i.e., treatment after children have been returned to the parents' home subsequent to temporary removal by the court for abuse or neglect). The Caregiver Wish List (Hodges, 2004), which is a strengths-based tool for assessing parental perceptions of their own parenting skills, is used to promote a collaborative, skill-building orientation to treatment that appears to enhance the therapeutic alliance and engagement in treatment. A court-sponsored program for screening truant youths in a large, urban city is described by Smith. The Juvenile Inventory for Functioning (Hodges, 2003), which is a screening tool based on the CAFAS, was used to determine the needs of the youths and the families. Based on this screening, interviewers informed about the formal and informal resources available within the local community helped caregivers identify programs (e.g., after-school, tutoring, recreational) that could foster resiliency in these youths.

#### **Chair**

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### **Functional Impairment Outcomes for Children Served by a School-based Preventive Intervention**

Scott Rosas

#### **Introduction**

The State of Delaware's child mental health system includes a comprehensive school-based preventive intervention focused on the amelioration of behavioral and social problems. The approach is flexible and combines social skill development, problem-solving skills training, individual and class-wide behavior management components, and parent skills training and support. The approach is similar to other school-based interventions designed to reduce inappropriate and aggressive behaviors, improve prosocial behaviors, academic engagement and behavioral compliance, and reduce parent aversive behavior during problem-solving situations (e.g. Nelson, Martella, & Marchand-Martella, 2002; Kamps, Kravits, Stolze, & Swaggart, 1999; Reid, Eddy, Fetrow, & Stoolmiller, 2000).

The school-based intervention to which children in this study were referred represented the front end of the services continuum and for some was the first contact with the mental health system. Previous work found a range of functional problems among children referred for these services with varying degrees of successful outcome (Rosas, 2004). To determine whether different groups of children referred to the intervention could be supported to improve functioning within the school setting, this study examined outcomes at six months using several criteria.

## Method

This study included 569 children, across 54 Delaware elementary schools, referred by teachers and staff for emotional and/or behavioral problems that interfered with learning. The sample was predominantly African American (51.7%) and Caucasian (39.9%). Sixty-eight percent were male, and children ranged in age from 5 to 12 years ( $M = 7.9$  years;  $SD = 1.25$ ). More than 73% of the sample lived in single-parent households and slightly more than 26% were from two-parent households. Teachers referred more than one-third of the children for primarily aggressive/disruptive behaviors. The percentages of children identified as academically at-risk or performing unsatisfactorily in math and reading were 41% and 45%, respectively.

Upon referral to the intervention, children's impairment level was assessed at intake and then again at six months. The Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 2000) was used to determine functional impairment in eight psychosocial domains and two caregiver domains. Children receive a rating of 0 = *Minimal or No Impairment*, 10 = *Mild Impairment*, 20 = *Moderate Impairment*, or 30 = *Severe Impairment*. A cluster analysis was conducted to group children based on their problematic behavior in school and home, difficulty with interpersonal interactions, or anxious or depressed mood. Outcomes were examined for the entire group of children and for each of the clusters.

## Results

For the entire sample, improvement was examined several ways. First, a paired samples *t*-test was conducted and revealed significant overall change in mean score from initial to six month CAFAS,  $t(568) = 9.19$ ,  $p < .000$ . Second, a criterion of  $\geq 20$  point improvement from initial to six month CAFAS was set and represented a clinically meaningful reduction in impairment. Overall 35% ( $n = 199$ ) of children experienced a reduction in total CAFAS score of 20 points or more. Finally, an outcome of no moderate or severe rating on the School, Home, Behavior Toward Others, and Moods/Emotions subscales was set, with 62.4% of the children achieving this criterion after six months. Thus, the overall proportion of children with a moderate to severe rating at six months was significantly smaller than at intake,  $\chi^2(1, N = 569) = 58.40$ ,  $p < .000$ .

A K-means cluster analysis revealed the presence of four homogeneous groups. A four-cluster solution was chosen for interpretation and meaningfulness following the examination of a three- and five-cluster solution. The percentages of level of impairment for the four relevant CAFAS subscales for each of the four clusters is represented on Table 1 and provide the basis for labeling each of the clusters. Cluster 1, School Problems, contained 32.2% of the total sample. The majority of these children were rated moderate to severe on the School subscale and mild to moderate on the Behavior Toward Others subscale. Cluster 2, Pervasive Problems with Mood, had the highest initial mean scores ( $M = 94.3$ ) and accounted for 13.4% of the total sample. A majority of these children were rated moderate to severe on the School, Home, Behavior Toward Others, and Mood subscales. Cluster 3, School and Home Problems contained 14.6% of the total sample. The majority of these children were rated moderate to severe on the School, Home, and Behavior Toward Others subscales. Cluster 4, Mild Behavior/Mood Problems, contained 39.9% of the total sample and had the lowest mean score at entry ( $M = 23.3$ ). Few children in this group were rated moderate or severe on any of the four subscales. Descriptive characteristics for each cluster are represented in Table 2.

**Table 1**  
**Frequency and Percentage of Level of Impairment for Selected CAFAS Youth Subscales by Cluster**

| CAFAS Subscale                                 | Impairment level |      |           |      |               |      |             |      |
|--|------------------|------|-----------|------|---------------|------|-------------|------|
|  | None (0)         |      | Mild (10) |      | Moderate (20) |      | Severe (30) |      |
|  | <i>n</i>         | %    | <i>n</i>  | %    | <i>n</i>      | %    | <i>n</i>    | %    |
| <b>Total Sample</b>                            |                  |      |           |      |               |      |             |      |
| School/work                                    | 104              | 18.3 | 220       | 38.7 | 177           | 31.1 | 68          | 12.0 |
| Home   | 216              | 38.0 | 262       | 46.0 | 70            | 12.3 | 21          | 3.7  |
| Behavior Toward Others                         | 158              | 27.8 | 238       | 41.8 | 147           | 25.8 | 26          | 4.6  |
| Mood/Emotions                                  | 230              | 40.4 | 238       | 41.8 | 87            | 15.3 | 14          | 2.5  |
| <b>Cluster 1: School problems</b>              |                  |      |           |      |               |      |             |      |
| School/work                                    | –                | –    | 57        | 31.1 | 101           | 55.2 | 25          | 13.7 |
| Home   | 89               | 48.6 | 92        | 50.3 | 2             | 1.1  | –           | –    |
| Behavior Toward Others                         | 29               | 15.8 | 120       | 65.6 | 34            | 18.6 | –           | –    |
| Mood/Emotions                                  | 126              | 68.9 | 55        | 30.1 | 2             | 1.1  | –           | –    |
| <b>Cluster 2: Pervasive problems with mood</b> |                  |      |           |      |               |      |             |      |
| School/work                                    | –                | –    | 2         | 2.6  | 31            | 40.8 | 43          | 56.6 |
| Home   | 7                | 9.2  | 23        | 30.3 | 32            | 42.1 | 14          | 18.4 |
| Behavior Toward Others                         | 1                | 1.3  | 5         | 5.6  | 50            | 65.8 | 20          | 26.3 |
| Mood/Emotions                                  | –                | –    | 11        | 14.5 | 51            | 67.1 | 14          | 18.4 |
| <b>Cluster 3: School and Home problems</b>     |                  |      |           |      |               |      |             |      |
| School/work                                    | 4                | 4.8  | 35        | 42.2 | 44            | 53.0 | –           | –    |
| Home   | 3                | 3.6  | 39        | 47.0 | 35            | 42.2 | 6           | 7.2  |
| Behavior Toward Others                         | –                | –    | 15        | 18.1 | 62            | 74.7 | 6           | 7.2  |
| Mood/Emotions                                  | 21               | 25.3 | 50        | 60.2 | 12            | 14.5 | –           | –    |
| <b>Cluster 4: Mild behavior/mood problems</b>  |                  |      |           |      |               |      |             |      |
| School/work                                    | 100              | 44.1 | 126       | 55.5 | 1             | .4   | –           | –    |
| Home   | 117              | 51.5 | 108       | 47.6 | 1             | .4   | 1           | .4   |
| Behavior Toward Others                         | 128              | 56.4 | 98        | 43.2 | 1             | .4   | –           | –    |
| Mood/Emotions                                  | 83               | 36.6 | 122       | 53.7 | 22            | 9.7  | –           | –    |

**Table 2**  
**Descriptive Characteristics by Cluster**

| Characteristic                                       | Cluster 1:<br>School<br>problems | Cluster 2:<br>Pervasive<br>problems with<br>mood | Cluster 3:<br>School and<br>Home<br>problems | Cluster 4:<br>Mild<br>behavior/mood<br>problems |
|--|----------------------------------|--|--|---|
| Age ( <i>M</i> )                                     | 7.97                             | 8.02   | 7.64   | 7.86  |
| Male (%)   | 75.4                             | 82.9   | 71.1   | 56.8  |
| Caucasian (%)  | 31.8                             | 37.8   | 43.2   | 48.4  |
| Single parent headed household (%)                   | 74.6                             | 68.1   | 71.8   | 74.7  |
| Caregiver resourcefulness                            |                                  |  |  |   |
| Severe or moderate impairment at intake on CAFAS (%) | 10.4                             | 14.5   | 9.6  | 10.6  |
| Unsatisfactory or at-risk performance in reading (%) | 50.8                             | 56.6   | 39.0   | 39.4  |
| Unsatisfactory or at-risk performance in math (%)    | 45.3                             | 52.6   | 35.4   | 35.3  |

To determine improvement across clusters, separate paired *t*-tests were conducted for each cluster. Significant differences were detected for the School Problems,  $t(182) = 3.47, p < .001$ , the Pervasive Problems with Mood,  $t(75) = 7.55, p < .000$ , and School and Home Problems clusters,  $t(82) = 8.17, p < .000$ . In terms of clinically significant change, 31.7% of children achieved this outcome in the School Problems cluster, 64.5% in the Pervasive Problems with Mood cluster, 61.4% in the School and Home Problems cluster, and 18.1% in the Mild Behavior/Mood Problems cluster. The proportion of children

with a moderate or severe rating at six months was significantly smaller than at intake in the School Problems,  $\chi^2(1, N = 183) = 25.8, p < .000$ , Pervasive Problems with Mood,  $\chi^2(1, N = 76) = 21.1, p < .000$ , and School and Home Problems clusters,  $\chi^2(1, N = 83) = 53.6, p < .000$ . In addition, for children in each cluster that had moderate to severe impairment at intake, 43.1% reduced impairment to mild or none at six months in the School cluster, 27.6% in the Pervasive Problems with Mood cluster, 50.6% in the School and Home Problems cluster, and 60.0% in the Mild Behavior/Mood Problems cluster.

## **Discussion**

This study's findings revealed (a) the presence of subgroups based on functional impairment patterns, and (b) that children who received this school-based intervention showed improvement in day-to-day functioning over six months. These results are noteworthy given that day-to-day functioning was assessed rather than just symptoms. Moreover, several outcome criteria were used, including a clinically meaningful and reliable amount of change. Overall, each of the subgroups demonstrated success in terms of the reduction of impairment. These results provide preliminary evidence that different groups of children could be supported by a comprehensive behavioral intervention within the school setting. Intervention research has demonstrated that such approaches can be effective in curbing disruptive behaviors and increasing competencies and, with subclinical populations, appear as effective as psychotherapy (Durlak & Wells, 1998).

Surprisingly, children in the Pervasive Problems with Mood cluster demonstrated success across several of the criteria. Research has shown that children who fit this particular profile are more resistant to change relative to other types (Hodges, Xue, Wotring, 2004). However, success in this cluster may be linked to several factors. First, a low proportion of children in this cluster had a moderate to severely impaired caregiver environments. Second, the intervention addresses several risk factors across multiple domains and as such, is more likely to result in positive outcomes than approaches that focus on single risk factors (Kaufmann & Dodge, 1997). Finally, children in the intervention lacked many of the high-risk behaviors typically found in children served in traditional mental health systems of care, such as runaway behavior or harm to self or others. It is plausible that higher levels of caregiver resourcefulness, coupled with the comprehensive focus within the school setting and absence of severe pathology, contributed to children's functional improvements.

With some outcome indicators, lower rates of improvement for the Mild Behavior/Mood problems cluster were found when outcomes were examined across the whole group. Children in this cluster may have experienced a floor effect, as they were not rated as highly at intake. However, it is also possible that some children did not benefit because they were involved in activities within the intervention with children with more extensive and severe problems. Evidence is accumulating that interventions that aggregate children and adolescents involved in problem behavior may under some conditions produce iatrogenic effects. In contrast, children in this group who had moderate to severe problems at intake improved at a higher rate than similarly impaired children in the other groups. The absence of more severe functional problems across multiple domains may have enabled the more impaired children in this cluster to maximize the benefits of the intervention.

The results of the cluster analysis revealed that the school-based intervention program served children along a continuum of functioning. Some primarily had school problems, while others had problems both in school and at home. In addition to these two groups, there were children who had only mild problems as well as those who were pervasively impaired (i.e., across settings and with both behavioral and emotional components). Each group showed substantial improvement in either the absolute change from pre- to post-assessment or in the proportion of youths whose problems were reduced to no more than mild. For the children with a fairly high level of impairment, further specification of which of these youths can be successfully treated with school-based interventions remains an empirical question that warrants further investigation.



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## **The Child and Adolescent Functional Assessment Scale (CAFAS), Multi-Systemic Therapy (MST), and Safe Schools Healthy Students: Resilience in Action**

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### **Introduction**

The Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 2000) is used to measure treatment progress for youth with externalizing behavioral issues as part of the Cleveland Heights-University Heights City Schools Safe Schools Healthy Students initiative in Ohio. During the first year, 75 youth were referred. Outcome information using the CAFAS is presented for the first 64 youth discharged, demonstrating the resilience of the sample (i.e., CAFAS improvement greater than twenty points on Total score). An issue in expanding Multisystemic Therapy (MST; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998) into schools has been whether the severity of youth referred justifies a treatment option as intensive as MST. Using the CAFAS to assess initial level of functioning, the present sample meets criteria for severity. The Safe Schools Healthy Students initiative in Cleveland Heights is described; MST is used as the primary mental health intervention and serves as an anchor for a continuum of services ranging from primary prevention through tertiary intervention.

The CAFAS is a versatile system for measuring children's behavior in the key domains that comprise their social and interpersonal lives. The CAFAS has been used extensively to determine needed levels of care for children and youth presenting to the public mental health system. In the present application, the CAFAS is one measure of treatment success for youth exhibiting behavioral issues in schools. Youth in the present study received MST as part of a Safe Schools Healthy Students initiative; the CAFAS was used to measure treatment progress.

### **Background**

The Cleveland Heights-University Heights City School District Safe Schools Healthy Students initiative began in August 2003 with three years of federal funding from the U.S. Department of Education and the Substance Abuse and Mental Health Services Administration. The Safe Schools Healthy Students initiative employs three evidence-based practices: Botvin's Life Skills Training to address student drug use; Second Step to prevent violence among preschool through ninth graders; and MST to address mental health, behavioral and family functioning needs among students who are displaying disruptive behavior at school. Other aspects of the initiative include promoting community collaboration; increasing the number of trained mental health professionals in the schools (social workers and nurses); providing psychiatric consultation; linking families with persons in the schools in order to prevent truancy; and conducting an independent evaluation of the program.

### **Method**

The Safe Schools Healthy Students initiative aims to serve 100 youth and families per year using MST. During the first year, 75 students and families were referred; services were delayed due to implementation issues during the first year. At the time of the current presentation (March, 2005), 64 participants had concluded treatment, and closing CAFAS had been administered. Each youth is administered the CAFAS at the time of enrollment in MST and at the conclusion of MST. The school database tracks disciplinary referrals and academic progress (these analyses are not currently available). In addition, families enrolled in MST are contacted monthly and administered a telephone interview measuring adherence to the MST model (Therapist Adherence Measure; Henggeler & Schoenwald, 1999).

## Results

The 64 youth referred by the schools were primarily high school students. Most were African-American, and about two-thirds were male. At the time of referral, CAFAS scores for the MST youth averaged 81 for the total score based on eight scales. This compares with an average of 88 for a juvenile justice sample in the validation study (Walrath, Sharp, Zuber & Leaf, 2001).

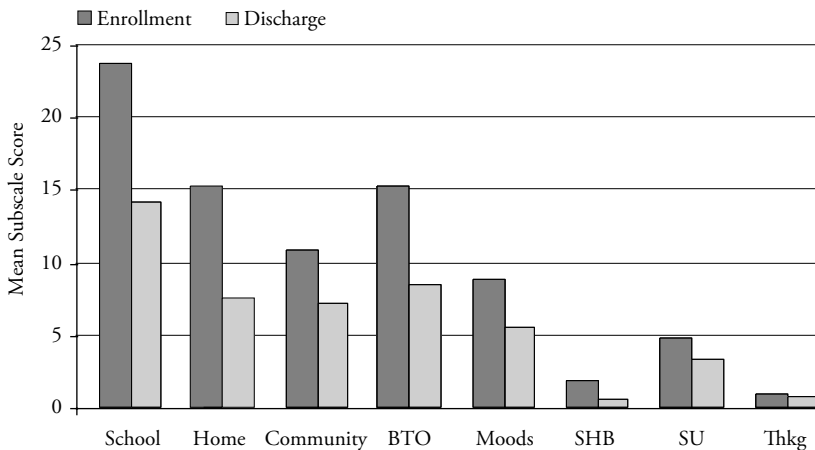
CAFAS subscale scores at referral and at the conclusion of treatment are presented below (see Table 1). The results of paired-sample *t*-tests suggest that all enrollment-discharge comparisons are significantly different except Thinking, which is endorsed infrequently for the sample. However, since multiple tests are made on the same data, alpha was set at .0055 (i.e. the Bonferroni adjustment to alpha was made by dividing alpha = .05 by number of analyses = 9). Using the adjusted alpha, the enrollment-discharge comparisons remained significantly different for the School/Work subscale; the Home subscale; the Community subscale; the Behavior Toward Others subscale; the Moods/Emotion subscale and the Total score (see Figure 1).

**Table 1**  
Means for CAFAS Subscale Scores & Total Scores at Enrollment & Discharge

| <i>Subscale</i>        | <i>Enrollment (M)</i> | <i>Discharge (M)</i> | <i>df</i> | <i>t</i> | <i>p</i>  |
|------------------------|-----------------------|----------------------|-----------|----------|-----------|
| School                 | 23.75                 | 14.22                | 63        | 7.76     | < .001*** |
| Home                   | 15.16                 | 7.5                  | 63        | 8.16     | < .001*** |
| Community              | 10.94                 | 7.19                 | 63        | 3.55     | = .001**  |
| Behavior Toward Others | 15.16                 | 8.44                 | 63        | 8.05     | < .001*** |
| Moods                  | 8.75                  | 5.47                 | 63        | 3.8      | < .001*** |
| Self-harm              | 1.88                  | 0.47                 | 63        | 2.01     | = .049*   |
| Substance Use          | 4.69                  | 3.44                 | 63        | 2.39     | = .02*    |
| Thinking               | 0.94                  | 0.78                 | 63        | 1.0      | = .321    |
| Total                  | 81.41                 | 46.88                | 63        | 9.93     | < .001*** |

\*≤.05; \*\*≤.01; \*\*\*≤.001

**Figure 1**  
Comparison of CAFAS Subscale Scores at Enrollment & Discharge (N = 64)



Hodges, Xue, and Wotring (2004) suggested that an overall change of 20 points on the CAFAS, or about one-half standard deviation, represents clinically relevant change to delineate whether improvement did or did not occur during a particular timeframe. Using the twenty point decrease in total scores criterion, two-thirds of the individual participants met the criterion while one-third did not. Using the criterion for improvement of a decrease from an initial score of 20 or 30 to a score of 10 or 0, 75% of subscales that were rated as 20 to 30 at enrollment decreased to 0 or 10 at discharge. Most of the participants were referred due to concern about their behavior at school. On the School/Work subscale, 41% of participants decreased from a moderate or severe level of impairment to a mild or none level.

The results of Adherence are tabulated by the MST Institute Enhanced Website. To date, adherence for the participant families is 0.404 (target = 0.4), and all of the sub-scale targets for the adherence measure are met. During the first year of Safe Schools, the average length of MST treatment was 139.64 days (target range: 90-150 days). The successful completion rate was 77.4% (target: 75%). Ultimate outcomes at the conclusion of treatment include:

- 78% of youth living at home in the community at discharge;
- 78% of youth in school or working at discharge (according to school-approved plan);
- 83% of youth have no new arrests during treatment; and
- 81% of families have an improved network of social supports.

In the second year analysis, referred youth whose families declined MST will be compared with youth who participated in MST, and the school database will be used for longer term tracking.

## Discussion

MST appears to be successful in helping the group of youth referred for school behavior to make functional improvement. The CAFAS shows that the youth referred improve as a group; many of them improve in the School domain. The CAFAS has proven to be a useful tool in documenting functional improvement with mental health treatment in a school-based setting.

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## **Partnering with Caregivers to Improve Parenting Skills within a Child Welfare Setting**

Barbara A. Hull & Sherry Love

### **Introduction**

Over the past 20 years, the efficacy of various evidenced-based treatments has been demonstrated in university settings. Studies of conventional treatments delivered in clinics have demonstrated much weaker effects (Weisz & Weiss, 1993). Wiesz (2000) pointed out that this model for developing effective treatments may not be well suited to real world settings because many variables, considered nuisance variables, have been ruled out or clinically controlled in the research studies. These nuisance variables are the daily fare for families in child welfare, including co-occurring disorders, parent substance abuse or pathology, life stresses that lead to early termination or no shows, or therapists too overburdened to learn new treatment protocols.

The National Institute for Mental Health's Blueprint for Change report (The National Advisory Mental Health Council Workgroup, 2001) suggests that factors relevant to the eventual deployment of an intervention (e.g., provider attitudes and skills, implementation processes, and barriers to intervention adoption) should inform both intervention development and research on intervention testing. The availability of evidence-based treatments allows those in the field to work at the combined challenge of bringing evidence-based interventions to families while problem solving the real life family and system barriers to success.

### **Background**

KVC Behavioral Health Care is a not-for-profit contractor, in Kansas' privatized social service system, providing foster care and reintegration services for families and children referred by the state. Serving an eight county region, KVC learned an important lesson early; barriers are challenges to be resolved—not endured. KVC is addressing the skill deficits (parenting, coping, interaction, life skills, etc.) and “nuisance” challenges of this welfare population head-on by teaching staff core strategies necessary to help parents and children develop skills essential to healthy, safe and effective family functioning. KVC is utilizing evidence-based treatments and measurement tools to support this implementation, ensuring that family members develop stronger skills from every interaction they have with child welfare professionals.

KVC initiated the project described in this summary with families in the Aftercare program, which includes families reunified following 60 or more days of court-ordered, out-of-home placement of children. Agency data for out-of-home days during Aftercare suggested that when supervision emphasized parent management training (PMT) techniques, as opposed to a traditional perspective, there were fewer out-of-home days. PMT is a treatment modality that is supported by extensive research and is readily available in the marketplace (Barkley, 1997; Forehand & Long, 2002; Patterson & Forgatch, 1987; Webster-Stratton, 1992). Training in PMT was developed and implemented by KVC for frontline child welfare workers.

The Caregiver Wish List (Hodges, 2004) was utilized to identify family-driven goals and guide the skill-building work of professionals implementing PMT. It was hypothesized that using this tool would facilitate engagement (Chamberlain, 1998) and the development of a collaborative relationship (Deblinger & Heflin, 1996). Additionally, it was anticipated that through identification of strengths and parents' perceptions of their current functioning, practitioners would engage in a balance of teaching and supportive interactions (Barkley, 1997).

This study is a preliminary step in a long-term agenda to examine the impact of PMT on parents' perceptions of their effectiveness in managing their children's difficult behaviors. The role of the

measurement tool was integral to the PMT intervention. KVC began by administering the Caregiver Wish List at enrollment into Aftercare and quarterly thereafter. This measure was revised several times as a result of use in the field with these families and other psychometric studies. Consequently, this report is restricted to data collected to-date on the most recent version of the measure. Thus, the sample consisted of 40 caregivers who provided perceptions of their skills at enrollment.

## Method

**Participants.** All caregivers who were served subsequent to the introduction of the most recent version of the Caregiver Wish List and who had at least one child who was two years or older were included in the sample ( $N = 40$ ). The age range of these children was 2 to 17, with an average age of eight years old. Most of the children (82.5%) were younger than 13 years old, were male (65%), and were from lower income, single parent families. The average length of out-of-home care for youth in the Aftercare program is 23 months, ranging from a low of 61 days to more than two years.

**Measures.** The Caregiver Wish List, which assesses strengths-based skills, includes 50 questions, each with a 5-point response option (Hodges, 2004). It has two sections: (a) Skill Wish List for Your Child and (b) Skill Wish List for You. The items in both sections were designed to tap skills in one of six areas: Providing Direction and Following Up, Encouraging Good Behavior, Discouraging Undesirable Behavior, Monitoring Activities, Connecting Positively with the Youth, and Problem Solving Orientation. The results are used to generate a “wish list” for skills that the caregiver would like to improve. The caregiver is given a copy of this wish list.

**Procedures.** The Caregiver Wish List was implemented within 14 days post-reunification. The measure was repeated at 90-day intervals. The therapist read the questions to the parent, who then marked the response options on his or her own copy. Parents were encouraged to share stories about raising their children throughout the interactions with the tool. Upon completion, the parents were asked to identify three skills that they would be most interested in addressing for change.

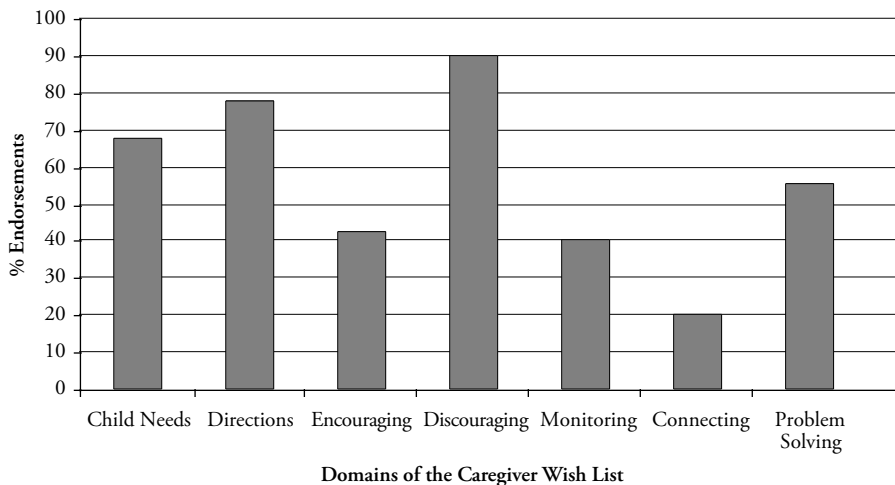
PMT interventions were supported through regular supervisory sessions. Family sessions occurred in the home, one to two times per week for the first month, weekly for the second and third months, and finally decreasing to monthly when the family stabilized with the integration of the new skills. Practitioners initiated frequent phone contacts with families, were available 24/7 for consultation or crisis management, and were able to increase the frequency of contact (face-to-face and by phone) as needed.

## Results and Discussion

Figure 1 presents the percent of caregivers who endorsed at least one item in the domain at the mid-point or below (adjusted for directionality of scoring), indicating a need for skill development. The first bar summarizes the results for the section, Skill Wish List for Your Child. Approximately two-thirds of the parents (67.5%) scored their children as not responding well to their parenting efforts in at least one of the six domains. Thus, most parents were feeling challenged by their child’s behavior. In terms of their own skill level, an overwhelming majority of the parents (90%) perceived that their greatest need for skill development was in discouraging their child’s undesirable behavior. The next most urgent area in need of skill development was in providing clear commands or requests to the child and following up to determine whether the youth was compliant, with 77.5% reporting difficulty. Additionally, 55.3% of the parents reported a need for skill development in problem solving. In comparison, most parents perceived themselves as having relative strengths in encouraging good behavior, monitoring activities, and in connecting positively with their children.

Furthermore, of the 40 caregivers included in this report, 100% completed the PMT intervention. While this study could not determine the mediating variables, it was anticipated that three mechanisms would promote treatment completion: (a) the collaborative, interactive process between the practitioner and the caregiver while working together on completing the Wish List, (b) the caregiver’s specification

**Figure 1**  
**Percent of Caregivers Endorsing Items Indicating Need for Skill Development**



of skills to target for development (i.e., done as the last step in completing the Caregiver Wish List), which resulted in family-driven and “custom-fit” goals, and (c) the balance of teaching and supportive interactions during the PMT intervention. In fact, staff who had previously resisted implementation expressed excitement over their new power to help parents and how this in turn helped them in their professional role of advocating for the family with the court.

In-home observations of the practitioners by the PMT trainer provided an opportunity to elicit parents’ comments about the Caregiver Wish List. Parents reported that they liked the process with the Wish List and expressed pride in the ways they had learned to manage their parenting challenges. Some parents indicated that they liked redoing the list so they could see what changed over time. In contrast to the expectation that parents would under-report problems, parents identified significant needs for improvement and welcomed the intervention at a time in their lives when taking a defensive posture would have been understandable (i.e., after their children had been removed and recently returned).

While not restricted to the sample in this report, it is noteworthy that during this time period, the agency overall performed well above state target goals on performance indicators required by the Kansas Department of Social and Rehabilitation Services. The percent of children who did not re-enter out-of-home placement within 12 months post reunification was 91.1% for fiscal year 2004 and 97.5% for the first quarter of fiscal year 2005, which compares favorably to the state target goal of 90%. The percent of children who did not experience confirmed abuse or neglect within 12 months post reunification was 93.8% for fiscal year 2004 and 100% for the first quarter of fiscal year 2005, which exceeded the state target goal of 80%.

## Conclusions

The early indications and comments from parents and staff members have encouraged the dedication of further resources to support implementation of this program, including the training in PMT and the use of the Caregiver Wish List. The common language, common knowledge base, and the collaborative, skill-building approach with families appear to contribute to the promotion of safe and timely permanencies. Additional studies are needed to identify mediating variables that may be responsible for any successful outcomes observed.

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## **Preventing Penetration of Truant Youth into the Juvenile Justice System Via Community-based Screening Procedures**

**Cynthia Smith**

*Acknowledgement: This work is a collaborative endeavor of the following: Juvenile Assessment Center, the Wayne County Prosecutor's Office, The Third Circuit Court, the Robert Wood Johnson Foundation, the Detroit School System and Kay Hodges, PhD.*

### **Introduction**

Everyday, over 9% of the enrolled students are recorded as truant from Detroit Schools. In 1999, 63,000 students in Detroit missed at least five weeks of school (School or Else, 2005). The negative outcome of chronic school absence on future achievement includes being at risk for criminal behavior, substance use, lower income, likelihood of being on welfare, and adult mental health and interpersonal problems (Prevatt & Kelly, 2003). Despite the importance of this issue, there is a paucity of empirical studies on interventions to prevent school dropout. Of the 259 studies on dropout prevention and intervention identified in a review by Prevatt and Kelly (2003), only 6.9% of the studies involved an empirical evaluation of a program and less than 2% had a comparison or control group.

This summary describes a preliminary study of the Erase Truancy Program, initiated to improve school attendance in the Detroit Public School System. The program holds caretakers accountable for the school truancy of their children. Youths who have not improved school attendance after intervention are petitioned in court by the Prosecutor's Office for adjudication as a juvenile delinquent.

In the first step of the Erase Truancy process, a brochure is sent from the Prosecutor's Office to the caregiver of a truant student. The brochure explains the law and requires the caregiver to report to the Court House to attend a "truancy hearing" with their child. Approximately 100 families receive the letters to attend the monthly hearings. The Juvenile Assessment Center provides an interview with the truant students and their families attending the Erase Truancy hearings. The purpose of the structured interview is to identify the barriers to attendance and connect the families with resources within the community. Funds from the Robert Wood Johnson Foundation have supported the development of programs to provide after-school programming, including "Mayor's Time," sports and recreation, tutoring resources, and church youth programs. If an interviewer identifies a need for immediate attention or evaluation based on the screening interview, the Juvenile Assessment Center is able to provide and connect the needed resources. This study reports on the preliminary findings of the families and youth who were interviewed the first three months of this program.

### **Method**

**Participants.** The participants were 111 youths, determined as chronically truant by the school system. The caretakers and youth voluntarily agreed to be interviewed. The mean age was 13.46 years old (range 6 to 15), with 63.1% male students from over 35 different schools. The caregivers interviewed were 60.3% mothers, 9% fathers, 1% both mothers and fathers, and the remaining were relatives, foster parent and guardians. Two bachelors-level case managers from the Juvenile Assessment Center and 17 trained volunteer interviewers conducted the interviews.

**Measures.** The measure was the Juvenile Inventory for Functioning (JIFF; Hodges, 2003; 2005), which takes about 20 minutes to administer. The JIFF is a structured interview in which the caregiver is asked about 10 domains of functioning: School, Home, Community, Behavior Toward Others, Moods/Emotions, Self-Harmful Behavior, Substance Use, Thinking, Family Life, and Child's Health. Questions from the first eight domains were based in part on the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 2000; 2004a). Thus, the JIFF can be considered a screening tool for the CAFAS, although it does not replace the CAFAS nor can it be considered a professional or comprehensive evaluation.

For each of the 10 domains, the caregiver is asked approximately five questions about the child's strengths and functioning. At the end of each domain, the caregiver is asked to rate the extent to which the child needs help in the specific domain (e.g., school) on a 0 to 5 rating scale, where 0 represents *no help needed* and 5 represents *help very needed*. At the end of the interview, the interviewer also gives a rating for each of the domains. The questions are designed to engage the caregiver and to identify factors that have impeded the youth from school attendance during the truancy. At the interview completion, the caregiver is given a copy of a JIFF summary with relevant community resources provided (e.g., Domestic Violence Shelter, crisis support phone numbers for caregivers who indicated that this is a problem on the Family Life questions).

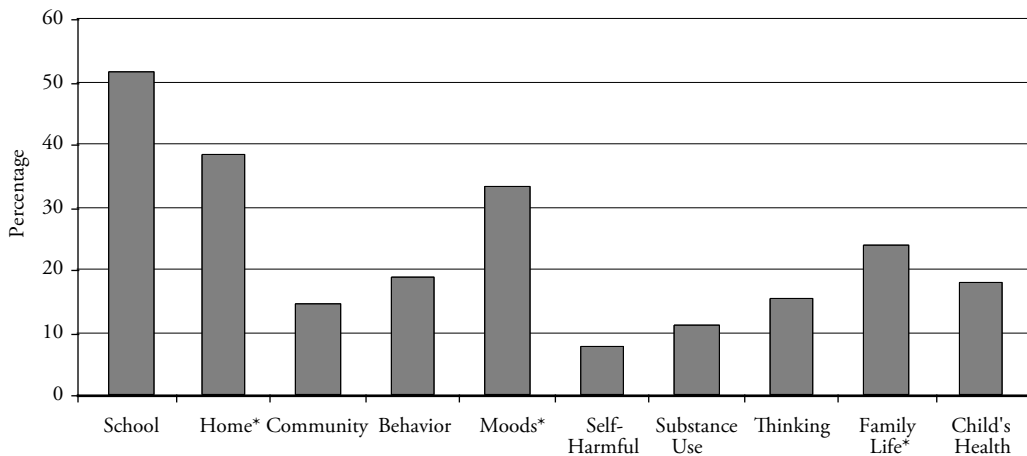
**Procedures.** Training for the interviewers consisted of viewing a set of slides in Microsoft PowerPoint® format (Hodges, 2004b) and supervised role-play of interviewing families. Prior to the interview the caregivers sign a consent form agreeing to the interview.

## Results

The data from the interviewers suggested that most of these truants were resilient youths who had a variety of strengths: 71.2% had no threatening behavior at school; 74% were not intimidating in the home; 67% were characterized by none, or only mild, noncompliance in the home; 73% were not involved in delinquent activities; and 77.5% were free of self-harmful behavior or ideation. In addition, 40% had adequate academic grades.

These findings were consistent with ratings given by caregivers, indicating the extent to which the youth or family needed help. The percent of caregivers giving a rating of 4 or 5, on the 0 to 5 rating scale, are presented in Figure 1. The correlations between the ratings given by the caregivers and the interviewers were significant ( $p < .001$ ) for each domain. The correlation between the sum of ratings for caregivers and interviewers was also significant,  $r = .905$ ,  $p < .0001$ .

**Figure 1**  
**Percent of Caregivers Giving Ratings of 4 or 5, Indicating Definite Need for Help**  
**(on a Rating Scale of 0 to 5)**



\* 38.2% indicated need for help with noncompliance in the home;  
 33.3% felt the children had indications of sadness, anxiety, or distress due to trauma;  
 23.9% wanted help with family issues other than truancy.

An examination of the endorsements for specific items revealed that 23.4% of the caregivers thought that their child needed assistance with decision making about sexual issues; 21.6% reported violent, threatening behavior by family members in the home (other than the truant); 12.6% needed help with child care to provide better supervision by an adult; and 10.8% reported that persons in the home (other than the truant) had problems with substance use. In addition, in response to a question about whether the youth had *ever* experienced a traumatic event (e.g., witnessing violence, abuse), 40.5% answered affirmatively, and 27% of the caregivers who endorsed this item thought that their children were still bothered by the event.

## **Discussion**

The results of this pilot project determined that almost a quarter of the caregivers (23.9%) expressed a desire for help with family problems, including child care, substance use, and violent or threatening behavior by household members (other than the truant). Not being able to respond to the expressed needs of these families would be extraordinarily unfortunate and potentially costly if the youth penetrates the juvenile justice system. Caregivers reported definitively needing help with managing their youth's noncompliance in the home (38.2%). One-fourth to one-third thought that their children needed help with emotional problems or with managing the emotional after-effects of a difficult trauma. There are evidence-based treatments for these problems that could be offered to these youths even though the generalizability of these treatments to youths living in demoralizing poverty may not have been demonstrated.

This pilot project found that caregivers of chronically truant youth were willing to be interviewed and wanted resources to help their children. In a newspaper feature on the Erase Truancy Program, a mother reported welcoming help to get her 12 year old daughter back into school, as she leaves at 6:30 a.m. for her job and is not at home when it is time to go to school (School or Else, 2005). The screening interview identified that the girl had experienced a significant assault in the recent months and was unable to focus at school though she was reporting that she "did not like math." With the help of the case manager, she received counseling, tutoring and support to return to school and to complete the semester successfully.

There are a variety of reasons why youth are truant, and the truancy rapidly reduces the youth's ability to be consistent in school participation. Once the regularity of attendance is impaired, inability to keep up with learning may overcome the youth and produces school failure. The screening interviewers stated that they "try to find the root of the child's truancy problem and offer solutions, such as after-school programs, tutoring services, a mentor program or substance abuse therapy...family counseling...drug screens ...extracurricular activities" (School or Else, 2005). The impetus for conducting the screening interviews was to keep youth out of the juvenile justice system by identifying the primary issues for lack of school attendance before an adjudication results. Having an interviewer who is culturally competent, able to engage each participant and is knowledgeable about the resources in the community was seen as critical. The screening process provided a standardized means to engage and measure critical areas of life functioning. The long-term goal is to study the effectiveness of this program and to identify predictors of successfully getting youth back into school.

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## **Symposium Innovations in Early Identification and Service Access**

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### **Symposium Introduction**

**D. Russell Lyman**

We know that the needs of many vulnerable children are not identified soon enough, and that significant numbers end up becoming consumers of intensive wraparound services later in development. A recent survey of parents of children in mental health services in Massachusetts indicates that 48% knew there were mental health problems by age four, yet nearly half of parents reported that their child's pediatric provider never or rarely asked about mental health problems; a third did not receive the services they needed because they didn't know where to find them, and a third waited more than a year before getting all the services they needed (Frank, Greenberg & Lambert, 2002). The President's New Freedom Commission on Mental Health (2003) calls for periodic mental health screening for children in primary care, yet this clearly is not happening. How can we best find these children as early as possible in life? In pediatric practice? Child care? Social services? What tools should we use to identify these children? This symposium describes three Massachusetts pilots in early detection and service access for very young children as well as adolescents. The incidence of identified developmental and mental health problems is investigated, as are opportunities and obstacles for early identification and treatment in current systems of care.

#### **Chair**

**D. Russell Lyman**

#### **Authors**

**D. Russell Lyman**

**John A. Lippitt**

#### **Discussant**

**Mimi Graham**

### **References**

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## **Building Bridges in Early Childhood Mental Health — Screening in Pediatrics and Child Care**

**D. Russell Lyman**

*Acknowledgements: This research was funded by the Blue Cross and Blue Shield of Massachusetts Foundation.*

### **Introduction**

This research, conducted by the Guidance Center, Inc. in Cambridge, Massachusetts, investigates ways to best conduct universal screening and service access for early childhood developmental and mental health problems with parents and children in different settings. This is of critical importance, because though national analyses indicate that 20% of American children have diagnosable mental health issues, most of them do not get the services they need. For very young children, if parents and providers wait until they reach school age, a critical period of intervention for rapidly developing brains, personalities and behavior patterns is lost. Less than half of children with developmental and behavioral problems are identified before they enter school (Glascoe, 2000). Both in Glascoe's work and in our study, parents report that often their children's doctors advise them to wait, in hopes that their child will "grow out of it." This study is a beginning step toward bringing field experience and incidence data to bear upon establishing best practices and needed public policy change aimed at ensuring that our youngest and most vulnerable citizens receive the help they need at the earliest possible moments in life.

## **Method**

Parents of 240 children ages birth through five years were administered the Parents Evaluation of Developmental Status tool (PEDS; Glascoe, 2000) to screen children under six years of age in three Cambridge settings. These settings were: (a) a busy health clinic of a large urban hospital (Windsor Street Health Center of the Cambridge Hospital); (b) the local Women, Infants and Children (WIC) program (a nutritional program for low-income mothers), and; (c) five urban city-run preschool child care classrooms. The project was implemented in a largely immigrant, Spanish speaking low-income neighborhood in order to target families that are most likely to experience barriers to care.

Use of the PEDS has been shown to identify 74% to 84% of children with disabilities and can be completed in five minutes (Glascoe, 2000). The American Academy of Pediatrics has named the PEDS as one of four instruments considered to be effective, brief mental health screening tools. Parents indicating significant concerns about their child on the 10-item PEDS survey were contacted by project staff and offered counseling and referral services. These referrals were tracked, and follow-up information was provided to their pediatricians. Community provider meetings were also conducted on a regular basis to examine the data and refine appropriate pathways to identification and treatment. A community early childhood resource guide for mental health and other services was also developed and disseminated, with a handy pocket version for pediatricians.

PEDS results were analyzed across 10 areas of concern that included global/cognitive, expressive and receptive language, fine and gross motor, school, self-help, behavior and social emotional (both of which were flagged in the study as mental health concerns), and "other." Retrospective baseline analysis of incidence and referral, and baseline survey of provider screening and referral patterns were conducted. Three Parent focus groups with Haitian Head Start parents, Spanish speaking consumers in WIC, and consumers of Early Intervention and mental health services were conducted, targeting parent perspectives on the strengths and weaknesses of the current identification, referral and service systems in mental health and pediatric practice.

## **Results**

In the baseline study, parents articulated significant language and reimbursement barriers to service access. Non-English speaking parents, especially Haitian parents, articulated a strong need for services, resource information and advocacy in their native language. They pointed to particular difficulties in describing problems their child might be having in brief pediatric appointments, in which both language and cultural differences in understanding child behavior were barriers. All parent groups identified the need for more time with pediatric service providers, and consumers of developmental and mental health services clearly articulated difficulties in dealing with health insurance systems. Most parents appeared to be receptive to being asked, especially by pediatricians, about how their children were doing developmentally and psychologically, though some culturally bound wariness was also evident among Haitian speakers. With regard to services, parents conveyed that referrals for mental health services for children under six years (and particularly for those from birth to three years of age) were discouraged.

Results of a total of 17 provider survey questionnaires indicate that many pediatricians and child care providers conduct informal screenings. However, the use of formal screening tools is inconsistent, especially in screening for mental health (69% of respondents do not use them). Only 31% of providers screen parents informally for parent mental health issues, and no providers reported using a parent mental health screening tool. The use of formal developmental screening tools was reported by 75% of providers; however none of these were pediatricians. Many using tools were childcare providers who were required to conduct screening by their funding sources. Less than 25% of those children screened are referred for services. Major barriers to successful referral were identified as: language or culture match, lack of agency follow-up (more than half of those referring receive follow-up calls never or rarely), and family hesitation. Helpful aids included: knowing one person to contact as an agency early childhood

liaison, receiving follow-up regularly and having a quick and easy list of updated resources. Other identified needs included training of parents and providers, improved cross-cultural staffing, flexible scheduling, and on-site mental health providers.

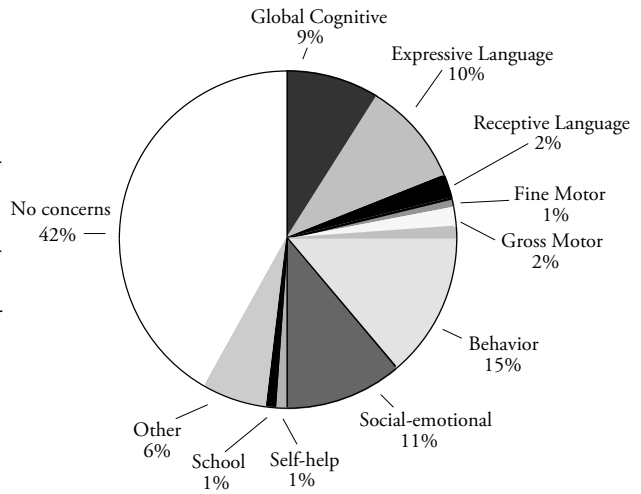
Our studies indicate that 31% to 39% of parents report at least one significant concern on the PEDS, with relatively consistent patterns across settings. In Windsor, 31% of parents reported at least one significant concern. Of parents reporting any concern, 26% of these concerns were mental health concerns (a combination of behavioral and social-emotional concerns; see Figure 1). In WIC, 32% of parents reported significant concerns, and 31% of parents reporting any concern were concerned about mental health. In preschool, 39% of parents reported significant concerns, and 39% of parents reporting any concern were concerned about mental health. We noted that some of the preschool settings had a significant Asian population, which appeared to elevate concerns, both in the areas of language and in culturally bound concepts of what is normal in development.

Preliminary cluster analysis indicates that when parents reported more than one concern, concerns about behavior were most often reported in tandem with concerns about language. This area will benefit from further investigation, particularly when and if we are able to increase our sample sizes.

Comparison to retrospective baseline of referral patterns during a similar time period revealed that referrals were dramatically increased, but still remained surprisingly low for an *N* of 188 (see Figure 2). Referrals in pediatrics quadrupled, from 2 to 9, and referrals in WIC increased from zero to 10. City preschools, which are relatively well resourced and purchase mental health consultation, appeared to have already implemented necessary referrals with variable success, especially in Special Education referrals. Many of our interventions amounted to brief counseling toward establishing that some concerns fell within normal ranges (e.g., gaining access to community resources such as nutrition or housing support, or dealing with issues such as obesity, eating habits or sleep disturbance).

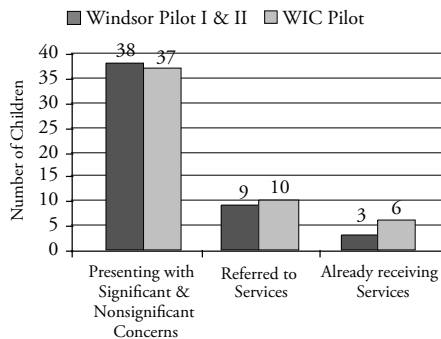
Paradoxically, perhaps the greatest value in our study has been in identifying the barriers to implementation of sustainable universal

**Figure 1**  
Windsor Street Pediatrics  
Pilot I\* and Pilot II\*\* PEDS Areas of Concern



*N* = 71 Total Concerns  
(Some children presented with multiple concerns)  
\* Pilot I: six weeks  
\*\* Pilot II: 12 weeks

**Figure 2**  
Referral Outcomes for Windsor Pilot I & II, WIC  
(Total Sample = 188; With Concerns = 75)



\*According to the PEDS protocol not all positive screens require a referral. No referrals at baseline in WIC; 2 in Windsor.

screening and referral. For example, WIC nutritionists are not trained in any form of mental health counseling, even to facilitate a referral, and the State, in their Institutional Review Board process, prohibited them from doing any mental health counseling in this pilot. This suggests that WIC, though fertile ground for screening, needs better training and a mandate to implement screening on its own.

Pediatricians also report that they do not have time or proper reimbursement to conduct screening and follow-up, and some are not convinced that formal tools are needed. Third party reimbursement for routine pediatric visits appears to incentivize a large number of brief visits in a day (since generally the longer one spends with a patient the less revenue per hour one generates), rather than the time it takes to follow up on mental health concerns. We have discovered that in order to make the process reimbursable, an ideal staffing pattern would be to have a licensed social worker on staff at the pediatric practice, with the ability to bill against both mental health and pediatric billing codes. Structure and support staffing in the pediatric clinic were also found to be insufficient to support the identification of young children and the implementation and tracking of the screening tool on an ongoing basis. Preschool teachers lack the training, support and resource information to make referrals, and their most common referrals are for Special Education services, which are often denied.

## Conclusion

This study has identified many challenges, as well as reasons for hope. There is a need for increased awareness of infant and early childhood mental health as a prominent health issue. Pediatricians, child care providers, WIC counselors and others most likely to have contact with very young children need training on what to look for, what tools to use, and how and what to do next for young children and their parents across systems of care. More work needs to be done on the development of appropriate screening tools, with a clearer sense of which to use with children of specific ages in different settings. We are also in need of more trained early childhood mental health providers, so that pediatricians, as they described to us, are not left diagnosing mental health problems for which there is no treatment.

A reason for hope is that there is growing recognition that starting early matters. We have also found that even a tool as brief as the PEDS can reliably identify mental health concerns in very young children. The system needs a clear mandate to perform regular screening, along with the necessary training, consultation and established payer streams for screening and follow-up. This is especially true in pediatric practice, where most children are seen on a regular basis. Field research on how to do this and what we find has potential for paving the way toward systemic change.

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## **Building Linkages for Early Childhood Mental Health**

**John A. Lippitt**

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### **Introduction**

Children who have been abused or neglected (or who are in homes where child abuse or neglect has occurred) are at considerable risk for a range of early childhood mental health, behavioral, and developmental difficulties (National Research Council, 2000). The Early Intervention (EI) system, which was created by Part C of the Individuals with Disabilities Education Act (IDEA), entitles children under three years of age to developmental evaluations and appropriate services if they are found to be eligible. However, the child welfare system has not routinely referred children to Part C Early Intervention. Reauthorizations of both the Child Abuse Prevention and Treatment Act and IDEA now require states to develop procedures for referring to Part C EI children under age three involved in substantiated cases of abuse or neglect.

The Massachusetts Early Childhood Linkage Initiative (MECLI) piloted these referrals at three pilot sites from November 2002 through December 2004. This demonstration project identified benefits, challenges, and success strategies for implementing these referrals. It tracked the results of the referrals to determine whether referred children were eligible for EI, under which eligibility criteria, what services they received, and at what cost.

### **Methods**

A partnership among the Massachusetts Department of Social Services (DSS, the state's child welfare agency), the Department of Public Health (DPH, the lead agency for Part C EI), the state's 65 independent, certified EI providers, and The Heller School at Brandeis University was established to pilot referrals from child welfare to Early Intervention. Three DSS Area Offices (out of 28) were selected as pilot sites along with the six EI Programs (EIPs) serving the same catchment areas.

The DSS personnel asked parents of children under age three who were involved in newly substantiated abuse or neglect cases if they would accept a referral to an EIP. If they agreed and signed a release, a referral form was completed and delivered to EI. The EIP then contacted the family to schedule an evaluation to determine whether the child was eligible. If eligible, the EIP worked with the family to develop an Individualized Family Service Plan (IFSP) and deliver therapeutic services.

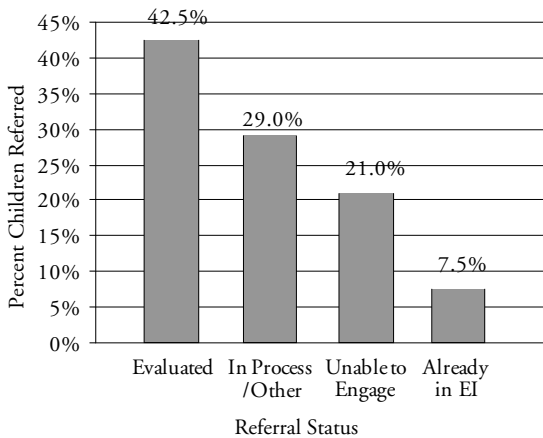
The implementation of these referrals was tracked through data collection forms completed by DSS and the EIPs. Electronic, administrative EI data were obtained from DPH. Data were captured on the rates at which referrals were offered and accepted at DSS. The EIPs captured data on the rates at which they successfully engaged referred families and conducted eligibility evaluations of children. In addition, EI data from DPH were analyzed to determine the rate at which the children were eligible for EI, the eligibility criteria met, and the resulting EI services and costs. In addition, the referral implementation process was documented to identify challenges and success strategies, in order to facilitate effective replication of these referrals at other locations.

### **Results**

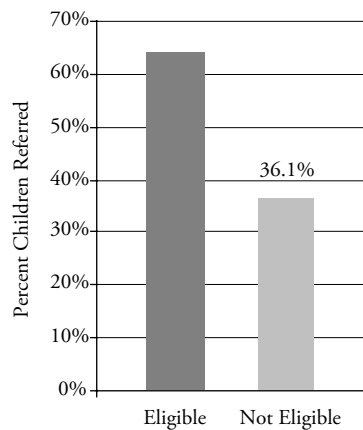
DSS reported offering the EI referral for 494 children and that 71% of the families accepted the referral. Seventeen percent declined the referral, 8% indicated the child was already involved with EI, and 5% had other or unknown results. The EIPs received 372 referred children. Eligibility evaluations

have been completed on 43% of them, while 29% are in process; 21% have failed to engage with EI and another 8% have indicated that the child was already involved in EI (see Figure 1). The EIPs reported on 158 children who had completed EI eligibility evaluations and 64% were found eligible for EI services (see Figure 2).

**Figure 1**  
**EI Results from Referrals**  
**(local data forms, n = 372)**



**Figure 2**  
**EI Eligibility Results**  
**(Local data forms, n = 158)**



The electronic, administrative data from DPH lagged somewhat behind the EIPs' reporting. These data included 207 MECLI-referred children. Of these children, 66% had been evaluated and 75% of them had been found eligible for EI: 54% had eligible developmental delays, an additional 15% met the Massachusetts at-risk criterion, and 6% were eligible based on clinical judgment, an established condition, or for an unknown reason.

Of the children with measurable delays, the type of delay varied from 46% who had a language delay to 25% who had a gross motor delay. Twenty-six percent had an eligible social-emotional delay, despite the fact that the eligibility tool was weak in the social-emotional domain.

In terms of risk factors, in addition to abuse or neglect, families self-reported other factors that are indicative of significant developmental and early childhood mental health risks: 20% reported a chronic parental illness or disability (which includes parental mental health problems), 19% multiple traumatic events or losses for the child, 18% parental substance abuse, and 10% domestic violence.

The services indicated on the Individualized Family Service Plans that were developed for eligible children were also analyzed by the discipline of the service provider identified as needed by the child. A developmental specialist was the most common provider type and was identified for 24% of the children. A social worker was identified as needed in 22% of the cases and a counselor or psychiatrist in 3% of the cases.

Analyses of services actually delivered showed that children in child welfare-involved families received fewer hours of services and cost less to serve than children in non-child welfare-involved families. These referrals benefited referred children and families by connecting them with EI when otherwise they would not have been or would have been later in the child's life. As a result, children received developmental evaluations and children and families received EI services that presumably were helpful for them. DSS and EI benefited from the collaboration.

Three key obstacles to the implementation of these referrals were identified: (a) the need for resources—specifically money, time, and expertise; (b) challenges to EI’s ability to engage and effectively serve these children and families; and (c) barriers to building a collaboration between these two agencies.

A variety of success strategies for overcoming these challenges were identified. They included up-front planning; possible avenues for obtaining financial resources; professional development for personnel, especially on early childhood mental health; and building local relationships through regular, face-to-face meetings.

## Conclusions

The results of this demonstration project indicate that young children in families involved with the child welfare system should be evaluated by Part C Early Intervention for developmental and early childhood mental health problems, as many of them will need and be eligible for EI services. EI will be challenged by the difficulties of engaging and working with these families who often have multiple issues and are involved with multiple service providers. Addressing the social, emotional, and behavioral issues of these young children will probably require enhanced capacity on early childhood mental health in the EI system.

Implementing referrals between child welfare and EI will not be easy, but strategies are available that will enhance the success of such efforts. Many young children, known to state social and human service systems such as the child welfare system, are at high risk for serious mental health and developmental problems, but too often do not receive appropriate assessments or services. These children, their families, and the service systems all stand to benefit from the implementation of referrals and linkages between child welfare and Part C Early Intervention.

## Reference

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## **Symposium Discussion**

### **Mimi Graham**

These summaries represent important work in the State of Massachusetts. It is important to note that in both of these studies, striking numbers of children screened or assessed were found to have significant concerns or a need for further services such as Early Intervention or mental health treatment. It is also important to note that a concerning number of families either never completed the assessment process, or did not follow recommendations for further services when children were found to have concerns. We know that we have much work to do to ensure that we provide appropriate follow-up support so that families will make use of treatment.

The results of these studies are consistent with our experience in Florida, where we have targeted services for families in child welfare services. We have experienced similar challenges in engaging and maintaining working alliances with families in child protective services, as well as strong gains in the families that were able to make use of our array of services.

Florida has a statewide Strategic Plan for Infant Mental Health, yet our colleagues from Massachusetts should not be discouraged. Florida's plan is being implemented in only three cities, and has a long way to go before our services are universal. In the meantime, Massachusetts is showing a leadership role in investigating how we can best identify developmental and mental health issues on a regular basis. The Massachusetts Early Childhood Linkage Initiative is demonstrating to other states, many of which are nowhere near as well prepared, that the nation's new Child Abuse Prevention and Treatment Act, despite clear challenges, can and should be implemented. It is our job now to share our knowledge to improve early identification and service access for all children.

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# **Symposium**

## **The Inter-American Consortium for Applied Research on Children and Communities: Translating Research into Action with Children and Adolescents in Medellín, Colombia**

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### **Symposium Introduction**

Linda M. Callejas

This symposium discusses findings from evaluation projects concerned with issues of drug use and family violence affecting children and youth in Medellín, Colombia. The papers, which address issues of national relevance to child mental health policy, highlight studies identifying some of the neighborhood and family conditions that provide the context for the daily lives of children in one of the largest metropolitan areas of Colombia. The author of the first summary discusses findings related to a study conducted with students in 6th through 11th grade to determine risk and protective factors related to adolescent drug use. The project relied on a mixed method case study design with logistic regression analysis applied to data collected. The main protective factors identified through the study include a sense of spirituality and belief in God, healthy lifestyle, family cohesion, and support networks. The main risk factors identified include the use of legal drugs, violent or aggressive behavior, a history of domestic or sexual abuse, and family dysfunction.

The second paper discusses the evaluation of the initial phase of a widespread program aimed at preventing and reducing violent behavior in local children and youth. The program focuses on training parents and teachers in more positive techniques for handling children exhibiting aggressive behaviors at home and at school. The study found that high levels of violence in a given neighborhood were positively correlated to aggression in children. The research findings presented here provide insight into the role that the family and social networks can play in ensuring positive social development in children and adolescents, despite a number of risk factors that have been exacerbated by continued violence and other social problems found in some of Medellín's neighborhoods. Such findings can enrich the repertoire of systems of care research and practice by highlighting the centrality of the family and community in the lives of children.

### **Risk and Protective Factors for Past-Year Drug Use in Adolescents: Main Results from Logistic Regression Models - Medellín Colombia 2004**

Yolanda Torres de Galvis, José Miguel Cotes Torres, & Liliana Patricia Montoya Vélez

#### **Introduction**

Research over the past two decades has tried to determine how drug abuse begins and how it progresses. Many factors can add to a person's risk for drug abuse. Risk factors can increase a person's chances for drug abuse, while protective factors can reduce the risk. However, most individuals at risk for drug abuse do not start using drugs or become addicted. Also, a risk factor for one person may not be the same for another.

Prevention programs should enhance protective factors and reverse or reduce risk factors. The risk of becoming a drug abuser involves the relationship between the number and type of risk factors (e.g., deviant attitudes and behaviors) and protective factors (e.g., parental support). Further, the potential impact of specific risk and protective factors changes with age. For example, risk factors within the family have greater impact on a younger child, while association with drug-abusing peers may be a more significant risk factor for an adolescent. Early intervention with risk factors (e.g., aggressive behavior and poor self-control) often has a greater impact than later intervention by changing a child's life path (trajectory) away from problems and toward positive behaviors. Thus, while risk and protective factors can affect people of all groups, these factors can have a different effect depending upon a person's age, gender, ethnicity, culture, and environment.

#### **Chair**

Linda Callejas

#### **Authors**

Yolanda Torres de Galvis et al.

Luis Fernando Duque et al.

Risk and protective factors refer to variables in youths' neighborhoods, families, school, and peer groups, as well as to factors within the individual, that increase or decrease the likelihood of problem behaviors. Risk factors for substance use typically are associated with an increased likelihood of substance use, whereas protective factors for substance use are related to a decreased likelihood of substance use.

The knowledge of the factors of risk for drug consumption has much preventive importance for students; identification of risk factors and preventive strategies with the purpose to stop drug use can diminish drug consumption. Knowledge of the protective factors is equally important due to its capacity to promote better conditions for the development of the person and to reduce the probability of high-risk behaviors. The present study contributes to the measurement of the problem of drug use in student populations and their possible relationship to risk factors and protective factors.

### **Objectives**

This study addresses the following:

- The relative importance of each risk and protective factor in predicting past year drug use;
- The importance of the gender variable combined with the full set of risk and protective factors in explaining the variation in past year substance use; and
- The usefulness of modeling techniques using Logistic Regression Models in explaining the variation in past-year drug use.

### **Methods**

In more than 15 years of research on drug abuse in Colombia, we have identified important principles for prevention programs targeting the entire family, along with individuals and their peers, by using descriptive statistics and simple odds ratios.

This report presents the main findings on the strength of the relationship between risk and protective factors and past-year drug use in a sample of 3,927 students, aged 12 to 19 years, using data from the 2004 Metropolitan Medellín Area High School Survey on Drug Use. The study relied on multiple logistic regression models to determine the importance of individual predictor variables by testing whether these factors account for a statistically significant amount of variation in the dependent variable after controlling for other predictor variables included in the model.

### **Model Information**

The regression analysis performed used the LOGISTIC procedure in the SAS program included: (a) Response Levels: (b) model: binary logit, (c) Optimization Technique Newton-Raphson and (d) Step by step Backward Elimination Procedure.

The study examined 25 risk and protective factors that had been associated with results in the bivariate analysis. Some of these factors were measured using multiple-items scales, others using simple items. When more than one item was used to measure a factor, the responses from all the items were combined into a single score. All scales were coded such that higher scale scores for risk factors indicated that a respondent was at a higher risk for substance use. Higher scores for protective factors indicated that a respondent scored high on variables that indicated a lower risk for substance use.

The multivariate model was constructed in separated form for legal and illegal substances, in each case under the hypothesis of different behaviors related to risk and protective factors, differentiated by gender.

## Results

The results of these models are presented in Tables 1 and 2, for each model, respectively. These tables present the regression coefficient, odds ratio (OR) and 95% confident intervals (CI) and significance test for each predictor. The OR is easier to understand than the regression coefficient; both are measures that describe the strength and direction of the relationship between the predictors and past year substance use. For example in Table 1, the OR for males indicates that the odds of past-year legal substance use was 1.24 times higher for males than for females, after controlling for other variables. The *p* value for this is less than 0.05, indicating that gender is a significant variable in the model.

**Table 1**  
**Results of Logistic Regression Model Predicting Past-Year Cigarettes and Alcohol Use and Risk and Protective Factors**

| <i>Factor</i>                   | $\beta$ | <i>Factors</i> | <i>OR</i> | <i>95% CI</i> |               | <i>p value</i> |
|---------------------------------|---------|----------------|-----------|---------------|---------------|----------------|
|                                 |         |                |           | <i>Lower</i>  | <i>Higher</i> |                |
| Intercept: SUBLEGAL=1           | -0.1163 |                |           |               |               | 0.5487         |
| Violent behavior scale          | 0.7729  | Risk           | 2.17      | 1.837         | 2.554         | <.0001         |
| Academic problems scale         | 0.5037  | Risk           | 1.66      | 1.367         | 2.003         | <.0001         |
| Verbal aggression against women | 0.3110  | Risk           | 1.37      | 1.141         | 1.632         | 0.0007         |
| Verbal abuse of children        | 0.2519  | Risk           | 1.29      | 1.088         | 1.521         | 0.0032         |
| Gender - males vs. female       | 0.2125  | Risk           | 1.24      | 1.078         | 1.419         | 0.0024         |
| Physical punis                  | 0.1881  | Risk           | 1.21      | 1.004         | 1.452         | 0.0457         |
| Healthy lifestyle               | -0.4471 | Protective     | 0.64      | 0.479         | 0.853         | 0.0024         |
| Self-esteem scale               | -0.7979 | Protective     | 0.45      | 0.346         | 0.585         | <.0001         |
| Good communication with teacher | -0.2680 | Protective     | 0.76      | 0.659         | 0.887         | 0.0004         |
| Regular exercise                | -0.2438 | Protective     | 0.78      | 0.670         | 0.916         | 0.0022         |
| Social support scale            | -0.0568 | Protective     | 0.95      | 0.929         | 0.960         | <.0001         |
| <b>Among Males</b>              |         |                |           |               |               |                |
| Violent behavior scale          | 0.5848  | Risk           | 1.79      | 1.457         | 2.210         | <.0001         |
| Academic problems scale         | 0.5624  | Risk           | 1.75      | 1.329         | 2.317         | <.0001         |
| Verbal aggression against women | 0.3428  | Risk           | 1.41      | 1.108         | 1.792         | 0.0052         |
| Physical punishment             | 0.2680  | Risk           | 1.31      | 1.008         | 1.695         | 0.0433         |
| Verbal abuse of children        | 0.2526  | Risk           | 1.29      | 1.017         | 1.630         | 0.0357         |
| Irritability scale              | 0.1987  | Risk           | 1.22      | 1.006         | 1.480         | 0.0437         |
| Healthy lifestyle               | -0.8153 | Protective     | 0.44      | 0.297         | 0.660         | <.0001         |
| Self-esteem scale               | -0.6220 | Protective     | 0.54      | 0.360         | 0.802         | 0.0024         |
| Regular exercise                | -0.2787 | Protective     | 0.76      | 0.623         | 0.919         | 0.0050         |
| Social support scale            | -0.0837 | Protective     | 0.92      | 0.899         | 0.941         | <.0001         |
| <b>Among Females</b>            |         |                |           |               |               |                |
| Sexual abuse of women           | 0.4869  | Risk           | 1.63      | 1.060         | 2.498         | 0.0259         |
| Violent behavior scale          | 1.1076  | Risk           | 3.027     | 2.292         | 3.998         | <.0001         |
| Academic problems scale         | 0.4622  | Risk           | 1.59      | 1.218         | 2.069         | 0.0006         |
| Verbal abuse of women           | 0.3422  | Risk           | 1.41      | 1.065         | 1.861         | 0.0163         |
| Irritability scale              | 0.2621  | Risk           | 1.30      | 1.058         | 1.596         | 0.0124         |
| Child abuse                     | 0.2438  | Risk           | 1.28      | 1.004         | 1.621         | 0.0459         |
| Self-esteem scale               | -0.8935 | Protective     | 0.41      | 0.289         | 0.580         | <.0001         |
| Good communication with teacher | -0.4177 | Protective     | 0.66      | 0.531         | 0.817         | 0.0001         |
| Social Support scale            | -0.0273 | Protective     | 0.97      | 0.950         | 0.997         | 0.0276         |

**Table 2**  
**Results of Logistic Regression Model Predicting Past -Year**  
**Marijuana and others Illegal Substances Use and Risk and Protective Factors**

| <i>Factor</i>                                     | $\beta$ | <i>Factors</i> | <i>OR</i> | <i>95% CI</i> |               | <i>p value</i> |
|---|---------|----------------|-----------|---------------|---------------|----------------|
|   |         |                |           | <i>Lower</i>  | <i>Higher</i> |                |
| Intercept: SUB. ILLEGAL=1                         | -4.4885 |                |           |               |               | <.0001         |
| Past year cigarette                               | 1.8055  | Risk           | 6.08      | 4.407         | 8.396         | <.0001         |
| Violent behavior scale                            | 1.4170  | Risk           | 4.12      | 2.065         | 8.237         | <.0001         |
| Past year alcohol consumption until getting drunk | 1.3829  | Risk           | 3.99      | 2.930         | 5.424         | <.0001         |
| Verbal abuse of children                          | 0.4687  | Risk           | 1.60      | 1.201         | 2.125         | 0.0013         |
| Academic problems scale                           | 0.4411  | Risk           | 1.55      | 1.145         | 2.109         | 0.0046         |
| Belief in God                                     | -0.8473 | Protective     | 0.43      | 0.272         | 0.675         | 0.0003         |
| Healthy lifestyle                                 | -0.4241 | Protective     | 0.65      | 0.433         | 0.988         | 0.0439         |
| <b>Among Males</b>                                |         |                |           |               |               |                |
| Past year cigarette use                           | 2.3323  | Risk           | 10.301    | 6.047         | 17.550        | <.0001         |
| Violent behavior scale                            | 1.2104  | Risk           | 3.355     | 1.408         | 7.996         | 0.0063         |
| Past year alcohol consumption until getting drunk | 1.0644  | Risk           | 2.899     | 1.796         | 4.680         | <.0001         |
| Academic problems scale                           | 0.7452  | Risk           | 2.107     | 1.299         | 3.417         | 0.0025         |
| Psychological abuse                               | 0.6446  | Risk           | 1.905     | 1.145         | 3.170         | 0.0131         |
| To practice exercise                              | -0.7555 | Protective     | 0.470     | 0.298         | 0.740         | 0.0011         |
| <b>Among Females</b>                              |         |                |           |               |               |                |
| Past year alcohol consumption until getting drunk | 1.5708  | Risk           | 4.81      | 3.197         | 7.238         | <.0001         |
| Violent behavior scale                            | 1.5680  | Risk           | 4.80      | 1.471         | 15.645        | 0.0093         |
| Past year use of cigarettes                       | 1.4146  | Risk           | 4.11      | 2.734         | 6.192         | <.0001         |
| Verbal abuse of children                          | 0.5931  | Risk           | 1.81      | 1.257         | 2.605         | 0.0014         |
| Irritability scale                                | 0.3964  | Risk           | 1.49      | 1.026         | 2.153         | 0.0359         |
| Belief in God                                     | -0.8765 | Protective     | 0.42      | 0.243         | 0.712         | 0.0014         |

A total of 22 factors were entered for the legal substances model. The logistic regression analysis for the total sample, without differentiating by gender, identifies a significant variable comprised of 12 factors to explain the rate of consumption, of which seven are risk factors and five are protective factors (Table 1). In the model for males, the number of factors was reduced to 10, with six of these being risk factors and four protective. For females, the number of factors with statistical significance was nine: six risk factors and three protective factors.

For the analysis of illegal substance use, the use of alcohol and cigarettes were also included as risk factors. The model generated for the total sample included seven factors, five of them risk factors and two protection factors (Table 2). When differentiated by gender, both males and females exhibited five risk factors and one protective; however the factors explaining the model differed by gender.

## Conclusions

The logistic regression models that explain the variation in the use of legal substances within the past year use are different from the models that explain the use of illegal substances.

The most important factors identified as contributing to the use of legal substances within the past year are:

- *Risk factors:* Violent behavior (OR 2.17), academic problems (OR 1.66), verbal abuse of women (OR 1.37), verbal abuse of children (OR 1.29), irritability (OR 1.25), and gender – males vs. female (OR 1.24).



- *Protective factors:* Self-esteem (OR 0.45), healthy lifestyle (OR 0.64), good communication with teacher (OR 0.76), regular exercise (OR 0.78) and social support (OR 0.95).

The most important factors contributing to the use of illegal substances within the past year are:

- *Risk factors:* Cigarette use (OR 6.08), violent behavior (4.12), alcohol consumption until getting drunk (OR 3.99), verbal abuse of children (1.60) and academic problems (OR 1.55).
- *Protective factors:* Belief in God (OR 0.43) and healthy lifestyle (OR 0.65).

## **Lessons from the Early Violence Prevention Program in the Municipality of Medellín, Colombia**

**Luis Fernando Duque, Juan de J. Sandoval, José Fernando Orduz, & Beatriz Caicedo**

*Acknowledgements: Research supported by Pan American Health Organization. The authors gratefully acknowledge the assistance and advice provided by Dr. Joanne Klevens (US CDC).*

### **Introduction**

The Early Aggression Prevention Program (the Program) of Medellín Municipality (Duque, 2000) is based on two fundamental strategies: (a) the teaching of pro-social skills in the classroom and the contingent, consistent and non-violent handling of the child at school on the part of the teachers; and (b) the contingent, consistent and non-violent handling of children with behavioral problems on the part of their parents.

The original design of the Program included two components: teacher training and support to families. There were 10 sessions for teacher training and a manual was developed. Support to families included two home visits to families with children with severe aggressive symptoms; home visits also were available to others upon request. Support to families included six workshops, two sessions of family counseling, and the development of a family manual.

From 2001 to 2005, the Program has targeted the following populations, as reported by the entities responsible for its implementation: (a) 349 schools and day-care centers, (b) 2,738 teachers or day-care givers, (c) 41,936 children, and (d) 25,314 families of these children. The first stage of the Program (2001) targeted 57 schools and day-care centers, 361 teachers and day-care givers, 7,605 children, and 2,442 families of these children. The objective of this research was to assess the impact attributable to the initial phase of the Program.

Family adherence to Program was defined as:

- *High adherence* (at least one of the parents attended 9 or 10 of the 10 training sessions) 22% ( $n = 531$ )
- *Acceptable adherence* (at least one of the parents attended 6, 7 or 8 of the 10 training sessions) 21% ( $n = 513$ )
- *Very low adherence* (at least one of the parents attended five or less of the 10 training sessions) 57% ( $n = 1,398$ )

### **Materials and Methods**

#### **Types of Analysis**

Two analyses were conducted. The first analysis compared data from 2001 and 2004 (pre- and post-analysis), among children who participated in the program in 2001, consisting of a non-probabilistic sample of 339 children from 57 schools and 310 of their parents who agreed to participate in the study.

Second, a quasi-experimental analysis was conducted to compare in 2004 the same group of children who had benefited from the program, with a group of children who had not received the Program (control group). The members of the control group were randomly selected among children from 15 schools in

neighborhoods of an adjacent municipality and were matched by gender and age (more or less one year of age). We selected 339 control children, and 254 of their parents agreed to participate in the study.

### **Variables**

Two types of variables were taken into account: those that were expected to be modified by the Program and, secondly, the variables that might affect the Program outcomes. The variables that were expected to be modified by the program were:

- direct aggression
- indirect aggression
- hyperactivity and attention deficit
- pro-social behavior
- school dropping-out
- performance at school
- use of psychoactive substances
- anti-social and delinquent behavior
- cognitive deficiency in the perception of aggression (in children aged 11 or less) and deficiency in self-control of aggression (in children aged 12 or more)
- family patterns of education and upbringing

The variables that can affect the impact of the Program, or outcomes, that we studied were:

- adherence to the Program
- family violence
- criminal and violent antecedents in the family
- perception of the degree of violence in the neighborhood
- socio-economic stratum

We used summary variables created by factorial punctuation (Linting & Groenen, 2002). Once the qualitative variables had been quantified through optimal scaling, we used factorial exploratory analysis (Hair, Anderson, Tatham & Black, 1999; Jonson, 2000), with orthogonal rotation using the Varimax technique (Mardia, Kent & Bibby, 1979). Factorial punctuations were estimated through the regression technique (Johnson & Wickern, 1992), and internal consistency was evaluated to determine data replicability (Martinez, 1996).

Although the children of both groups belong to the lowest socio-economic strata, the children of the control group are poorer than those who participated in the Program, and in their neighborhoods there is a greater awareness of violence. Among children who participated in the Program there is significantly more family violence at the present time, as well as antecedents of verbal and unarmed physical violence in the families. There were no differences between the two groups regarding antecedents of violence and criminality in the families, nor in the level of aggression between siblings ( $p = 0,861$ ). Nor were there any differences in terms of gender ( $p = 0,789$ ) and age ( $p = 0,642$ ), an indication that matching was adequate.

### **Analysis**

We used conditional logistic regression for the multivariate analysis (Hosmer & Lemeshow, 2000; Londoño, 2004), and the methodology for matching samples to estimate the odds ratios and their statistical significance (Campbell & Stanley, 1963). The variables with  $p$ -values below 0.25 were introduced in the conditional logistic regression models.

## **Results**

### **Evaluation: Pre- (2001) and post- (2004)**

The results of the general pre- and post- conditional logistic regression model show the following significant statistical differences: a 19% decrease of symptoms of direct aggression in 2004 ( $p = 0.043 < 0.05$ ); a 38.5% decrease of indirect aggression in comparison with 2001 ( $p < 0.001$ ); an increase of 47% in pro-social behavior ( $p < 0.001$ ); and a 66% decrease in academic performance, in comparison with those of the same age ( $p < 0.05$ ).

To estimate whether these changes are related to the Program or not, we analyzed them according to Program adherence. There was an association between the Program and an increase of pro-social behavior and a decrease of indirect aggression. Decrease of direct aggression does not appear to be attributable to the Program, since there was significant association in the two groups that were analyzed ( $p < 0.05$ ). Data show a negative impact attributable to the program on superior academic performance, given that the differences found were significant between high adherence children, but not in low adherence ones.

### **Quasi-Experimental Evaluation**

A multivariate conditional logistic regression analysis was used to estimate the effect of the Program on the aspects it was meant to modify. The intervention group presented a higher probability than the control group for direct aggression ( $p < 0.05$ ), good academic performance ( $p < 0.05$ ), and lower probability to be punctual and to respect directives given ( $p < 0.001$ ). The parents of the children who participated in the Program reported that they had applied a greater degree of supervision and care in terms of directives given and compliance with school homework of their children, compared with those who had not participated in the Program ( $p = 0.014$ ). Parents increased the use of upbringing and disciplinary strategies based on dialogue and reasoning, in comparison with the control group ( $p = 0.012$ ), and they had made less use of disciplinary strategies involving threatening and physical punishment ( $p = 0.024$ ). Parents of children who participated in the Program generally displayed more severe carelessness in the supervision of their children (“I was so drunk or drugged that I could not take care of him/her and I could not take him/her to the doctor or hospital when he/she required it.”;  $p < 0.05$ ). No effect of the Program on indirect aggression, pro-social behavior or use of psychoactive substances could be observed.

For observation of the effect that external variables might have, these were introduced one by one into the logistical regression model. Neither the current situation of family violence, nor the antecedents of verbal and unarmed physical aggression or family delinquency, nor the socio-economic stratum, presented any modifications of the results of the Program. The contrary occurred with the variable perception of degree of threats, robberies and homicides in the neighborhood and its interaction with direct aggression. When these variables were introduced into the model they cancelled out the effect of the Program on the supervision and care of homework and permission to leave home ( $p = 0.106 > 0.05$ ), on the patterns of upbringing and disciplinary strategies using threats and physical punishments ( $p = 0.372 > 0.05$ ) and good academic performance ( $p = 0.090 > 0.05$ ). Statistically significant interaction between the symptoms of direct aggression and antecedents of threats, robberies and homicides in the neighborhood ( $p < 0.05$ ) also causes the disappearance of the association between the Program and the increased direct aggression among the children in the intervention group ( $p > 0.05$ ). The probability that children who participated in the Program improved their academic performance, which is at statistical significance limit ( $p = 0.047$ ), was cancelled by introducing into the model the following variables: family antecedents of verbal and unarmed physical aggression, family antecedents of delinquency, and brawls or fights among neighbors. It is important to note that statistical significance values are very close to the significance limit ( $p = 0.050 - 0.055$ ). The variable antecedents of threats, robbery and homicides in the neighborhood and its interaction with direct violence cancel out the effect of the Program on academic performance ( $p = 0.090 > 0.05$ ).

## **Discussion**

There were encouraging results from this initial Program evaluation, including: good academic performance, greater degree of supervision by parents and care in terms of directives given and compliance with school homework, increased use of upbringing and disciplinary strategies based on dialogue and reasoning, and less use of disciplinary strategies involving threatening and physical punishment. Higher direct aggression among the intervention group than the control group can be due to the fact that the intervention group has had a greater proportion of aggressive children from the beginning of the Program.

In its initial phase (2001) the Program suffered several modifications via a change in orientation from a developmental perspective to a psychodynamic one, along with a decrease in the number of activities offered. Qualitative analyses of field diaries suggested that teachers had changed their ways of thinking about children's aggressive behavior and had clear ideas of how to intervene in conflict situations, but their actions remained unchanged. We believe it is possible that, given the psychodynamic orientation of the revised intervention, trainers could spend a great deal of time promoting "insight" or awareness of inappropriate teaching practices, but did not model or practice the specific skills that were to be implemented as part of the original Project design. Even if teachers had wanted to conduct the intervention in the ways intended, they might not have gained the skills needed to do so during their training (Duque, Klevins, Ungar & Lee, 2005).

The decrease in the number of activities originally programmed (Montoya, Montoya, Pardo & Alvarez, 2003) may also have led to the fact that the Program had paradoxical effects. The importance of having an adequate "dose" of interventions has been highlighted by various authors (Center for the Study of Prevention and Violence, n.d.). Low adherence to the Program is another element that may well be associated with the results obtained.

The results obtained by this study are congruent with the relationship between high levels of violence in the neighborhood and aggression in children, which cause deterioration of the social capital (Sampson, Raudenbush & Earls, 1997) and in the quality of the supervision capacity of parents over their children (Loeber & Stouthamer-Loeber, 1986). It has also been reported that a highly violent environment creates a paradoxical state of de-sensitization or "normalization" in the face of continuous acts of violence (Ng-Mak, Salzinger, Feldman & Stueve, 2002).

The follow-up of the cohorts will be continued for another two years, which will allow for measurement of the continuity (or lack thereof) of the effects and, as the children reach age 12, will allow us to determine whether there are any effects on their sexual activities.

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# Rethinking Female Adolescent Depression in the Context of Poverty

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## Introduction

Growing up poor is significantly associated with poorer health outcomes (Boothroyd, & Olufokunbi, 2001; Boushey & Gundersen, 2001; Lichter & Crowley, 2000), a greater likelihood of dropping out of school (Haveman & Wolfe, 1995), an increased probability of teenage pregnancy (Kirby, 1997), and an increased likelihood of substance involvement (Fraser, 1997). Psychological distress disproportionately affects those with low socioeconomic positions as evidenced by the growing literature on low-income mothers and high rates of depression (Belle, 1990; Muntaner, Eaton, Miech, & O'Campo, 2004; Ritchey, Gory, Fitzpatrick, & Mullis, 1990). The gravity of this disparity is that depression is ranked as the fourth most disabling disease in the world (World Health Organization [WHO], 2001) with the economic impact exceeding \$63 billion per year in the United States (U.S. Department of Health and Human Services [USDHHS], 1999). It is estimated that among adolescents (i.e., 14-19 years of age), lifetime prevalence rates for any depressive disorder is approximately 20%, impacting nearly six million young people (USDHHS, 1999; Friedman, et al., 2004; Tsuang & Tohen, 2002). Despite evidence that female adolescents experience depression at twice the rate of males, there is limited empirical research seeking to understand these differences (Hazler & Mellin, 2004). Further investigation of the causes and correlates of female adolescent depression is justified in light of the potential consequences of untreated depression: a 12-fold risk factor for suicide in females, co-occurring disorders (USDHHS, 1999), and circumscribed lifetime opportunities and lower rates of employment due to depressive symptoms (Kalil, Born, Knuz, & Cuadill, 2001).

*Correlates of Depression.* A plethora of research has emerged tracing the association of victimization and witnessing violence to a magnitude of health problems, including: depression, suicidality, substance abuse, hospitalizations, post-traumatic stress disorder, violence, teen pregnancy and risky sexual behaviors (Howard, Feigelman, Li, Cross, & Rachuba, 2002; Jong, Mulham, & Kam, 2000; Kendall-Tackett, Williams & Finkelhor, 1993; Spat Widom, 1999; Stevens, Murphy, & McKnight, 2003). In a recent study of residential mobility in families leaving Temporary Assistance to Needy Families (TANF), 42% moved within a six-month period (approximately 8% of the general population moves in a six-month period; Sard, 2002). Multiple moves are generally assumed to be a risk factor for psychological distress as they are a life event that potentially impacts well being by interrupting work schedules, jeopardizing employment, and adversely affecting a youth's educational progress with changes in peer groups and loss of connections (Magdol, 2002).

*The current study.* The primary goal of this longitudinal study is to monitor the status and well being of a cohort of adolescent girls growing up in families receiving welfare. This sub-study examined within this cohort the prevalence of depression at three points in time and the association and potential contribution of four hypothesized risk factors: (a) adolescents' pregnancy, (b) self-reported victimization, (c) witnessing community violence, and (d) residential mobility.

## Methods

*Participants.* A sample of 125 mothers currently receiving TANF and their adolescent daughters were identified from the 2000-2001 Florida Medicaid eligibility data using the family identifier and other matching variables (such as gender, address, and last name). Study eligibility criteria included mothers currently receiving TANF with a daughter 13-18 years of age living at home and residing within a five

county area in west central Florida. Approximately 1,000 mother and daughter pairs who seemingly met these criteria were identified in the Medicaid data and 873 recruitment letters were mailed. Although some families contacted did not meet the eligibility requirements, 125 eligible daughter/mother pairs were recruited for participation.

**Interview protocols.** In addition to respondent demographic and family characteristics, both the mother and daughter protocols included a number of frequently used, psychometrically tested, self-report health, mental health and substance abuse status measures. The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) was utilized as measure of depression. The commonly accepted cut-off score for “clinical caseness” of depression is a score of 16 or above (Kalil, et al., 2001). Additional questions focused on a broad range of issues concerning risk and protective factors associated with the daughters, perceived social supports, self-esteem, engagement in high-risk behaviors, and their hopes and aspirations for the future.

**Procedures.** This mixed-method study includes two phases. Phase 1 involved face-to-face interviews using various standardized measures with 125 mothers who were receiving TANF in 2002 and their daughters, while Phase 2 included in-depth qualitative interviews with a random sample of 20 adolescent girls participating in Phase 1. Administrative data provided system utilization across three segments: (a) criminal justice utilization, (b) substance abuse services and, (c) mental and physical health services (i.e., mental health Medicaid claims). All procedures and protocols were reviewed and approved by the University’s Institutional Review Board prior to initiating the study.

**Analysis.** Univariate and bivariate analyses were utilized to estimate the prevalence and determine the relationships of the four selected risk factors and adolescent depression. In addition, a logistic regression analysis was conducted to assess the relative contribution of these risk factors to the likelihood of scoring above the criterion score for clinical depression.

## Findings

Characteristics of both mothers and daughters are summarized in Table 1. Two notable trends found within this year of the study included dramatic increases in depressive symptoms among the daughters, as well as increases in teen pregnancies. Compared to the 2002 findings in which 30.4% of the adolescent girls exceeded the criterion score on the CES-D, this increased to 40.5% in 2003 and jumped to a dramatic 45% in 2004. By 2005 there was a reduction in overall depression scores for the girls to 38.3%. Given that approximately 10%-15% of youth in the general population at any point in time will suffer from symptoms of depression (DHHS, 1999), the rates of clinical depression obtained among these Medicaid enrollees exceeds national estimates by nearly 35%. The results of daughters’ level of depression and their self-perceived need for and use of mental health services are summarized in Figure 1. Another critical finding, in light of the increase in depression (38.3%), is that only 4.4% in 2004 received a Medicaid reimbursed mental health service during the past year.

By year 3 of the study, 35% of the girls became pregnant; a figure substantially higher than the national rate (4.9%). Although a statistically significant relationship was observed for pregnancies occurring by the first year of the study and depression scores in year 3 ( $\chi^2(1, N = 55) = 3.81, p = .051$ ), no further relationship has been found. Adolescents exceeding the threshold on the CES-D were 1.6 times more likely to reported having been pregnant compared to adolescents who were not depressed ( $\chi^2(1, N = 88) = 1.26, p = .26$ ).

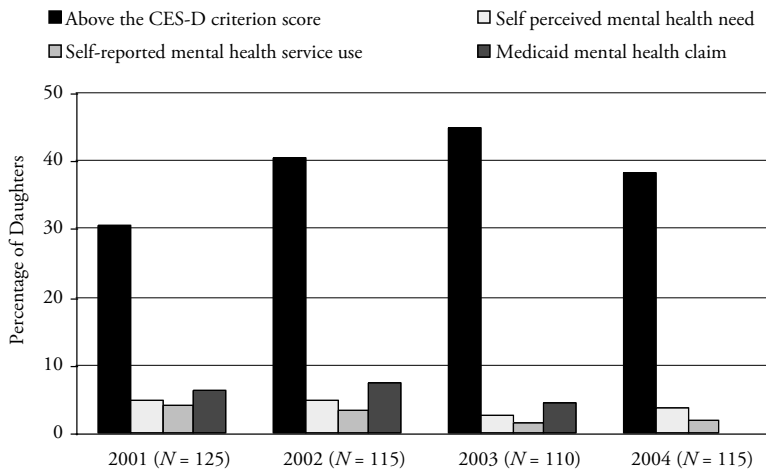
Personal exposure to maltreatment was reported by 37% ( $n = 41$ ) of the girls, with 22% ( $n = 24$ ) of these girls reporting being sexually assaulted, five of them within the past year. Personal exposure to any victimization at any time during the four year study was reported by 76% ( $n = 96$ ), with 21% ( $n = 24$ ) of these girls reporting being sexually assaulted; two of the girls reporting assaults within the last year. The relationship between personal exposure to victimization and adolescents’ level of depression in 2002 was significant at  $r = .24, (p < .01)$ . As well in 2003 the relationship between victimization and



**Table 1**  
**Characteristics of Mothers and Daughters from 2002-2004**

| Characteristics  | Mothers<br>200<br>(n =125) | Mothers<br>2003<br>(n =113) | Mothers<br>2004<br>(n =107) | Daughters<br>2002<br>(n =125)        | Daughters<br>2003<br>(n =116) | Daughters<br>2004<br>(n =111) |
|--|----------------------------|-----------------------------|-----------------------------|--------------------------------------|-------------------------------|-------------------------------|
| <b>Gender:</b>   |                            |                             |                             |                                      |                               |                               |
| Female   | 100%                       | 100%                        | 100%                        | 100%                                 | 100%                          | 100%                          |
| <b>Age:</b>  |                            |                             |                             |                                      |                               |                               |
| Mean   | 38.4                       | 39.7                        | 40.7                        | 15.5                                 | 16.5                          | 17.5                          |
| SD   | 4.99                       | 5.05                        | 5.03                        | .99                                  | .99                           | .96                           |
| Range  | 30 - 53                    | 31 - 53                     | 32-54                       | 13 - 17                              | 14-18                         | 15-19                         |
| <b>Race/Ethnicity:</b>                                   |                            |                             |                             |                                      |                               |                               |
| White  | 40.7%                      | 39.8%                       | 40.5%                       | 33.6%                                | 32.2%                         | 34.5%                         |
| Black/African American                                   | 38.2%                      | 38.9%                       | 37.8%                       | 40.8%                                | 41.7%                         | 40.7%                         |
| Hispanic   | 21.1%                      | 21.2%                       | 21.6%                       | 25.6%                                | 26.1%                         | 24.8%                         |
| <b>Marital status:</b>                                   |                            |                             |                             |                                      |                               |                               |
| Married or living as married                             | 12.8%                      | 12.6%                       | 19.6%                       | 0%                                   | .9%                           | 4.5%                          |
| Divorced, Separated, or Widowed                          | 54.4%                      | 50.5%                       | 45.8%                       | 0%                                   | 0%                            | .9%                           |
| Never married  | 32.8%                      | 36.9%                       | 34.6%                       | 100%                                 | 99.1%                         | 94.6%                         |
| <b>Education:</b>  |                            |                             |                             |                                      |                               |                               |
| Dropped out of school                                    | 50.4%                      | 49.6%                       | 42.5%                       | 28.0%                                | 28.7%                         | 33.6%                         |
| Completed high school/GED                                | 49.6%                      | 50.4%                       | 57.5%                       | NA                                   | 5.2%                          | 22.1%                         |
| <b>Length of time on TANF:</b>                           |                            |                             |                             |                                      |                               |                               |
| Less than 6 months                                       | 15.4%                      | 5.5%                        | 6.2%                        | None of the girls received TANF      | 1.7%                          | 6.2%                          |
| Six months to 1 year                                     | 18.7%                      | 8.2%                        | 0%                          |                                      | 9.6%                          | 5.3%                          |
| Over 1 year  | 65.9%                      | 40.9%                       | 26.6%                       |                                      | 0%                            | 15.0%                         |
| Not on TANF  | 0%                         | 45.5%                       | 67.3%                       |                                      | 88.7%                         | 71.7%                         |
| <b>Housing arrangement:</b>                              |                            |                             |                             |                                      |                               |                               |
| Private or public house or apartment                     | 84.0%                      | 73.0%                       | 85.9%                       | All of the girls were living at home | 8.9%                          | 10.6%                         |
| Private house or apartment shared with friends or family | 12.8%                      | 22.6%                       | 15.1%                       |                                      | 2.7%                          | 19.5%                         |
| Other  | 3.2%                       | 4.4%                        | 0%                          |                                      | 0%                            | 0%                            |

**Figure 2**  
**Depression, Perceived Need, and Mental Health Service Use**



depression scores was significant at  $r = .30$ , ( $p < .01$ ) level. In subsequent years the association weakened but remained significant; 2004  $r = .21$  and year 2005  $r = .19$ , ( $p < .05$ ). Adolescents reporting personal victimization in year four were 2.6 times more likely to exceed the threshold for depression at any point during the study compared to adolescents who had not been exposed.

Reports of witnessing or knowing someone bullied, beaten up, robbed, sexually assaulted, shot at, shot, stabbed, or killed were utilized to construct two exposure to community violence variables. The first with (3) low severity items, the second with (5) high severity of violence items. Over the entire length of the study, 93% reported exposure to the low severity of violence, with 90.4% reporting exposure to high severity of violence. Twenty five of the girls (19.8%) reported witnessing someone sexually assaulted. Thirty nine (31%) of the girls reported witnessing someone shot; (20.7%), 26 witnessing someone being killed, and 34 (27%) witnessing a stabbing. A significant relationship was found between exposure to community violence in year 2 of the study and adolescents' level of depression  $\chi^2(1, N = 116) = 14.04$ ,  $p < .001$ . These adolescents were 4.4 times more likely to exceed the threshold on the CES-D compared to adolescents who had not been exposed in that year. In year 3 of the study significant relationships with exposure to violence and depression were also found;  $\chi^2(1, N = 111) = 4.65$ ,  $p = .031$  and in year 4,  $\chi^2(1, N = 115) = 4.97$ ,  $p = .026$ .

In tracking the number of moves by daughters from 2000 to 2004, 35% of daughters ( $n = 41$ ) reported moving at least once during the four-year period while 28% ( $n = 52$ ) reported three or more moves. During this four-year period, the number of moves among these daughters ranged from 1 to 13, averaging 2.9 moves. A significant relationship was not found between the numbers of moves an adolescent experienced and their level of depression. However, adolescents exceeding the threshold on the CES-D moved an average of 3.12 ( $SD = 2.4$ ) times during the previous four years while adolescents below the threshold on the CES-D moved an average of 2.51 times,  $SD = 1.54$ .

The logistic regression analysis demonstrated that the four variable model was not significant, accounting for only 13% of the variance associated with the daughters' depression. However, examination of the individual variables within the model confirmed a statistically significant association of personal victimization with depression ( $p = .01$ ). Moreover, those experiencing victimization were 4.4 times more likely to score above the threshold for depression at any point during the study. Examination of the individual variables within the model confirmed the significant association of the total number of moves with depression.

## Discussion & Conclusion

In summary, the findings regarding the increased prevalence of depression over time are not surprising, when considering the evidence of previous studies on the role of socioeconomic position on depression (Lorant, Deliege, Eaton, Robert, Philippot, & Ansseau, 2003). However, it is surprising that only one of the four predictors was found to be significantly associated with adolescent depression given the dominant findings in the literature. Irrespective of the lack of statistical significance there is still evidence, as shown in Figure 1, that there is a substantial unmet mental health need among these adolescents given the high prevalence rate of depressive symptoms among these girls.

Recently, studies have documented that only half of the people who need mental health services receive treatment (Kessler et al., 2001). Access to mental health care may present an even greater dilemma for adolescents due to lack of appropriate services, fragmented services, missed diagnoses, and stigma that may cause reluctance in seeking help.

The results of this study suggest that an increase in psychological distress due to teen pregnancy, a history of victimization, and multiple moves contributes to depression. Even though a relatively small proportion of the variance has been explained, these variables remain important to consider when attempting to map the developmental pathway of depression in females.

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# **Initiatives Supporting Children with Emotional or Behavioral Challenges in Child Care Settings**

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## **Introduction**

Part of an emerging vision of children's mental health is the provision of comprehensive, community-based services assuring that children and their families can "live, work, and thrive in their communities" (Huang & Mayberg, 2003, p. 1). The attainment of this vision would result in children with emotional disorders being fully integrated into their child care settings. However, there is great variation from state to state in the ways in which children's mental health is addressed and promoted (Knitzer, 2004), how supports are put into place, and how systems of care are built around vulnerable young children (Simpson, Jivanjee, Koroloff, Doerfler, & Garcia, 2001).

State level child care administrators are in a position to build partnerships, lead planning efforts, obtain funding, and implement programs that support the successful inclusion of children with emotional or behavioral challenges in community child care. Therefore, we interviewed a sample of state administrators regarding the structures, initiatives, planning, training, consumer participation and outreach, and funding that enabled inclusive child care settings to flourish and to overcome barriers. This paper focuses on two principal research questions: (a) What training prepares child care providers to work with children with emotional or behavioral challenges, and to what extent are families involved in training? and (b) What initiatives have states taken to provide mental health supports for children with emotional or behavioral challenges in child care settings?

## **Method**

The study used a cross-sectional survey design, with an interview schedule including both closed and open-ended questions. Of the 50 state child care administrators invited to participate in the research, 24 completed hour-long interviews. The majority of participants were female (87.5%) and European-American (83.3%). The age of respondents ranged from 32 to 63 years ( $M = 49.6$ ,  $SD = 6.6$ ), and length of employment in their current position ranged from 1 to 12 years ( $M = 5.2$ ,  $SD = 3.3$ ).

Items in the survey instrument were informed by: a qualitative study on inclusive child care (Brennan, Bradley, Ama, & Cawood, 2003); consultation with an advisory group consisting of child care researchers and practitioners, family members, and mental health experts; and a review of the inclusion and children's mental health literature. The question topics included demographic and job information, administrative structure of child care, planning and major child care initiatives, support for children with mental health challenges, standards, funding, training, and outreach. In addition, participants were asked, on a confidential basis, to report their perceptions of barriers to inclusion and any lessons learned from their own state's experience.

Researchers conducted 2 face-to-face and 22 telephone interviews. All interviews were recorded with permission, and transcripts were prepared. Quantitative data were subjected to descriptive analyses. Two members of the research team coded the qualitative data independently, and then discussed identified themes and developed the coding scheme (Morse, 1994). Any differences in interpretation were resolved by referring to the raw data, and consulting with a third researcher. The software package, NUD\*IST (Qualitative Solutions and Research Pty Ltd, 1993), was used to apply the coding scheme to the data and to link data across interviews.

## Results

Two major areas of initiatives regarding mental health supports emerged in our analysis: the training of child care staff, and the use of specialized consultation.

The majority of respondents reported that their states provided specific training on inclusion in child care settings (83%) and working with children with emotional or behavioral challenges (88%). About two-thirds of respondents (67%) reported that their states combined training in child development and children's mental health. Seventy-one percent reported state initiatives to educate providers about ADA requirements.

Although administrators reported that general training in caring for children with special needs was available, mental health disabilities were not always included. Qualitative data indicated that training for child care staff in children's mental health was often restricted to elective modules completed as part of other training programs. One administrator noted the challenge arising from the failure of some federally funded initiatives to "recognize the importance of the whole child" and the breadth of issues to be addressed in order "to get kids to be cognitively and academically successful."

Participants noted that providers needed appropriate knowledge, skills, and support if they were to respond appropriately to children who have complex needs. This is a challenge in the field since, unlike other providers such as Head Start staff, training is often not mandated for child care workers. The lack of trained personnel with this combination of skills concerned the participants. One administrator noted that, "the biggest void is mental health services and resources, and not having people who understand how to work with children in group settings who have behavioral issues."

Administrators were also asked if the parents, or other family members, of children with mental health needs contributed to state-supported training for child care staff. In this sample, approximately four out of ten states (44%) reported family involvement in training. Roles included training design (21%), training delivery (21%) and training evaluation (4%). Of the states in which parents were involved in training, only 25% of the respondents indicated that family members received payment for their input on the training of child care staff. Other notable examples of parent participation described by interview participants included conference presentations and participation in focus groups. Parents were also involved in outreach efforts through advocacy organizations, designed to prepare family members to take on advocacy roles, and to assist other parents to get more effective services for their children with mental health issues.

In addition to training, administrators discussed the importance of access to expertise that supported child care staff to work with specific children in the child care environment. When asked about the forms of technical assistance offered by the state to child care providers concerning care for children with mental health disorders, 92% of the states offered informational resources, 79% offered telephone consultation, and 79% had face-to-face consultation available. Four major types of consultants provided support for children with mental health challenges: mental health personnel, health consultants, consultants available through child care resource and referral agencies, and inclusion specialists.

The majority of states had mounted initiatives to provide mental health expertise to child care workers who without this support often are isolated; fully 58% of the states supported some form of mental health consultation. One respondent stated, "Providers...don't have the resources or knowledge to deal with some of the issues... [they are facing] with children that might have suffered some sort of abuse or have emotional or behavioral problems. [There is] an increasing need for this type of support." A few states had instituted screening processes that could identify children for early mental health supports, some focused on sending out mental health professionals for onsite direct work with providers, children, and families, and several states used their mental health experts to provide training, technical assistance, and program advice. An administrator talked about program-level consultation: "sometimes it is the situation and not the child. There are too many kids ... or the way they are running their flow of the day interferes with how kids can cope... [The consultants'] hope is...they are building the capacity of the staff."

More frequently, assistance came from health consultants who were supported by 87.5% of the states; 58.3% of the states had health consultants who also addressed children's emotional or behavioral issues. Several states provided public health nurses who made on-site visits to child care facilities, provided direct consultation to providers and parents, conducted mental health training, and supplied telephone guidance for providers through "warm lines." Some health consultants had been given specialized mental health training so, "if the public health nurses need to make a referral, they will know the avenue to make the referral."

Seven of the state administrators talked about the provision of mental health supports through the venue of child care resource and referral agencies. These community-based agencies served as providers of training, as the contracting agency supplying technical assistance through staff nurses or mental health consultants, or as a center that connected families with a wide variety of resources, including mental health supports. "Providers come and take [special needs] training [through Child Care Resource and Referral], but... if there is an issue with a particular child and the provider is having a difficult time adjusting, they can call and we look at sending someone on-site."

A final source of supports for children with mental health needs was through inclusion specialists. For example one state funded more than 15 inclusion coordinators who were available statewide to assist child care providers and families with children with any type of special need. Also very notably Child Care Plus, through the University of Montana, supported inclusive child care through comprehensive training and consulting services for children with a variety of special needs.

## **Conclusion**

In many child care settings, supports for children, families, and staff are absent, and children with mental health challenges are not successfully integrated into the care environment. Indeed, expulsion from care is a fact of life for many families (Emlen, 1997, Gilliam & Shahar, in press). The current study demonstrated that when states plan for and fund initiatives to provide mental health supports for children with challenges and training to child care providers, these children can successfully be included in community-based child care. Supports for children with emotional or behavioral difficulties were provided by consultation delivered by mental health providers, health consultants, child care resource and referral agency staff, and inclusion specialists. Additional research is needed to establish the evidence base for these supportive practices.

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# **Therapeutic Alliance in Pediatric Primary Care and Implications for Mental Health Interventions**

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## **Introduction**

Therapeutic alliance (TA) between doctors and patients is related to treatment outcomes in psychotherapy settings (Martin, 2000; Krupnick et al., 1996). Similarly, TA between pediatricians and mothers may help explain successful outcomes when treating children's mental health problems within primary care. The research described in this summary demonstrates that TA can be reliably assessed in primary care settings and that the underlying constructs are similar to those found in psychotherapy. Therefore, TA may serve as a useful measure of child mental health interventions in primary care.

## **Methods**

This research uses audio-taped interactions between mothers ( $n = 50$ ) and doctors ( $n = 34$ ) using the Vanderbilt Therapeutic Alliance Scale (VTAS; Hartley, 1983). A trained listener independently coded recorded interactions between mothers and doctors from an urban teaching hospital.

Following the visit mothers completed three measures: (a) the General Health Questionnaire (GHQ; Berwick, 1987) for emotional distress; (b) the Conflict Tactics Scale (CTS; Straus 1979) for exposure to family violence; and (c) the Multidimensional Anger Inventory (MAI; Siegel, 1986) for irritability. Mothers with GHQ scores greater than four were considered distressed. Scores above the mean on a seven-item subscale of the MAI indicated that mothers were easily angered. Mothers were considered to have been exposed to severe family violence if they answered on the CTS that at least once or twice in the past year they encountered several threatening situations.

Following the visit, mothers also reported on satisfaction with their child's doctor. Satisfaction questions included the mother's perception of whether or not the doctor knew the mother's agenda, encouraged the mother to talk about her worries and solicited her opinions, could be counted on to set the mother at ease, and whether the doctor clearly explained his/her treatment rationale.

The Roter Interaction Analysis System (RIAS; Roter, 1997) was also used to code interactions between doctors and mothers. RIAS codes classify utterances into categories including information giving, question asking, empathy, and partnership facilitation. RIAS codes were aggregated to develop measures of doctor patient-centeredness, parent participation, and doctor dominance of the conversation (Wissow, 2003).

Principal component factor analysis was used to compare therapeutic alliance among doctors and mothers with a previous VTAS application to youth in a psychotherapy setting; the National Institute of Mental Health Treatment of Depression Collaborative Research Program (TDCPR; Krupnick et al., 1996). Correlations were used to describe the relationship between VTAS scores and other measures. Generalized Estimating Equations (GEE), a form of regression that accounts for the non-independence of observations, was used to explore the construct validity between the VTAS and the RIAS, as well as the previously mentioned measures. The psychometric properties of the VTAS were assessed using Cronbach's alpha and correlations. The study was approved by the Committee on Human Research of Johns Hopkins Bloomberg School of Public Health.

## Results

### VTAS Characteristics

The VTAS consists of three subscales: doctor, patient, and interaction. The total score summing all 38 items had a possible range of 0-190. The scores ranged from 115-181 ( $M = 154$ ,  $SD = 14.5$ ). The VTAS demonstrated good consistency ( $\alpha = .90$ ) and test-retest reliability ( $r = .89$ ). Principal component factor analysis revealed two dimensions which were named the *provider factor* and *patient and interaction factor* which jointly described 41% of the variance. This factor structure was extremely similar to that found in the TDCPR study, accounted for a similar amount of variance, and similar items loaded on each factors of the VTAS. This suggests that the underlying dynamics measured in psychotherapy are comparable to those measured in pediatric primary care.

### Relationship between VTAS and RIAS

The RIAS measure of doctor patient-centeredness correlated most strongly ( $r = 0.46$ ,  $p = .0007$ ) with the doctor subscale of the VTAS and only slightly with the interaction subscale ( $r = .28$ ,  $p = .05$ ). The rapport-building component of patient-centeredness was most strongly associated with the VTAS doctor subscale ( $r = .42$ ,  $p = .002$ ).

The larger the doctors' proportion of talk in a visit, the lower was the VTAS patient subscale ( $r = -.45$ ,  $p = .001$ ). However, the ratio of doctor to mother talk was unrelated to both the doctor ( $r = -.03$ ,  $p = .8$ ) and interaction ( $r = -.25$ ,  $p = .07$ ) VTAS subscales.

### Relationship between VTAS and Mother's Characteristics

There were no significant relationships between mother's age, educational level, or current emotional status with the VTAS scores. When controlling for race, VTAS scores were significantly lower for mothers who reported exposure to family violence and significantly lower among mothers who reported becoming easily angered. When controlling for mother's exposure to family violence and anger, VTAS scores were significantly lower for African-American mothers compared to Caucasian mothers.

The number of emotion statements mothers made was related to the VTAS scores among African-Americans, but doctors' patient centeredness and the relative amounts of doctor and mother talk was not. The opposite was true for Caucasian mothers: doctors' patient centeredness was associated with increased VTAS scores, and a greater amount of doctor talk relative to mother talk was associated with decreased VTAS scores.

### Relationship of VTAS to Mother's Satisfaction

Mothers who strongly agreed that the doctor knew what they wanted to talk about and who felt that the doctor could ease their worries, had visits in which the VTAS total score was significantly higher when compared with less satisfied mothers. This relationship was true after accounting for mother's race.

Table 1 summarizes the difference in VTAS scores as a function of doctor and mother characteristics using GEE.

**Table 1**  
Changes in VTAS Scores for African-American and Caucasian Mothers

| <i>Doctor and Mother Characteristics</i>  | <i>Change in VTAS</i> |               |
|---|-----------------------|---------------|
|   | <i>Total Score</i>    | <i>95% CI</i> |
| Doctor patient centeredness               | 0.016                 | -.01, .04     |
| Mothers' emotion statements               | 0.118                 | .022, .213    |
| Relative amount of doctor and mother talk | -3.09                 | -6.02, -.164  |
| Mother reports family violence            | -8.21                 | -12.9, -3.53  |
| Mother reports being angered easily       | -10.30                | -15.5, -5.13  |
| Doctor knew mothers' agenda               | 10.30                 | 3.4, 17.3     |
| Mother felt doctor could ease her worries | 8.30                  | 1.1, 15.6     |
| Mother African-American                   | -9.19                 | -15.1, -3.34  |

## **Discussion**

This research demonstrates that TA can be reliably and validly measured in pediatric primary care settings. The factor analysis results suggest the underlying construct that describes TA in psychotherapy settings also clearly exists in pediatric primary care. The VTAS may characterize provider and mother characteristics that are essential to eliciting and managing psychosocial problems in primary care. Mothers who are satisfied with their child's doctor and feel a strong alliance may be more likely to disclose psychosocial problems and participate in treatment within a primary care setting.

This study also demonstrated that within primary care, TA is related to the presence of family violence and mothers being easily angered. Research suggests that women exposed to domestic violence are guarded in their disclosures and may fear discussing family violence because of concern that doctors will suspect child abuse (Alpert, 1995). Individuals who feel that they are easily angered may also keep an emotional distance in clinical interactions and may require further probing to discover their psychosocial concerns. Clinicians and researchers must also consider the role of race in TA. These factors may impact the success of child mental health interventions in primary care and must be considered when designing and evaluating mental health interventions. TA may serve as a method to measure both the process and outcomes of mental health interventions that take place in the pediatric primary care setting.

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## **Chapter Seven**

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### **Transition to Adulthood**



# **Symposium**

## **Partnerships for Youth Transition: Evaluating the Planning, Implementation, and Progress/outcomes of Community Initiatives**

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### **Symposium Introduction**

Hewitt B. "Rusty" Clark

During the transition to adulthood period (ages 14-25), all youth and young adults face decisions about future career and educational goals, new social situations and responsibilities, self-management of behavior and alcohol/drug use, and maintenance of supportive friendships and intimate relationships. Young people with serious emotional disturbances (SED) and severe mental illness (SMI) are particularly challenged during this transition period, experiencing some of the poorest secondary school and postsecondary school outcomes among any disability group. Studies have shown that students with SED/SMI drop out of school at a rate that is about three times higher than their peers without disabilities and that, after exiting secondary school through graduation or dropout, they experience about one-third poorer outcomes in securing jobs, about two-thirds poorer outcomes in living on their own, about two-thirds poorer outcomes in accessing post-secondary education, and have about three times higher rates of arrests and incarcerations than youth without disabilities.

The federal policy response to the legislative and policy vacuum regarding youth transition included funding of the Partnerships for Youth Transition (PYT) initiative by the Substance Abuse and Mental Health Services Administration and Department of Education. Five PYT community sites were funded in 2002 for the purpose of planning, developing, implementing, and documenting models of comprehensive, community-based programs to assist in improving the outcomes for youth and young adults with SED/SMI as they enter the period of emerging adulthood. Three sites have adopted the Transition to Independence Process (TIP) model with its seven principles and associated practice elements in its entirety, and two sites have adopted the TIP model with some various modifications<sup>1</sup>.

This symposium provides data on the: (a) processes and instruments used in the planning and implementation of the transition models at the sites; (b) demographic characteristics and experiences; (c) service utilization and satisfaction; and (d) preliminary findings on progress and outcome indicators for the young people. The implementation experiences and findings from across the sites will contribute to the field's instrumentation and knowledge base related to program design, youth and family progress, community partnerships, and system/policy reform.

By means of an assessment instrument that was developed early in the life of the project, an integrated data system was developed and used across all five sites. The National Center on Youth Transition (NCYT) took the lead on working with representatives from all site and national partners in the development of the Transition to Adulthood Assessment Protocol (TAAP) instruments (Davis, Deschênes, Gamache, & Clark, 2004a, 2004b, 2004c). This instrumentation development process drew on an updated literature review, a previous progress tracking instrument (i.e., Clark, Knapp, & Corbett, 1997), and stakeholder focus groups. Some of the data on demographics, service utilization, and progress/outcome on the young people included within each of the following three papers were collected from the TAAP instruments—including the version for capturing historical information on the youth, initial information at the time of his/her entry to the program, and quarterly follow-up on the young person's progress or difficulty during and after involvement with the PYT sites.

#### **Chair**

Hewitt B. "Rusty" Clark

#### **Authors**

Gwendolyn White et al.

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Nicole Deschênes et al.

#### **Discussant**

Maryann Davis

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<sup>1</sup>For more information regarding the TIP model, please visit <http://tip.fmhi.usf.edu>

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## **Utilization of Data from Young People and Other Partners in Implementation of a Transition System**

Gwendolyn White, Sheila Bell, & Robin A. Orlando

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### Introduction

As a Partnership for Youth Transition (PYT) grantee community, Allegheny County System of Care Initiatives (SOCI) has worked with transition-age youth and young adults to inform the overall planning and implementation of a transition system. The goal of the PYT evaluation is to collect, analyse, and disseminate vital information regarding system of care performance and effectiveness in ways that will ensure that the information is used to improve the quality of the service delivery. Hence, data are used to direct change at the program (administrative and direct staff), community, and county levels. This is accomplished through the collaboration of young adults/consumers, community members, families, system partners, and SOCI staff.

There are three evaluation focuses for the PYT project: (a) involving young adults in evaluation, (b) collecting program and outcome data, and (c) collecting information for quality improvement and assurance. The organization of evaluation efforts in these focus areas benefits all stakeholders. The adoption of a utilization-based model of data collection enhances the quality of the program, supports a consumer driven model, and leads to maximum effective use of financial and programmatic resources. This paper addresses how to best maximize partnerships in an evaluation process. It also addresses the question of how evaluation and quality improvement processes and data can be used to inform decision making in a system of care.

### Evaluation Methods & Preliminary Results

**Participants.** Program data collection began with the first referral in March 2004. As of July 2005, 87 young adults have been referred to the program and 43 enrolled. The majority of referrals are from caregivers or are self-referrals from the young adults (58%). The average age of PYT enrollees was 17, with 58% being female. The majority of enrollees were African American (61%) followed by Caucasian (21%). Many of those served (67%) had more than one mental health diagnosis. Currently, the most common diagnoses of PYT enrollees are Major Mood Disorders (63%), Attention Deficit Disorder (37%), and Adjustment Disorders (21%). Other diagnoses include Impulse Disorders, Pervasive Developmental Disorders, Anxiety Disorders, and Drug Abuse and Dependence.



**Program Data Collection.** In addition to the Transition to Adulthood Assessment Protocol (TAAP; Davis, Deschênes, Gamache, & Clark, 2004a, 2004b, 2004c) assessments described in the introduction to this symposium, SOCI has added measures that assess consumer risk, needs and strengths. These data are collected by program staff. The Consumer Risk Assessment, developed by SOCI staff, is administered when screening an individual for intake into the PYT program. It assesses various risk factors the youth may be facing such as homelessness, multi-system involvement, school dropout, and unemployment. These data help program supervisors with the initial planning phases for a new enrollee and also help to prioritize enrollment when service coordinators are at or near capacity. The Young Adult Needs and Strengths Assessment (Lyons, 2003) collects information on the young adult's needs, strengths and culture and is used for service planning. Data are collected at enrollment and every six months until disenrollment. The Consumer Strengths Discovery instrument is a qualitative tool that asks young adults about their hopes and dreams for the future as well as their general goals for their lives. It is used for service planning and is administered at intake and prior to each consumer support team meeting.

Consistent with the findings of national studies, program data show that in Allegheny County young adults with emotional and behavioral disorders (EBD) are subject to a number of risk factors in their homes and communities. Table 1 illustrates risk factors reported by enrollees ( $N = 43$ ) in the PYT program.

**Table 1**  
**Risk Factors**

| <i>Risk Factors</i>                                       | <i>Percentages<br/>(N = 43)</i> |
|---|---------------------------------|
| Have a Parent with a Mental Illness                       | 56%                             |
| Experienced Abuse (Physical and/or Sexual) and/or Neglect | 37%                             |
| Have Experienced Homelessness                             | 19%                             |
| Have Children   | 19%                             |
| Live in Temporary Situations                              | 27%                             |
| Dropped Out of High School                                | 29%                             |
| Have No Sources of Income                                 | 29%                             |
| Are Addicted to Drugs and/or Alcohol                      | 9%                              |
| Have a Parent Convicted of a Crime                        | 37%                             |
| Do Not Have Adequate Transportation to Work/School        | 33%                             |

**Outcome Data Collection.** In addition to program data, SOCI has initiated a longitudinal study to collect outcomes data over a two year period with young adults who consent to participate. Data are collected within 30 days of enrollment into PYT and every six months through the end of the grant. The study was designed to collect information similar to that collected under the Substance Abuse and Mental Health Services Administration Center for Mental Health Services system of care grant initiative so comparisons between the younger and older populations could be made. Data in the PYT outcomes study are collected in the following areas: perceptions of opportunities, substance use/abuse, exposure to violence, delinquency, functioning, sexuality, service history, and cultural competency.

Preliminary baseline findings ( $N = 25$ ) indicate a high level of trauma experienced by the young adults being served. Ninety-six percent have witnessed a physical attack on another person; while 44% have been the victim of a physical attack. More than half (56%) report that they had been the victim of emotional or verbal abuse. Twenty-four percent have been the victim of physical abuse and 24% of the females have been raped or experienced an attempted rape. Many (48%) of the young adults report suicide ideation and 28% have attempted suicide.

**Quality Improvement Data Collection.** SOCI is dedicated to fulfilling its mission and expressing its values through a process of continuous quality improvement (CQI). This process involves the constant

monitoring of various aspects of service delivery and outcomes. It is facilitated by the evaluation, operations, family support, community organization, and training and technical assistance staff at the SOCI central office and also by the SOCI partner communities and the SOCI Community Evaluation Team (CET). To monitor fidelity to the SOCI practice model, SOCI staff created several tools to collect information about how SOCI works and whether consumers/families like how it works (see Table 2).

**Table 2**  
**Continuous Quality Improvement Tools**

| <i>Tools</i>  | <i>Description</i>  |
|---|---|
| <b>Consumer/Family Service/Support Team Satisfaction Survey</b> | Distributed to all participants in a service/support team to gauge their satisfaction with the meeting process.   |
| <b>Initial Meeting Observation Form</b>                         | Program Supervisors complete this form by observing one initial meeting per service coordination staff per month. Results are used to supervise and coach staff in their interactions with consumers/families. Rates how well staff implements SOCI values.   |
| <b>Team Meeting Observation Form</b>                            | Program Supervisors complete this form by observing one team meeting per service coordination staff per month (either in person or by videotape). Results are used to supervise and coach staff on how to conduct a team meeting according to the SOCI practice model.  |
| <b>Site Visit / Record / Case Review Tool</b>                   | Completed annually as part of an annual site visit to all partner communities by the SOCI Central Office. Used to analyze records for documentation, service/support plan implementation and consumer/family program involvement. Also used monthly by Program Supervisors to discuss individual cases with staff.  |
| <b>SOCI CQI Survey</b>  | Distributed to all SOCI stakeholders, including consumers and families, annually. Assesses the overall system of care, including how well SOCI is meeting its goals and implementing its values.  |
| <b>Advisory Board Satisfaction Survey</b>                       | Distributed after each quarterly advisory board meeting in each partner community. Results are used to inform boards what works well for them and where they could make changes.  |
| <b>Community Review/ Site Visit</b>                             | Annually, each partner community is required to participate in a site visit conducted by a team of central office staff. The site visit is conducted over a two day period and reviews the various components of the SOCI value based service process: operations, family engagement, community outreach and partnership, documentation, and information system management. |

Satisfaction with support team meetings has been high among young adults, families and system partners ( $N = 63$ ). Ninety-five percent agreed that the service plan was helping the young adult to become independent. More than half (67%) strongly agreed that the right people attended the team meeting. Eighty percent strongly agreed that the team was a good cultural match and that their input was respected and valued.

**Youth Involvement in Evaluation.** PYT involves youth in evaluation in several key ways. Young Adults are asked for their opinions through various evaluation methods including surveys and focus groups. These consumers are also represented on the SOCI Community Evaluation Team (CET; a group of stakeholders including youth, families, community members, and system partners that meets once a month to discuss evaluation and quality improvement issues for the system of care). The CET ensures that young adults review outcomes and quality improvement instruments/surveys prior to administering them. Finally, educational opportunities for young adults on evaluation and quality improvement are provided. These trainings include information on how data can be used for practical purposes in their lives such as advocacy activities.

## **Conclusion**

The preliminary data from serving young adults in transition indicates that Allegheny County is serving a population that is multi-system involved. The data also reflect the expected risk factors for this population. Allegheny County has used data collected from young adult consumers to design a system delivery process. This “way of doing business” has a high satisfaction rate among consumers, their family members, and other stakeholders. We have found that applying the expertise of young adults in all aspects of program development and delivery has a significant impact on the quality of decision making.

A number of conclusions and recommendations can be drawn from our experience and preliminary findings:

1. Input from consumers and individuals served can be obtained in a variety of manners and is invaluable
2. Only collect information that is useful. This lessens the burden and intrusion on the consumer and increases their willingness to participate in evaluation.
3. Approach data as a tool to be used by consumers, staff, system partners, and funders.
4. Tie data collection and tools to values and philosophies identified by young adults, family members, and stakeholders. This is an informative and worthwhile process that enriches the data collected.
5. It is best practice to incorporate evaluation into every component of service delivery including, but not limited to: operations, technical assistance and training, social marketing, and information management. In this way, data are an integral part of total quality improvement and have an optimal impact on the lives of young adults.

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## **Enhancing a Transition System Through Process and Outcome Data: Methodology and Findings**

Nancy Koroloff, Lyn Gordon & Michael Pullmann

### **Introduction**

The Clark County, Washington, Department of Community Services & Corrections has established *Options*, a Partnerships for Youth Transition (PYT) project site. The goal of the *Options* project is to build an enhanced system of treatment to address the particular difficulties that youth with serious emotional disturbance/serious emotional illness (SED/SMI) face in making a successful transition to adulthood. This comprehensive continuum of services is built upon existing programs and works to bridge gaps between the children's mental health system and the adult mental health system.

The program, based upon the Transition to Independence Process (TIP) model, focuses on the life domains of youth that are most critical during the transition years: education, employment, housing, and community life functioning. Program staff include three transition specialists, one job developer, and an employment specialist (or a transition specialist). They work with youth in flexible, innovative, non-clinical ways. Youth are referred to *Options* from *Connections* (a specialized mental health program based in juvenile justice) and Catholic Community Services (a provider of crisis and intensive mental health services). Youth qualify if they are age 14-25, meet criteria for a mental health diagnosis, and are at imminent risk of out-of-home placement or homelessness.

As part of *Options*, researchers at the Regional Research Institute for Human Services, Portland State University, are conducting a process and outcome evaluation. This paper presents preliminary findings from this evaluation.

### **Process Evaluation**

As of March, 2005, 101 youth had been referred to the *Options* program, and 47 were actively enrolled. Of the remainder, 11 had chosen not to participate or were otherwise not engaged in services. In 19 cases, the transition specialist and youth were still in the process of developing a relationship, and the youth had not yet decided whether to join the program. The rest of the youth had either been closed out of services or were on a wait list.

All 47 of the participating youth had identified goals in the area of Community Life Adjustment. Youth could identify goals in multiple domains, and 26 had articulated goals related to their education. Twenty-seven were interested in obtaining employment, and 11 were looking for independent housing. Of the 47 youth active in *Options*, all had completed an initial assessment and 40 had completed a success plan. Twenty-two of the youth had also completed the Core Gift process, a series of activities that helps youth determine what their contribution to society will be. Core Gifts is intended to encourage self respect and build hope for the future. Of the 47 youth in the program in March, four were in drug and alcohol treatment, seven were in detention or jail, three were on the run, and four were parenting.

The ongoing process evaluation has yielded many findings that have been helpful in planning for and modifying the program. During the first and second years of the program, focus groups were conducted with youth and caregivers, key stakeholders completed surveys, staff were interviewed, and a system-wide network analysis of most service provider organizations that have contact with transition-age youth was completed. Focus groups with youth in *Options* were conducted by a university-based researcher and a youth researcher who had experience as a consumer of mental health services. The youth were overwhelmingly positive about the *Options* program. Key findings suggest that, in general, these youth:

- Greatly appreciated an unconventional, friendly, non-clinical approach,
- Appreciated concrete help with employment and education,
- Felt supported by transition specialists in wraparound team meetings, and
- Did not want their parent to have significant involvement in *Options*.

Focus groups with caregivers were conducted by a university-based researcher and a family member/ researcher. Caregivers were also quite satisfied with the program, having mentioned that Options was successful with their child and could be supportive of them. A few complained they did not have as much involvement in the program as they would have liked. Ongoing process evaluation methods include a quarterly telephone interview with youth to assess their level of involvement and satisfaction with services. Detailed staff activity data are also recorded by the transition specialists. In addition, a brief one-time interview is planned to capture needs as well as satisfaction of family members with the Options program. As soon as six months worth of data are collected, a report will be prepared for the program.

**Outcome Evaluation**

The Options evaluation is part of a national, five-site evaluation. Transition specialists complete regular youth assessments. A historical/initial Transition to Adulthood Assessment Protocol (TAAP; Davis, Deschênes, Gamache, & Clark, 2004a, 2004b, 2004c) is collected at intake into the program, and quarterly assessments are completed every 90 days thereafter. These assessments collect descriptive information; educational information; employment history and status; financial information; legal history and status; residential history and status; mental health history and status; substance abuse and dependence status; public agency involvement; and satisfaction with services.

Table 1 illustrates the findings for the first 32 youth who completed both the historical/initial assessment and the first 90 day assessment.

This preliminary evidence suggests youth involved in Options show increasing rates of employment and GED completion and a decrease in recent arrests. Current living situation appears to be slightly more stable with no youth homeless for three months. However, four youth were housed in correction settings, possibly the result of adjudication of a crime committed before entering Options. These findings are preliminary and the sample size is small—however, the trends are in a positive direction and are consistent with the data reported by the National Center on Youth Transition.

In summary, Options is a unique program intended to address the needs of transition-age youth. It has promising outcomes—in general, youth and families are satisfied with the program, and youth have increasing success at home, at school, at work, and in the community.

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**Table 1**  
**Intake and First Quarter Outcomes for Options Youth (n=32)**

|                                       | <i>Historical/Intake</i> | <i>3-month follow up</i> |
|---------------------------------------|--------------------------|--------------------------|
| In school/GED/on hold                 | 24 (75%)                 | 21 (66%)                 |
| Graduated/received GED                | 4 (13%)                  | 7 (22%)                  |
| Dropped out                           | 4 (13%)                  | 4 (13%)                  |
| Currently employed                    | 3 (9%)                   | 9 (28%)                  |
| Arrested during previous 90 days      | 15 (47%)                 | 10 (31%)                 |
| Current living situation              |                          |                          |
| With family involved in upbringing    | 21 (66%)                 | 20 (63%)                 |
| With spouse/partner                   | —                        | 2 (6%)                   |
| Friend's home—temporary               | 3 (9%)                   | 1 (3%)                   |
| Foster care/group home                | 2 (6%)                   | 2 (6%)                   |
| Substance abuse residential treatment | —                        | 1 (3%)                   |
| Corrections setting                   | 1 (3%)                   | 4 (13%)                  |
| Homeless                              | 2 (6%)                   | —                        |
| Other/don't know                      | 2 (6%)                   | —                        |

## **An Analysis of Partnerships for Youth Transition (PYT) Cross-site Findings: Demographics, Progress, and Outcome Data**

Nicole Deschênes, Peter Gamache & Hewitt B. "Rusty" Clark

### **Introduction**

This paper describes how the Transition to Adulthood Assessment Protocol (TAAP; Davis, Deschênes, Gamache, & Clark, 2004a, 2004b, 2004c) battery was developed and is being applied, and provides findings from the preliminary data being analyzed across the five Partnerships for Youth Transition (PYT) sites containing approximately 349 youth and young adults.

### **Methods**

The TAAP instruments were developed such that practitioners, educators, transition facilitators, and others working with a young person would be able to examine the results and use the information for: (a) identifying areas of progress and/or difficulty the young person is experiencing over time; (b) formulating or modifying the services and supports he/she needs in order to achieve his/her current goals; and (c) guiding future person-centered planning to adjust or create new goals with him/her.

To track young people's progress, practitioners and program managers can utilize the growing body of information gathered directly from the instruments over time (e.g., before, during, and after being served by a transition program). By examining the responses to key items illustrating progress and/or difficulty in transition, a pattern emerges over subsequent interviews to illustrate the young person's transition experience. To examine the effectiveness of their program in serving these youth and young adults over time, program managers and other stakeholders can also aggregate the responses across the young people on key items illustrating progress and/or difficulty in transition across the areas listed previously (e.g., prior to entry to the program 68% of young people were employed and/or in school, whereas after the program 92% of these same individuals are now productively engaged).

The TAAP instruments were developed through a process involving the researchers from the National Center on Youth Transition, a researcher from the University of Massachusetts Medical School, and representatives from the PYT community sites and PYT national partners. The creation of TAAP was begun with an extensive literature search and review of existing instruments to assist in the identification of data elements relevant to the adjustment status and community life progress of transition-age young people. The common data elements gleaned from these sources contributed to a focus group process involving PYT site and national partner representatives experienced in work with transition-age young people and their families (e.g., young people, parents, direct service personnel and educators, program managers, and administrators). This process yielded sets of common data elements judged to be relevant to: (a) the tracking of progress and/or difficulty that the young person experiences across the transition domains of employment, educational opportunities, living situation, and personal adjustment and community-life functioning; and (b) the types of services and supports required to assist these young people with serious emotional disturbance/serious mental illness (SED/SMI) and their families.

Social Solutions On Line was contracted to handle the data management portion of the PYT project. Data are entered into the company's proprietary, Web-based Efforts-To-Outcomes (ETO) Software™. ETO Software™ is a "customizable, web-based service management tool that relates an organization's efforts to the accomplishment of user-defined outcomes" (Social Solutions, 2004).

### **Results**

Of the data presented from the ETO software system, selected aggregate demographic data ( $N = 349$ ) show that the PYT initiative had enrolled 57.2% males and 42.8% females. Correspondent percentages on race/ethnicity included 55.1% Caucasian, 5.7% Hispanic, 4% African-American, 2.6% Native American, 1.1% each for Asian and Other, and 30.4% Unanswered. Age at intake was 43.4% 16-20,

29.1% 21-25; and 27.5% Unanswered. Marital status included 59.7% Single; 0.6% Married; 0.3% each for Domestic Partner, Separated, and Widowed; and 38.8% Unanswered.

The graphical output of documented legal activity data was selected to show the specificity of information gained from the system. This measure included the responses relating to arrests for felony charges (6.5%), misdemeanor charges (10.9%), nuisance status/petty charges (3.0%), and unknown seriousness of the charges (2.5%). Additional response percentages showed a significant proportion of young adults that had been placed on probation, parole, or other community control (10.7%), had been physically abused (11.2%), or had been sexually abused/assaulted (12.3%).

Early findings of progress illustrate changes from baseline to 2nd quarter (180 day) involvement. Variables of interest included daily living skills, homeless status and events, education status, and employment status and events. Significant improvements were seen in most daily living skills, which included baseline to 2nd quarter comparisons of doing own laundry most of the time (62.5% to 60.4%), paying own bills most of the time (12.5% to 29.2%), cooking for one's self most of the time (43.7% to 52.1%), having the ability to get around the community as necessary (35.4% to 54.2%), shopping for essentials most of the time (25% to 41.7%), taking medications as prescribed or as instructed on medication containers (64.6% to 73%), and cleaning one's own room or apartment (29.2% to 68.8%).

Findings for homeless status and events showed a promising overall trend, with baseline to 2nd quarter comparisons yielding a decrease in current homelessness (4.2% to 2.1%), less frequent movement that was not due to incarceration or treatment setting (16.7% to 12.5%), and decreases (4.2% to 2.1%) in having been kicked out of or turned away from one's home/residence, and having run away from one's home/residence.

Education status changes included baseline to 2nd quarter comparisons, with a slight decrease in enrollment in high school, vocational/technical school, or GED program (83.3% to 79.2%), and gains in enrollment in postsecondary school (6.3% to 8.3%), graduation from high school or receipt of a Certificate of Completion or GED (12.5% to 16.7%), and a slight decrease in having permanently dropped out of a high school or vocational/technical school (22.9% to 20.8%).

Employment status results showed an increase in current employment (20.8% to 35.4% from baseline to 2nd quarter), and second quarter events included the attainment of a new job or new employer (33.3%), promotion or receipt of a wage increase (6.3%), having left one's job voluntary (20.8%), and having been fired or laid off (10.4%).

## **Discussion**

The preliminary demographic and progression findings showed that these youth and young adults experienced significant life event changes. While it is too early to draw definitive conclusions from this sample, the percentage changes thus far show an overall improvement trend in daily living skills, homeless status and events, education status, and employment outcome indicators.

Next steps include ongoing data integrity assurance, further data analyses (e.g., multiple demographic characteristics and service utilization outcomes), a process evaluation (i.e., efforts to ensure fidelity, barriers, and coordination), the development of a program manual, and sustainability support to include advocacy, additional collaborations, and public support. For additional information, please visit our two websites: <http://ncty.fmhi.usf.edu> and <http://tip.fmhi.usf.edu>

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## Symposium Discussion

### Maryann Davis

The Partnerships for Youth Transition (PYT) grant program provides a rich opportunity to inform practice and research and knowledge regarding a grossly understudied population: youth with serious mental health conditions transitioning into adulthood. One challenge in studying this population is that there are few transition support programs for them across the country (Davis & Sondheimer, 2005; Davis, Geller & Hunt, submitted), which produces few opportunities to enroll them in studies, or to study the interventions used. The PYT program remedies this by having five sites that can enroll young people, provide innovative services to them, and examine innovative research approaches.

Another challenge in studying services for this population is the difficulty in finding meaningful existing instruments to measure changes in individual functioning and well being. Most instruments that measure functioning do so only with children (i.e., up to age 18), or only with adults (i.e., age 18 and older). While some adult instruments can be applied to those 16 and older, they are generally not designed to measure the acquisition of new functional capacities that are so typical of the transition period, and do not include family functioning (except as parents). Thus, a new instrument had to be developed for this grant project that would capture functional changes for this age group in a meaningful way.

The Transition to Adulthood Assessment Protocol (TAAP; Davis, Deschênes, Gamache, & Clark, 2004a, 2004b, 2004c) package has great face validity, inquiring about concrete areas of functioning with apparent meaning (e.g., was enrolled in any of a variety of educational settings, was living in a variety of settings, does own laundry most of the time). Unfortunately, the response of “typical” young people to these questions, which helps identify concerning responses, is unknown. Some items are significant by their nature (e.g., is currently homeless), but the significance of others is less apparent (e.g., mental health condition has interfered “some” since the last interview). Thus, the PYT programs provide an opportunity to examine the variability of these items within this population—and identify which ones vary over time, and which are intercorrelated. By the end of the grant period it may also be possible to identify which variables correlate with treatment.

These papers also indicate some unique characteristics of working with this age group. For example, Clark County’s report that youth felt that minimizing family involvement in treatment was valuable, whereas family members were frustrated by this, is important to document so that others can anticipate this tension. Furthermore, this may be a variable that is important to test in the future; for whom or when does greater or lesser family involvement work best? There are numerous variables that might be important to examine in relationship to appropriate level of family involvement: youth’s level of psychosocial development, quality of relationship with parental figures, quality of peer relationships, or feelings of self-sufficiency, among others.



Along a similar vein, both programs described in this symposium have demonstrated the importance of youth involvement in the research process—in helping design instruments, collect data through focus groups, and interpret data and findings. These programs will continue to provide valuable contributions to the growing knowledge base about serving and researching youth in transition to adulthood.

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# **Using the NCS to Answer Questions about the Transition to Adulthood**

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## **Symposium Introduction**

**Maryann Davis**

One challenge to conducting research on the transition from adolescence to adulthood among individuals with serious mental health conditions is that most large scale studies that could shed light on transition issues study youth up to age 18 or adults age 18 and older. Thus, one of the avenues for developing a rapid knowledge base, namely utilizing existing databases, is largely limited for transition issues because of the unavailability of data for ages before or after 18. In this regard the National Comorbidity Study (NCS; Kessler, 1994) is appealing. It is a large, nationally representative household survey of 15-54 year olds that used structured diagnostic research instruments to assess mental health and substance abuse diagnoses. It included daily functioning questions relevant to both adolescents and adults (e.g. inquired about school, work, family life). Further, it is publicly available, with good documentation. A second NCS has been conducted and will soon be publicly available.

This symposium summary describes the methodology of the NCS and some examples of its use for addressing transition issues. The first paper details the methodology of the NCS and highlights methodological issues particular to transition. The second paper asks the question: when do the changes of the transition period end and when does mature adulthood begin among individuals with psychiatric disorders? The third paper examines parenting issues among young women, focusing on those with post-traumatic stress disorder. The last paper raises issues of using the NCS to examine criminal activity, which is particularly relevant to the transition-age population.

## **Reference**

Kessler, R. C. (1994). The National Comorbidity Survey of the United States. *International Review of Psychiatry*, 6(4), 365-376.

## **Overview of the Baseline NCS Methodology**

**Bernice Fernandes & Valerie Williams**

### **Background**

The analyses described in this summary used data from respondents in the Part II subsample of the Baseline National Comorbidity Survey (NCS; Kessler, 1994). Conducted from 1990 to 1992, the Baseline NCS was the first nationally representative mental health survey in the U.S. to employ a fully structured research diagnostic interview to assess the prevalences and correlates of DSM-III-R disorders and patterns and correlates of service utilization for these disorders (e.g., Kessler, 1994). Sponsored by the National Institute of Mental Health, the National Institute on Drug Abuse, and the W.T. Grant Foundation, the Baseline NCS Interview Schedule employed a face-to-face structured interview that was administered to a nationally representative household sample of 8,098 non-institutionalized, civilian persons aged 15 to 54 in the 48 contiguous states. Respondents were drawn from a nationally representative, stratified, multi-stage, area probability sample of persons in this age range in the non-institutionalized civilian population, including a supplemental sample of students living in campus group housing (Kessler et al., 1997a). The inclusion of individuals as young as 15, compared to the 18 year old lower age limit used in most general population surveys at the time, was based on an interest in minimizing recall bias of early-onset psychiatric disorders (Kessler et al., 1997b).

### **Chair**

**Maryann Davis**

### **Authors**

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**Joanne Nicholson et al.**

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### **Discussant**

**Steven M. Banks**

The NCS data have been one of the main sources of estimates of treatment need in the United States (U.S. Department of Health and Human Services, 2000) and have been used to address research questions regarding lifetime and 12-month prevalence of psychiatric disorders (e.g., Kessler et al., 1994a; Kessler, Sonnega, Bromet, Hughes & Nelson, 1995; Kessler et al., 1997b, 1997c), gender (e.g., Kessler et al., 1994b; Silverstein, 1999; Sheikh, Leskin & Klein, 2002), socioeconomic status (Bassuk, Bruckner, Perloff & Bassuk, 1998; Katz, Kessler, Frank, Leaf, & Lin, 1997; Mutaner, Eaton, Diala, Kessler & Sorlie, 1998; Wells, Klap, Koike & Sherbourne 2001), family formation and stability (Forthofer, Kessler, Story, & Gotlib, 1996; Kessler et al., 1997a; Kessler, Walters & Forthofer, 1998), and interpersonal relationships (Zlotnik, Kohn, Keitner & Della Grotto, 2000), among others (e.g., Kessler & Frank, 1997; Kessler, Molnar, Feurer & Applebaum, 2001; Molnar, Berkman & Buka, 2001). The main content areas of the NCS include demographic characteristics, activities of daily life, mental and physical health status, history of substance use and abuse, marriage, employment, home and work, children, life event history, and family.

## **Methodological Details**

NCS data were adjusted for non-response, variation in the probability of selection, and to approximate national population distributions (National Health Interview Survey; NHIS, 1989). With the exception of nonaffective psychosis, *DSM-III-R* diagnoses in the NCS were assigned based on structured interviews using a modification of the Composite International Diagnostic Interview (CIDI; World Health Organization, 1990), and the University of Michigan Composite International Diagnostic Interview (UM-CIDI; WHO, 1990). Nonaffective psychosis diagnoses were determined in re-interviews by experienced clinicians, following a screen for psychotic symptoms and using an adapted version of the Structured Clinical Interview for DSM-III-R (Kessler et al., 1994a).

The NCS interview was administered in two parts. Part I contained the core diagnostic interview, a brief risk factor battery, and items related to sociodemographic background information. Part II contained a much more detailed risk factor battery. Part I was administered to 8,098 respondents, while Part II was administered to a subsample of respondents consisting of all those in the age range 15-24 (99.4% of whom completed Part II), all others who screened positive for any lifetime diagnosis in Part I (98.1% of whom completed Part II), and a random subsample of other respondents (99.0% of whom completed Part II).

## **Strengths of the NCS**

The main strengths of the NCS include its size (Part II subsample  $n = 5,877$ ), representativeness, use of standardized diagnostic tools to assess psychiatric and substance abuse symptomatology, and use of experienced and well trained interviewers for data collection. Its public availability and detailed documentation facilitate its use to address a range of research questions. The wide age range (15-54 years) allows for the examination of individuals in both the adolescent and young adult stages of the transition to adulthood, as well as for comparisons against individuals in other adult age groups.

## **Limitations of the NCS**

Because these data are cross-sectional, it is not possible to disentangle the timing and relationships among variables. In addition, these data are vulnerable to all of the weaknesses of retrospective self-report data. Because the data are representative of individuals living in the community, important institutional populations are not present in the data (e.g. long term residential settings, jails).

## NCS-2 and NCS-R

Respondents in the baseline NCS were re-interviewed in 2001-02 (NCS-2) to collect information about changes in mental disorders, substance use disorders, and their predictors and consequences over the ten intervening years. This information would allow for the study of patterns and predictors of the course of mental and substance use disorders. The interview schedule for the NCS-2 was administered using computer-assisted-personal interviewing (CAPI; National Comorbidity Survey, n.d.) with a pre-loaded customized file for each individual that automatically pulled in relevant information about the respondent's reports in the Baseline NCS and used this information to customize skip patterns.

The NCS Replication Survey (NCS-R) was carried out in conjunction with the NCS-2 (2001-2002). The NCS-R drew from a separate national sample of 10,000 respondents aged 18 years or older. The goals of NCS-R were to study trends in a wide range of variables assessed in the Baseline NCS (replicate) and to obtain more in-depth information in some areas new to the NCS-R (expand). The interview schedule used in the NCS-R is a fully structured face-to-face interview that was administered by trained lay interviewers. As with the NCS-2, the NCS-R was administered using CAPI.

## Accessing the Baseline NCS Dataset

NCS data can be accessed through the Internet on the Inter-university Consortium for Political and Social Research (ICPSR) website at: <http://webapp.icpsr.umich.edu/cocoon/SAMHDA-DISPLAY/06693.xml>

ICPSR provides an easily accessible public use file system containing all of the documents from the Baseline NCS and those relating to other data collection efforts in the NCS Program (e.g., NCS-2). This system is updated on a regular basis and also serves as an archive for paper abstracts and other NCS-related publications.

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## **Development Doesn't Stop at 18: Developmental Differences between Young and Less Young Adults**

**Maryann Davis & Valerie Williams**

*Acknowledgement: The Substance Abuse and Mental Health Data Archive and Inter-University Consortium for Political and Social Research at the University of Michigan provided these data.*

### **Introduction**

The age at which the transition from adolescence into adulthood is completed in current society extends well into the twenties and some argue into the thirties (Settersten, Furstenberg, Jr., & Rumbaut, 2005). Adult mental health systems, then, serve individuals at a critical developmental stage—young adulthood. Functional outcomes during young adulthood are appalling for youth with psychiatric disorders (e.g. Armstrong, Dedrick, & Greenbaum, 2003; David & Vander Stoep, 1997; Meich et al., 1999; Vander Stoep, et al., 2000; Wagner, 1995). Few specialized services for young adults are offered in adult mental health systems, and there is generally an absence of a developmental perspective (Davis & Hunt, 2005). The present study examined evidence that young adulthood is a developmentally different stage of life than older adulthood. By examining areas of individual functioning that are relevant to mental health treatment, we asked the following questions:

Question 1. Does individual functioning differ across adult age groups among individuals with psychiatric disorders?

Question 2. Is the rate of developmental change different in younger than older adults with psychiatric disorders?

### **Method**

#### **Subjects**

The present study examined National Comorbidity Survey (NCS; Kessler, 1994) respondents aged 18-54 with a current (12 month) psychiatric diagnosis (substance use disorders were not considered psychiatric disorders). The sample ( $N = 1,110$ ) was 75.9% White non-Hispanic, and 34.8% male. Pearson's Chi Square analysis indicated significant age differences in race, with younger groups containing more minority groups,  $\chi^2(df = 15) = 29.2, p = .015$ , but no gender differences,  $\chi^2(df = 5) = 7.4, p > .10$ .

#### **Statistical Methods**

Data were weighted to provide a national picture (see Kessler, 1994). Daily engagement, income and social functioning were analyzed. Variables were set to reflect typical young adult functioning (not working, never married, in school, etc.). Attending school and working were measures of daily engagement. Respondents were considered enrolled in school if they indicated they were a student (full or part time). Respondents were considered not working if they were not currently employed (full or part time), or not on temporary leave. Living at or below the Federal poverty level was used as the measure of income, and having daily contact with friends and having never married were used as measures of social functioning.

Pearson's Chi-square analyses (Cochran, 1952) were used to examine Question 1, by comparing younger (18-30 years old,  $N = 546$ ) to older (35-54 years old,  $N = 563$ ) respondents. Multiple regression analyses were used for Question 2 to examine the contributions of sex and race to age differences. These findings are preliminary in that weights have not been applied to correct for the level of significance due to inflation of standard errors caused by complex sampling. Quangles (Kotz & Johnson, 1981) were used to examine the point at which rates of change diminished. The quangle is the most efficient analytic procedure for detecting a single shift in mean level of a sequence of observations (e.g. rates

over an age range). The observed rates for each age produce a sequence of rates over the age range. The quangle procedure starts by identifying the range of the rates, and defines both the minimum value and maximum value. Once these values have been identified, the rates (e.g. employment) are transformed into an angle  $\Theta$ , by the formula:

$$\Theta = \pi/2 + (\pi * (\text{rate} - \text{min}) / (\text{max} - \text{min}))$$

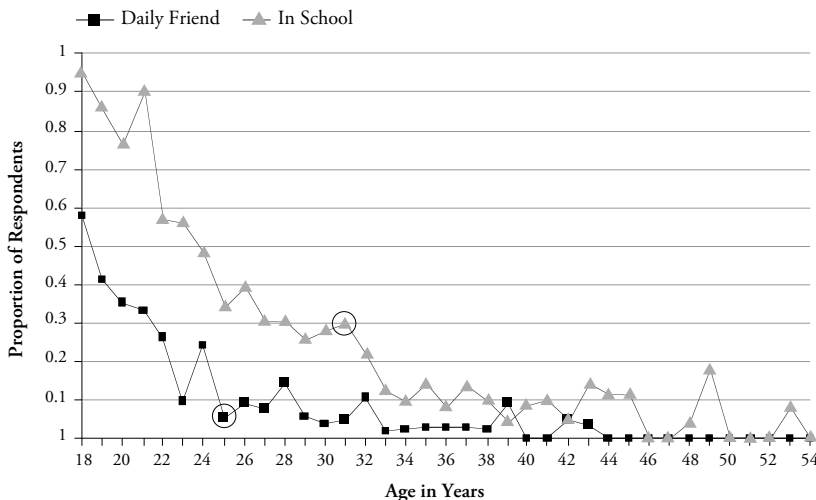
A unit vector is then constructed, with co-ordinates  $(\cos(\Theta), \sin(\Theta))$ , for each rate and these vectors are summed and plotted. Though the quangle provides an appealing *visual* representation of a change-point, it does not provide a statistical test associated with the significance of the change point.

## Results

More young adults were still in school (21.8% vs. 2.0%), living below poverty level (24.2% vs. 8.9%), not married (55.0% vs. 29.5%), and having daily contact with friends (33.0% vs. 18.3%) than older adults,  $\chi^2(df=1) = 31.4-105.5$ , 2-sided  $p < .001$ . Not working approached significance (31.0% vs. 24.7%),  $\chi^2(df=1) = 5.5$ , 2-sided  $p = .019$ , but because this analysis did not adjust the variance to account for the design effect, this finding should be considered cautiously.

Multiple Regression analyses indicated that age was a significant factor in predicting each of the areas of functioning (see Figures 1 & 2). Age was the only significant factor (among age, race, and gender) predicting being in school (Adjusted  $R^2 = .128$ ,  $F(1,1276) = 188.3$ ,  $p < .001$ ), and having daily contact with friends (Adjusted  $R^2 = .033$ ,  $F(1,1276) = 45.0$ ,  $p < .001$ , see Figure 1). Never having married was affected by age and gender (Adjusted  $R^2 = .075$ ,  $F(2,1276) = 52.9$ ,  $p < .001$ ), in which the rate of never having married changed more quickly and variably for males from ages 18-28, and more gradually and steadily for females from ages 18-30. Generally more women than men had married prior to age 28, whereas both genders tended to have been married at equal rates among those age 30 and older. Not working (Adjusted  $R^2 = .026$ ,  $F(3,1276) = 12.2$ ,  $p < .001$ ) and living below poverty level (Adjusted  $R^2 = .056$ ,  $F(3,1276) = 25.3$ ,  $p < .001$ ; see Figure 2) were affected by age, gender, and race. It is beyond the scope of this paper to describe in detail these 3-way interactions, suffice it to say that race and gender have strong effects on working and living in poverty throughout the age spectrum.

**Figure 1**  
**Proportion of Respondents with Current Psychiatric Disorders**  
**having Daily Contact with Friends, and Enrolled in School at each Adult Age**



Note. Circled points indicate point at which rate of change has leveled off.



Quangles indicated that the age at which the rates of change in these areas of functioning slowed was between ages 25 and 31 (see Figures 1-2). Some quangles also indicated a second shift in functioning among individuals in their fifties.

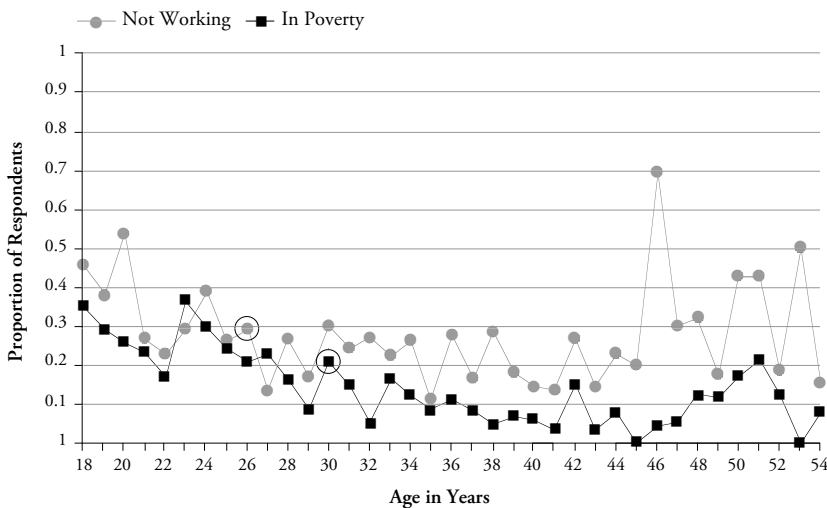
## Discussion

These preliminary findings suggest that, like their non-disabled peers (Settersten et al., 2005), stable and mature adult functioning does not occur among youth with psychiatric disorders until they are in their late twenties and early thirties. Further, young adulthood is a period of rapid functional change that is markedly different from the relative stability of mid- to older-adulthood. It is more common for younger adults with psychiatric disorders to still be in school, to not be working, to live in poverty, to have not yet married, and to have daily contact with friends than it is for older adults.

Several limitations of the study are important to note. First, this is a cross sectional study. True developmental effects are best understood through longitudinal studies that reduce the impact of cohort effects. Thus, for example, marriage rates may be affected both by maturity and by different generational beliefs about marriage. The fact of the differences, regardless of cause, calls for different approaches to facilitating adult functioning in younger and older adults. The source of the causes (be they developmental, attitudinal, or other) are important for developing effective interventions and supports.

Another important limitation to the study is that the individuals most likely to be served in child or adult mental health systems are often in marginalized settings, such as residential or group treatment settings, boarding houses, homeless shelters, temporarily bunking with friends, on the streets, or in jail. Individuals in these types of settings were not sampled in this study. Because it is a household sample, this study reflects the functioning of individuals functioning well enough to be in a household setting. It is unlikely that the age related differences in functioning would not exist among those with the most impairing mental health conditions, but the specific rates of functioning may differ, and the ages at which change stabilizes may be different.

**Figure 2**  
**Proportion of Respondents with Current Psychiatric Disorders**  
**Not Working, and Living at or Below Poverty Level at each Adult Age**



Note. Circled points indicate point at which rate of change has leveled off.

Despite these limitations, these findings strongly support the notion that young adults in adult mental health systems need either specialized programs or specialized approaches. Services for younger adults need to focus on *emerging* skills and capacities for employment and self sufficiency, the possible need to coordinate with school systems in helping younger adults complete their schooling, the continuing importance of peers, and the reduced likelihood of a spouse and thus, the increased likelihood of unmarried romantic or sexual issues.

Interviews with state level adult mental health administrators suggest that the unique needs of younger adults are not recognized within that system, and half of states don't have a single program within their adult system that is focused on the needs of young adults (Davis & Hunt, 2005). Findings from the current study suggest that this is insufficient to meet the needs of young adults in mental health systems. There is also little in the research literature on the separate needs of this age group, or on interventions for them. Research on the development of adult skills and capacities among young adults, and differences with mature adults within the mental health population, would help guide improvements in young adult services.

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## **The Consequences of Trauma for Mothers in the Transition Years**

Joanne Nicholson & Valerie Williams

### **Introduction**

National prevalence data, such as data from the National Comorbidity Survey (NCS; Kessler, 1994), allow for consideration of significant issues for young women who become mothers during the transition years from a public health perspective. Public policies and program initiatives may be informed by analyses of population-level data, with implications for the foci and timing of prevention, rehabilitation and treatment efforts, and points of service access for specific groups of individuals. The NCS provides the first opportunity to understand the prevalence of parenthood, and the relationship between parenthood and a variety of other variables in men and women with mental illness and substance use issues (Nicholson, Biebel, Williams, & Katz-Leavy, 2004). The implications of findings for young women who meet criteria for posttraumatic stress disorder (PTSD) are of particular interest.

Parenthood is a key life domain for women in the 15- to 30-year-old age group. In 2001, there were over 150,000 births to women age 17 and under (Guttmacher Institute, 2004). Women 18 to 19 years-of-age accounted for over 300,000 births, and in those 20 to 24 years-of-age, over 1 million births. Parenthood is prevalent among women who meet diagnostic criteria for mental illness (Nicholson et al., 2004). Seventy-three percent of women who meet lifetime criteria for PTSD are mothers. While some mothers experience the onset of symptoms following the birth of their first child, others experience mental illness prior to giving birth. Almost 70% of NCS mothers with PTSD, however, had their illness onset as youth, prior to the birth of their first children.

Given the concern in the literature that childhood experiences of violence may predispose an adult to poor parenting behavior (e.g., Banyard, Williams & Siegel, 2003), analyses of NCS data can provide important information on the background characteristics, childhood experiences of violence, substance abuse and mental health status of a large, representative sample of mothers, and on the impact of these variables on mothers' relationships with their children. Findings will have broad-scale ramifications for parenting intervention strategies for women in the transition years.

### **Method**

Data from 522 mothers aged 15 to 30 in the NCS Part II subsample were used in the analyses. These respondents reported having one or more natural children at the time of the interview. Background characteristics, childhood history of violence, and lifetime substance abuse of mothers in three key groups are described and compared: (a) mothers with no lifetime mental illness ( $N = 253$ ), (b) mothers with lifetime mental illness but no PTSD ( $n = 196$ ), and (c) mothers with PTSD ( $N = 73$ ). Mothers in the third group met criteria for other comorbid lifetime psychiatric diagnoses in addition to PTSD. For all categorizations based on diagnosis, we used UM-CIDI/DSM-III-R diagnoses without exclusions for DSM-hierarchy rules. Respondent groups are also compared on three additional variables—perceived relationship with child(ren), and two levels (*low* and *moderate*) of abusive behaviors towards child(ren).

Background characteristics included age, race, education, income, marital status, and number of children. For these analyses, childhood history of violence was defined as having ever experienced one or more of the following events as a child: rape; sexual molestation, serious physical attack and/or physical abuse. Lifetime substance abuse was defined as any alcohol and/or drug abuse (with or without dependence). The relationship with child(ren) variable was derived from a single item, "Overall, is your relationship with your child(ren) excellent, good, fair, or poor?" The abusive behaviors towards child(ren) variables were derived from two items rated on a four-point scale from *never* to *often*. The first of the two items, categorized as *low* level of abuse, asks "Since your child(ren) were first born...how often have you done any of the following things to your children: insulted or swore at your child; sulked or refused to talk to your child; stomped out of the room; did or said something to spite your child; threatened to hit

your child; and/or smashed or kicked something in anger.” The second item, categorized as a *moderate* level of abuse, asks “Since your child(ren) were first born...how often have you done any of the following things to your children: pushed, grabbed, or shoved your child; threw something at your child; and/or slapped or spanked your child.”

Bivariate analyses comparing the three groups of mothers on each of the variables employed chi-square tests for nominal variables and analysis of variance for continuous variables. All estimates presented here were weighted and their associated standard errors adjusted for sampling design parameters using the appropriate SAS<sup>®</sup> SURVEY procedures (SAS Institute, 2004).

## Results

There are no significant differences across respondent groups in terms of age, race, education, income, marital status or number of children. Mothers with PTSD are significantly more likely to report childhood histories of violence than are mothers with mental illness and no PTSD, or mothers with no mental illness,  $\chi^2(2, N = 522) = 95.18, p < .0001$  (see Table 1). Mothers with PTSD are significantly more likely to report lifetime substance abuse than are mothers with mental illness and no PTSD, or mothers with no mental illness,  $\chi^2(2, N = 522) = 33.23, p < .0001$ . Mothers with PTSD report significantly poorer relationships with children than do mothers in the other two respondent groups  $F(2,519) = 3.67, p = .026$ . Reports of low-level abusive behaviors towards child(ren) are not significantly related to respondent grouping  $F(2,519) = .85, p = .43$ . However, reports of moderate-level child abuse by mothers with PTSD are significantly higher; that is, moderate abusive behaviors are more frequent than in reports of mothers in the other two respondent groups  $F(2,521) = 4.19, p = .016$ . A childhood history of violence is associated with poorer ratings of perceived relationship with child regardless of respondent grouping (see Figure 1).

## Discussion

While the NCS data provide information on a large, representative sample of women, it is important to note that data for these analyses were obtained at one point in time, in the mid-1990s. Reports of childhood history of violence, substance abuse, and the onset of psychiatric symptoms are retrospective; ratings of perceived relationship with children rely on mothers' reports alone, as do measures of abusive behaviors. Measures of PTSD have since been developed and refined. However, the NCS provides the first, and most extensive information on the variables of interest available from a large, nationally representative sample. As such, it is the best resource to date for placing these issues in a broader context essential for framing public health implications.

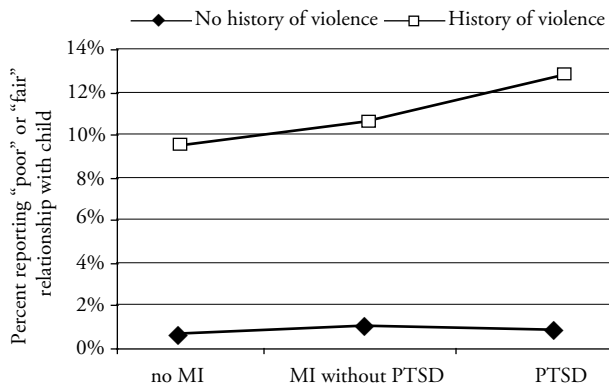
The prevalence of motherhood in women who meet criteria for PTSD, and the relationship between PTSD and mothers' perceived relationship with, and abusive behaviors toward their children highlight the importance of the accurate diagnosis and effective treatment of PTSD in adolescent and young women, even prior to motherhood. Trauma-specific treatments for young women with PTSD should focus on nurturing and care-giving skills as well as on self-care, symptom management, relationship skills and recovery—both before women become mothers and while they are parenting. Perinatal health care clinicians must acknowledge the impact of trauma on parenting, assess women's history of violence and impact on their current functioning, and provide psychoeducation regarding the impact of early experiences of violence on parent-child relationships.

**Table 1**  
**Descriptives by Respondent Group**

| Variable   | No MI<br>(N=253) | MI (no PTSD)<br>(N =196) | PTSD<br>(N =93) | Total<br>(N =522) |
|--|------------------|--------------------------|-----------------|-------------------|
| Childhood history of violence (%)*                       | 9.3              | 16.5                     | 59.9            | 19.1              |
| Substance abuse (lifetime) (%)*                          | 14.3             | 29.9                     | 44.6            | 24.4              |
| Relationship with child (mean)†                          | 3.8              | 3.6                      | 3.5             | 3.7               |
| Low-level abusive behaviors towards child (mean)‡        | 1.8              | 1.9                      | 1.9             | 1.8               |
| Moderate-level abusive behaviors towards child (mean) †‡ | 1.9              | 2.1                      | 2.2             | 2.0               |

\*  $p < .0001$ , † $p < .05$ , ‡ higher rating = more frequent abusive behaviors.

**Figure 1**  
**Perceived Relationship with Child by History of Violence**



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## **“Trouble with the Police and Courts:” What the National Comorbidity Survey Can and Cannot Tell Us About the Behavioral Health Antecedents of Juvenile and Adult Offending**

**William H. Fisher & Steven M. Banks**

### **Introduction**

Challenging social norms is a commonly observed feature of adolescence. But “pushing the envelope” of socially accepted behavior may at times bring individuals into conflict with the law. Juveniles can break the law in two ways. One is by committing *status offenses*—behaviors such as truancy and running away from home that are unlawful only for individuals under a certain statutorily imposed age. The other is through engaging in behaviors that constitute criminal offenses regardless of the perpetrator’s age.

Understanding the correlates and patterns of juvenile offending or delinquency has long enjoyed the attention of criminological researchers. This is not surprising. Many of the crimes against persons and property committed by juvenile offenders have major social costs and consequences. They also raise concern about individuals’ future criminal involvement. Investigators and theoreticians working within the so-called “developmental criminology” framework, (see for example Gottfredson & Hirschi, 1990; Sampson & Laub, 1993, 2003) Moffitt (1993), and Nagin & Farrington, 1992) raise the question of whether juvenile offending is a unique class of criminality, or whether it is a prelude to later adult offending. Finally, youthful offenders themselves pay a price for their unlawful behavior. Having a record can place significant limitations on future educational, employment and social opportunities, particularly if that record includes offenses that are not classified as status or other juvenile offenses.

The psychological aspects of juvenile offending have not gone unstudied, as the work of Moffitt (1992) and others clearly attests. However, such research shares many of the same difficulties as similar efforts with adult offenders. While there are data, such as the Pittsburgh Youth Study, that provide considerable detail on the psychological status of offenders and non-offenders, there has been a dearth of large-scale studies that bring state-of-the-art epidemiologic methods to nationally-based samples of individuals while also capturing information on criminal offending. In this discussion we examine the potential and the limitations of one of the most commonly used psychiatric epidemiologic studies, the National Comorbidity Survey (NCS) for exploring the linkage between serious emotional and mental disorders and juvenile and early adult offending.

### **The National Comorbidity Survey (NCS)**

As the premier basis for psychiatric epidemiologic research, the National Comorbidity Survey (Kessler, 1994) should provide an excellent vehicle for investigating psychological antecedents of offending for both adults and juveniles. Unfortunately, its current form includes a number of features that seriously limit its use in this domain. These limitations are in two areas: the lack of specificity in items used to capture individuals’ offending histories, and the use of household samples. These will be discussed separately.

### **Trouble with Police and the Courts**

#### **Definitional issues**

The NCS includes only one question addressing any form of legal involvement. This question is, “In the past 12 months have you had problems with the police or courts?” Overall, roughly four percent of respondents aged 18-30 answered in the affirmative; however, these rates vary dramatically by gender and history of a mental illness. Specifically, females less than age 30 with mental illness are nearly twice as likely to have had trouble with the police or courts as females with no mental illness (1.1% vs. 0.6%), while males less than age 30 with mental illness are more than twice as likely to have had trouble with the police or courts as males with no mental illness (11.4% vs. 4.8%).

As these data indicate, males between age 15-30 with a history of mental illness had the highest rates of reported legal problems among the four groups of individuals. But what does this mean? “Trouble with the police” may be a reasonable framing of a question seeking to probe individuals’ encounters with the criminal justice system. It is particularly useful as a way to examine experiences, which many adolescents may have, of being harassed or confronted by police but of not being arrested. But this advantage is also a disadvantage; there is no way of telling from the response to this question who has been arrested and who has not, and this distinction has tremendously important social ramifications. The waters are muddied further by the inclusion of the courts, because there is no differentiation between civil problems and criminal problems. As such, this question invites positive responses that can derive from a very broad array of issues extending well beyond the domain of delinquency or criminal offending. These can include motor vehicle problems, housing issues, civil suits, divorce, child custody and support issues, and so on. Juveniles may or may not answer in the affirmative if their only brush with the law was a status offense. We thus may be on very thin ice if we choose to consider all affirmative responses to this question as indicative of involvement in the criminal or juvenile justice systems. And while it is tempting to use this item as a surrogate for criminal involvement and proceed with using the rich array of risk factors available in the NCS, this would be risky.

### **The use of household samples**

The NCS is but one of a class of national studies of psychiatric and substance abuse issues (the National Household Survey of Drug Abuse is another) that uses persons living in households as its sampling universe. This choice of sampling frames is both puzzling and seriously limiting with regard to the kinds of questions one can address, as is evident when one considers the range of individuals who are excluded by virtue of their residence. Among the classes of excluded individuals are persons living in any kind of institutional or group quarters, including psychiatric and substance abuse facilities, juvenile detention centers, adult correctional facilities, residential programs for adults or adolescents with substance abuse or psychiatric disorders or homeless shelters. Also excluded are homeless persons or persons who are unstably housed and thus have no fixed address.

This approach therefore systematically excludes many individuals who comprise the sample of greatest interest when one wishes to explore risk factors for offending. It similarly excludes individuals with mental, emotional, and/or substance abuse disorders that are so severe that they reside in other than a household setting. This sampling approach may significantly bias certain NCS analyses. For example, differential risks of incarceration for Whites and African-Americans, coupled with the strong relationship between offending and substance abuse, can seriously skew findings regarding the relationship between race/ethnicity and the use of substances. The extent of potential sampling bias arising from the use of household samples has not been documented but clearly should be, given the widespread use of such designs in research on behavioral health.

### **Looking to the Future**

In many ways the NCS, as currently conceived, represents a missed opportunity with regard to studying critical questions about offending by both adolescents and adults, and about the host of psychiatric and social risk factors available in the NCS. Granted, these questions were by no means the central focus of the NCS. Nonetheless, future generations of population-based psychiatric epidemiologic studies need to expend the not inconsiderable resources necessary to include these currently excluded populations, and to work with the criminal/juvenile justice communities and criminologists to identify efficient and reliable methods for measuring justice system involvement and its correlates.

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## Symposium Discussion

Steven M. Banks

This symposium has focused on the use of the epidemiological databases, specifically the National Comorbidity Survey (NCS; Kessler, 1994) to address issues associated with transition to adulthood. What has become clear is both the potential value and limitations associated with using these national databases. As is evident by the range of topics (e.g. employment, motherhood, trouble with the law), the NCS has a wide scope that allows for the examination of a wide range of important domains. As noted above, a replicate NCS is nearing completion and other national epidemiological studies with an interest in mental illness and substance abuse are also currently being analyzed (e.g. The National Epidemiologic Study on Alcohol and Related Conditions (NESARC). The NESARC (see for instance Grant et al. 2004), funded by National Institute of Alcohol Abuse and Alcoholism, is a longitudinal survey that collected its first wave of interviews in 2001-2002. In the not to distant future, these databases will become publicly available, and will be of tremendous value to researchers studying transition to adulthood. In addition to using these databases as a primary research tool, they will also be useful in addressing questions regarding generalizability of our own research findings. An example of this may be seen in the work by Fisher and colleagues (2002), who compared findings at a specific location to findings from the NCS.

Though it would be easy to see these large epidemiological databases as a research nirvana, the authors of the papers in this session have raised serious concerns regarding the ability of these databases to address important policy issues. These concerns fall into three broad categories: who can be selected for the sample, cross sectional nature of the data, and the specific content of the variables in the database. Regarding the sampling issue, reliance on a community sample may be of primary concern when the research questions deal with groups of individuals or outcomes that may remove a class of individuals from consideration. Some of the newer epidemiological surveys are trying to incorporate these non-community populations, or specific surveys of these populations are being mounted so that a complete picture of individuals may be more possible in the future. Both the NCS and the NESARC will be performing longitudinal surveys, so concerns regarding the cross sectional nature of the data can begin to be addressed. Finally, as the field of behavioral services research matures, standardized instruments will begin to be used more often in epidemiological studies, which will increase the utility of the data collected.

As I have argued elsewhere, (Pandiani & Banks, 2003) large data sets are a powerful tool in services research. I believe the authors have demonstrated that with the work presented in this symposium.

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# **Symposium**

## **Youth with Serious Emotional Disorders in Transition to Adulthood from Special Education and Juvenile Justice Settings**

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### **Symposium Introduction**

Maryann Davis

Youth with serious mental health conditions are found in all public child-serving systems. Each will traverse the path from adolescence to adulthood. That path starts to accelerate in early adolescence and, because of the many institutional changes at ages 18 or 21, becomes a critical jumping off point around ages 17 and 18. Both of the papers in this symposium examined questions about the characteristics of youth with serious mental health conditions during the early- to-mid transition years, using large, longitudinal studies, but each from a different service system.

The first paper is an important addition to our knowledge about the particular challenges faced by students with emotional disturbances (ED) in secondary school. This study highlights some of the factors that identify those with ED who do well academically and behaviorally, and those who do poorly, and in so doing provides both risk markers and potentially malleable factors. The second paper adds to the growing interest in mental health needs of youth involved with juvenile justice systems. This paper asked questions about the prevalence of disorder and service utilization by youth who were earlier and further along the pathway to adulthood, and raises important concerns about service access at the threshold of adulthood.

### **NLTS2: A National Look at the Academic Performance and Social Adjustment of Secondary School Students with Emotional Disturbances**

Mary Wagner

#### **Introduction**

Numerous studies have documented high rates of school dropout in youth with emotional disturbances (ED; e.g. Wagner, 2005; Vander Stoep, et al., 2000; Vanderstoep, Weiss, Kuo, Cheney & Cohen, 2003). Entry into adulthood without a high school diploma is particularly detrimental in current society (Furstenberg, Rumbaut, & Settersten, 2005). Many factors likely contribute to the high dropout rate in this population. For example, studies of youth with ED have documented behavioral and academic difficulties at school. Students with ED are likely to exhibit high rates of inappropriate behavior and low rates of positive behavior (e.g., Landrun, Tankersley & Kauffman, 2003; Walker, Hops, & Greenwood, 1993). They also can experience difficulties establishing and maintaining positive social relationships (Walker, 1995) and may exhibit internalizing behaviors such as anxiety, withdrawal, and depression (Lane, Wehby, & Barton-Arwood, 2005; McConaughy & Skiba, 1993). Students with ED are likely to have problems in learning-related areas, such as attention to task and academic engagement (Landrum et al., 2003) and significant deficits in academic achievement (Wehby, Lane, & Falk, 2003). But these generalizations about students with ED mask the wide variation in both their behavioral and academic performance. Understanding who is at greatest risk for behavioral or academic difficulties is an important step in serving them well, and improving dropout rates. Here, data from the National Longitudinal Transition Study-2 (NLTS2) are used to provide a picture of the range in school behaviors and academic performance of students with ED nationally.

**Chair**

Maryann Davis

**Authors**

Mary Wagner

He Len Chung et al.

## Methods

NLTS2, conducted by SRI International for the U.S. Department of Education, involves more than 11,000 youth who received special education services in grade seven or higher when the study began; of these, 825 are categorized as having ED. Data are reported from 2001 telephone interviews with parents and from mail surveys of school staff serving sample members in Spring 2002; youth were ages 13 through 18. Scores on research editions of passage comprehension and mathematics calculation subtests of the Woodcock-Johnson III (WJ-III; Woodcock, McGrew, & Mather, 2001) also are presented; youth were 16 through 18 at the time of assessment. Students' functional cognitive skills were measured by parent rating on a 4-point scale of how well youth could tell time on an analog clock, count change, read common signs, look up telephone numbers and use the phone. Scores on these were summed to create a functional scale. Students' social skills were rated by parents using items from the Social Skills Rating System (SSRS; Gresham & Elliott, 1990). Comparisons between youth with ED and youth with disabilities as a whole provide a context for interpreting results for students with ED; percentages and means are weighted to represent those groups nationally. Comparisons also are made with youth in the general population where comparable data are available (e.g. National Survey of America's Families; Urban Institute, 2005). Results of *F* tests indicate the statistical significance between youth with ED and these comparison groups. Logistic and ordinary least squares regression analyses were used to identify the independent relationships of individual and household factors to variations in behavior and academic performance.

## Results

### Academic Performance

Secondary school youth with ED have serious deficits in both their reading and mathematics abilities (see Table 1). However, students with ED scored comparably to all students with disabilities, if not better. Despite having academic abilities that were as good or better than students with all disabilities, youth with ED were more likely to receive poor grades. Among students with ED and students with all disabilities taking at least one general education class, teachers reported that similar proportions were able to "keep up," with a sizeable group of both who did not.

### Behavior

Students with ED fared significantly worse than students with all disabilities on all measures of behavioral difficulties in school (see Table 1). On measures that are available for the general student population, even greater discrepancies are noted. In social interactions outside of school, students with ED generally were comparable to students with all disabilities, though they were less likely than the general student population to engage in extracurricular groups (Table 1). Students with ED were at greatly heightened risk of arrest at each age compared to students with disabilities as a whole, and at age 16 compared to the general student population. Overall, though, for each problem behavior except disciplinary action, the majority of students with ED were not involved.

### Factors Associated with the Academic Performance and Behavior of Students with ED

*Functional factors.* As can be seen in Table 2, functional cognitive skills were positively associated with being closer to grade level in reading and mathematics, and receiving disciplinary action, but were unrelated to grades and being arrested. Students' social skills were unrelated to academic performance, but poorer social skills were related to a greater likelihood of school disciplinary action. Persisting with a task "even if it's hard" was associated with earning better grades and avoiding arrest; in contrast, it also is associated with being further below grade level in math.

**Table 1**  
**Academic Performance and Behavior of Youth with ED,**  
**Youth with All Disabilities, and Youth in the General Population**

|  | <i>Secondary School Youth</i> |                              |                                       |
|--|-------------------------------|------------------------------|---------------------------------------|
|  | <i>With ED</i>                | <i>With All Disabilities</i> | <i>General Population<sup>a</sup></i> |
| <b>Academic Performance</b>  |                               |                              |                                       |
| Percentage with scores on standardized test of passage comprehension in the: <sup>(a)</sup>                                      |                               |                              |                                       |
| Bottom quartile (0% to 25%)  | 64                            | 76**                         | 25***                                 |
| Second quartile (26% to 50%)   | 18                            | 12                           | 25                                    |
| Third quartile (51% to 75%)  | 9                             | 6                            | 25***                                 |
| Top quartile (76% to 100%)   | 8                             | 5                            | 25***                                 |
| Percentage with scores on standardized test of mathematics calculation in the: <sup>(a)</sup>                                    |                               |                              |                                       |
| Bottom quartile (0% to 25%)  | 55                            | 58                           | 25***                                 |
| Second quartile (26% to 50%)   | 22                            | 18                           | 25                                    |
| Third quartile (51% to 75%)  | 17                            | 18                           | 25**                                  |
| Top quartile (76% to 100%)   | 6                             | 6                            | 25***                                 |
| Percentage with grades that are: <sup>(b)</sup>  |                               |                              |                                       |
| Mostly As and Bs   | 28                            | 30                           |                                       |
| Mostly Ds and Fs   | 14                            | 8*                           |                                       |
| Percentage ever held back a grade <sup>(c)</sup>   |                               |                              |                                       |
|  | 38                            | 36                           |                                       |
| Percentage in general education academic classes whose teacher report youth keeps up with other students in class <sup>(c)</sup> |                               |                              |                                       |
|  | 65                            | 74                           |                                       |
| <b>Behavior in School</b>  |                               |                              |                                       |
| Percentage whose teacher says in class they “very often”: <sup>(d)</sup>   |                               |                              |                                       |
| Act impulsively  | 20                            | 9*                           |                                       |
| Argue with others  | 13                            | 4*                           |                                       |
| Control behavior to act appropriately  | 31                            | 47*                          |                                       |
| Percentage who in current school year have:  |                               |                              |                                       |
| Gotten along poorly with: <sup>(c)</sup>   |                               |                              |                                       |
| Students   | 28                            | 13***                        |                                       |
| Teachers   | 26                            | 12***                        |                                       |
| Been bullied or picked on at school <sup>(c)</sup>   | 42                            | 29***                        | 12***                                 |
| Bullied others at school <sup>(c)</sup>  | 36                            | 16***                        |                                       |
| Been in fights <sup>(c)</sup>  | 42                            | 23***                        | 4***                                  |
| Been subject to disciplinary action <sup>(b)</sup>   | 60                            | 34***                        |                                       |
| Been expelled <sup>(b)</sup>   | 18                            | 5***                         |                                       |
| Received out-of-school suspension <sup>(b)</sup>   | 30                            | 11***                        |                                       |
| Percentage whose parents report youth has ever been: <sup>(c)</sup>  |                               |                              |                                       |
| Suspended or expelled  | 73                            | 33***                        |                                       |
| <b>Behavior out of School</b>  |                               |                              |                                       |
| Percentage whose parents report youth: <sup>(c)</sup>  |                               |                              |                                       |
| Participates in organized extracurricular group  | 57                            | 65                           | 83***                                 |
| Sees friends outside of school four or more times a week   | 34                            | 31                           |                                       |
| Is invited to other students’ social activities  | 83                            | 85                           |                                       |
| Arrested among youth age:  |                               |                              |                                       |
| 13 or 14   | 24                            | 8***                         |                                       |
| 15   | 35                            | 25***                        |                                       |
| 16   | 42                            | 15***                        | 12***                                 |
| 17   | 49                            | 16***                        |                                       |

*Note.* Comparisons with youth with ED statistically significant in a two-tailed test at the following levels: \* $p < .05$ , \*\*\* $p < .001$ .

Sources: (a) NLTS2 Student Assessment, 2002 and 2004; (b) NLTS2 Wave 1 Student’s School Program Survey,

(c) NL:TS2 Wave 1 parent interview; (d) Wave 1 General Education Teacher Survey.

**Table 2**  
**Factors Related to the Academic Performance and Behavior of Youth with ED**

|  | <i>Dependent Variables</i>              |                                      |                       |   |                               |
|--|---|--------------------------------------|-----------------------|---|-------------------------------|
|  | <i>Closer to Grade Level in Reading</i> | <i>Closer to Grade Level in Math</i> | <i>Overall Grades</i> | <i>Subject to Disciplinary Action at School</i> | <i>Has Ever Been Arrested</i> |
| <b>Functional factors</b>                            |   |                                      |                       |   |                               |
| Functional cognitive skills                          | +***                                    | +***                                 |                       | +**   |                               |
| Social skills  |   |                                      |                       | -**   |                               |
| Persistence  |   | -*                                   | +***                  |   | -**                           |
| <b>Demographics</b>                                  |   |                                      |                       |   |                               |
| Age  | -*                                      |                                      | -*                    |   | +***                          |
| Gender   |   |                                      |                       |   | +**                           |
| Number of school changes                             |   |                                      |                       |   | +*                            |
| <b>Family support</b>                                |   |                                      |                       |   |                               |
| Expectations for postsecondary education             |   |                                      | +**                   |   | -***                          |
| <b>School factors</b>                                |   |                                      |                       |   |                               |
| Student's grades                                     | NI                                      | NI                                   | NI                    | -**   |                               |
| Number of academic accommodations provided student   | -**                                     | -**                                  |                       |   |                               |
| Receives tutoring services                           |   |                                      | -**                   |   |                               |
| Number of social supports provided student at school |   |                                      |                       | +*  | +*                            |

"-" indicates negative relationship

"+" indicates positive relationship

NI = Not included in the model indicated

Statistically significant relationship to the dependent variable in a regression model containing all variables listed at the following levels:

\* $p < .05$ ; \*\* $p < .01$ , \*\*\* $p < .001$ .

**Demographics.** Older students with ED were significantly more likely to be behind grade level in reading, to have poorer grades, and to have been arrested at some time (Table 2). Males, and students who changed schools often, were more likely to have been arrested than their counterparts. Neither the race/ethnicity of students nor their household income was significantly related to any of these measures.

**Family support.** Parents' expectations that their adolescent would pursue postsecondary education was associated with higher grades, although not with reading or mathematics performance (Table 2). Higher parental education expectations also related to lower arrest rates. Neither family support for education at home or support at school was related to these measures.

**School factors.** Students who received better grades were less likely to get in trouble at school (Table 2). The direction of the relationship between supports or accommodations that students are provided to help them succeed academically and behaviorally suggests that students doing worse academically got more academic supports and students with more behavior problems got more social supports.

## Conclusion

Although students with ED, as a group, demonstrate significant academic deficits and negative behaviors at school on all academic and behavior measures examined, some students demonstrate exceptionally poor performance and behavior whereas others succeed academically and exhibit positive behaviors at school. This heterogeneity in the population of students with ED highlights the importance of understanding the factors that distinguish them.

These findings show that having higher functional skills is a mixed blessing. For example, having higher functional cognitive skills is associated with being closer to grade level academically but also with a higher likelihood of getting in trouble at school. Similarly, being more persistent in the face of challenging tasks is related to having higher grades and a lower likelihood of arrest, but also to being further behind grade level in math, perhaps because those who are further behind need to work harder academically.

The relationship of age to outcome measures suggests that youth with ED exhibit something of a downward spiral over time, with older youth being farther behind grade level, having poorer grades, and accumulating an arrest record at higher rates than younger peers, independent of other differences between them. This is a particularly unfortunate pattern at the threshold of adulthood and post secondary life; it suggests that the earliest secondary school years, or earlier, are critically important to reversing this negative spiral. Further, a history of frequent school change is related to a higher likelihood of arrest—a finding worth noting, given that students with ED have higher school mobility than youth with disabilities as a whole, more than often due to reassignment by their schools (Wagner, 2005), a factor that can be changed via school policy. The importance of parents in their children's lives is reinforced by the finding that parents' high expectations for the educational careers of their adolescent children with ED relate to more positive academic and behavior outcomes.

A consideration of malleable factors associated with better academic and behavioral performance indicates that early interventions might focus on improving functional cognitive skills, reducing school mobility, and encouraging parental educational expectations. A more subtle change is also suggested. Since students with ED performed better on tests of their reading and mathematics abilities than their grades reflected, and because poorer grades were associated with greater school disciplinary action, it is possible that some students with ED are undeservedly perceived as bad students—both in terms of behavior and performance.

The finding that academic and behavior services and supports were associated with poorer academic performance and behavior, respectively, underscores the difficulty in identifying their benefits in the absence of random assignment or more sophisticated statistical approaches (e.g. Trochim, 1990). When receipt of supports is measured simultaneously with their target outcomes, their potential to benefit students is obscured. Fortunately, NLTS2 measures youth outcomes multiple times over its 10-year life. This longitudinal design will enable the disentangling of services from need for services via analyses of the relationships between services received during secondary school and outcomes later in life.

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## **Mental Health Problems, Court Involvement, and Service Utilization among Serious Juvenile Offenders**

He Len Chung, Edward Mulvey, Carol Schubert

### **Introduction**

As a group, delinquent youth often lag behind their peers on traditional markers of adult success, such as graduating from high school or finding employment (see Chung, Little & Steinberg, 2005). In recent years, dismal outcomes have been linked to findings that mental health (MH) disorders among juvenile offenders are three to four times as high as in the general adolescent population, and that youth with emotional/behavioral disorders have trouble achieving positive outcomes linked to desistance from crime (Grisso, 2004). And yet, despite repeated suggestions that inadequate attention to MH problems can lead to adult offending and poor adjustment, researchers know surprisingly little about the link between MH needs and service utilization among court-involved youth.

The current study explores relations between age, psychiatric problems, and service use among delinquent youth to examine whether older offenders are at risk for losing potential support services as they move into adulthood. We ask three questions regarding differences among juvenile offenders who are early- and mid-transition age: (1) do younger and older offenders show different rates of MH and substance use (SU) diagnoses?; (2) following court involvement, are age and diagnosis related to service use after accounting for other individual characteristics?; and (3) do younger and older offenders with diagnosable MH and SU problems show different levels of service utilization?

### **Method**

#### **Sample**

Data come from Research on Pathways to Desistance (RPD), a longitudinal project for adolescent offenders in Pennsylvania and Arizona (see Mulvey et al., 2004 for theoretical framework; see Schubert, et al., 2004 for operational details). Enrolled individuals were between the ages of 14 to 18 and were found guilty of a serious crime. Participants were interviewed soon after adjudication (baseline) and every six months thereafter (follow-up). The sample ( $N = 926$ ) used in the current analyses was primarily comprised of African-American (44%), Hispanic (30%), and Caucasian (21%) offenders. Eighty-five percent of participants were male. At the time of their baseline interview, 66% were 14-16 years old (younger), and 34% were 17-18 years old (older). Data through 24 month-follow-up interviews were used in the analyses.

#### **Measures**

Information about age, gender, and race were collected for all subjects at baseline. The RPD assessed past-year diagnoses for the following mental health disorders at baseline using a modified version of the Composite International Diagnostic Interview (World Health Organization, 1994): Major Depressive Disorder (MDD), Dysthymia, Mania, Posttraumatic Stress Disorder (PTSD), Alcohol Abuse/Dependence, and Drug Abuse/Dependence. Participants were identified as having a MH disorder if they met criteria for MDD, Dysthymia, Mania, or PTSD, and for a SU disorder if they met criteria for alcohol or drug abuse/dependence.

A modified version of the Child and Adolescent Services Assessment (Ascher, Farmer, Burns & Angold, 1996) identified participants' use of the following community services at follow-up: psychologist, priest, day treatment/partial hospitalization, emergency room, case manager, community support group, and MH group. Participants were also specifically asked whether they used any of these services for drug and alcohol (D&A) reasons. For this study, we assessed service use differently depending upon court disposition. For individuals who remained in the community (probation), we examined the period three months following the baseline interview. For those who were sent to an institution as a result of court action (placed), we examined the period three months following discharge from the

institution (aftercare); disposition did not include time in detentions centers, and focused primarily on stays at juvenile correctional facilities and residential treatment. We created two dichotomous variables to describe services used in the community: (1) counseling (*yes* = using any of the services for emotional or behavioral, but not D&A, problems); and (2) D&A (*yes* = using any of the services for D&A problems).

**Statistical Analyses**

Crosstabulation tests were used to address questions 1 and 3. Logistic regression analyses were used in question 2 to predict the use of counseling and D&A services with the following variables: gender, ethnicity, site, prior offenses, age, and diagnosis (MH for predicting counseling services, SU for predicting D&A services).

**Results**

*Question 1: Do younger and older offenders show different rates of MH and SU diagnoses?*

There were no significant differences in overall rates of the MH diagnoses assessed. However, older offenders were more likely to have a SU diagnosis in both Philadelphia and Phoenix (39% versus 23%, and 53% versus 41%, respectively). Overall, offenders in Phoenix had higher rates of SU disorders, but the relation between age and diagnosis was similar across both sites (see Table 1).

**Table 1**  
**Comparison of Younger and Older Offenders**  
**with Mental Health and Substance Use Diagnoses**

| Diagnosis     | Philadelphia                |                             | Phoenix                     |                            |
|---------------|-----------------------------|-----------------------------|-----------------------------|----------------------------|
|               | 14-16<br>(n = 329)<br>n (%) | 17-18<br>(n = 215)<br>n (%) | 14-16<br>(n = 283)<br>n (%) | 17-18<br>(n = 99)<br>n (%) |
| Mental Health | 26 (8)                      | 23 (11)                     | 30 (11)                     | 12 (12)                    |
| Substance Use | 75 (23)                     | 83 (39)***                  | 116 (41)                    | 52 (53)*                   |

*Note.* Philadelphia Mental Health:  $\chi^2(1, N=544) = 1.24, ns$ ; Phoenix Mental Health:  $\chi^2(3, N = 382) = 0.17, ns$ ; Philadelphia Substance Use:  $\chi^2(1, N = 544) = 15.77, p < .001$ ; Phoenix Substance Use:  $\chi^2(1, N = 382) = 3.96, p < .05$   
 \*\*\* $p < .001$ ; \* $p < .05$

*Question 2: Following court involvement, are age and diagnosis related to service use after accounting for other individual characteristics?*

Relations between age, diagnosis, and service use were examined separately in the *placed* and *probation* offenders. Because relatively few youths in the two court groups met criteria for a MH diagnosis ( $n = 45$  for probation;  $n = 46$  for placed), analyses were not conducted separately by site.

For the probation group ( $N = 495$ ), 47% and 16% of offenders reported using counseling and D&A services, respectively. Logistic regression analyses showed that younger offenders and those with MH diagnoses were more likely to use counseling services, and offenders with a SU diagnosis were more likely to use D&A services (see Table 2). For the placed group ( $N = 431$ ), 35% and 8% of offenders reported using counseling and D&A services, respectively. In contrast to the results for the probation group, analyses of the placed group showed that neither age nor having a diagnosis were important for predicting either service in the aftercare period. Follow-up analyses indicated no age by diagnosis interactions in any of the models.

**Table 2**  
**Logistic Regression Analyses for Service Use Among the Probation and Placed Groups**

| <i>Probation Group (N = 495)</i>     |                            |           |               |                         |           |               |
|--------------------------------------|----------------------------|-----------|---------------|-------------------------|-----------|---------------|
| <i>Predictor</i>                     | <i>Counseling Services</i> |           |               | <i>D&amp;A Services</i> |           |               |
|                                      | <i>B</i>                   | <i>SE</i> | <i>Exp(B)</i> | <i>B</i>                | <i>SE</i> | <i>Exp(B)</i> |
| Site <sup>a</sup>                    | -.40                       | .27       | .67           | -.09                    | .46       | .92           |
| Age <sup>b</sup>                     | .63                        | .23       | 1.88**        | -.26                    | .35       | .77           |
| Gender <sup>c</sup>                  | .57                        | .24       | 1.76*         | .88                     | .36       | 2.41*         |
| Ethnicity                            |                            |           |               |                         |           |               |
| African-American <sup>d</sup>        | -.39                       | .32       | .68           | -1.25                   | .59       | .29*          |
| Hispanic <sup>d</sup>                | -.71                       | .24       | .49**         | -.66                    | .37       | .52           |
| Prior offenses                       | .06                        | .06       | 1.06          | .12                     | .08       | 1.13          |
| Mental Health Diagnosis <sup>e</sup> | .73                        | .34       | 2.08*         | —                       | —         | —             |
| Substance Use Diagnosis <sup>e</sup> | —                          | —         | —             | 1.27                    | .35       | 3.57***       |
| Model $\chi^2_{(df)}$                |                            | 33.82***  |               |                         | 41.18***  |               |
| Nagelkerke $R^2$                     |                            | .09       |               |                         | .18       |               |
| <i>Placed Group (N = 431)</i>        |                            |           |               |                         |           |               |
| <i>Predictor</i>                     | <i>Counseling Services</i> |           |               | <i>D&amp;A Services</i> |           |               |
|                                      | <i>B</i>                   | <i>SE</i> | <i>Exp(B)</i> | <i>B</i>                | <i>SE</i> | <i>Exp(B)</i> |
| Site <sup>a</sup>                    | -.58                       | .34       | .56           | -.81                    | .52       | .44           |
| Age <sup>b</sup>                     | .49                        | .25       | 1.64          | .35                     | .51       | 1.42          |
| Gender <sup>c</sup>                  | .44                        | .37       | 1.55          | .73                     | .57       | 2.08          |
| Ethnicity                            |                            |           |               |                         |           |               |
| African-American <sup>d</sup>        | -.74                       | .31       | .48*          | -1.46                   | .6        | .23*          |
| Hispanic <sup>d</sup>                | -.62                       | .34       | .54           | -.56                    | .51       | .57           |
| Prior offenses                       | -.18                       | .06       | .84**         | -.09                    | .09       | .91           |
| Mental Health Diagnosis <sup>e</sup> | -.63                       | .39       | .53           | —                       | —         | —             |
| Substance Use Diagnosis <sup>e</sup> | —                          | —         | —             | .59                     | .46       | 1.80          |
| Model $\chi^2_{(df)}$                |                            | 35.82***  |               |                         | 25.59**   |               |
| Nagelkerke $R^2$                     |                            | .11       |               |                         | .16       |               |

Note. Reference groups are <sup>a</sup>Phoenix, <sup>b</sup>17-18 years old, <sup>c</sup>Male, <sup>d</sup>Caucasian, <sup>e</sup>No diagnosis

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Question 3: Do younger and older offenders with diagnosable MH and SU problems show different levels of service utilization?**

The last set of analyses focused on the subset of offenders who met criteria for a MH or SU diagnosis: there were 45 MH probation offenders (28 younger, 17 older); 46 MH placed offenders (28 younger, 18 older); 153 SU probation offenders (95 younger, 58 older); and 173 SU placed offenders (96 younger, 77 older).

In the probation group, results showed a trend for fewer older MH offenders to use counseling services compared to their younger counterparts (29% versus 61%,  $\chi^2(1) = 4.15$ ,  $p < .10$ ), but no differences in the use of D&A services among older and younger offenders with SU diagnoses (18% versus 21%,  $\chi^2(1) = 0.18$ , *ns*, respectively). In the placed group, older offenders were also less likely than younger offenders to use counseling services within three months of returning to the community (6% versus 36%, respectively, Fisher's exact test:  $p = .02$ ), and results showed a trend for fewer older substance offenders to use D&A services compared to their younger counterparts (5% versus 13%, respectively, Fisher's exact tests:  $p = .08$ ).

## **Discussion**

### **Limitations**

This study has at least three limitations that should be recognized. First, we used a restricted definition of MH problems that did not include certain disorders prevalent among juvenile justice populations (e.g., ADHD); in addition, we did not consider psychiatric problems that did not meet criteria for a DSM-IV diagnosis. Second, our MH variables were obtained from baseline interviews and not assessed when individuals left residential facilities when psychiatric symptoms might have differed from those reported at the start of the study. And third, all service use data were self-reported by youths, thus increasing the potential for inflated shared method and source variance.

### **Implications**

The limitations of this study notwithstanding, results indicate that almost 40% of serious adolescent offenders met criteria for a MH or SU diagnosis other than a disruptive behavior disorder within the year prior to enrollment in the RPD study. Results also indicate that older offenders are more likely to have SU disorders than younger offenders. Further, results suggest that older offenders with a previous diagnosis of MDD, PTSD, dysthymia, or mania may be at particular risk for not using services in the community, especially following discharge from a residential facility; in fact, only one older offender who met criteria for a MH diagnosis reported using counseling services within three months of returning to the community. The use of aftercare D&A services among older SU offenders was only slightly lower (and not significantly different) than that of younger offenders; however, given that the first few months following discharge are considered the “danger time”—when youths are at high risk of getting re-arrested (Snyder, 2004)—the low level of service use among older SU offenders is disconcerting.

That older offenders with MH problems may disconnect from services in the community could reflect a reticence in this age group to engage in services. It could also reflect the fact that services in the juvenile justice system have been specifically developed and designed to serve children and adolescents. Although many states, including Pennsylvania and Arizona, have statutes that extend juvenile court jurisdiction to age 20, the provision of services is grounded in a justice system that targets juveniles. Indeed, most of the screening instruments used by the juvenile court to assess individual (and family) needs and strengths typically lead to recommendations for youth ages 12 to 17, and services may not fit the needs of older offenders who are entering their early adult years (Grisso & Greenwood, 2004). With growing evidence that delinquent youth face significant challenges during the transition to adulthood, and that inadequate attention to MH problems may lead to adult offending and other poor outcomes, future analyses with RPD data will examine the impact of service use (or lack thereof) on promoting positive adult adjustment among serious juvenile offenders.

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# **Informing Systems of Care for Transition Aged Youth: Youth Focus Group Results**

Sheila Bell  
Robin Orlando

## **Introduction**

The Allegheny County System of Care Initiatives (SOCI) is a mental health system of care program funded by the Substance Abuse Mental Health Services Administration and the Allegheny County Department of Human Services. SOCI provides service coordination and support to children with serious emotional disturbance and to young adults with serious mental illnesses and their families across a minimum of two service systems (i.e., mental health, child welfare, juvenile/criminal justice, mental retardation/developmental disabilities, and education). SOCI's mission is to "empower consumers, families, and communities to manage and advocate for their needs and realize their dreams. We accomplish this by partnering with, supporting and educating consumers, families, communities, and professionals."

The SOCI philosophy is based on 12 core values:

- Consumer/Family Focused and Driven
- Safety (Youth, Family and Community)
- Individualized
- Strengths-Based
- Collaboration
- Community-Based/Least Restrictive
- Cultural Competence
- Relentless Advocacy
- Outcome-based
- Cost-Effective/Cost-Responsible
- Education/Vocation
- Physical and Mental Well-being

SOCI consumers live in five communities in or around Pittsburgh. The purpose of this study was to gather qualitative data on the strengths and needs of transition age youth who would be served through a system of care expansion grant in Allegheny County, PA. To inform the expansion, focus groups were conducted with youth aged 18 – 24. Data gathered from these groups provided youth insights on their goals and future, stressors they encounter in their daily lives, who they define as their families, the role of trust in the service process, and what their ideal system of care would look like. In this summary, results will be shared, followed by discussion of how results were used for system change.

## **Methods**

**Participants.** Participants included 50 males and 41 females who had experienced the mental health service system and who had a wide variety of transition experiences. The young adults ranged in age from 18 to 24 years ( $M = 20.17$ ). Thirty-eight percent were African American, 51% Caucasian, 8% Other/unknown races (8%), and 3% Biracial.

**Recruitment.** Participants were recruited for focus groups by mental health providers in Allegheny County, through the SOCI Community Connections for Families program, by system partner professional stakeholders, and by posting flyers in various communities. A total of 12 groups were held (six with males; six with females) with 6-12 participants per group. Groups were facilitated at six locations: one group was held in downtown Pittsburgh for youth recruited from all over Allegheny County; one group was held in the Sto Rox SOCI partner community and one group was held in the Wilkesburg SOCI partner community because both were chosen to implement system of care expansion

for this target population; another group was held at a homeless drop-in shelter; one group was held at a mental health community treatment team center; and one group was held at a mental health provider setting for sexual minorities. Participants received a \$30 stipend and food.

**Facilitation.** SOCI contracted with the local Family Health Council, Inc. for focus group facilitation by young adults who were experienced in running focus groups with youth. SOCI staff co-moderated the focus groups.

**Focus group questions.** SOCI evaluation staff drafted questions with the input from system-of-care stakeholders and youth. The local Family Health Council, Inc. staff also reviewed and modified the questions. In addition to an icebreaker and summary question, there were six main topic areas discussed: youth goals/future; life stressors; the definition of “family;” trust and the service process; and the ideal system of care for transition age youth.

At the beginning of each focus group, participants completed a demographic questionnaire on their gender, age and race. At the conclusion, participants completed an optional survey asking about educational status, employment status, marital status, number of children, living situation, and social service experience.

## Results

Although males and females gave some similar answers, there were also several key differences.

**Goals and the Future.** Males strived for educational achievements, employment goals, and personal goals such as having a family. Females had similar goals for their future, adding that they would like to have their own place to live one day.

**Life Stressors.** Males discussed many daily events as stressors in their lives including drugs, violence, money, finding a job, broken families, fear of failure, and mental health stigma. Females discussed many of these things, adding domestic abuse, maintaining housing, managing their mental health, and pregnancy/having a child.

**Defining Family.** Based on discussion with other programs serving this target population and with young adults, SOCI was aware that the term “family” may include more than the traditional nuclear members, therefore, this question was included. Males defined family as their parents, friends, churches, and self. Females added other relatives, their significant others, and social service providers as family.

**Trust.** Again, informal discussion with other system partners and young adults prompted the need to ask this question about the role of trust in the service process. Males stressed that trust takes time and that often friends and family count the most in the beginning. Females added that they trusted those who were non-judgmental and were loyal to them, and who had integrity. Several mentioned their trust in God.

**The Ideal System of Care.** Males described a system that was youth-driven and staffed by individuals who really cared. They also noted that they wanted a “one stop shop” where services were always available. Females also noted the need for an open door policy and mentors who had experiences similar to theirs. Females also said that they wanted to see the system offer services for employment, financial aide, housing, time management, physical health care, and money management. Support groups were also key for female participants.



## Discussion

The main themes from these groups that were incorporated in system-of-care expansion included the following.

*Systems of care must have strong connections to youth.* There needs to be youth oversight, staff who reflect youth experiences, and accessibility. This finding was used by SOCI to create a youth support position in each of the two implementing partner communities. These positions are responsible for facilitating community support groups for youth and for mentoring them through the service process. Furthermore, a county-wide youth group called the Youth Outreach Union was created. Youth are also involved in planning a youth support budget and in evaluating the system of care.

*Challenges are going to be highly varied from person to person.* Those served by the system of care will have a multitude of needs; services/supports must be highly individualized. In addition to their mental health needs, youth enrolling in the system of care have various challenges such as homelessness, lack of insurance, suicidality, physical health needs, daily living skills, educational and job challenges. SOCI's practice model is built upon an individualized service/support process to ensure that these needs are met.

*There are multiple transition areas to adulthood.* Youth entering the system of care may transition out of child welfare; from primary to secondary education; from school to a job; from dropping out of school to re-enrolling; from homelessness to housing stability; and criminal/juvenile placements to community placements, etc. SOCI has used this information to train staff about the various systems involved in these transitions and for the situations in general.

*Mental health issues compound the everyday stress of transition to independent adulthood.* SOCI has adopted the recovery model principals to recognize this fact and has established support groups for young adults to help them deal with these situations.

*Family is not always defined by blood.* SOCI has used this finding to train staff to involve those the youth defines as family in the service/support planning process in the system of care.

*Trust takes time.* Many youth will need to develop a relationship before being open to receiving many services/supports. SOCI has experienced this first hand. However, the youth support position has greatly helped build trust with young adults in the community.

Moving from a 6-18 year old population to 18-25 year old population brings with it new issues such as teen pregnancy, single parenthood by consumers, domestic violence, transient homelessness, dropping out of school, drug abuse, etc. SOCI has used these findings to provide training and support to staff around such issues so that the system is prepared to respond to consumers who experience them. In conclusion, transition is different for everyone, reinforcing the fact that system of care values—including individualization, cultural competence, youth driven, and strengths based planning—must be adhered to.

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## **Chapter Eight**

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**Use of Data to  
Assure Quality and  
Enhance Outcomes  
in a System of Care**



## **Symposium**

# **Community-Based Theories of Change: Highlights of Findings from a National Study**

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### **Introduction**

**Sharon Hodges**

This symposium presented findings of a five-year national study of community-based theories of change that was conducted between 1999 and 2004 as part of the Research and Training Center for Children's Mental Health at the University of South Florida. This study was designed to investigate the process of local policy implementation and how policies related to children with emotional disturbance and their families impact the availability of services and access to these services in the community. The goals of this study were to: gather information about how organizations conceptualize, operationalize, and implement community-based service policies; to gather information about how organizations transfer policy agendas across stakeholders in local organizations; and to learn more about how organizations sustain their local service strategies over time. The papers presented in this symposium provided a description of the study background and design as well as an overview of the findings. In addition, more detailed findings from specific aspects of Phases I and II of this study are presented.

### **Community-Based Theories of Change: Study Background and Design**

**Sharon Hodges**

The Community-Based Theories of Change Study was designed for the purpose of understanding how child-serving organizations that have a clearly articulated and widely held theory of change carry out their mission and goals. For the purpose of this study, a theory of change can be understood as the underlying assumptions that guide a service delivery strategy and are believed to be critical to producing change and improvement for children and families (Hernandez & Hodges, 2003). This study was grounded in the assumption that a clearly articulated and widely held theory of change facilitates local policy implementation. It was further assumed that a participating site's theory of change reflects the organization's mission and goals and represents the implementation of policy by the organization.

Community-Based Theories of Change used a multi-site case study design conducted in two phases. The case study design was used to balance aspects of the study's inductive and exploratory inquiry with the more bounded approach common to hypothetical-deductive inquiry, and the multi-site approach was used to increase the potential for generalizing findings to local service delivery systems and programs not included in this study (Yin, 1994). The major research questions for this study were: (a) What organizational structures and processes support the clear and effective conceptualization, operationalization, and implementation of service-related policy; (b) How are efforts to carry out organizational missions and goals sustained over time; and (c) What benefits and challenges are associated with having a clearly articulated and widely held theory of change?

Phase I of this study involved three sites that used distinctly different theories of change in their efforts to serve children and families. The purpose of Phase I was to identify any organizational structures and processes that existed across the sites to support policy implementation and to identify benefits and challenges that the sites associated with using a theory of change approach. This phase of the study used a purposeful sample of organizations identified through a rigorous site selection process. During the site selection process, it was necessary to confirm that nominated sites were using a theory of change approach to accomplish their successful implementation of local service-related policy. Data related to the operating

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theory of change included document review, on-site and telephone interviews, and on-site observation of organizational structures and processes. Logic models were developed and reviewed by informants at each site in order to identify site-specific themes and clarify the presence of an active theory of change.

After identifying three sites that were using a theory of change approach to policy implementation, Phase I data collection focused on identifying the structures and processes within these organizations that contributed to their ability to carry out their mission and goals. Phase I data collection included a comprehensive review of documents at each site, facilitation of a concept mapping process (Concept Systems 2002), semi-structured interviews with key stakeholders at multiple levels of each organization, and on-site observation of structures and processes related to the organizations' mission and goals.

Inductive inference was used to develop and describe results of Phase I. The narrative data (interview notes and transcripts, document review, and statements brainstormed during the concept mapping process) were analyzed to identify emergent patterns and themes within and across respondent types. Concept maps were developed for each site based on a facilitated group brainstorming process and individual statement sorting and rating activities. The concept mapping results were discussed with each site and presented in individual written site reports. In addition to the site specific findings that were reported to individual sites, the cross-site analysis of Phase I data suggested the presence of four organizational characteristics and two organizational facilitators that were common to the participating organizations' ability to carry out their missions and goals. These Phase I findings were summarized in a nationally distributed report (Hodges, Hernandez, Nesman, & Lipien 2002), and were further investigated in Phase II of the study.

The purpose of Phase II was to confirm or disconfirm the findings of Phase I. This phase used a purposeful sample of five organizations that used the same theory of change across sites to carry out their mission and goals. Because the five agencies participating in Phase II were certified by the Teaching Family Association as confirmed implementers of the Teaching Family Model, it was unnecessary to use the site selection process to identify and confirm the active theory of change at each site. However, document review and telephone interviews were used in advance of the site visit for the purpose of familiarizing the research team with the participating agency. Data collection for Phase II mirrored the processes used in Phase I and included a comprehensive review of documents at each site, facilitation of a concept mapping process, semi-structured interviews with key stakeholders at multiple levels of each organization, and on-site observations of structures and processes related to the organizations' mission and goals. The analysis of narrative data for Phase II (i.e., interview notes and transcripts, document review, and statements brainstormed during the concept mapping process) is ongoing at the time of this writing. The most detailed analysis to date is of the 433 statements generated during the brainstorming phase of the concept mapping process across the five sites. The Phase I findings were operationalized and a coding schema developed for each of the Phase I themes. The research team developed a shared understanding of these operationalized findings and inter-rater reliability was established. Subsequently, the 433 Phase II concept mapping statements were coded according to the codes representing the Phase I findings. This initial analysis of the Phase II data indicate that the Phase I findings can be confirmed as present in the Phase II organizations. Analysis of Phase II data will continue with the coding of transcribed interview data across the participating sites.

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## **Community-Based Theories of Change: Overview of Findings**

**Mario Hernandez**

This paper presents the cross-site, cross-phase findings of the Community-Based Theories of Change Study. Although data analysis is ongoing, the findings to date provide insight into the planning and management processes of human service organizations that have a clearly articulated and widely held theory of change. This study examined the organizational structures and processes that human service organizations believe allow them to carry out their mission and goals and to sustain this effort over time. Organizations participating in this study used a theory-based approach, which examines underlying beliefs and assumptions, links expected outcomes to a specific population of focus, and links expected outcomes to strategies for achieving those outcomes. As a result, organizations could focus their activity on why they believe certain services or policies will lead to positive changes in their identified service population.

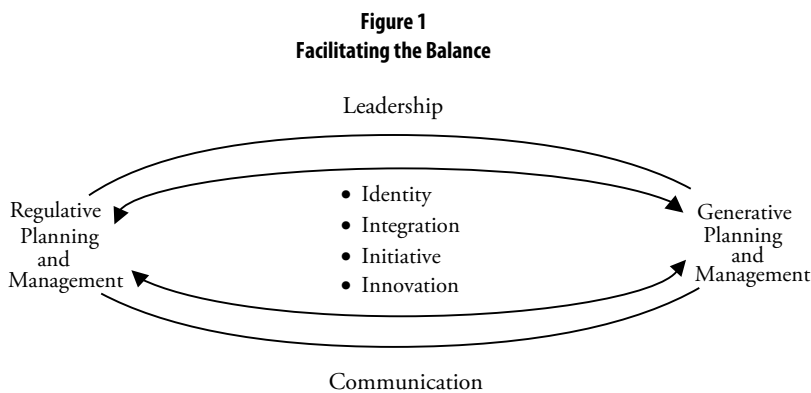
Data from document reviews, key informant interviews, and concept mapping for Phase I were analyzed for the purpose of identifying emergent themes common across the sites. These themes are discussed in detail in a report of the cross-site findings (Hodges, Hernandez, Nesman, & Lipien, 2002). Analysis of Phase II data confirmed the presence of themes common across the participating sites in both phases. These cross-site, cross-phase themes include four characteristics that emerged from the cross-site data. These characteristics were common across the sites and significantly shaped the nature and complexion of these organizations as they worked to carry out their mission and goals. The four organizational characteristics were:

1. **Identity**—a clear and shared understanding of the organization's purpose, what the organization intends to accomplish and why. This includes that the organization's identity is anchored in its vision and mission and its shared and clearly articulated values and principles. The vision and mission of the organization guide priority setting and decision making
2. **Integration**—structures and functions that are well aligned and work together to support the achievement of the organizational mission and goals. This requires that individual roles within the organizations are clear and well supported. Integration ensures that the intended mission can be carried out without structural or functional impediments and also facilitates building community partnerships.
3. **Initiative**—is characterized by an achievement orientation within the organization and a willingness to meet challenges. Members of these organizations believe themselves to be accountable for the results of their strategies; they evaluate and critique their own processes.
4. **Innovation**—organizations use new and creative approaches to service delivery and are willing to challenge convention. Innovation is measured against the ability to achieve the organizational mission while maintaining flexibility.

Two facilitators support the organizational characteristics of identity, integration, initiative, and innovation. These facilitators are leadership and communication. The Phase I data suggested that leadership can be characterized as: (a) providing inspiration, guidance and direction that is strong and empowering; (b) maintaining clear lines of authority with decentralized decision making; and (c) providing positive reinforcement, motivation, and rewards. These attributes of leadership were confirmed in Phase II organizations. The Phase I data suggested that the facilitator identified as communication can be characterized as the flow of information and ideas within and outside the organization in ways that are open, multi-directional, and continuous. This includes formal (staff meetings, written reports, training events) and informal (impromptu phone calls, office visits, lunch gatherings) methods of communication. Like the concept of leadership, evidence of such communication was identified in the Phase II sites. Together these facilitators enhance the impact of the organizational characteristics by reducing any obstacles to their accomplishment. Without these facilitators, the influence of strong organizational identity, integration, initiative, and innovation would be impeded.

A useful concept emerging from this analysis is the existence of a balance between regulative and generative organizational processes in human service organizations. Drawing from Uzzell's (1990) description of regulative and generative organizations, regulative processes can be identified as those that rely upon power for decision making authority, employ standardization of work practices, filter out information that would provide feedback, and treat actions as final rather than conditional. In contrast, generative processes can be identified as those which rely on information for decision making authority, allow for idiosyncratic or contextual design, incorporate information that will provide feedback, and treat actions as experimental and open to adaptation when necessary.

The cross-phase findings of this study suggest that human service organizations cannot be operated through entirely generative or entirely regulative processes. A balance between the processes allows for organizational responsiveness built upon a foundation of proactive and strategic implementation (see Figure 1). The findings further suggest that the relationship between the identified organizational characteristics and facilitators help human service organizations establish a balance between regulative and generative planning and management.



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## **Structures and Processes Supporting the Mission and Goals of a Family-Run Organization: King County Blended Funding Project**

Svetlana Yampolskaya

### **Introduction**

The last decade has seen the concept of family involvement in healthcare decision making grow. Family involvement has been shown to reduce morbidity rates, improve treatment outcomes, and increase satisfaction with services (Hawley & Weisz, 2005; Kaas, Lee, & Peitzman, 2003; Lefley, 1996). As part of an ongoing dialog regarding family involvement, Bewrnheim (1994) suggested that a new goal for professional approach in mental health should be to develop cooperative alliances with families. This approach corresponds with the advocacy efforts of the National Alliance for the Mentally Ill (NAMI). Marsh (1994) recommended that new models of service delivery should include collaborative family-professional partnerships and that such strategies would enable families to play active roles in decisions that affect them. Finally, Osher, Kammen, and Zaro (2001) noted that in the system of care model of services for children's mental health, a core value is that families are considered full partners and should therefore share decision making with administrators and policymakers. They further noted that families have begun to take new roles in child-serving systems including establishing family-run organizations where parents of children with mental health problems guide and control expenditures and decisions on behalf of their children. An example of such an organization is the King County Blended Funding Project.

The King County Blended Funding Project in Washington State is a family-run organization that utilized a new collaborative approach to serving children with emotional disturbance and their families. The project was designed to establish partnerships with professionals and parents, to actualize services, and to oversee the financial management of available funds. In doing so, the Blended Funding organization combined funds from three participating children's service systems (i.e., child welfare, mental health, and special education) into a single resource pool (Vander Stoep, Williams, Jones, Green & Trupin, 1999). The Blended Funding theory of change recognized that the family is a child's most valuable resource and hinged on family empowerment and the ability to take advantage of available opportunities (Hodges, Hernandez, Nesman & Lipien, 2002).

Because of the rarity of family-run organizations and unique approach such as the one described above, it is important to identify organizational structures and processes that allow the project developers and implementers to accomplish their specific goals. Using The King County Blended Funding Project as an example, this study focused on uncovering structures and processes that enable program participants to carry out the project's mission and goals.

### **Method**

This summary presents the results of a concept mapping process (Trochim, 1989) that was conducted with Blended Funding in 2001. The concept mapping process involved 12 Blended Funding stakeholders and included both family members ( $n = 5$ ) and mental health professionals ( $n = 7$ ). Concept mapping, using Concept Systems software (Concept System 2002), was used to collect and analyze data related to the structures and processes within the Blended Funding Project that support how its mission and goals are carried out. Concept mapping begins with a structured brainstorming process in which the participants are given a focus statement and are guided to generate statements in response to the prompt. The focus statement for the concept mapping procedure was, "Generate a list of things that are done in the Blended Funding Project so that you and others understand how to carry out its mission and goals." As a result, 77 statements were generated. Following the brainstorming, participants were provided with a complete set of the statements and asked to sort them in to piles in a way that made sense to them. After creating their piles of statements, participants labeled each pile with a name they thought described the statements included in that pile. In addition to sorting the statements, participants were asked to rate

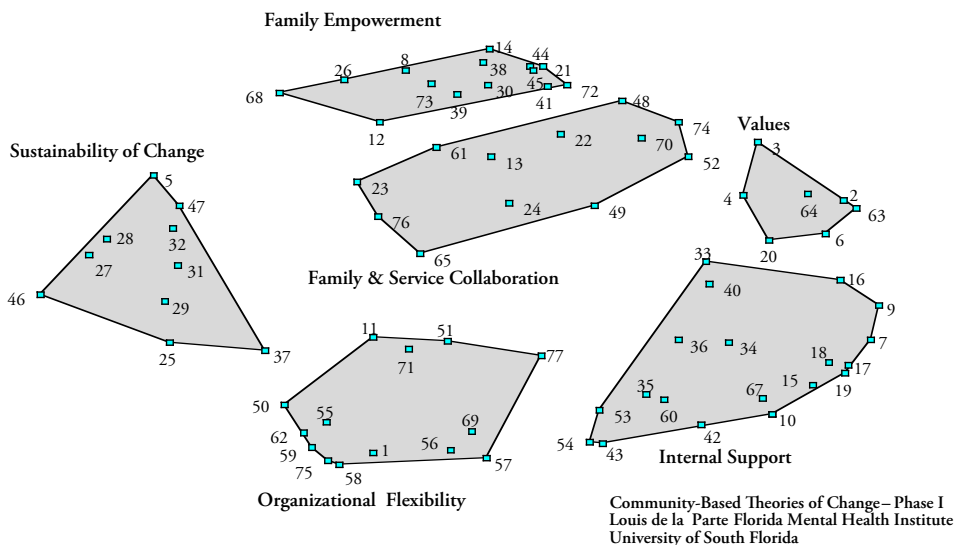
each statement on a 1 to 5 scale as to its importance in terms of carrying out the organization’s mission and goals. This was followed by a rating of each statement according to its effectiveness.

The Concept Mapping software makes use of multivariate statistical techniques for the analysis of data, including multidimensional scaling and cluster analysis. This analysis was used to create a conceptual map for the Blended Funding Project that positions statements perceived by participants to be similar to one another close together and statements perceived to be dissimilar located farther apart. Similar statements are grouped together in non-overlapping categories called clusters based on their proximity to one another. Semi-structured telephone interviews were conducted in order to validate the results for concept mapping.

## Results

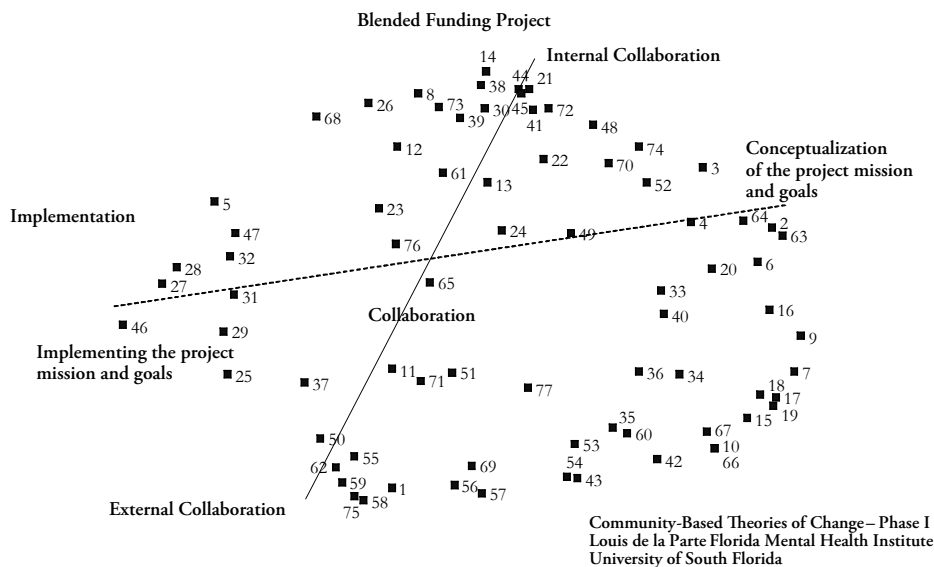
A six cluster solution was examined in order to identify categories of statements that represent the elements of the Blended Funding Project theory of change. The six cluster categories were: (a) family empowerment, (b) family and service collaboration, (c) values, (d) internal support, (e) organizational flexibility, and (f) sustainability of change. Figure 1 shows the clusters observed. The *family empowerment* category is directly linked to the family empowerment as part of the project theory of change. The cluster *family and service collaboration* incorporated both family collaboration with community and family and the service system collaboration elements. *Values* reflected the child and family support element. *Organizational flexibility* and *sustainability of change* represent financial flexibility and individual/organizational elements of the project theory of change. Although one of the key elements of the Blended Funding Project Theory of Change (i.e., addressing children’s needs across multiple domains) was not identified as a separate cluster, the services in place provided ample response to a wide array of children’s needs. One additional cluster identified as *internal support* was observed.

**Figure 1**  
**Six-Cluster Solution Map**  
 Blended Funding Project



In addition, the point map (see Figure 2) was examined in order to provide dimensional interpretation of these results. Examination of the 2-dimensional solution point map suggested two interpretable dimensions of the service elements configuration: (a) conceptualization/implementation of the project mission and goals and (b) collaboration with both families and community partners.

**Figure 2**  
**Point Map With Statement Numbers**



Conceptualization/implementation of the project mission and goals can be seen progressing from the right to the left and represents the continuum ranging from values and concepts of the project to implementation of these conceptions. The collaboration with both families and community partners dimension forms a continuum that is progressing from the upper-middle area of the map to the lower-middle area and ranges from internal collaboration (e.g., collaboration among families, staff members, and administrators) to external collaboration (e.g., relationships with funding entities and community partners).

Finally, results of the semi-structured interviews were analyzed. With regard to the concept mapping results, three interrelated themes were identified through the interview analysis: (a) care teams were created and they were functioning, (b) care teams served as a mechanism to achieve the Blended Funding Project mission and goals, and (c) care teams were created as family-centered.

## Discussion

The Blended Funding Project appeared to represent the widely held theory of change, and the major elements of the project theory were identified in concept maps. The key categories that represent the Blended Funding Project's theory of change are family empowerment, organizational flexibility, and family and service system collaboration. There were two main strategies developed and utilized in the project: (a) widespread and extensive collaboration and (b) communication of the key values shared by the stakeholders. In addition, the results of semi-structured interviews revealed the importance of creating care teams. Care teams were identified as mechanisms to achieve the project mission and goals and ensure that services were family-centered. In summary, the results of both the concept mapping procedure and the results of the interviews indicated that the project was created as family-centered. In brief, this project demonstrated the viability of family members as both overseers and recipients of services.

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## **Organizational Structures and Processes Within an Evidence-Based Practice: Cross-Site Findings From a Study of Teaching Family Organizations**

Teresa Nesman

### **Introduction**

This paper describes findings from Phase II of the Community-Based Theories of Change study. Phase II focused on confirming or disconfirming the presence of organizational characteristics and organizational facilitators used for policy implementation that were identified in Phase I (Hodges, Hernandez, Nesman, & Lipien, 2002). These organizational characteristics and facilitators are described in the above discussion by Hernandez.

Improving the clarity of the conceptualization and operationalization of local policy and its implementation is important for effective service planning and delivery (Wholey, 1997) as well as for focusing evaluation efforts (Chen, 1990; Cohen & Kibel, 1993; Rimer, 1991; Weiss, 1992). Theories of change, made explicit with the use of logic models, have been found to improve local stakeholders' understanding of the relationships between the children and families served, the services and supports provided and the resulting outcomes by making abstract service concepts concrete and understandable (Alter & Murty, 1997; Julian, Jones, & Deyo, 1995). This increased understanding may be especially helpful in implementing evidence-based practices within differing community contexts, but research that illuminates this process is needed.

This summary provides an example of how evidence-based practices are operationalized at the local level and how this translates to actual service delivery. Research questions for the study include, "How does an organization implementing an evidence-based practice turn ideas into action?" "What structures and processes support such an organization's ability to carry out its mission and goals?" and "How does such an organization sustain its focus?"

### **Method**

The data presented were collected through concept mapping (Concept Systems Inc., 2002) with organizations implementing the Teaching Family Model (Wolf, Kirigin, Fixsen, Blase, & Braukmann 1995), an evidence-based practice that has a clearly articulated theory of change. This model is supported by the Teaching Family Association (TFA), which is an international organization that supports the consistent implementation of the model, certification of member agencies, recognition of programs, standardization of useful training and evaluation procedures, supervision of program replication, and the provision of annual conferences for sharing new material and program development (TFA, 2002). Implementation of the model is based on a theory of change that includes the following components: (a) Behavioral problems in children and youth result from a lack of appropriate alternative ways of interacting with their home, school, and community environments; (b) Therapeutic change takes place through the implementation of individualized child and family treatment plans, and (c) Change for professionals and organizations is necessary to achieve client-level outcomes. Concept mapping was used to identify structures and processes that support carrying out the mission and goals of TFA within each of the five participating organizations. The sampling protocol for this process required that concept mapping participants be actively involved in carrying out the mission and goals of the organization and the Teaching-Family Model. Participants included staff from five organizations implementing the evidence-based practice of the TFA. There were a total of 71 participants, with a mean of 14.2 participants per site. Names of the organization and the number of participants for each one are: (a) Barium Springs Home for Children ( $N = 13$ ); (b) Bringing It All Back Home (BLABH;  $N = 16$ ); (c) Closer To Home ( $N = 20$ ); (d) Utah Youth Village ( $N = 11$ ) and (e) Devereaux Family Programs ( $N = 11$ ).

Concept mapping began with a structured brainstorming process in which participants were given a focus statement and guided to generate statements in response to the prompt statement: "Generate a list of things that are done at [name of organization] so that we understand how to carry out the Teaching-

Family mission and goals.” A total of 433 statements were generated across the sites, an average of 66.4 statements per site. The number of statements generated for each site included 101 for Barium Springs, 97 for BIABH, 101 for Closer To Home, 53 for Utah Youth Village, and 81 for Devereaux. Following the brainstorming, each participant was provided with a complete set of the statements and asked to sort the statements into piles in a way that made sense to them. After the individuals created their piles of statements, they named each pile according to the type of statements included in that pile. In addition to sorting the statements, each participant was given a list of all generated statements and asked to rate them from 1 to 5 in terms of importance, 1 being *not important* and 5 being *very important*. Finally, participants rated the same statements as to their effectiveness.

Data analysis included coding of each brainstormed statement by three research team members. A coding scheme was created by fully operationalizing the six organizational characteristics and facilitators described in cross-site findings from Phase I. Designated coders were trained in this coding scheme to ensure complete and consistent understanding of their meaning across coders. Coding of statements was done on a Yes/No scale for each of the six Phase I themes: Identity, Integration, Initiative, Innovation, Leadership, and Communication. As a pilot test, statements from one Phase I site were coded, followed by discussion of items that were confusing or did not fit existing definitions. In the final coding, coders were given a list that operationalized the six factors. One theme was coded at a time, so that all statements for a site were reviewed for one factor before moving on to the next factor. A single statement could be coded as representing more than one theme, such as Initiative and Innovation, and coders could also create additional themes or suggest adaptations to the operationalized definitions of a code. The order of statements and themes were shuffled across coders in order to avoid order effects. The analysis included inter-rater agreement and disagreement (i.e., to what extent are coders creating new themes) and comparing reliability with importance and effectiveness ratings for each statement.

## Results

Inter-rater reliability (percent agreement) by TFA site and Phase I organizational characteristics and facilitators are shown in Table 1 ( $N = 3$  raters). Reliability ranged from 70% to 96%. The characteristic with the lowest reliability (71%) was Integration and the one with the highest reliability (90%) was Innovation. The TFA site for which there was the lowest reliability (82%) was Barium Springs and the site with the highest reliability (87%) was Utah Youth Village. Differences in reliability may be attributed to need for additional clarification of a factor or different emphases at the various TFA organizations.

The brainstormed statements with highest inter-rater reliability and highest ratings for importance and effectiveness are shown in Table 2. Statements are provided for each TFA site by the organizational factor. Note the similarity in statements for each factor, such as adherence to the Teaching Family (TF) model’s approach or philosophy (Identity), flexibility (Innovation), an emphasis on accountability, evaluation and feedback (Initiative), and training (Communication). There are also some differences in

**Table 1**  
**Interrater Reliability (Percent Agreement) by TFA Site and Phase 1 Theme (N = 3 Raters)**

| TFA Site                  | Phase 1 Factor |             |            |            |               |            | Total |
|---------------------------|----------------|-------------|------------|------------|---------------|------------|-------|
|                           | Identity       | Integration | Initiative | Innovation | Communication | Leadership |       |
| Utah Youth Village        | 83%            | 75%         | 81%        | 95%        | 92%           | 95%        | 87%   |
| Closer to Home            | 86%            | 69%         | 88%        | 88%        | 83%           | 91%        | 84%   |
| Devereux                  | 93%            | 73%         | 90%        | 86%        | 80%           | 96%        | 86%   |
| Bringing It All Back Home | 91%            | 69%         | 91%        | 89%        | 86%           | 86%        | 85%   |
| Barium Springs            | 91%            | 69%         | 91%        | 91%        | 75%           | 70%        | 82%   |
| Total                     | 89%            | 71%         | 88%        | 90%        | 83%           | 88%        | 85%   |

emphasis across sites, such as the different Leadership aspects emphasized (e.g., involvement of staff in admission procedures, leaders as role models) and differences in how Integration occurs (e.g., adequate staffing, skills development) within organizations.

**Table 2**  
**Highest Reliability, Importance & Effectiveness Ratings for each Organizational Factor**

| <i>Identity</i>      | <i>Statement</i>  |
|----------------------|---|
| <i>Site</i>          |   |
| Barium               | Family teachers live and model the TF approach  |
| BIABH                | Philosophy of promoting staff from within   |
| Closer               | Kids and families come first  |
| Devereaux            | Mission: To provide effective treatment in a humane and individualized way in a family setting  |
| Utah                 | Knowledge that the TFM works, high degree of confidence in the model.   |
| <i>Integration</i>   |   |
| Barium               | Group homes have a couple and two staff, plus three floaters available (adequate staffing)  |
| BIABH                | All consultants are experienced as Teaching Parents   |
| Closer               | In-home support staff for teaching parents  |
| Devereaux            | Provide TPs with skills (skill list) to teach to children, skill curriculum   |
| Utah                 | Families and children are part of the treatment team.   |
| <i>Initiative</i>    |   |
| Barium               | Evaluations - individual and program components using aggregate information from all program evaluations as a systemic tool   |
| BIABH                | High criteria for accountability and job performance at all levels  |
| Closer               | Working toward clearly defined outcomes (e.g., performance based contracts with funders)  |
| Devereaux            | TFA evaluation process offers feedback that allows program to grow  |
| Utah                 | Consultation feedback as to strengths, what's been done that's been right, feedback on ways to improve.   |
| <i>Innovation</i>    |   |
| Barium               | Flexibility: fitting model to the kid - techniques have to be individualized  |
| BIABH                | TFM is not a cookie-cutter approach (allows different approaches with different children)   |
| Closer               | Flexible responses to needs of consumers  |
| Devereaux            | Flexibility of TPs  |
| Utah                 | Devoted to growth and expanding organization.   |
| <i>Leadership</i>    |   |
| Barium               | Admissions is by clinical team decision   |
| BIABH                | Leadership of BIABH serves as role models   |
| Closer               | Higher authority to make decision-making 24-7   |
| Devereaux            | Motivators, such as food, Christmas parties, music, dancing, coffee, donuts   |
| Utah                 | Consumer-driven facilitative administration: All pieces of the TFM (consultation, evaluation, and training) work together, but administration must make it happen   |
| <i>Communication</i> |   |
| Barium               | Preservice training   |
| BIABH                | Preservice training   |
| Closer               | Preservice training   |
| Devereaux            | Intensive training initial preservice training  |
| Utah                 | Preservice workshop/training: 40+ hours includes teaching TFM, general child welfare, professionalism, ethics, first aid CPR, restraint training, social learning theory, teaching interactions, role playing (10 hrs) with role play feedback. |

## **Conclusion**

The preliminary findings for Phase II confirm the presence of all organizational characteristics and facilitators from Phase I in the five organizations implementing the TFA theory of change. These include a clear identity, integration of structures and functions, flexibility and innovation in service approaches, initiative to meet challenges and self-evaluate, strong and empowering leadership and multi-directional communication. This suggests the important role these organizational characteristics play in turning ideas into action in organizations implementing an evidence-based practice.

Key concepts of the TFA theory of change are evident in the statements for each factor, which indicates clarity of both conceptualization and implementation of this evidence-based practice. That is, organizational structures and processes that help staff carry out the mission and goals of TFA include theory of change elements such as professional and organizational change as a requirement for achieving client-level outcomes, providing alternative ways for children to interact with their environments, and implementing individualized child and family treatment plans.

Closer examination of individual brainstormed statements also indicates a high level of integration of organizational characteristics within sites. That is, many statements were coded for and included elements of more than one characteristic. High reliability in coding for each characteristic and importance/effectiveness also supports the consistency of these factors across organizations. Some differences in reliability and importance/effectiveness ratings suggest the need for further clarification of factors and the possibility of different emphases in implementation of the Teaching Family model at some sites. Future analyses will include examination of concept maps that group statements by clusters based on participant sorting. This analysis will provide additional insight into the way in which the organizational characteristics are incorporated across organizational structures and processes within each organization implementing this evidence-based practice.



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## **Symposium Discussion**

### **Sharon Hodges**

For human services in general and child mental health services in particular, it is important for planners and providers to understand how policy is conceptualized and operationalized at the local level and how this translates into actual service delivery. Without an explicit understanding of why service policies are expected to affect change among children and families, local stakeholders cannot easily measure the relevant dimensions of performance or understand and interpret the results that are achieved.

Benefits and challenges emerged across sites that are associated with using a theory of change approach to policy implementation. The benefits of using a theory of change approach to policy implementation supports careful thinking to ensure feasibility and defensible use of resources, development of local solutions to community needs, strategic planning, evaluation, and quality improvement activities, and helps build consensus among diverse stakeholders. The challenges of using a theory of change approach to policy implementation include the surfacing of conflict among stakeholders as ambiguity is clarified, increased anxiety about achieving organizational goals as they become clearer, and lack of assurance that organizational strategies will be effective in achieving goals even if consensus is achieved among planners and implementers.

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# **A National Look at the Academic Achievement of Children with Emotional Disturbances**

Mary Wagner  
W. Carl Sumi

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*The content of this presentation does not necessarily reflect the views or policies of the U.S. Department of Education nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. government.*

## **Introduction**

Much is expected from our education system in terms of preparing future citizens, workers, and leaders. However, academic performance remains the central mission of our schools. Further, limitations in academic achievement represent the primary implication of disability for most students receiving special education services, including students with emotional disturbances. In fact, a student's emotional or behavioral issues must affect his or her ability to learn in order for a student to qualify for special education services in the category of emotional disturbance (ED). Ameliorating learning limitations is crucial to the ability of children with ED to be successful in school. Fortunately, some evidence suggests that instructional strategies that are effective in overcoming academic deficits also reduce the occurrence of behavior problems in the classroom (McComas, Hoch, Paone, & El-Roy, 2000).

Within the current accountability environment, it is crucial to understand the progress of all students, including those with disabilities, and the factors that contribute to their positive academic performance. The Special Education Elementary Longitudinal Study (SEELS)<sup>1</sup> provides a national perspective on how students with disabilities, including children with ED, are faring academically. This summary presents information on the demographics of children with ED; their academic achievement, functional cognitive skills, sense of locus of control, and motivation toward schooling; and results of multivariate analyses identifying individual (e.g., age, race/ethnicity, social skills), household (e.g., income), and school factors (e.g., modifications received, prior grade retention) associated with variations in reading and math proficiency.

## **Methods**

The Office of Special Education Programs (OSEP) of the U. S. Department of Education commissioned a six-year study that is generating the information needed to assess the achievements of students with disabilities in their elementary and middle school years in multiple domains. The SEELS is documenting the characteristics, experiences, and outcomes of a nationally representative sample of more than 11,000 students who were ages 6 through 12 and were receiving special education services in grades 1 through 6 when the study began in 2000. SEELS findings are generalizable to students with disabilities nationally, and to students in each of the federal special education disability categories in use for students in the SEELS age range, including children with emotional disturbances (ED).

Data are reported from the first wave of telephone interviews with parents, conducted in 2000, and from the first wave of mail surveys of school staff serving sample members in the 2000-01 school year. Data also are presented from two years of direct academic assessments conducted in the 2000-01 and 2001-02 school years. These assessments used research editions of the Woodcock Johnson III (Woodcock, McGrew, & Mather, 2001). Reading was assessed using the letter-word identification and passage comprehension subtests, whereas math was assessed using the calculation and applied problems subtests. Locus of control and motivation toward schooling scores were derived from the School Attitude Measure (Wick, 1990) and obtained during an in-person interview with students that was part of the direct assessment. Descriptive percentages and means reported for youth with ED and youth with disabilities as a whole are weighted to

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*Author note: <sup>1</sup>SEELS design details, data tables, and reports are available at [www.seels.net](http://www.seels.net)*

represent those groups nationally. Multivariate analyses are unweighted and employ ordinary least squares to identify the independent relationships of motivation for schooling and locus of control to academic performance, holding constant a variety of other individual, household, and school factors.

## Results

### Student Characteristics

Four-fifths of children in the SEELS age range with ED were male, compared with 51% of children in the general population ( $p < .001$ ), and 27% were African-American, compared with 17% in the general population ( $p < .001$ ). A higher percentage of children with ED were found to be living in poverty (31%) than their same-age peers in the general population (16%;  $p < .001$ ). In addition to being identified as having an emotional disturbance, 65% of parents of children with ED reported that their children also had Attention Deficit/Hyperactivity Disorder (ADHD).

### Academic Achievement

Comparisons of the abilities of students with ED on letter-word identification, passage comprehension, mathematics calculation, and applied problem solving showed no significant changes from 2001 to 2002 (see Table 1). On all subtests in 2001 and 2002, the majority of children with ED scored in the bottom quartile, ranging from 42% in the 25<sup>th</sup> percentile on math calculation in 2001 to 64% on passage comprehension in 2002. Similarly, no more than 10% of children with ED scored in the highest quartile, ranging from 5% on passage comprehension to 10% on letter-word identification.

**Table 1**  
**Reading and Math Achievement Scores by Percentile Rank for Children with ED**

|                            | Year | Percentile |       |       |        | Mean |
|----------------------------|------|------------|-------|-------|--------|------|
|                            |      | 0-25       | 26-50 | 51-75 | 76-100 |      |
| <b>Reading</b>             |      |            |       |       |        |      |
| Letter-word identification | 2001 | 56%        | 25%   | 9%    | 10%    | 29.6 |
|                            | 2002 | 53%        | 24%   | 14%   | 9%     | 30.7 |
| Passage comprehension      | 2001 | 61%        | 24%   | 10%   | 5%     | 25.6 |
|                            | 2002 | 64%        | 22%   | 9%    | 5%     | 24.6 |
| <b>Math</b>                |      |            |       |       |        |      |
| Math calculation           | 2001 | 42%        | 31%   | 18%   | 9%     | 34.3 |
|                            | 2002 | 48%        | 27%   | 18%   | 7%     | 31.9 |
| Applied problems           | 2001 | 52%        | 23%   | 16%   | 8%     | 32.7 |
|                            | 2002 | 44%        | 33%   | 16%   | 7%     | 33.5 |

Although in the aggregate, children with ED did not improve in these academic measures in a one-year period; over time it is important to note that some fluctuation in scores did occur at the individual level. Whereas from 49% to 63% of the children's scores did not fluctuate from year to year across the four measures, 14% to 29% declined at least one-half standard deviation and 19% to 27% improved at least one-half standard deviation.

### Locus of Control and Motivation toward Schooling

Locus of control refers to the tendency to attribute both successes and difficulties either to internal factors (e.g., one's own effort, skill, or choices) or external factors (e.g., luck or other people's decisions) (Conner, 1995). The psychological dimension of engagement at school inherent in motivation toward schooling reflects the extent to which a student identifies with the school environment (Finn, 1993). Students' motivations, their overall attitudes toward coming to school each day, and their disposition while they are there are other psychological indicators of their engagement at school.

Although there are no significant changes in locus of control or motivation toward schooling responses from 2001 to 2002, it is interesting to note that the majority of children with ED, 64% to 83%, responded “usually agree” or “always agree” to statements that they do not believe they have a lot of control over whether or not they will be successful in school. Scores on individual items regarding locus of control and motivation toward schooling were summed to create scales and summarized into categories of low, medium, and high. Approximately three-fourths of children scored in the medium range in 2001 and 2002 for locus of control and motivation towards schooling, with no significant change in a one-year period.

**Multivariate Analyses**

To help understand the contribution that variations in locus of control and motivation toward schooling make toward variation in academic performance (i.e., passage comprehension and mathematics calculation) multivariate analyses were conducted to examine the independent relationship of the two factors to academic performance, holding constant statistically a variety of other factors the SEELS conceptual framework suggests would influence reading and math abilities. Factors with statistically significant independent relationships to academic performance are listed in Table 2.

**Table 2**  
**Results of Multivariate Analyses Measuring the Relationship**  
**of Independent Factors to Direct Assessment Scores in Reading and Math**

| <i>Independent Variable</i>                    | <i>Direct Assessment Score in Reading</i> | <i>Direct Assessment Score in Math</i> |
|--|---|--|
| Child has ADD/ADHD                             | —*  |  |
| Functional cognitive skills                    |   | +‡                                     |
| Gender—being male                              | +**                                       |  |
| Race/ethnicity—being African American          | —***                                      | —*                                     |
| Number of school changes                       | —‡  |  |
| Child has been retained at grade level         | —*  |  |
| Locus of control                               |   |  |
| Motivation for schooling                       |   |  |
| Number of instructional modifications          |   | —‡                                     |
| Participation in literature-related activities |   | +‡                                     |

*Note.* Additional variables that also were analyzed but not included in this table include: age, students’ social skills, number of domains affected by disability, household income, parents’ expectation for college, family involvement at home, takes language arts in special education class, receives tutoring, number of presentation/communication modifications, teachers education, frequency of whole class instruction, frequency of small group instruction, frequency of individual instruction, and participation in general instruction activities.

Notation:

+ Contributes to academic performance

– Detracts from academic performance

Statistical significance: ‡ $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Although many children with ED have a weak internal locus of control and some are not strongly motivated toward school, these factors are not associated with academic performance for children in the SEELS age range, independent of other differences between them. Other factors are related, however. Children with ADHD as well as ED have added academic challenges. Boys with ED read better than girls. Being African American is negatively associated with reading and math performance, independent of income, which is unrelated. Children with ED change schools more than other categories of children, and do so more often because they are reassigned by their schools. Mobility shows a negative relationship with reading performance that could strengthen over time if a pattern of mobility persists. Although retaining students at grade level is done to help students’ master content in one grade before progressing

to the next, those who have been retained continue to have poorer academic performance, independent of other differences between students. Receiving more instructional modifications is negatively related to math performance, probably reflecting the fact that underachieving students are most likely to receive them. Finally, those who participate in more literature-oriented activities also demonstrate stronger academic performance.

## Discussion

The majority of children with ED have significant deficits in reading and math that, as a group, do not show change in a one-year period. Half or more are in the lowest quartile in reading with only about 1 in 7 in the top half. About half are in the lowest quartile in math with about one-fourth in the top half. Overall scores mask considerable fluctuation in performance for individual children. About one-fourth of children with ED improve in reading comprehension and math calculation in one year, and an equal proportion have declining scores.

Although there were no significant changes over one year in academic functioning for children with ED in the SEELS age range, the information gathered through SEELS is still a vital component to the field of special education's knowledge base regarding the daily functioning for children with ED nationally. These data help special education professionals understand more thoroughly how children with ED progress from year to year. Surprisingly, when variables that are expected to affect academic performance are investigated while holding other variables constant, statistical analyses show that they do not have the affect expected (e.g., household income, social skills, age) while other variables do affect academic achievement (e.g., number of instructional modifications, participation in literature-based activities). Understanding how many different variables interact and affect children's outcomes provides professionals in the field with important information that can help meet the complex needs of children with ED and hopefully improve outcomes.

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# **Linking Outcomes Information to Decision Making: Preliminary Findings Using a Case Study Approach**

**Vaishali Patel  
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## **Introduction**

Although national interest exists to use outcomes information to provide accountability and improve the quality of child mental health services, little is known about how outcomes management systems are implemented and how this information can inform decision making at various levels of the organization, such as at the clinical, program management and executive leadership levels (Hodges, Woodbridge, & Huang, 2001). Actual use of information has been identified as a key step in the quality improvement process, although few studies have attempted to understand information utilization within child and adolescent mental health settings (Rouse, Toprac, & MacCabe, 1998). The goals of this study are to identify the conditions under which the use of outcomes information is supported and hindered, and describe the experiences of various staff within such organizations in using data on the outcomes of children and youth in their care.

## **Methods**

We studied a subset of child out-of-home care agencies in Maryland that used an Internet-based Outcomes Management System (OMS) developed through the support of their professional organization, Maryland Association of Resources for Families and Youth. The OMS captures the following data: demographic data, family history, behavioral/social issues, psychiatric diagnoses, prior care and treatment, program type, and functional rating scale. Using a multiple case study design we purposefully selected two Residential Treatment Centers (RTC) and two Treatment Foster Care (TFC) programs from 10 programs that were using the same outcomes system. The selection of RTCs and TFCs was based upon our desire to contrast the use of outcomes information in these programs as they differ most in terms of the intensity of services they offer, costs, and potentially in the quality of care they provide among out-of-home care settings (USDHHS, 1999).

Using qualitative methods, within each program, information was gathered from staff members representing different groups of users (clinician, program manager/clinical supervisor, quality improvement, executive director) using tailored semi-structured field guides. Interviews lasted approximately one hour, were audio-recorded and transcribed. Treatment team meetings and quality improvement meetings were observed to describe the decision making processes, including how and who discussed outcomes information and other types of data at these meetings.

The data collection process is still ongoing. As of March 2005, 23 interviews with staff members had been conducted across three programs (2 TFC and 1 RTC), representing 10 clinicians/case managers, four Quality Improvement managers, seven Unit Directors/clinical supervisors, and two Executive Directors (one of whom is responsible for two of the three programs). At the three different programs, six meetings (both quality improvement and treatment team meetings) have been observed. Subsequently, additional interviews and observations of meetings were conducted at a fourth program, an RTC.

The analysis of the data collected—text from the transcribed interviews and field notes describing observations related to meetings—has been guided by grounded theory (Corbin & Strauss, 1998) and case study methods (Yin, 2003). The use of Atlas.ti software (Scientific Software Development, 1997) has facilitated both the management of the data as well as analysis. Data triangulation was done to check

the consistency and convergence of the findings obtained from different sources by comparing interviews with observations of meetings. Member checking has also been done by presenting initial findings to participants to elicit feedback.

## Results

*“I don’t know...that they are seeing a correlation between the data collecting and the information that they are getting or the decisions that are being made organizationally.”*

Organizations are struggling to generate meaning from the data they are collecting. Although the level of use varied to a degree across programs and types of staff, overall outcomes information has done little to inform decision making. Typically, outcomes management systems are implemented within these agencies as far as data collection and entry efforts and little action is taken to actually use the information. Despite this struggle to generate meaning from the data, executive directors and program management staff do recognize that their current methods for evaluating their work fall short:

*“The longer I’m in the business the more I realize how much we don’t know— how much we’re shooting in the dark... so we collect the data that begins to let us know in a systematic way what impact we’re having.”*

Their reliance on individual vignettes and anecdotal data to substantiate their work rather than analysis of aggregated, objective data was cited as a concern. They also recognize that current decision making processes are more reliant on people’s opinions rather than hard data.

Issues identified as contributing to the struggle to generate meaning include: the ability to link data directly to work processes; limitations of the measures and the complexity of care provided that make it difficult for staff to understand and interpret the information; quality and quantity of feedback provided to staff, and staff fears regarding how the data will be used. These issues impact staff buy-in and subsequent use of the data for decision making. The struggle to make sense of the data directly relates to the poor integration of outcomes data to work processes. This problem is pervasive and is reflected at all levels of the organization:

*“...people don’t know how to make that meaningful because it’s not related to anything else that they do. It’s not tied in any way to what they do.”*

This lack of integration is especially evident in clinical processes. Outcomes data are not linked to treatment plans or goals. Treatment teams—a major mechanism for treatment decision making in these settings of care—do not discuss outcomes data; instead the data monitored in RTCs to evaluate the progress of youth are negative behaviors, such as the number of therapeutic holds. These types of data are valued because they are very specific and relevant to behavior modification strategies employed by staff. In contrast, outcomes data are not valued because they are more global in nature and are seen as more subjective because they are clinician ratings of functioning.

Another potential barrier to incorporating outcomes into work processes is the poor understanding of outcomes across organizational levels. The emphasis is placed on data collection and entry rather than on analysis and interpretation of the data, resulting in a repository of data that are not used, and are considered meaningless by staff. According to one program manager:

*“...right now we talk outcomes, but I don’t really see us — first of all most people don’t understand an outcome — and secondly they don’t know what to do with it anyway if they did get one. ...We have tons of data on kids, but nobody collating that together into something useful.”*



Staff members currently do not know what they want from an outcomes system and express difficulty interpreting outcomes data and applying it to their work:

*“I don’t know that...we know how to translate it [outcomes data] into meaningful terms.”*

This lack of knowledge is exacerbated by limited amount and poor quality of feedback provided to staff. Organizational leaders and management recognize this problem as critical:

*“One has never been able to get meaningful data down to the clinician and treatment team level. That in turn has contributed to the lack of real buy-in on the part of those people. We’re just producing reports that aren’t terribly useful for them.”*

Clinical staff report that they rarely see the data after they are collected and that communications regarding even summary level findings are rare. However, they also admit that very little demand for data exists, reflecting how rarely the data are used and how little the data are valued.

Another barrier limiting the use of data for decision making includes fears regarding the potential misuses of the data. Both clinicians and executive directors expressed concerns that regulators would use the data for “watchdog” purposes rather than for trying to improve practice or obtain additional resources for needy clients. Fear of what the data will show—their flaws—was specifically cited as a major concern by some. Clinicians also expressed fears about the data being used to attack their clinical judgment. They specifically cited the dangers of using conclusions drawn from aggregate data to individual level cases, thereby losing the uniqueness of each child.

## **Implications**

These findings demonstrate that organizations are struggling with a key step in the process of information utilization: generating meaning from the data. A greater emphasis needs to be placed on the analysis, interpretation and application of the data collected rather than on data collection and entry. Such efforts should also seek to link outcomes data to specific clinical and managerial work processes and obtain the buy-in of staff collecting the data. In order to accomplish this, regulatory agencies and accreditation organizations should recognize and support the development of an infrastructure to support the use of data for decision making within child and adolescent mental health organizations.

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# **Using Data for Continuous Quality Improvement in an Integrated Setting**

Jody Levison-Johnson  
Glenn Gravino

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## **Introduction**

The need for explicit data review and defined quality improvement processes has often been overlooked in the human services field. In system of care initiatives, this need is even greater as adherence to the principles and values base of the wraparound model is what has typically assured successful outcomes from both a quality and financial perspective. In Monroe County, New York, a non-federally funded system of care initiative engaged in data review as part of a quality improvement process. Results demonstrated both positive clinical outcomes and sizable cost savings and resulted in significant program expansion. In addition, the data have revealed that despite challenges with fidelity, positive outcomes can be achieved.

The Monroe County Youth and Family Partnership (YFP) in Rochester, NY is an innovative integrated cross-system approach whereby each Care Coordinator serves as a Mental Health Case Manager, a probation officer and a child welfare caseworker for enrolled youth and their families. This integration of functions represents a novel approach to reducing the number of people with whom families need to interact in order to get their needs met. The initiative began as a 25-youth pilot project in 2002. From the outset, the project's leadership asserted the need to demonstrate successful outcomes, both clinically and fiscally, for continuation. In 2004, as a result of demonstrated cost savings and improvements in youth functioning, the project doubled to serve 50 families. In 2005, at a time when service reductions and budget cuts have been the norm in Monroe County, the project was approved for expansion to serve 100 families. This is wholly attributable to the project's ability to demonstrate compelling cost savings to Monroe County while also providing a more effective intervention that supports families in developing their own skills and abilities to meet their needs. This summary describes methods and results from comprehensive evaluation of the YFP project, and demonstrates how data were used for quality improvement.

## **Method**

Coordinated Care Services, Inc. has provided a comprehensive annual evaluation of the YFP project for Year 1 (July 2002-June 2003) and Year 2 (July 2003- June 2004). This evaluation has included computation of the overall and local cost-savings of the initiative, assessment of fidelity to the wraparound model, consumer satisfaction, review of clinical and functional improvements using the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 2000) and impact on overall County out-of-home placement rates.

Fiscal indicators were computed using the CareManager® information system, which captures actual client and family costs for all YFP families enrolled during the evaluation periods. Total costs were computed and compared to local residential care costs which were established through an extensive cost-finding study completed at the project's inception.

To assess fidelity to the project's model, several indicators were reviewed using CareManager® including child and family team composition, frequency of team meetings, and the use of informal/natural resources, system/community supports and paid providers to meet family needs. Changes in functioning were assessed by reviewing the intake CAFAS scores and comparing them to the most recent CAFAS scores. Hodges, the scale's author, suggests that as the instrument is "very sensitive to changes in functioning" (Hodges, 1999, p. 24), and an improvement in Total score from intake to most recent functioning of 20 points or more is significant.

## Results

A portion of the results from this evaluation, including fiscal, functional and fidelity indicators are presented here.

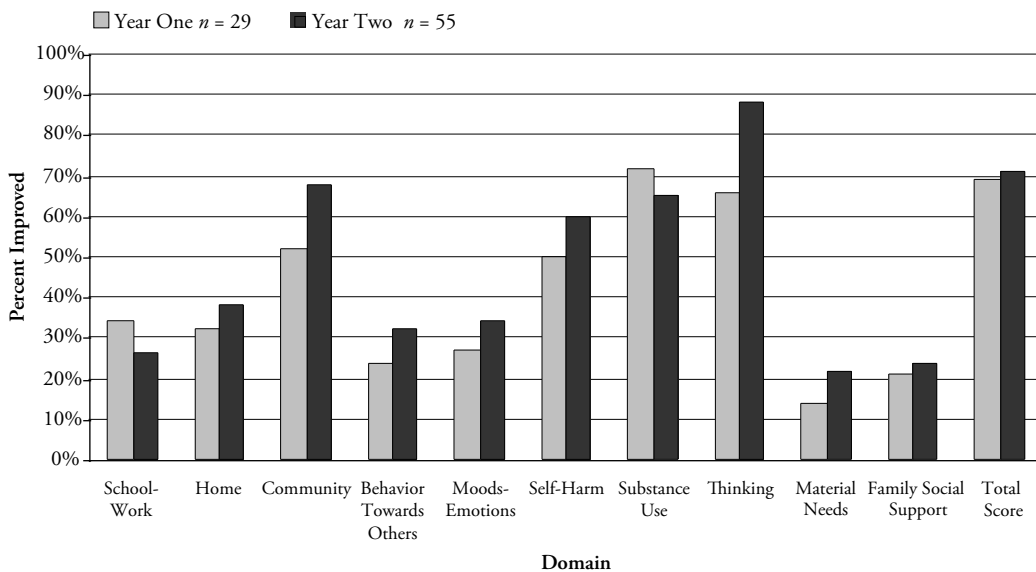
In Year 1, cost-savings to Monroe County averaged approximately \$38,274 per youth, which was conservatively estimated at over a half-million dollars in total savings. For Year 2, savings per enrollee were \$45,751 on average, totaling nearly a million dollars for the entire project.

With respect to functional improvements, the CAFAS has reflected improvements for enrollees. Sixty-nine percent of children and families evidenced functional improvements in Total CAFAS scores in Year 1. This result was consistent in Year 2 as total CAFAS scores improved for 71% of enrollees. In addition to Total scores, improvements were noted in many of the other critical subscales of the CAFAS.

The CAFAS data also provided unique insights into areas for growth and development. Specifically, Community domain improvements were noted in only 52% of enrollees in Year 1. As all YFP participants are on probation and functioning in the community is critical, this was an area of focus in Year 2. Focused attention resulted in an increase in improvement in this domain to 68% of enrollees. Figure 1 reflects the percentage of enrollees who demonstrated any improvement in the various CAFAS domains.

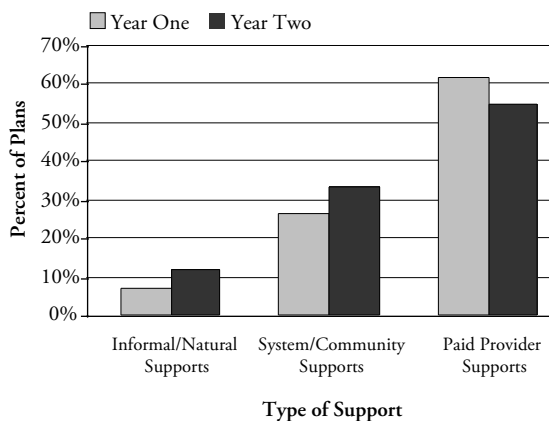
The wraparound model used by the YFP assists families with the development of informal and natural resources to support them over time, thereby ultimately reducing the family’s reliance on the formalized service system. From this philosophical underpinning, more substantial increases in scores in the Family Social Support domain were anticipated. As this has not been substantiated, it has become a concerted area of focus for the YFP in Year 3. Efforts include a broader social marketing and awareness campaign regarding system of care values and principles as well as the hiring of one employee devoted to community development.

**Figure 1**  
**CAFAS Improvements**



One indicator of fidelity to the wraparound model is the balanced use of a variety of supports—natural/informal, system/community and paid providers—to meet family needs. Informal/natural supports may include family members, neighbors, etc. System/community supports include school staff and other service providers who are not directly paid by the YFP. Paid providers include, but are not limited to, therapists or skill-builders that are paid by the YFP. Team Plans for the YFP reflected high use of paid provider supports and minimal use of informal/natural and system/community supports in Year 1. Efforts made to focus on this area in Year 2 yielded slight increases. As this is a key component of effective wraparound, a more concrete plan to address this is in place for Year 3 which includes the hiring of the community developer and securing the services of a professional Wraparound Process Coach to support Care Coordinators in building supportive teams with families and maximizing team contributions in plan development and implementation. Figure 2 illustrates the percentage of plans for all enrollees and for all enrollment months which authorized the various types of supports (informal/natural, system/community, paid provider).

**Figure 2**  
**Plans Use of Informal, Community & Paid Supports**



## Conclusion

The results from this evaluation have demonstrated the ability to effect positive outcomes both clinically and fiscally despite apparent challenges with fidelity. The evaluation report has served as the basis to identify areas of strength and areas for growth and development with program leadership, administration and staff and has provided a foundation for planning and continuous quality improvement initiatives. Further study of the innovative approach used by Monroe County, where the roles of three child-serving systems (mental health, child welfare and juvenile justice) are blended, is warranted. In addition, the evaluation suggests many areas for growth and development and offers myriad recommendations to assure that the project enhances its ability to deliver high quality, cost effective and culturally competent services.

This has culminated in a larger scale quality improvement initiative for the project that involves the project's leadership from the key child-serving systems (mental health, juvenile justice and social services), project administrators and supervisors and the project staff. Several steps have been taken to build upon the project's strengths and enhance areas of perceived weakness including fidelity and specific areas on the CAFAS, such as the Family Social Support and Community domains. This quality improvement process has included a focused effort to revisit the model's parameters and values, a review of the integration of the functions of the Care Coordinators, planning a response to the Care Coordinators identified needs through modified staffing structures, as well as a plan to conduct more real-time data review and analysis for immediate feedback to program administrators, supervisors and staff.

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# **Four Clinical Pathways to Success in Systems of Care**

Shannon Van Deman  
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## **Introduction**

The Dawn Project, which is the system of care in Marion County (Indianapolis), Indiana, serves youth with serious emotional disorders who are at-risk for or have a history of residential placement. Youth enrolled in the Dawn Project are involved in at least two child-serving agencies (e.g., juvenile justice, child welfare, education, and mental health) and approximately 60% are in costly out-of-home placements at the time of referral. These youth represent a substantial financial burden to the systems mandated to serve them. By managing costs within a per-child per-month case rate paid by referring agencies, the Dawn Project provides the community with a way to stabilize costs and find community-based solutions for serving these youth.

The primary focus of the Dawn Project is to develop service coordination plans that help youth and families succeed at home, in school and in the community. Plans are developed by child and family teams, which include the youth, family members, representatives from the referral agency, providers and other individuals identified by the family. Child and family teams are responsible for managing the case rate and for purchasing services that best meet the needs of youth and their families. Given the severity of the needs faced by youth enrolled in the Dawn Project, many youth are placed in residential treatment at some point during their enrollment. The timing of these placements affects the child and family team process, the content of service coordination plans and youth and family outcomes.

The purpose of this study was two-fold. First, it was hypothesized that the timing of residential placements would not only affect the overall experience that children and families have with the Dawn Project, but also the level of success attained by Dawn Project participants. Second, variables that might predict residential placement timing were examined.

## **Method**

The independent variable was clinical pathway. Based on the patterns of referrals received from child welfare and juvenile probation and existing clinical data, four clinical pathways were identified to reflect whether youth had a residential placement at some point during their involvement with the Dawn Project and when the residential placement occurred relative to enrollment in the Dawn Project. The four pathways are defined below.

- **No Residential** – Youth in this pathway did not have a residential placement while they were enrolled in the Dawn Project.
- **Placed After** – Youth in this category include youth who were placed in residential treatment after being enrolled in the Dawn Project for at least 30 days.
- **Transition Out** – Youth in this pathway were in a residential placement at the time they were referred into the Dawn Project and left their residential placement within 90 days of their Dawn Project enrollment.
- **Placed Prior** – This category includes youth who were already in residential at the time of their enrollment or were placed within 30 days of their enrollment in the Dawn Project and remained in residential placements for more than 90 days.

The dependent variables included length of stay in the Dawn Project, cost per child per month, success in meeting child and family team goals, child characteristics, such as gender, race, age at enrollment, initial diagnoses, and initial Child and Adolescent Functioning Assessment Scale (CAFAS; Hodges, 1996), and system processes (i.e., child and family team size, referring agency, and service utilization).

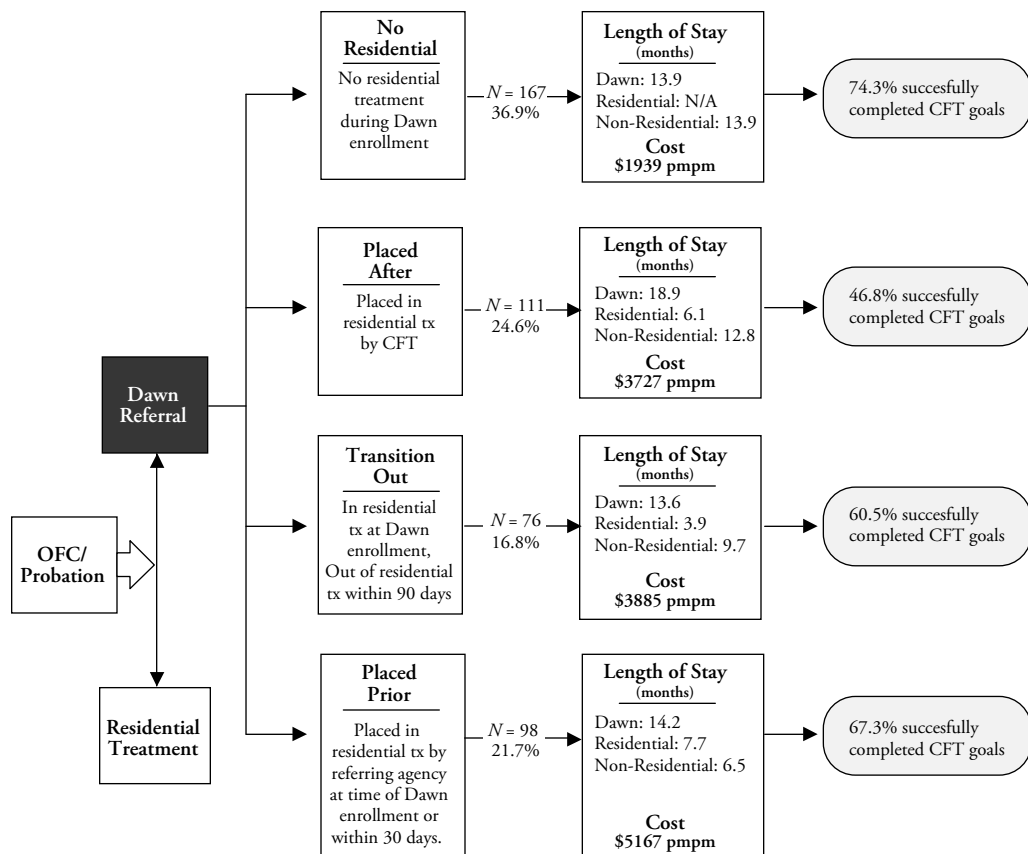
All juvenile justice and child welfare youth referrals enrolled between May 1, 1997 and April 30, 2003 and disenrolled by July 31, 2004 were examined ( $N = 452$ ). The data were obtained from The Clinical Manager (TCM; Clinical Data Solutions LLC, 1998), which is the information management system used by the Dawn Project to collect clinical, fiscal and outcome information.

## Results

### Length of stay

The data were analyzed using SPSS software (SPSS, 2002). All statistically significant results rely on an alpha level of .05. An omnibus ANOVA revealed that length of stay (see Figure 1) in the Dawn Project varied by clinical pathway,  $F(3, 448) = 9.5, p < .000$ . Specifically, independent  $t$ -tests indicated that the Placed After youth ( $M = 19.0, SD = 9.1$ ) had longer lengths of stay than the Placed Prior ( $M = 14.3, SD = 9.8$ ),  $t(207) = -3.6, p < .000$ , Transition Out ( $M = 13.6, SD = 9.5$ ),  $t(185) = -3.9, p < .000$ , and No Residential youth ( $M = 13.9, SD = 7.2$ ),  $t(276) = 5.2, p < .000$ . This is not surprising since the Placed After youth spend a period in Dawn prior to residential placement and then often a period in Dawn after residential placement.

**Figure 1**  
**Length of Stay in Dawn and Residential Treatment, Cost per Child per Month, and**  
**Child and Family Team Successful Goal Completion Rate by Clinical Pathway**





## Cost

An omnibus ANOVA also revealed that the cost per child per month varied by clinical pathway,  $F(3, 448) = 84.7, p < .000$ . Independent  $t$ -tests indicated that every clinical pathway varied from every other clinical pathway except the Transition Out and Placed After pathways  $t(185) = .6, p = .54$ . As shown in Figure 1, the No Residential pathway was the least costly ( $M = 1939.3, SD = 1439.7$ ) followed by the Placed After ( $M = 3727.2, SD = 1599.2$ ) and Transition Out ( $M = 3885.6, SD = 1932.8$ ) pathways, with the Placed Prior pathway being the most costly ( $M = 5167.6, SD = 1802.9$ ). Furthermore, Figure 1 shows that as the number of months the youth spent in the Dawn Project outside of residential placement increases, the average cost decreases.

## Treatment goals

The proportion of youth who successfully completed their child and family team treatment goals at the time of Dawn Project disenrollment (see Figure 1) varied by clinical pathway,  $\chi^2(27, N = 452) = 77.6, p < .000$ . The No Residential pathway youth were the most successful, meeting 74.3% of the child and family team goals, followed by the Placed Prior (67.3%) and Transition Out (60.5%) pathways, and finally the Placed After pathway (46.8%).

## Child characteristics

Race,  $\chi^2(9, N = 452) = 11.6, p = .236$ , and age at enrollment,  $F(3, 448) = 1.4, p = .246$ , did not vary as a function of clinical pathway. The proportion of females did vary by clinical pathway,  $\chi^2(3, N = 452) = 10.9, p = .012$ , with the Transition Out pathway having the largest proportion of females (50%), followed by the Placed Prior (40%), No Residential (35%), and Placed After pathways (27%). A gender by referring agency interaction,  $\chi^2(1, N = 452) = 10.0, p = .002$ , was also found, however. Child welfare (43%) referred a larger proportion of females than juvenile probation (28%) and child welfare had larger proportions of referrals to the Transition Out and Placed Prior pathways.

The proportion of youth in each clinical pathway with an initial DSM-IV diagnosis in each of the categories listed in Table 1 were compared using a Chi-square analysis. The only statistically significant difference between pathways was found for the affective/psychotic category of diagnoses. Specifically, the Placed Prior (61.5%) and Transition Out (58.0%) pathways had higher proportions of youth with affective/psychotic diagnoses than the No Residential (46.8%) and Placed After pathways (44.9%). This suggests that youth with affective/psychotic diagnoses were more apt to be in a residential placement at the time of Dawn Project enrollment.

**Table 1**  
Proportion of Youth by Initial Diagnoses and Clinical Pathway

|                    | <i>Affective/<br/>Psychotic</i> | <i>Attention<br/>Deficit</i> | <i>Conduct<br/>Based</i> | <i>MR/<br/>DD/LD</i> | <i>Reactive<br/>Stress</i> | <i>Personality</i> | <i>Other</i> |
|--------------------|---------------------------------|------------------------------|--------------------------|----------------------|----------------------------|--------------------|--------------|
| No Residential     | 46.8%                           | 41.6%                        | 48.7%                    | 14.9%                | 18.8%                      | 3.9%               | 7.1%         |
| Placed After       | 44.9%                           | 45.9%                        | 61.2%                    | 11.2%                | 14.3%                      | 7.1%               | 4.1%         |
| Transition Out     | 58.0%                           | 33.3%                        | 58.0%                    | 10.1%                | 15.9%                      | 4.3%               | 11.6%        |
| Placed Prior       | 61.5%                           | 38.5%                        | 59.3%                    | 13.2%                | 17.6%                      | 8.8%               | 14.3%        |
| Across Groups      | 51.5%                           | 40.5%                        | 55.6%                    | 12.9%                | 17.0%                      | 5.8%               | 8.7%         |
| Chi-Square $df(3)$ | 7.9                             | 2.9                          | 4.9                      | 1.3                  | 0.96                       | 3.1                | 7.4          |
| $p$ -value         | 0.05                            | 0.41                         | 0.18                     | 0.73                 | 0.81                       | 0.38               | 0.06         |

Individual functioning at the time of enrollment in the Dawn Project was assessed using the CAFAS. The average total CAFAS score was computed for each clinical pathway. An omnibus ANOVA found statistically significant differences in CAFAS scores across clinical pathway,  $F(3, 448) = 10.3, p < .000$ . Independent  $t$ -tests revealed that the No Residential pathway ( $M = 85.8, SD = 43.1$ ) varied from the Placed After ( $M = 109.9, SD = 33.3$ ),  $t(186) = 4.0, p < .000$ , and Placed Prior ( $M = 99.6, SD = 38.5$ ),  $t(184) = 2.2, p = .03$ , pathways and that the Transition Out pathway ( $M = 73.3, SD = 43$ ) varied from the Placed After,  $t(121) = -5.3, p < .000$ , and Placed Prior,  $t(119) = 3.5, p = .001$ , pathways. The No Residential and Transition Out pathways did not vary from one another,  $t(167) = -1.7, p = .083$ , nor did the Placed After and Placed Prior pathways,  $t(138) = -1.7, p = .093$ . This suggests that the functioning level of the youth at time of Dawn Project enrollment was not the determining factor for residential placement as seen by the similarity in CAFAS scores for the Placed Prior and Placed After pathways.

### System processes

The number of team members on the child and family team did not vary by pathway at 30 days,  $F(3, 448) = 1.0, p = .402$ , or 3 months,  $F(3, 448) = .9, p = .451$ , after Dawn Project enrollment. There were statistically significant differences between clinical pathway and referral agency,  $\chi^2(3, N = 452) = 57.9, p < .000$ , with child welfare referring larger proportions of youth in the Placed Prior (74.5%) and Transition Out (85.5%) pathways and juvenile justice referring larger proportions of youth in the Placed After (62.2%) and No Residential (50.3%) pathways. This is likely a reflection on the nature of these agencies and the populations they serve.

Service utilization was examined by looking at resource allocation (i.e., proportion of monies spent) among the following service categories: behavioral health, placement, respite, mentoring, discretionary funds, behavioral support, and substance use. The results indicated that as more resources were allocated to placement services, fewer resources were allocated to the remaining service categories. Youth in the Placed Prior group had almost 90% of their resources allocated to placement services, Transition Out had 80%, Placed After had 70%, and No Residential had only 45%.

### Discussion

The identification of four clinical pathways has clinical and fiscal implications not only for the Dawn Project, but for other system of care communities as well. Specifically, the experience of children and families in the Dawn Project varies based on the clinical pathway to which they belong. Knowing whether a youth will be in the Placed After or No Residential pathways can allow child and family teams to more effectively purchase the services and supports necessary to fulfill the youth's needs.

The results of this study also have implications for system-level decision making. For example, functioning level, rather than diagnosis, may be more effective in determining which youth will need a residential placement. System-level decision makers should also take note of the high success rates (74.3%) and low cost (\$1,939 per child per month) for the No Residential pathway. These are youth with complex behavioral and emotional issues that were referred into the Dawn Project before they were placed in residential treatment by a referring agency and were successfully maintained in the community through the support of their child and family team. The success of these youth in the Dawn Project points to the importance of the timing of referrals (i.e., prior to or after placement in residential treatment) and understanding the level of functioning of these youth at the time of referral. Being able to identify which clinical pathway a youth belongs to at the time of referral would give youth the best chance for success and reduce costs for the entire system of care.

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# **Characteristics of Children with Chronic Physical Illness, their Service Use and Clinical Outcomes in Systems of Care**

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## **Introduction**

The President's New Freedom Commission on Mental Health recommends addressing mental health care with the same urgency as physical health (New Freedom Commission, 2003) under the first goal (i.e., for Americans to understand that mental health is essential to overall health). Integrating mental and physical health is stressed also in the recommendation that mental health screening occur in primary care settings.

The co-existence of mental health disorders with physical illnesses and the heightened risk of one by the other is well established (Bair, Robinson, Katon, & Kroenke; 2003; National Institute for Mental Health, 2002). Children with psychiatric disorders have been described by their mothers as more burdened by physical health issues (Garraalda, Bowman, & Mandalia, 1999). Children and youth with depression and anxiety disorders often also experience eating disorders that may lead to obesity (Burghart, 2004; CDC, 1994), and mental illness can manifest through physical symptoms (Center for Disease Control, 2003; Glazebrook, Hollis, Heussler, Goodman & Coates, 2003; Holden Chmielewski, Nelson, Kager & Foltz, 1997).

A child's serious physical illness often places psychological burden on both child and family. The impact of physical illnesses on children's daily activities may exacerbate mental health concerns (Holden, et al., 1997; Ireys, Werthamer-Larsson, Kolodner, & Gross, 1994; Newacheck, & Halfon, 1998; Stein, Westbrook, & Silver, 1998; Thompson & Gustafson, 1996). Children with chronic medical conditions have been found to have a twofold risk of psychiatric disorders (Cadman, Boyle, Szatmari & Offord, 1987).

Barriers to the assessment of mental health needs include limitations in detection of mental health needs by primary care providers (Asarnow, Jaycox & Anderson, 2002; Holden & Schuman, 1995). Due to time constraints on appointments, children may not disclose mental health problems and parents may fail to voice their concerns (Asarnow et al., 2002). For mental health practitioners, pressing psychological and social needs of children with chronic physical illness co-morbidity may present additional challenges. This study uses national data to examine intake characteristics, service use, and outcomes of children with and without chronic physical illnesses served in systems of care.

## **Method**

### **Participants**

Participants were drawn from youth and families who participated in the national evaluation of the Comprehensive Community Mental Health Service for Children and Their Families Program of the Center for Mental Health Services (CMHS) at the Substance Abuse Mental Health Services Administration (CMHS, 2004). This program has funded systems of care in 92 communities since 1994 throughout the United States and its territories, and represents the largest federal investment to develop community-based mental health services for children and their families (Manteuffel, Stephens, & Santiago, 2002).

Data for 13,602 children and youth for whom physical health data were available were drawn from the 45 communities initially funded from 1997 to 2000. The mean age for this group was 12.1 years; most were male (67.1%) and White (56.9%); 24.9% were Black/African American, followed by 11.8% American Indian/Alaska Native, 11.8% of Hispanic origin, 1.4% Asian/Pacific Islander, 8.3% multi-racial, and 1.2% Other.

## Measures

Descriptive data include chronic illness, clinical characteristics, risk factors, and service use history. Behavioral and emotional problems were assessed with the Child Behavior Checklist (CBCL; Achenbach, 1991), and functional impairment with the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges & Wong, 1996). The Behavioral and Emotional Rating Scale (BERS; Epstein & Sharma, 1998) was used to assess child strengths. Caregivers reported service use on the Multi-Sector Service Contacts (MSSC) form.

## Results

Among 13,602 children, 36.5% had chronic physical health problems at intake; of these, 38% had asthma, 37% had allergies. Other problems were head pain (8.9%), migraine headaches (8.6%), neurological disorders (5.6%), ear problems (4.3%), gastrointestinal problems (4.1%), sinus problems (3.6%), excretory problems (3.4%), heart problems (3.2%), and skin problems (3.1%). Physical illnesses disrupted daily activities an average of 8.55 times in six months ( $SD = 28.3$ ). During the six months before intake, 63% of children with chronic illnesses took medications for physical health problems ( $N = 4,770$ ). Among the smaller sample reporting on medical service use (1999- and 2000- funded communities only), children with chronic illness averaged 2.72 doctor visits ( $N = 1,827$ ,  $SD = 8.6$ ) and .42 emergency room visits ( $N = 1,848$ ,  $SD = 1.6$ ), and were hospitalized an average of .11 times ( $N = 1,853$ ,  $SD = 1.03$ ) with lengths of stay averaging 12.69 days ( $SD = 24.5$ ) among these hospitalized children ( $n = 106$ ).

Differences in demographics, risk factors, clinical characteristics, and service use history are reported in Table 1. Children with chronic illnesses were significantly more likely to be diagnosed with mood disorders, anxiety disorders, autism, impulse control disorders, personality disorders, and mental retardation. Children without chronic illnesses were more frequently diagnosed with conduct and adjustment disorders. Children with chronic illnesses were more likely to be referred to system-of-care services by mental health agencies (34.8% versus 30.5%;  $\chi^2 = 23.9$ ,  $n = 12,295$ ,  $p < .001$ ), and somewhat more likely to be referred by a primary care provider (1.72% versus 1.25%;  $\chi^2 = 4.36$ ,  $n = 12,295$ ,  $p < .05$ ). Children without chronic illnesses were more likely to be referred by courts/corrections, schools, and child welfare. Regression analyses (Table 2) confirm that children with chronic physical illness are characterized by more serious clinical impairment, even after controlling for risk factors and previous service receipt.

During their first six months in services, children with chronic illnesses were more likely to receive individual therapy (78.4% versus 75.5%,  $\chi^2 = 4.64$ ,  $n = 4,009$ ,  $p < 0.05$ ), case management (77.7% versus 74.1%,  $\chi^2 = 6.82$ ,  $n = 4,001$ ,  $p < 0.05$ ) transportation (24.7% versus 22.1%,  $\chi^2 = 3.82$ ,  $n = 3,997$ ,  $p < 0.05$ ), and flexible funds (25.9% versus 21.9%,  $\chi^2 = 8.61$ ,  $n = 3,965$ ,  $p < 0.05$ ), although they were significantly less likely to receive therapeutic foster care (3.7% versus 5.2%,  $\chi^2 = 5.01$ ,  $n = 4,009$ ,  $p < 0.05$ ).

Among children with chronic illnesses, 35.7% made clinically significant improvements in their behavioral and emotional problems (CBCL Total Problems T-score; without chronic illness = 39.5%), and 39.4% improved in their strengths (BERS Overall Strengths Quotient; without chronic illness = 40.5%). Similarly, 36.8% of children with chronic illness improved their school performance, and 20.4% improved school attendance (without chronic illness: 20.4%, 18.0%, respectively). Total CAFAS Scores indicating marked to severe impairment fell by 13.1% from 65.4% at intake to 52.3% at six months ( $z = -7.47$ ,  $n = 1,589$ ,  $p < .001$ ) among children with chronic illness; below average strengths (BERS Overall Strength Quotient) decreased by 7.6% (60.4% to 52.8%;  $z = -4.31$ ,  $n = 1,600$ ,  $p < .001$ ), and problems in the clinical range (CBCL Total Problem Scale T-score) decreased by 9.6% (83.7% to 74.1%;  $z = -6.39$ ,  $n = 1,500$ ,  $p < .001$ ) after the first six months of services. Children without chronic illnesses showed similar changes.

**Table 1**  
**Children's Intake Characteristics by Physical Health Status**

| <i>Demographic Characteristics</i>                  | <i>N</i> | <i>Chronic Physical Illness</i> | <i>No Chronic Physical Illness</i> | <i>Significance Test</i>          |
|---|----------|---------------------------------|------------------------------------|-----------------------------------|
| Mean age  | 13,597   | 12.08                           | 12.12                              | <i>ns</i>                         |
| Girls   | 13,589   | 34.5%                           | 32.1%                              | $\chi^2 = 8.47, p < .01$          |
| White   | 12,508   | 59.9%                           | 57.8%                              | $\chi^2 = 5.6, p < .05$           |
| Below Poverty                                       | 11,704   | 49.7%                           | 45.5%                              | $\chi^2 = 19.34, p < .001$        |
| Acute illness in past 6 months                      |          | 47.0%                           | 26.5%                              | $\chi^2 = 205.79, p < .001$       |
| Mean number of times acute illness in past 6 months |          | 2.64                            | 2.06                               | $t = -3.12, df = 1,602, p = .002$ |
| <b><i>Service Use History</i></b>                   |          |                                 |                                    |                                   |
| Outpatient mental health services                   | 12,916   | 70.9%                           | 63.5%                              | $\chi^2 = 72.0, p < .01$          |
| School-based mental health services                 | 12,776   | 61.9%                           | 53.8%                              | $\chi^2 = 78.8, p < .01$          |
| RTC/Hospitalization                                 | 12,937   | 31.0%                           | 26.7%                              | $\chi^2 = 78.8, p < .001$         |
| Medication  | 12,871   | 59.0%                           | 49.6%                              | $\chi^2 = 107.75, p < .001$       |
| Substance Use Treatment                             | 12,830   | 10.8%                           | 9.7%                               | $\chi^2 = 27.36, p = .49$         |
| <b><i>Child Risk Factors</i></b>                    |          |                                 |                                    |                                   |
| Physical abuse                                      | 12,970   | 29.2%                           | 25.8%                              | $\chi^2 = 16.8, p < .01$          |
| Sexual abuse  | 12,647   | 24.2%                           | 20.4%                              | $\chi^2 = 25.7, p < .01$          |
| Suicide attempt                                     | 13,150   | 18.4%                           | 13.6%                              | $\chi^2 = 52.3, p < .01$          |
| Run away  | 13,174   | 33.7%                           | 31.6%                              | $\chi^2 = 6.18, p = .01$          |
| <b><i>Family Risk Factors</i></b>                   |          |                                 |                                    |                                   |
| Chronic illness among family/household members      | 13,602   | 89.4%                           | 84.0%                              | $\chi^2 = 76.8, p < .01$          |
| Mental illness among biological family members      | 12,437   | 62.9%                           | 52.0%                              | $\chi^2 = 138.91, p < .01$        |
| Domestic violence                                   | 12,683   | 52.1%                           | 49.2%                              | $\chi^2 = 10.12, p < .01$         |
| Substance abuse among biological family members     | 12,667   | 68.5%                           | 64.8%                              | $\chi^2 = 17.75, p < .01$         |
| <b><i>Clinical Characteristics</i></b>              |          |                                 |                                    |                                   |
| CAFAS Total Scale Score                             | 6,579    | <i>M</i> = 114.9                | <i>M</i> = 109.9                   | $F = 17.42, p < .001$             |
| CBCL Total Problems T-score                         | 5,849    | <i>M</i> = 71.9                 | <i>M</i> = 69.2                    | $F = 100.1, p < .001$             |
| BERS Total Strengths Score                          | 6,439    | <i>M</i> = 86.2                 | <i>M</i> = 86.8                    | $F = 2.29, ns$                    |

**Table 2**  
**Predictors of Behavioral and Emotional Problems**  
**(CBCL Total Problems T-Score)**

| <i>Covariates</i>  | <i>Model 1<br/>Coefficients</i> | <i>Model 2<br/>Coefficients</i> |
|--|---------------------------------|---------------------------------|
| Does your child have a recurring or chronic health problem?  | 0.112<br>( $p < 0.001$ )        | 0.059<br>( $p < 0.01$ )         |
| Has child received outpatient services in the previous 12 months?  | –                               | 0.093<br>( $p < 0.001$ )        |
| Has child received school based services in the previous 12 months?  | –                               | 0.103<br>( $p < 0.001$ )        |
| Has child been physically abused?  | –                               | 0.032<br>( $p > 0.05$ )         |
| Has child been sexually abused?  | –                               | 0.066<br>( $p < 0.01$ )         |
| Has child attempted suicide?   | –                               | 0.147<br>( $p < 0.001$ )        |
| Is there a history of family violence/spousal abuse in biological family, but child was not the direct target? | –                               | 0.038<br>( $p > 0.05$ )         |
| Is there a history of mental illness in child's biological family?   | –                               | 0.201<br>( $p < 0.001$ )        |
| Is there a history of substance abuse among biological family members?   | –                               | 0.010<br>( $p > 0.05$ )         |
| Does any member of child's household have chronic health problems?   | –                               | 0.053<br>( $p < 0.05$ )         |
| Adjusted <i>R</i> -Squared   | 0.012                           | 0.148                           |

Note: Both models included a constant term.

## Discussion

Children with chronic physical illnesses served in systems of care differed demographically and clinically from those without chronic health problems. They had increased child and family risk factors, were burdened by health problems, and entered services with different diagnostic patterns, and greater behavioral and emotional problems and functional impairment, and had made greater use of outpatient, residential, and medication services. Chronic health problem was a predictor of behavioral and emotional problems, but was not as strong a predictor as other factors, and did not predict functional impairment when other factors were considered. Although children with chronic illnesses entered services with greater problems, they improved at rates similar to those of children without chronic illness.

Systems of care addressed the service needs of children with and without chronic illnesses differently. Greater use of case management, individual therapy, transportation and flexible funds may reflect greater service need as well as greater poverty among these children. Fewer children with chronic illness receiving therapeutic foster care suggests a perceived risk of serving these children in this setting.

Over half (51%) of the 45 communities represented by this sample involved local public health agencies in their programs (e.g., public health was on the governing board in about 29% communities). Specific efforts by some communities to engage the public health sector to address children's and families' mental health needs included training in system of care principles, outstationing of public health staff in schools and juvenile justice, and flexible availability of these staff. Referrals from public health were made in about 20% of communities, yet rates of referral from primary care were low, and public health providers rarely contributed to mental health service planning or wraparound.



Further research is needed to understand the interrelationship of behavioral, emotional, physical and environmental problems among children. A better understanding of the interrelationship of these problems, and the service needs of children with chronic illness can improve identification of service needs. The somewhat higher referrals from primary care for children with chronic illnesses suggest that these providers can assist in the identification of mental health needs. Factors impacting primary care provider referral to mental health services (e.g., frequency of contact with a provider, consistency of provider) may account for slightly increased referral of children with a chronic illness, and may yield a better understanding of primary care identification of mental health needs.

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# **Cost Savings with Early Intervention: Impacting Child Welfare and Juvenile Justice Outcomes**

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## **Introduction**

The Dawn Project, which is the system of care in Marion County (Indianapolis), Indiana, was developed in 1997 to serve youth with serious emotional disorders who are at-risk for, or have a history of, residential placement (Intensive Dawn). After receiving a Federal system of care grant in 1999, the Dawn Project developed a pilot process through which youth with serious emotional disorders who had not yet reached the level of intensity requiring residential care could participate in the Dawn Project (Early Intervention Dawn). The goal of Early Intervention Dawn was to provide services to youth before they required higher levels of involvement with various child-serving agencies.

The Dawn Project receives referrals from several child-serving systems including child welfare, juvenile justice and education. These systems can refer youth into both Early Intervention and Intensive Dawn. Referring agencies pay a monthly case rate for each youth enrolled in the Dawn Project. The current per member per month case rates for Intensive Dawn and Early Intervention Dawn are \$4,383 and \$1,809, respectively. The purpose of this study was to examine the success of youth referred by child welfare and juvenile justice into both the Intensive Dawn and Early Intervention Dawn.

## **Method**

Data obtained from the Dawn Project's information management system were used in this study. Youth referred by the Marion County Office of Family and Children (child welfare) for Intensive and Early Intervention Dawn between January, 2001, and November, 2003, and youth referred by Marion Superior Court, Juvenile Division (juvenile justice) between May, 2002, and November, 2003, were included in the analysis based on the dates in which Early Intervention Dawn began within each system. Comparisons between child welfare and juvenile justice referrals in Intensive Dawn and Early Intervention Dawn were made on the following variables: age, gender, race, length of stay, services provided and individual functioning. Individual functioning was assessed using the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1996).

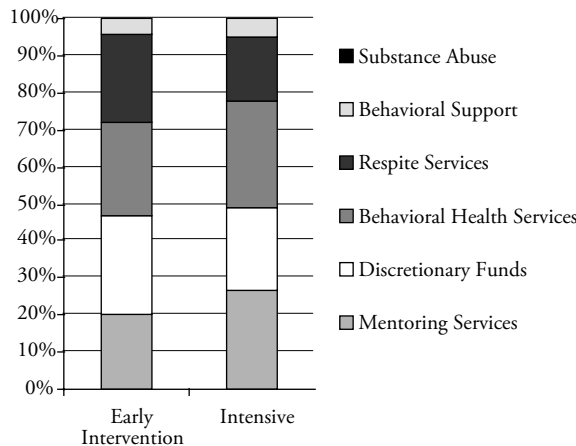
## **Results**

### **Child Welfare Early Intervention and Intensive Dawn Referrals**

Youth referred by child welfare and enrolled in Early Intervention Dawn were younger than youth enrolled in Intensive Dawn (11 years and 13 years, respectively). No differences were found for gender or race. For youth referred by child welfare, the average length of stay in Intensive Dawn was 14.6 months compared to a length of stay of 7.4 months for Early Intervention Dawn.

To examine the array of services provided to children referred from child welfare and enrolled in Intensive and Early Intervention Dawn, the proportion of the case rate spent on services in the following categories was assessed: placement, mentoring, discretionary funds, behavioral health services, respite, behavioral support, and substance abuse. Approximately 90% of the case rate was used for placement services in Intensive Dawn, making comparisons with Early Intervention Dawn (in which placement services for residential treatment were not provided) difficult. Thus, a second analysis was conducted to determine whether the utilization of service categories in Early Intervention Dawn were comparable to non-placement services paid for in Intensive Dawn. When placement was removed from the analysis, the distribution of services within the Early Intervention and Intensive Dawn case rates was similar (see Figure 1).

**Figure 1**  
**Child Welfare Early Intervention vs. Intensive Dawn**  
**Average Resource Allocation by Service Type**  
**Eliminating Placement Services**



Changes in functioning were compared for youth referred by child welfare into Early Intervention Dawn who had CAFAS scores available at both enrollment and six months ( $n = 13$ ) and at both enrollment and discharge ( $n = 29$ ) and for youth from child welfare in Intensive Dawn who had CAFAS scores available at both enrollment and six months ( $n = 43$ ) and at both enrollment and discharge ( $n = 37$ ). Clinically significant improvements in functioning (i.e., a decrease in CAFAS scores of at least 20 points) were observed for youth enrolled in Early Intervention Dawn between enrollment ( $M = 64.62$ ) and six months ( $M = 36.15$ ) and between enrollment ( $M = 77.59$ ) and discharge ( $M = 51.38$ ). Similarly, youth from child welfare in Intensive Dawn demonstrated clinically significant improvements in functioning between enrollment ( $M = 78.60$ ) and six months ( $M = 58.84$ ) and between enrollment ( $M = 72.43$ ) and discharge ( $M = 38.38$ ).

The percentage of youth referred by child welfare who successfully completed their treatment goals did not differ between Early Intervention Dawn (67%) and Intensive Dawn (71%).

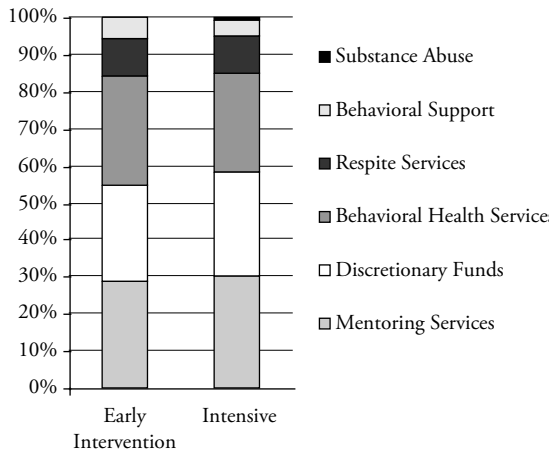
**Juvenile Justice Early Intervention and Intensive Dawn Referrals**

No differences were found between youth referred by juvenile justice into Early Intervention and Intensive Dawn in age, gender or race. The average length of stay did differ across the two levels, with an average of 14.6 months for Intensive Dawn and 6.8 months for Early Intervention Dawn.

Approximately 85% of the case rate for youth referred by juvenile justice was used for placement services in Intensive Dawn, again making comparisons with Early Intervention Dawn difficult. When placement was removed from the analysis, the distribution of services within the Early Intervention and Intensive Dawn case rates was similar (see Figure 2).

Changes in functioning were compared for youth referred by juvenile justice to Early Intervention Dawn who had CAFAS scores available at both enrollment and six months ( $n = 13$ ) and at both enrollment and discharge ( $n = 22$ ), and for youth referred to Intensive Dawn who had CAFAS scores available at both enrollment and six months ( $n = 21$ ) and at both enrollment and discharge ( $n = 12$ ). Clinically significant improvements in functioning (i.e., a decrease in CAFAS scores of at least 20 points) were observed for youth in Early Intervention Dawn between enrollment ( $M = 84.6$ ) and six months ( $M = 60.77$ ). Youth in Intensive Dawn exhibited only slight improvements in functioning between enrollment ( $M = 84.29$ ) and six months ( $M = 73.33$ ). However, between enrollment and

**Figure 2**  
**Probation Early Intervention vs. Intensive Dawn**  
**Average Resource Allocation by Service Type**  
**Eliminating Placement Services**



discharge, clinically significant improvements were observed for youth in Intensive Dawn ( $M = 103.33$  at enrollment and  $M = 81.67$  at discharge), but not in Early Intervention Dawn ( $M = 84.45$  at enrollment and  $M = 75.0$  at discharge).

Youth referred by juvenile justice into Intensive Dawn were more likely to have successfully completed their treatment goals than youth from juvenile justice in Early Intervention Dawn. Specifically, 54% of youth referred by juvenile justice into Intensive Dawn successfully completed their goals, compared to 38% of youth in Early Intervention Dawn.

### Comparison of Child Welfare and Juvenile Justice

The results of this study also identified several differences based on referral sources across the two levels of the Dawn Project. Most notably, the level of functional improvement as measured by the CAFAS was much greater for youth referred by child welfare than for youth referred by juvenile justice. Similarly, the percent of youth who successfully completed their treatment goals was higher for the child welfare population (approximately 70% for both Early Intervention and Intensive Dawn) than for the juvenile justice population (38% for Early Intervention Dawn and 54% for Intensive Dawn).

### Conclusion

The results of this study highlight the need for and value of providing early intervention services to youth with serious emotional disorders. Both child welfare and juvenile justice youth enrolled in Early Intervention Dawn had shorter lengths of stay (7.4 months for child welfare youth and 6.8 months for juvenile justice youth) than youth enrolled in Intensive Dawn (14.6 months for both child welfare and juveniles justice referrals). These shorter lengths of stay, in addition to the lower cost of care for early intervention services, result in significant cost savings for the community. The fact that the proportion of the case rate used for non-placement services did not differ between Early Intervention and Intensive Dawn suggests that youth served at the two levels had similar needs and that by intervening early, the high cost of out-of-home care (e.g., residential placements, foster care and group homes) can be avoided.

This study also highlights differences between youth referred by child welfare and juvenile justice. For example, juvenile justice referrals had higher CAFAS scores (indicating a lower level of functioning) at the time of referral than child welfare referrals. The average length of stay in Early Intervention Dawn

was shorter for juvenile youth than for youth referred by child welfare. Child welfare referrals into both Early Intervention and Intensive Dawn were more likely to demonstrate clinically significant improvement in their functioning than were juvenile justice referrals. Youth referred by child welfare also were more likely to have successfully completed their treatment goals than were juvenile justice youth. The reasons for these differences need to be explored in order to more effectively serve youth referred from diverse child-serving agencies. Additionally, the level of functional change and successful completion achieved by both child welfare and juvenile justice youth need to be considered in the context of other service options for these populations to determine whether systems of care are the most effective way to meet their unique needs.

Although more work needs to be done to understand the different experiences that youth referred by child welfare and juvenile justice had in the system of care examined here, the identification of these differences is important to other system of care communities working with one or more child-serving systems. The unique mandates of the systems, as well as the distinct populations that they serve, are important issues that must be addressed as systems of care work to improve the quality of their services. In addition, understanding when youth should be referred to systems of care is critical to creating cost savings for communities. If youth with serious emotional disorders can be identified and served before they require out-of-home services, communities can reduce the overall cost of care for these youth and redistribute resources toward community-based care.

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# **Strengths, Psychological and Functional Adjustment over Time in a Multi-site Wraparound Initiative**

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## **Introduction**

The Coordinated Family Focused Care (CFFC) pilot initiative has been undertaken in order to better coordinate the care of youth in Massachusetts who are at risk of hospitalization or residential placement because of their serious emotional disturbance (SED); 40% have had a hospitalization and/or stay in residential treatment at the time of intake into CFFC. There are five sites across the state, each serving a maximum of 50 children at any given time. This wraparound program builds on family strengths and available support systems to help children remain in or return to the community.

CFFC has been designed to be consistent with the National Institute of Mental Health's Children and Adolescent Support Services Programs principles, which require services to be child-centered, family-focused, community-based, multi-system, culturally competent, and provided in the least restrictive environment. Wherever possible, services are being provided by staff who are of the same ethnicity as the families. Services are also provided in the family's native language whenever possible. Each child enrolled has a two-staff team assigned to them, which consist of the Care Manager (a Master's level clinician) and a Family Partner (an individual who has been a primary caregiver for a child with serious emotional disturbance).

Unique features of the CFFC program include blended funding from public agencies in Massachusetts: the Departments of Mental Health, Social Services, Youth Services, Education and Medicaid. The Medicaid mental health carveout, Massachusetts Behavioral Health Partnership (MBHP), is managing the CFFC program. While one of the five CFFC sites (Worcester Communities of Care) has been a recipient of a Substance Abuse and Mental Health Services Administration system of care grant, the program currently operates entirely on state monies. Through a grant from the Center for Health Care Strategies, the University of Massachusetts Medical School (UMass) is studying program outcomes. For this paper, we are reporting on some of the broad interim findings of this evaluation.

## **Method**

All data are from the CFFC evaluation. Consent for participation in the study is obtained by program staff upon intake into services. The risks and benefits are explained, and a consent form is signed that has been approved by the University of Massachusetts Medical School Institutional Review Board. To date, 93% of families who have been invited have consented to participate in the evaluation; 7% have declined.

## **Participants**

For this study, data were accessed for 159 children who enrolled in CFFC for at least six months, who were also part of the ongoing evaluation.

## **Measures**

Standardized measures are collected via standardized checklists and inventories, by program staff at intake at set intervals throughout program enrollment. Additional demographic information as well as updates on treatment progress are collected by care managers. All data are submitted electronically by MBHP to UMass.

*Child functioning.* The Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1996) is collected quarterly (at intake into the program, and every three months thereafter).

**Child psychological symptoms.** Youth Outcome Questionnaire (YOQ; Wells, Burlingame, & Lambert, 1999) is completed by the primary caregiver at intake, three months, six months and 12 months to assess psychological symptoms.

**Child strengths.** The Behavioral and Emotional Rating Scale (BERS; Epstein, 1999) is collected at intake, six and 12 months into treatment to assess caregiver’s perceptions of child strengths. The amount and type of peer relationships, adult relationships, and being bullied are also collected at intake and six months.

## Results

Results of repeated measures analyses indicated statistically significant changes over time in the expected directions in all areas assessed. On the CAFAS, mean scores went from 143 at intake to 102 by nine months (see Table 1, Within Subjects Repeated measures:  $df = 137$ ;  $F = 177.094$ ;  $p < .0001$ ). All subscales also had statistically significant change. While all children had CAFAS scores at or above 100 at intake, 77% did at three months, 60% did at six months, and 55% did at nine months. By six months, about three-quarters of the sample had drops of 20 points or more on the CAFAS. Additional analyses indicated that the presence of an Attention Deficit-Hyperactive Disorder diagnosis is associated with greater rates of positive change on the CAFAS, and that a history of sexual abuse, a caregiver history of substance abuse, and the presence of a Depressive Disorder and a Post-Traumatic Stress Disorder diagnosis (girls only) is associated with less positive change on the CAFAS.

On the YOQ, mean scores went from 101.6 at intake to 92.9 by six months (Within Subjects Repeated measures  $df = 121$ ;  $F = 13.092$ ;  $p < .0001$ ). All subscales also had statistically significant change. At intake, 53% of the sample were at or above the mean for an inpatient sample, and 27% were at or below the mean for an outpatient sample. By six months, 42% were at or above the mean for an inpatient sample, and 40% were at or below the mean for an outpatient sample.

**Table 1**  
Results Of Within Subjects Repeated Measures

|                        | Intake           | 3 months | 6 months          | 9 months | Within Subjects repeated measures |
|------------------------|------------------|----------|-------------------|----------|-----------------------------------|
| CAFAS<br>( $N = 138$ ) | 142.9            | 123.1    | 108.7             | 101.7    | $F = 177.094$<br>$p < .0001$      |
| YOQ<br>( $N = 122$ )   | 101.6            | 93.5     | 92.9              | n/a      | $F = 13.092$<br>$p < .0001$       |
| BERS<br>( $N = 159$ )  | 98.7<br>(51%ile) | n/a      | 104.5<br>(58%ile) | n/a      | $F = 12.716$<br>$p < .0001$       |

On the BERS, the mean scores for the overall strength quotient saw significant increases, from an average percentile score (when compared with other children with SED) of 51% to 58% at six months (Within Subjects Repeated measures  $df = 158$ ;  $F = 12.716$   $p < .0001$ ). Significant improvements were seen in the areas of interpersonal strengths, family involvement, and intrapersonal strengths, which assesses a child’s outlook on his-or her- self. Additional paired sample  $t$ -test analyses from intake to six months indicated significant increases in parent reported positive friendships, the number and strength of the child’s connections with adults and formal supports, and decreases in being bullied (all  $p < .05$ ).

In order to determine which psychological and strengths factors may be associated with CAFAS change from intake to six months, a stepwise multiple regression was performed with CAFAS change as the dependent variable and CAFAS intake score entered on the first step to control for intake scores. Results indicated that intake CAFAS scores account for 19% of the variance (higher scores at intake equal greater change), and a combination of interpersonal functioning variables accounted for an additional 13% of the variance: intake YOQ Interpersonal Relations Subscale Score, intake YOQ Social Problems Subscale, and the change on BERS Intrapersonal Strengths from intake-six months (see Table 2).



**Table 2**  
**Stepwise Multiple Regression with CAFAS Change**  
**Intake–6 Months as the Dependent Variable**

*R* = .582(d), *R*<sup>2</sup> = .338, Adjusted *R*<sup>2</sup> = .320, Std. Error of the Estimate = 26.01

| <i>Model</i>                         | <i>Unstandardized Coefficients</i> |                   | <i>Standardized Coefficients</i> | <i>t</i> | <i>Sig.</i> |
|--------------------------------------|------------------------------------|-------------------|----------------------------------|----------|-------------|
|                                      | <i>B</i>                           | <i>Std. Error</i> | <i>Beta</i>                      |          |             |
| (Constant)                           | -27.258                            | 10.586            |                                  | -2.575   | .011        |
| CAFAS Intake                         | .590                               | .079              | .559                             | 7.437    | .000        |
| YOQ Interpersonal Relations Subscale | -.873                              | .428              | -.182                            | -2.039   | .043        |
| BERS Intrapersonal Strengths Change: |                                    |                   |                                  |          |             |
| Intake 6mo                           | -2.246                             | .647              | -.237                            | -3.472   | .001        |
| YOQ Social Problems Subscale         | -1.149                             | .529              | -.198                            | -2.173   | .031        |

## Discussion

The CFFC program has chosen to focus on children with very high levels of psychiatric impairment and functioning, in an effort to serve children with SED in community settings rather than out of home settings, whenever possible. This is a group of children who are at high risk of residential placement; indeed, the high scores on standardized measures at intake (similar to inpatient samples), and high incidence of an inpatient/residential history at intake, indicate the level of severity of this group of children. Given the severity of this population, the results from this evaluation study are encouraging.

These results are not very dissimilar from many of the programs which are part of the National Evaluation of the Comprehensive Community Mental Health Services for Children and Their Families Program (Holden, Friedman, & Santiago, 2001; Manteuffel, Stephens, & Santiago, 2002), which found greater improvements in the areas of functional impairment than in core psychological symptoms. Much as adults with serious mental illness must learn to manage and live with the symptoms of a disorder that may wax and wane, but never fully “go away,” so must families learn to manage and cope with the symptoms of SED. By building on strengths, where meaningful improvements were found in many areas, the program appears to be helping children function better in community settings, despite the high levels of psychological impairment endorsed by their caregivers.

A statistically meaningful change was seen over time on all of the standardized measures. While statistically significant, were these changes also clinically meaningful? For the CAFAS, the answer is yes. While the mean nine-month score of 102 is still within a range requiring significant supports, the average drop of over 30 points is both statistically and clinically meaningful. Further, over three-quarters of the sample (77%) had drops in the CAFAS of over 20 points by nine months in the program, and there was a change in the overall group from 0% to 45% of children having CAFAS scores of 90 or below.

The YOQ results are somewhat less clear. While a statistically significant decrease was seen in the YOQ, this was mainly in the first three months of the program, and the mean score was still about midway between the inpatient and outpatient means for this measure. Between intake and six months, 11% of the sample moved from above to below the inpatient mean, and 13% moved from above to below the outpatient mean.

There were also similar changes in the measures of strengths and positive peer relationships. In many areas there were statistically significant changes, yet it is difficult to determine at what point these changes are meaningfully different in the lives of an individual child or family. At the same time, improvements in so many areas, from family strengths, to adults supports, to decreases in being bullies, are very encouraging.

Results from the regression help to pull these results together into a coherent picture. While it is true that children who come in with higher CAFAS scores show the greatest change (perhaps indicating a regression to the mean), there are other factors related to the reductions seen in the CAFAS scores from

intake to six months in services. There is a clear relationship between interpersonal functioning factors, and changes in the CAFAS scores. Improvements in the BERS interpersonal strengths score are clearly and significantly related to improvements in the CAFAS scores. A child's intake scores in the areas of interpersonal and social problems are also predictive of CAFAS change. While the causal directions are not entirely clear, it is likely that, through bolstering of interpersonal competencies and strengths, the program is able to also improve functioning in a number of areas.

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# **Continuous Quality Improvement: Using a Service-Learning, Peer-Mentoring Approach to Ensure System of Care and Wraparound Fidelity**

Christine S. Davis  
Steve Martaus

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## **Introduction**

Children's Future Hillsborough (CFH) is a collaborative consortium of fifteen agencies and programs in Hillsborough County, Florida that provides: (a) childcare and preschools for children with issues of poverty, neglect, disability, and pre-natal drug/alcohol addictions, and for typically developing children; (b) children's mental health care and case management services; (c) early childhood enrichment programs; (d) developmental screening; (e) Occupational Therapy, Physical Therapy, and Speech Therapy; (f) a doula (pre-natal support and education) program; and (g) respite services for parents of young children with disabilities. When the CFH consortium was formed in 2004, funders and management set as a requirement that the activities of agencies reflect adherence to system of care values and principles (Stroul & Friedman, 1986). The challenge for CFH was to implement this mandate among a large and diverse staff. CFH management used a Continuous Quality Improvement (CQI) process as a building block to coordinate and assess their efforts to promote system-of-care principles. This process is now wrapping up its initial year; it combines system-of-care and wraparound fidelity measures with a peer mentoring and coaching process and engages staff members in living out the concepts of wraparound in their day-to-day interactions with families and children.

This summary describes the development, key components, lessons learned, and evaluation plans for the CQI process. We discuss how the CQI program has supported efforts to build a common mission, vision, and values between partners; communicate clear expectations of collaborative partners; focus on partner strengths; and strengthen staff development and training—all in a cost effective manner.

## **Method**

The CQI process has six components, which will be described in detail below. These include

1. Training and supervising peer review leaders
2. Piloting the CQI process
3. Training and supervising peer reviewers
4. Conducting the reviews
5. Giving coaching feedback to reviewees
6. Conducting ongoing training for CFH staff

*Health Communication Practicum.* CFH management identified three staff members to serve as Peer Review Leaders. These leaders participated in a graduate level "Health Communication Practicum" course in the Communication department at the University of South Florida. CFH's staff members joined with two other university graduate students and a staff member from another case management agency to learn system-of-care principles and coaching and mentoring skills from many human service fields including children's mental health, nursing, social work, and public health. Putting together traditional graduate students with students from the community was an intentional decision made to provide students with a diversity of experiences, backgrounds, and disciplines.

The course objectives were to:

1. acquaint students with the concepts and practical applications of SOC principles;
2. teach students how to observe communication and interactions between providers and families to assess fidelity to SOC principles;
3. teach students how to provide peer coaching, evaluation, and feedback to providers; and
4. teach students how to apply the key concepts of systems of care to a variety of health care settings.

The course followed a coaching model in which the instructor coached the students to, in turn, coach agency providers on how to coach families in reaching their goals through feedback that is strengths-based and dialogic.

*Piloting the CQI process in the Health Communication Practicum.* The course had a lecture/discussion component and a field-based component. CFH's agencies acted as some of the course field sites, and other community agencies acted as other field sites, in which students conducted case fieldwork (observation and interviewing) and provided feedback and coaching to individual case managers. This process led to refinement of the CQI process and protocols.

*Training and Supervising Peer Reviewers.* Once the course was completed and the Peer Review Leaders were thus trained, we began training and supervising identified staff members to become peer reviewers. Their training was on system-of-care principles, on using the specific fidelity instruments, and on how to give effective coaching and feedback to peers that models the desired principles.

*The Review Process.* The review process consists of a case methodology in which a peer reviewer dyad, for one specific child and family case, conducts interviews with the primary caregiver, the case manager, and one other service provider. Peer review dyads also observe a planning team meeting; and review the family's planning documents (if applicable).

For our review protocol, we used customized versions of the System of Care Practice Review (SOCPR; Hernandez, Gomez, Lipien, Greenbaum, Armstrong, et al., 2001), and the Team Meeting Observation (TMO: Epstein, Jayanthi, McKelvey, Frankenberry, Hardy, et al., 1998; Epstein, Nordness, Kutash, Duchnowski, Schrepf, et al., 2003). Six different versions of the protocol were developed—one for each type of CFH agency.

*Coaching.* Under the supervision of their Peer Leaders, the reviewers gave coaching and feedback to staff members. Coaching—in the context of CFH's CQI process—can be thought of as using self-directed learning to assist peers to enhance their effectiveness (Blackman-Sheppard, 2004; Crane, 2002; Wilson, 2004). The challenge of coaching is to support and empower individuals to see new ways of behaving (Crane, 2002; Hawkins, 2004). The positive orientation of coaching helps people focus on their past successes and find ways to use the skills they already have to achieve new goals and reach new directions (Hawkins, 2004). The coaching model used in the CQI program uses learning questions rather than directive statements to lead people to find their own solutions and suggestions (Crane, 2002).

Unlike the punitive feedback many people are used to, this approach is constructive and effective, and models the system-of-care principles the process is promoting. During the course, the coaching process was closely supervised by the instructor and other students who participated in role-playing and small group supervision exercises. During the rest of the CQI process, the Review Team Leaders provided the same role-playing and supervision for the coaching.

*Training Sessions.* In the final step in the process, the information obtained was compiled and turned into a collaborative-wide training program by Louis de la Parte Florida Mental Health Institute staff that addressed the problem areas identified in the reviews.

## Results & Lessons Learned

Participants in the Health Communication Practicum class kept a journal of field notes during their experiences at the review sites. We also conducted interactive interviews and discussion sessions with participants during the CQI process. Changes and revisions in the protocol and the process itself were made as a result of this feedback. A more empirical evaluation effort is currently underway that consists of a feedback survey conducted among CFH staff, managers, and CQI participants.

## **Strengths**

From the outset, we hoped that the CQI process would build *sense of team* among member agencies to create a unified, common vision among the diverse group of organizations that make up the consortium. Although the process was more complicated than anticipated, it was very successful in building a foundation of unity for the consortium.

Compared to the costs of conducting program evaluation using outside researchers or consultants, this process was a cost-effective alternative, as it was designed to utilize agency staff and train them to carry on the project in-house by Year 2.

Using the CQI as a tool to frame system-of-care principles in practice was a key to the success of the program. This process gave an important structure to the system of care expectations that helped set a culture for the new consortium. Intensive up-front planning went a long way to help the program succeed. Selection of CQI team leadership was crucial. The staff members selected as leaders were internally driven and motivated individuals, so that even though they were not leaders in the organizations, they were respected and modeled the persistence that was necessary for the process.

One of the strongest benefits of the CQI process has been in the accelerated learning gained by the reviewers themselves. This outcome was expected, but its intensity surpassed expectations. Another positive facet of this learning process was the confidence gained by the reviewers in their own abilities. In addition, the reviewers expressed an appreciation for the system of care principles and for their jobs and agencies, another expected but very strongly encouraging outcome.

This process has taught us how to engage and get buy-in from fifteen different agencies, many of whom do different things and have different target populations. Some of the agencies had a great deal of experience utilizing system of care principles but some had none. This process refined and modeled expectations, and operationalized the principles in ways that could be understood and employed in a wide array of types of agencies.

## **Challenges**

This process has not been without its challenges. Probably the most frustrating obstacles were communication and scheduling. Reviewers expressed frustration with being unable to coordinate the reviews, both with co-reviewers and with the staff members being reviewed. We originally created reviewer dyads from different agencies in order to use this process to build bridges across agencies and to provide the staff members being reviewed with a diversity of experiences by the reviewers. However, we have now determined that pairing people from the same agency greatly helps overcome the communication and scheduling difficulties.

There was some initial reviewee reluctance; not surprising given that the process—on the surface—probably seemed evaluative. To alleviate this, the reviewers were very vigilant in their coaching to make sure that the feedback they were giving was being positively perceived, and to make sure that they were modeling the wraparound and client-centered principles from the course. Overall, the feedback and coaching was well-received and helpful.

Finally, it is admittedly difficult to add new peer reviewer duties to staff members' existing caseloads and responsibilities. It is important to build money into budgets to compensate reviewers and leaders for their additional duties and time, as well as to recognize and acknowledge the new skill-set acquired as a result of the CQI process. The process is intensive; each review averages eight hours. We addressed staff time concerns by reducing the number of reviews done in the initial year, and articulating the "pay-off" for each agency to participate. Streamlining the process will be a priority for next year.

## Conclusions

The CQI program proved to be a valuable course of action within the collaboration-building process. It was apparent that early on in the collaborative process, a decision must be made as to how committed partners are to elements of a common practice. Once the commitment has been made, coaching and modeling the desired behaviors and measuring progress toward the common practice appear to be approaches worthy of the acknowledged investment. The process takes work, but it's worth it. Factors that promoted success for the CQI process included: (a) selecting and training the right people to be Peer Review Leaders; (b) the importance of up-front planning yet flexibility when things did not go according to plans; (c) tailoring the instrument to each agency; and (d) driving the process through the roadblocks. The process has been associated with positive practice-level outcomes, such as building a skill-set for the reviewers, building linkages and relationships across partner agencies, and increasing skills and performance of agency staff members. Participants report that the CQI process has helped build uniformity, consistency, common practices, and a belief among agency staff that "we are part of something greater than ourselves." As communities face challenges to maintaining and sustaining program fidelity, it is important to find cost effective ways to continue training, coaching, and supporting staff members in doing so. Children's Future Hillsborough's CQI process is a success story in the making.

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## **Chapter Nine**

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### **Developing Effective Financing Strategies**





## **Symposium**

# **Findings: Promising Managed Care Approaches to Care Management and Clinical Decision Making**

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### **Symposium Introduction**

**Mary I. Armstrong**

From 1995 through 2004, the Health Care Reform Tracking Project (HCRTP) tracked the development of publicly financed managed care systems and their impact on children and adolescents with behavioral health problems and their families. The project also assessed the impact of managed care on the systems of care that had been set up to serve these youth and their families. The HCRTP was conducted jointly by the Research and Training Center for Children's Mental Health at the University of South Florida, the Human Service Collaborative of Washington, D.C., and the National Technical Assistance Center for Children's Mental Health at Georgetown University. The HCRTP was co-funded by the National Institute on Disability and Rehabilitation Research in the U.S. Department of Education and the Substance Abuse and Mental Health Services Administration of the U.S. Department of Health and Human Services. Supplemental funding was provided by the Administration for Children and Families of the U.S. Department of Health and Human Services, the David and Lucile Packard Foundation, and the Center for Health Care Strategies, Inc.

The mixed method design of the Tracking Project included periodic surveys of all states, in-depth impact analyses involving site visits to a selected sample of states with experience in public sector managed care, and the identification and dissemination of promising approaches and features of managed care systems. Throughout these activities, the Tracking Project explored and compared the differential effects of *carve out designs*, defined as managed care arrangements in which behavioral health services are financed and administered separately from physical health services, and *integrated designs*, defined as arrangements in which the financing and administration of physical and behavioral health services are integrated.

**Promising Approaches.** Comprehensive discussion regarding the HCRTP's principle findings can be found in the *Series on Promising Approaches*<sup>1</sup>. The *Series* is comprised of a number of thematic issue papers, each describing promising strategies or approaches related to a specific aspect of managed care systems as they affect children with behavioral health disorders. The papers highlight strategies, approaches and features within publicly financed managed care systems that hold promise for effective service delivery for children and adolescents with behavioral health treatment needs and their families, particularly for children with serious and complex disorders. The *Series* draws on the findings of the HCRTP to date, highlighting relevant issues and approaches to addressing them, that have surfaced through the HCRTP's all-state surveys and in-depth impact analyses in a smaller sample of 18 states. The papers are intended as technical assistance resources for states and communities as they refine their managed care systems to better serve children and families.

The summaries below illustrate the HCRTP's approach to identifying promising approaches within managed care environments; specifically, they describe recent findings from study of care management models within these environments, and exploration of clinical decision making guidelines by states and/or management entities.

#### **Chair**

**Beth Stroul**

#### **Authors**

**Mary I. Armstrong**

**Sheila A. Pires et al.**

#### **Discussant**

**Ginny M. Wood**

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<sup>1</sup> The *Series on Promising Approaches* is available at [http://rtckids.fmhi.usf.edu/rtrcpubs/hctrking/pubs/promising\\_approaches/](http://rtckids.fmhi.usf.edu/rtrcpubs/hctrking/pubs/promising_approaches/)

## **Promising Approaches in Care Management Systems**

**Mary I. Armstrong**

### **Introduction**

This study examined the use of care management models by states and/or management entities within states that are operating within a managed care environment. In particular, the study targeted a representative sample of states and/or managed care entities that are using intensive care management approaches for the provision of services to children and adolescents with serious behavioral health disorders and their families. Through semi-structured interviews with key state and managed care informants, and case managers and their supervisors, the study explored the types of care management models that are being used, strategies for the successful development and implementation of a care management approach, and the challenges and successes in sustainability of a promising approach.

### **Method**

As noted, promising care management approaches within managed care systems were identified throughout the Tracking Project through the all state surveys and impact analyses. These recommendations were verified through telephone interviews with potential sites and recommendations from national experts. The sample includes the following sites: the Massachusetts Behavioral Health Partnership, Magellan Health Services/Tenn Care, Value Options/Arizona Department of Health Services, Wraparound Milwaukee, and the Dawn Project in Marion County, Indianapolis.

Further descriptive information on their care management approaches was obtained through three methods:

1. A site visit to Tennessee involving semi-structured interviews with key stakeholders in various communities;
2. Telephone interviews with key stakeholders in Arizona, Massachusetts, Milwaukee, and Indianapolis; and
3. Reviews of documents on all of the identified approaches.

### **Results**

A number of organizational and practice parameters were useful in describing and comparing the case management interventions. Burns, Gwaltney and Bishop (1995) articulated a set of organizational parameters for case management models: the case manager-to-client ratio, the frequency of contact between case manager and clients, and the duration of the service. Practice parameters of case management include the variables of focus of services, availability of service, the site where services are offered, and the amount and nature of client direction offered in the care coordination model (Willenbring, Ridgely, Stinchfield, & Rose, 1991). Table 1 describes these parameters for each care management approach in the study.

Caseload size and number of contact hours per month are proxies for the intensity of the care management model. As shown in Table 1, the caseload size ranges from a high of 15 children to a low of 6, with most models serving between 8-10 children. At least two models (Continuous Treatment Teams and Wraparound Milwaukee) specify the amount of contact that is expected by the care manager with the family each month. Regarding the length of stay, most models do not specify an upper limit. Rather, the length of stay is flexible and based on the needs of the individual child and family. Fourteen to 15 months is the average length of stay for Child and Family Teams in Maricopa County and the Dawn project.

All the models clearly state that the focus of care is the child within the context of the family, and that services are available 24 hours a day, 7 days a week. Regarding the degree of client direction, four of the five models appear to be in the forefront of offering family driven care, defined as care where families

**Table 1**  
**Comparison of Case Management Parameters by Models**

| <i>Care Management Model</i>    | <i>Caseload Size</i>  | <i># Contacts</i>   | <i>Duration</i> | <i>Focus</i>     | <i>24/7</i> | <i>Site</i>          | <i>Client Direction</i>  |
|---------------------------------|-----------------------|---------------------|-----------------|------------------|-------------|----------------------|--------------------------|
| Child and Family Teams          | 12-15                 |                     | 14-15 months    | Child and Family | Yes         | Community            | Family directed          |
| Coordinated Family Focused Care | 10 Served by 2 people | Flexible            | Flexible        | Child and Family | Yes         | Community            | Family directed          |
| Continuous Treatment Teams      | 6                     | 12 contacts / month | Flexible        | Child and Family | Yes         | Community and Office | Family and team directed |
| Wraparound Milwaukee            | 9                     | 15-16 hours / month | Flexible        | Child and Family | Yes         | Community            | Family directed          |
| Dawn                            | 8-9                   | 14 hours / month    | 14-15 months    | Child and Family | Yes         | Community            | Family directed          |

have a decision making role in the treatment of their children. “Family driven” has been described as: “...choosing supports, services, and providers; setting goals; designing and implementing programs; monitoring outcomes; and determining effectiveness of all efforts to promote the mental health of children and youth” (U.S. Department of Health and Human Services, 2005 p.16). Finally, all models are guided by the principle of community-based services, with most services being offered in the home and community.

### **Policy and Practice Recommendations**

Some interviewees across sites noted the need to begin with the development of a shared vision and set of principles, before the operational planning for care management. The visioning process can result in an agreed upon conceptual framework, such as a resilience model for children with serious emotional problems. The framework can then serve as the basis for the case management model. For example, the use of a strengths-based approach is very useful with families because it emphasizes what they are already doing well. Another suggestion was to emphasize the importance of communication and teamwork in the implementation of an intensive case management model.

There are several recommendations related to the organizational and program requirements that must be developed for a new care management program. Evans & Armstrong (2002) note that the care management model needs to be well specified, with clearly defined job descriptions. A related decision concerns who will provide the care management. Wraparound Milwaukee and ValueOptions decided to contract out the care coordination process to a variety of community agencies. An advantage of this approach is the ability to include culturally diverse and indigenous community agencies. However, the providers must agree and be able to make arrangements so that care coordinators and family partners have flexible hours and working arrangements.

The planning process for implementation of a new care management model should be comprehensive, laying out a set of sequential steps that need to take place at all levels of the system, including the managed care entity, the state agencies responsible for behavioral health managed care, providers, and families and advocates. Interviewees emphasized the need for a massive re-training effort, both of existing staff who will be re-assigned to the new care management approach, and of the system partners who serve these youth, including child welfare, juvenile justice, and education. In Arizona, child-serving system partners are regularly invited to attend Child and Family Team process training and coaching activities. The sequencing of training also is important; for example, supervisors, clinicians, and out-of-home providers need to be targeted early in the training plan.

Sequencing is also important in the recruitment, training, and hiring of direct service providers, such as respite caregivers and behavioral health aides, so that these resources are readily available as the needs are identified in service plans. The process of developing new service modalities is ongoing; in Milwaukee, for example, the provider network of community agencies currently offers families a choice of 80 different services.

Interviewees from several sites noted the challenge of recruitment and retention of care managers and family partners. One goal of Wraparound Milwaukee, for example, is to recruit care coordinators who are more mature and experienced in children's services. Their perception is that a new care coordinator's lack of experience can be an impediment in forming strong and trusting relationships with families.

Another challenge is to develop policies and procedures that monitor fidelity to the new care management process, and the related need for fiscal resources for training, coaching, and other quality assurance, quality improvement, and evaluation mechanisms. Some interviewees noted that the level of fidelity of the care management model varies across providers. Several sites emphasized the need for a standardized set of quality improvement supervision tools, and practice fidelity methods, including youth and family interviews with families and youth being served by the care management teams.

In the area of financing, one recommendation is for states to apply for a Psychiatric Rehabilitation waiver for Medicaid services. In comparison with the Targeted Case Management option, the waiver provides more flexibility to offer creative service modalities, and to offer services in school and in communities.

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## **Promising Approaches on Clinical Decision Making Guidelines for Child/Adolescent Behavioral Health Care in Public Sector Managed Care Systems**

Sheila A. Pires & Katherine Grimes

### **Introduction**

This study examined the use of clinical decision making guidelines by states and/or management entities within states that are operating within a managed care environment. In particular, the study targeted a representative sample of states and/or managed care entities (MCE) within states that are using formal clinical decision making protocols to guide decisions about the services and supports provided to children and adolescents with behavioral health disorders and their families. Through semi-structured interviews with key state and MCE informants, the study explored the types of clinical decision making guidelines that are being used, state and MCE reasons for use of formal protocols, their experience with the various guidelines being used, and the strengths and challenges of particular approaches. The study also examined such factors as the impact of using formal protocols in such areas as quality, consistency, and cost of care, and access to care. In addition, reflecting the emphasis on an individualized approach to care in the President's New Freedom Mental Health Commission report and the children's system of care movement, the study examined approaches to using formal protocols within an individualized approach to care. The ultimate purpose of the study is to provide a useful technical assistance resource for states and MCEs as they implement and refine clinical decision making approaches for this population of children and families.

### **Method**

The Health Care Reform Tracking Project's periodic surveys of all states and site visits to selected states have led to the identification of promising approaches, that is, features of managed care design and implementation that seem to be associated with better service delivery for this population, particularly for children with serious disorders. Included among the areas targeted by the Tracking Project for identification of promising approaches was that of clinical decision making guidelines or protocols. In other words, state surveys and telephone interviews have asked key informants in states whether clinical protocols were being used within states specifically for children's behavioral health decision making. The surveys and interviews yielded a number of promising approaches in this area. Further information was gathered—through telephone interviews with national experts, interviews with the states in question and analysis of documentation—to determine whether a given identified approach would remain in the sample. As a result of this process, nine states and five local management entities were included in the sample. The states included are: Arizona, Delaware, Hawaii, Michigan, New Jersey, North Carolina, Pennsylvania, Tennessee, and Texas. The five local management entities included are: Clinton Eaton Ingham in Lansing, Michigan; the Dawn Project in Marion County, Indiana; the Mental Health Services Program for Youth operating in several local areas in Massachusetts; Philadelphia Behavioral Health System; and Wraparound Milwaukee. Semi-structured telephone interviews were conducted with key state and MCE informants in each of the states and localities included in the sample. In addition, documentation and relevant websites were reviewed.

### **Results & Discussion**

The study describes the clinical guidelines that a sampling of states and MCEs are using for children's behavioral health service delivery within a managed care environment. Some of these guidelines draw on national instruments, such as the Child and Adolescent Functional Assessment Scale (Hodges, 2000); some are "homegrown," that is, developed by states themselves; and some are hybrids, that is, adaptations of existing, formalized protocols. In a few instances, no formalized protocols are used but rather a highly individualized approach to care is used that itself has become "formalized."

The study explored the length of time states or MCEs have been using particular guidelines and adaptations made over time. It examines the reasons states are using particular guidelines, such as to improve consistency or quality of service provision. The study identifies how states are using protocols, for example, in initial decision making for eligibility criteria and medical necessity determination, for ongoing decision making, for treatment monitoring and the like. The study explores the impact of the guidelines on access to care, and on such aspects as quality and consistency.

The study described the extent and nature of states' efforts to incorporate use of clinical decision making protocols systemically, efforts to train providers, clinicians, families and other key stakeholders about clinical protocols, and supervision and monitoring of the use of protocols. The study identified a number of challenges to the use of clinical protocols, including lack of acceptance by clinicians of the face validity of protocols, conflict regarding consistency versus individualized planning, and the cultural sensitivity of some instruments.

The study also examined how various protocols take into account individual characteristics of children and families, in particular, language, ethnicity, severity and co-morbidity. It explored how guidelines support family and youth involvement, interagency involvement, and an individualized, strengths-based approach to care. The study also examined the "politics" of using guidelines and what happens when guidelines call for services that are not available.

The study provided an opportunity for a sample of states and local management entities to reflect on their experience using particular clinical decision making approaches and protocols, to identify the strengths and challenges of their approaches, and the refinements they have made based on their experience. Their reflections provide useful lessons learned for other states and MCEs who are considering use of clinical care guidelines within managed care environments.

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## **Symposium Discussion**

**Ginny M. Wood**

Above, the presentation on care management models illustrated how families raising children with serious emotional disturbances are “standing at the center of the service delivery system supporting and assisting other families to drive the care and services they need for their families.” This new role for families reduces the stigmatizing myths about the inadequacy of parents. New roles in themselves are not enough. For public mental health managed care systems to actualize the values of employing parents in the behavioral health system, families and formally trained researchers need to team up to examine the sites where families are employed more thoroughly, to document it, to talk about it with policy makers, service providers, families and others involved in providing services and supports to children and families and to develop, promote and support a commonly accepted definition of family-driven care.

Stroul and Grimes’ discussion on clinical guidelines clearly described the variety of tools used by states to guide the decision making process. What was missing from the findings was how family members raising children with behavioral health challenges were engaged in the development process. Without family comfort and buy-in, children and youth do not understand the need or how this information will improve their quality of life at home, in schools and in the community. Further research is needed to understand how families are informed and involved at the state and community levels in the process of developing clinical decision making protocols. If mental health care is going to be consumer and family driven then providers must embrace the concept of sharing decision making authority and take the initiative to change practice from provider-driven to family-driven.

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## **Symposium**

# **Financing Issues in Systems of Care for Children's Mental Health**

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### **Introduction to Symposium**

Jennifer Taub

Although our field has made inroads in promoting Child and Adolescent Service System Program and systems of care principles into the children's mental health services arena, there has been little focus to date by the research community on the important issues of financing for the creation and maintenance of such services. Federal Substance Abuse and Mental Health Services Administration grants have been instrumental in the establishment of systems of care and the many creative and innovative services associated with these systems, such as wraparound services and respite care. Yet once such funding ends, communities have differing levels of success in sustaining their systems of care. Biebel and Katz-Leavy's summary examines communities that have used creative financing mechanisms to sustain their systems of care programs and services beyond a period of grant funding. Few programs have been initiated and sustained in the absence of federal funding initiatives. The other two summaries look at one such program, Coordinated Family Focused Care, a pilot wraparound program in five communities that was created by a combination of public monies in Massachusetts, and is not dependent on federal funding. The discussion by Taub and O'Garr examines the role of flexible funding in this program in the provision of respite services. The summary by Fields, Gyurina, and Strauss, from the perspective of a managed care entity working on the Medicaid carve out, looks at the cost differentials between children who graduate from this program, and those who leave prior to graduating. While each discussion examines a different aspect of financing in system of care services for children, taken together they help to shed light on some of the financing issues affecting system of care programs. It is hoped these summaries will aid in understanding how to maintain such programs over the long term without dependence on time-limited grants.

#### **Chair**

Jennifer Taub

#### **Authors**

Kathleen Biebel et al.

Suzanne Fields et al.

Jennifer Taub et al.

#### **Discussant**

Brian T. Yates

### **Sustaining Systems of Care: Maximizing Medicaid for Children with Serious Emotional Disturbance**

Kathleen Biebel & Judith Katz-Leavy

#### **Importance and Purpose of Work**

The President's New Freedom Commission on Mental Health (2003) suggests that the mental health problems among children and adolescents constitute a public health crisis for the nation. Five to nine percent of children aged nine to 17 have a serious emotional disturbance which causes "extreme functional impairment" (Friedman, Katz-Leavy, Manderscheid, & Sondheimer, 1998). Studies show significant numbers of children and adolescents in need of treatment do not receive behavioral health services (Bazelon Center, 1999). When children's mental health services are unavailable, unaffordable, or inappropriate, many young people end up caught in the child protection or juvenile justice systems. Exposure to greater numbers of risk factors places children and adolescents at higher risk of adverse outcomes including school failure, difficulty with social relationships, unplanned pregnancies, out-of-home placements and family disruptions.

Children enrolled in Medicaid have significant rates of mental disorder and relatively high rates of service utilization (Bazelon Center, 1999). Many services most helpful to children with serious emotional disturbance could be reimbursed by Medicaid but rarely are. Medicaid generally can include a broad array of services including psychiatric hospitalization under age 21, case management and EPSDT. Many of these services are federally mandated: inpatient hospital care, residential treatment, or

group homes; clinical services by (or supervised by) a physician; outpatient hospital services; physician services and services of other licensed professionals. Others are clearly permitted through a number of different Medicaid options, such as the Rehabilitation Option and the Clinic Option, and the Home and Community-Based Waiver. These may include, in addition to those services mentioned above, crisis services; intensive in-home services; day treatment; substance abuse counseling; social and daily living skills training; case management; behavioral aide services and other intensive community-based care. In some cases, Medicaid options and waivers may also be used to cover services for family members of the identified child, as they relate to the well-being of the family.

Many of the more intensive community-based services, which families report as most helpful to them, are not traditionally covered by states in their Medicaid State Plans (Bazelon, 1999). For example, wraparound has been identified as a successful and effective strategy for children with serious mental and emotional disorders and has been implemented throughout the country through demonstration projects and statewide initiatives. Even so, the availability of Medicaid-funded community-based wraparound services varies among states. Accordingly, where a child lives can have a significant impact on the types of services to which she or he has access. And while most Medicaid programming for children is fairly traditional and based on a medical model, some states have been innovative in their organization, financing, and range of community services offered. Examples of innovations in Medicaid-funded programming include team meetings in Kansas, Minnesota and Nebraska, family support services in Kentucky, Pennsylvania and Maine, and home-based services in Michigan (Bazelon, 1999). These states have introduced more clear and precise definitions of what services are available to children, a change which helps providers and families alike. “Medicaid can be used—but often is not—to finance the services that are most effective for children with serious emotional disorders.” (Bazelon, 1999, p.61)

Data from the National Evaluation of the Comprehensive Community Mental Health Services for Children and their Families Program (also known as the Children’s Mental Health Services Initiative) indicate that grantee sites are billing Medicaid for services provided to between 70-80% of the children and youth in their systems of care (ORC Macro, 2002). However, it is not known which services specifically are being billed to Medicaid, under what authorities of the states’ Medicaid Plan they are covered, or how such practices could best be brought to scale in other sites and/or states.

The goal of the current study is to identify and describe innovative and exemplary uses of Medicaid to fund wraparound services across the Children’s Mental Health Services Initiative grantee sites and to assess these practices in the context of the state’s Medicaid Plan. These findings will identify how grantee site administrators and providers have been innovative and exemplary in using Medicaid to fund system-of-care services for children with serious emotional disturbance and their families. Findings will suggest strategies useful to state-level systems administrators and grantee site program directors for developing sustainability plans.

## Methods

This study was conducted in two phases. In Phase I primary quantitative data were collected and analyzed to identify grantee sites interested in participating in the study. In Phase II primary qualitative data were collected through case studies to identify key factors and strategies related to the use of Medicaid to fund system-of-care community-based services.

In Phase I, Principal Investigators and Project Directors for active and graduated grantee sites ( $N = 92$ ) were surveyed regarding their use of Medicaid. Survey items were reviewed by experts in the field, including children’s mental health providers, administrators, researchers, and family members for feedback on validity and ease of administration prior to its distribution. The survey contained 11 items and asked about grantee sites’ use of Medicaid Options (e.g., Rehabilitation Option, Intensive Case Management Option), Eligibility Waivers (e.g., Katie Beckett Option/TEFRA), Children’s Health Insurance Program (CHIP), EPSDT, and other Waivers (e.g., Home and Community-based Waivers, 1915(b) Waiver, and 1115 Federal Demonstration Programs), financing mechanisms, and availability

of specialized managed behavioral health care systems. Grantee sites that self-identified as innovative in securing and using Medicaid funds were asked if they were interested in participating in the study. Response rate for the survey was 59%. Demographic information regarding the race/ethnicity of populations served and population characteristics (e.g., urban, rural, suburban) by grantee sites were extracted from a secondary analysis of the National Evaluation data. A National Advisory Group of experts in the fields of Medicaid, children’s mental health services, State Medicaid Plans, family-driven services and systems of care were convened to provide guidance throughout the study.

In Phase II, six grantee sites were selected for case study from sites that self-identified as innovative in using Medicaid, nominated themselves for participation in the study, and were recommended for participation by the National Advisory Group. Selected sites represented a range of Medicaid Options and Waivers, financing mechanisms, and demographics of population served. In the Fall of 2004, study investigators visited each grantee site for two days and administered a semi-structured interview guide to capture data on relevant dimensions suggested in the literature and in consultation with grantee sites and the National Advisory Group. Investigators interviewed grantee site Principal Investigators and/or Program Directors, grantee site finance administrators, state/county Medicaid mental health liaisons, state/county CHIP mental health liaisons, family members, partner agencies, and provider agencies. Interview questions were tailored to specific respondents. Qualitative data were content-analyzed after coding for themes derived from the interview guide.

## **Results**

Preliminary analyses of the qualitative case study data suggest grantee sites use a variety of strategies to maximize Medicaid reimbursement opportunities. Some strategies, listed below, were identified by all or most grantee sites while others were unique to specific sites:

- Build relationships with key stakeholders to think strategically about using Medicaid;
- Develop infrastructures, e.g., an information technology system, to facilitate interactions with Medicaid;
- Educate community providers on how to bill Medicaid through technical assistance and trainings;
- Establish and maintain eligibility for all incoming children and their families;
- Blend/braid funds whenever possible to maximize State Medicaid match to access the full federally-funded portion;
- Establish household-of-one designation to facilitate access to Medicaid for out-of-home children based on the child’s, not family’s, income;
- Amend State Medicaid Plan language to include wraparound services; and
- Seek expert consultation to educate key stakeholders on system-of-care services and Medicaid.

## **Conclusions**

These preliminary findings are the first step in understanding how the federal Children’s Mental Health Services Initiative grantee sites use Medicaid to pay for services that have not traditionally been reimbursed through this funding mechanism. This knowledge will be useful to other grantee sites and systems of care programs as they strive to achieve sustainability, and provide services to children and families in need for as long as necessary. Ultimately, the study will produce programmatic and policy relevant material for the sites and states.

## **Cost and Service Utilization for Families Enrolled in a Managed Care Wraparound Program**

Suzanne Fields, Carol Gyurina, Stephen Magnus & John Straus

### **Introduction**

Coordinated Family Focused Care (CFFC) is a pilot initiative in Massachusetts undertaken to better coordinate the care of children and adolescents who are at risk of hospitalization or residential placement because of their serious emotional disturbances (SED). The CFFC initiative is sponsored by five human services agencies: the Department of Mental Health, the Department of Social Services, the Department of Youth Services, the Division of Medical Assistance, and the Department of Education. The Massachusetts Behavioral Health Partnership, which manages Medicaid mental health benefits in the Commonwealth, is administering the CFFC program.

This study explores the relationship of graduation vs. withdrawal from the program with cost, service utilization patterns, length of stay, and functional status. Findings from the study will aid policymakers, providers, managed care organizations and other payers as they develop and monitor similar services.

### **Methods**

Study participants were selected from all members who had enrolled in the CFFC program between July, 2003, and September, 2004, and who had been discharged from the program—either through graduation or withdrawal—prior to October 27, 2004. Only families who consented to participate in the program evaluation were included in this analysis. For the demographic and clinical analysis, 120 participants were included. For the cost analysis, 72 participants were included; members who were discharged from the program after July 27, 2004 were excluded in order to allow time for the claims in the post period to be processed. Members included in the sample were from all five CFFC program sites.

Of the 120 study participants, 69% were male; 12% were between three and six years of age, 50% between seven and twelve years, and 38% between 13 and 18 years. For those for whom ethnicity data had been collected, 18% were African American, 36% were Latino, 16% were multi-ethnic and 30% were White.

Study data included both behavioral health claims and clinical data collected by the program staff at intake and at quarterly intervals thereafter. Psychological instruments included a bio-psychosocial assessment form and the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges 2000a), or the Pre-School and Early Childhood Assessment Scale (PECFAS; Hodges 2000b). Analysis used the initial score at intake and the last score prior to discharge.

### **Results**

Demographic variables, as well as variables relating to family history and family structure, were analyzed for differences between the groups that graduated and those that withdrew from the program. Members were considered to have graduated if they met the goals that the clinical team set for the family at the beginning of the program. Families who left the program without having met these goals were considered to have withdrawn. Withdrawals occurred for a variety of reasons: 40% of the families said they were no longer interested in participating; 33% had their child permanently placed out of the home; 10% moved out of the region served by the program; 6% lost their insurance coverage; and 27% cited other reasons.

Chi Square tests were used to evaluate statistical significance for differences between the groups. Variables under analysis included: age category, gender, ethnicity, language spoken in the home, self-reported family history of mental illness and substance abuse, primary caregiver's relationship to the child (biological, adoptive, kin, foster parent) and marital status.

There were no statistically significant differences in demographics between the graduates and withdrawals, although a non-significant difference was found for English spoken in the home, with 85% of graduates speaking English in the home and 72% of withdrawals speaking English in the home ( $p = .108$ ). There were no statistically significant differences between the groups in terms of biological family history of mental illness, or biological family history of substance abuse. Seventy-eight percent of the graduates and 77% of the withdrawals reported a family history of mental illness, and 58% of graduates and 51% of withdrawals reported a family history of substance abuse.

### Functioning

At enrollment in the program, there was no difference in functional scores between those who graduated and those who withdrew, with the mean CAFAS/PECFAS scores for graduates at 144, and for withdrawals at 143. At discharge, the difference between these groups was statistically significant according to the  $t$ -test ( $p = .012$ ), with the mean CAFAS/PECFAS for those who graduated at 98, and for withdrawals at 118. In addition, the difference in CAFAS/PECFAS scores from the time of enrollment to the time of discharge was statistically significant ( $p < .0001$ ). Both graduates and withdrawals experienced significant improvements in functioning as measured by the CAFAS/PECFAS over the course of the program.

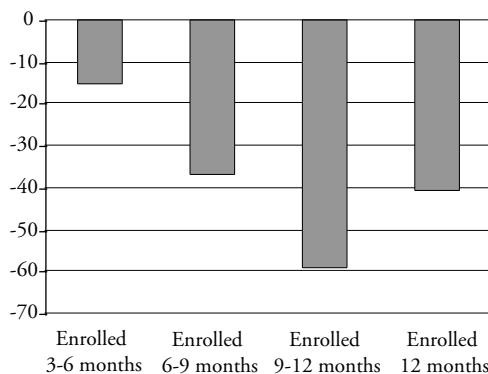
Both groups were combined to analyze the change in CAFAS/PECFAS scores by length of stay in the program. All participants, regardless of how they disenrolled, were split into four cohorts: (1) disenrolled after 3-6 months, (2) disenrolled after 6-9 months, (3) disenrolled after 9-12 months and (4) disenrolled after 12 months or more in the program. The mean change in CAFAS score between enrollment date and disenrollment date was measured, and significance was tested across the four groups using ANOVA. Members who were missing CAFAS data were excluded, so the  $N$  for this analysis was 98 vs. 120. The difference in the changes in CAFAS by length of time was statistically significant ( $p = .006$ ). Those who were enrolled in the program for 9-12 months had the largest gains in functional improvement (see Figure 1).

### Cost

For each participant in the cost analysis ( $N = 72$ , as noted in Methods), average monthly behavioral health care costs paid through MBHP were calculated for three time periods: (1) the three months prior to enrollment, (2) the time the member was enrolled (which varied from one month to more than one year), (3) and the three months after discharge from the program. Cost data are based on MBHP paid claims, and a mean monthly cost was calculated for each service category: inpatient, diversionary, emergency, outpatient, and CFFC costs.

The costs represent what MBHP paid to providers for services, not necessarily the costs incurred by providers. These costs do not represent flexible fund expenditures that are part of the program model, and do not include services paid by other sources, such as long term residential care, special education services, or services provided by the state's child welfare or mental health departments. In the three months prior to program enrollment, differences were found in average monthly costs, with graduates costing \$755 and withdrawals costing \$1624. While not statistically significant, these differences will continue to be monitored. However, in the three months post discharge, a significant difference in average monthly costs was found using  $t$ -tests ( $p = .002$ ); those who graduated from the program had an average monthly cost of \$239, while those who withdrew

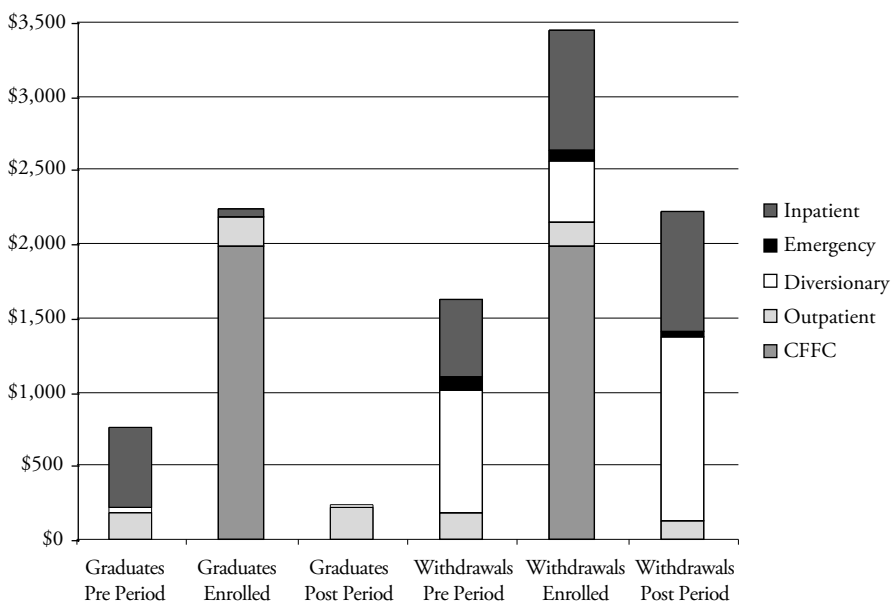
**Figure 1**  
Change in CAFAS  
Negative Represents Improvement



had an average monthly cost of \$2,220. Higher levels of care, both inpatient services and diversionary services, account for the difference in overall costs between the groups in the during-CFFC, and the post-CFFC periods (see Figure 2).

Analysis of the change in costs between pre- and post-periods by length of stay was done by splitting the total population into four cohorts by length of time in the program, and measuring which time period had the greatest reduction in overall costs. ANOVA analysis showed no statistically significant differences in cost changes by length of time in the program.

**Figure 2**  
**Monthly Costs by Service Level**  
**Graduates and Withdrawals**



## Discussion

Children who graduated and withdrew from the program were similar in functioning, costs, and service utilization patterns prior to enrollment in the program. Both groups experienced improvements in functioning, with graduates, as anticipated, demonstrating greater improvement. Graduates demonstrated lower overall costs during and after the program, primarily due to differences in the utilization of inpatient and diversionary services.

The relationship of length of enrollment in the program with both functioning and behavioral health costs requires further study. The largest changes in costs occurred for children enrolled in the program six-nine months, and the largest changes in functioning occurred in the 9-12 month group. Even if families do not complete a program, the data point to improvements in a child's functioning and lower costs for those who remain in the program for at least six months. Further study is needed in order to understand whether these are long-term changes (i.e., ones that are sustainable over time), if there is a minimum period in time for the program to have some impact, and if there is a point in time at which a longer stay does not offer much benefit.

While the rates of self-reported biological mental illness and substance abuse history in the two groups does not appear to have any association with whether or not a family completed the program, these rates were surprisingly high for both groups. It was expected that self-reported rates would be lower than found, and they are often lower than actual rates. Again further study is needed to understand whether these findings do represent an under-reporting of the needs of these families.

In summary, this study is preliminary, as it is based on a small sample. It is expected that when data are available on 400-plus children, including cost and service data for 12 months post-enrollment, the findings will be more conclusive. The present study, however, does identify larger systems questions for Massachusetts and other payers of wraparound models as they strive to maintain highly individualized programming while managing costs and length of program enrollment.

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## **Use of Flexible Funds for Respite Services in a Managed Care Wraparound Program**

Jennifer Taub & Joseph O'Garr

### Introduction

There have been few studies to date that have examined the roles of flexible funding and respite care in services for children with SED. Respite care has been defined as “temporary care given to a disabled individual for the purpose of providing an interval of relief to the individual’s primary caregiver(s)” (Cohen, 1982, p. 8). In this unique service, the caregiver, rather than the patient, is intended to be the direct beneficiary. This service arose from the recognition that most, if not all, families can benefit from support and relief when caring for a disabled family member.

Most research examining factors associated with respite care have focused on children with developmental disabilities and their caregivers. A review of this small body of research concluded that the use of respite care is associated with reduced parental stress in a majority of the participating families with developmentally disabled children (Chan & Sigafos, 2001; Mullins, 2002; Rimmerman, 1989).

While high need for respite services for families with children with SED has been identified (Trupin, Forsyth-Stephens, & Low, 1991), few studies have examined the factors related to respite use among children with SED. In a descriptive study involving children experiencing psychiatric crises, Boothroyd and colleagues (1998) examined respite care as part of a more comprehensive demonstration and research project directed at decreasing the rate of psychiatric admission. Significant differences were found between respite care user and nonuser groups in a number of categories. In general, they found that the children in the respite care user group tended to be younger and have a higher number of functional impairments. Parents of children in this group also reported less availability of social supports and more difficulty managing their child’s behavior.

Only one study has examined the efficacy of respite care in the SED population. In comparison to those on a waitlist, Bruns & Burchard (2000) found that families receiving respite had significant reductions of personal strain on the caregiver and fewer incidents of out-of-home placement, with a dose-response relationship.

While not specifically targeting respite care, one study to date examined factors related to flexible funds spending in a comprehensive services program for children with SED. This study concluded that a history of psychiatric hospitalization, but not other functioning and symptom factors, predicted flexible funds spending for this population (Jenson, Turner, Amero, Johnson, & Werrbach, 2002).

The present study seeks to examine factors related to the use of flexible funds for respite care in a comprehensive case management program for children with SED. Specifically, we sought to determine clinical and demographic factors related to cost and utilization of respite services.

## Method

For the purpose of this study, analysis was conducted using the data from the evaluation of the Coordinated Family Focused Care (CFFC) program in Massachusetts. CFFC utilizes strengths-focused wraparound services for children with SED who are at risk for out-of-home placement. Each family in CFFC is set up with a team consisting of a master's level care manager (CM) and a family partner (FP) who has been a caregiver of a child with SED. The CM and FP help the family identify additional team members. These team members include people who have a stake in seeing the family succeed: family members, service providers, and members of the family's natural and community support networks. The families involved with CFFC experience high levels of caregiver stress (see Taub & Lewis, this volume). The Massachusetts Behavioral Health Partnership (MBHP), which manages Medicaid mental health benefits in the Commonwealth, is managing the CFFC program. The evaluation of this program, which is funded by the Center for Health Care strategies, includes data on flexible funds use and costs, and quarterly collection of data on child functioning and parental stress.

**Participants.** All participants in this study were enrolled in the evaluation of the CFFC program. Eligibility requirements for enrollment in CFFC include: Medicaid recipient, 3-18 years old (inclusive), at risk for residential or more restrictive placement, attainment of a score of 100 or higher indicating clinically significant impairment in functioning on the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges & Wong, 1996), residence in one of the CFFC designated communities and presence of a serious emotional disturbance.

**Procedures.** Consent for participation in the study is obtained by the child's care manager upon intake into services. The risks and benefits are explained, and a consent form is signed that has been approved by the University of Massachusetts Medical School Institutional Review Board. The evaluation study consists of administration of a number of standardized measures completed with the care providers, as well as through phone interviews with University of Massachusetts researchers. For this study, data were accessed for 214 children enrolled in CFFC for at least six months, who were also part of the ongoing evaluation.

**Measures.** Data on costs of flexible funds use for respite care were culled from a flexible funds database compiled by MBHP as part of program management. Monthly data on the client level is submitted by each provider for each client enrolled in CFFC. Categories include in-home respite and community services and out-of-home respite. These data provide overall usage and associated costs of these services across the program. These data are sent electronically from MBHP to the University of Massachusetts for analysis.

Additional data for this study include demographic and diagnostic data collected at intake by program staff, the CAFAS (Hodges, 1996) is administered quarterly (at Intake into the program, and every three months thereafter) as a measure of child functioning, and the Youth Outcome Questionnaire (YOQ; Wells, Burlingame, & Lambert, 1999) is completed by the primary caregiver at intake, three months, six months and 12 months to assess psychological symptoms.



## Results

To understand the amount spent for different types of respite utilized by children in the program, flexible funds claims data were analyzed to identify totals and per child spending rates for each category.

Results indicate that 49% of all flexible funds are spent on in-home respite and community supports, which are largely spent on respite services categorized as respite, mentoring, or "specialized babysitting." Only 2% of flexible funds were spent on out-of-home respite, and this service was utilized by a small number of program participants. At six months in services, 60% of children had experienced respite services in the program, with a median cost of \$600 (*SD* \$1550) per child. By 12 months, 78% of children had received some respite care, at a median cost of \$1435 (*SD* \$3030) per child. There was a great deal of variation in costs, as evidenced by the large standard deviations in per child expenditures (see Table 1 for details).

To understand the relationship between the use of respite care and child functioning, a series of multiple regressions were performed. For each program timepoint (6, 9 and 12 months), total respite dollars were entered as the dependent variable, and gender, diagnosis, functioning, and psychological symptoms were entered in stepwise equations.

Results indicated significant relationships between respite spending and intake scores on the Somatic Complaints subscale of the YOQ at 6 months. At 9 and 12 months, there were significant relationships between respite spending intake scores on Somatic Complaints, and a diagnosis of Post Traumatic Stress Disorder. The specific respite dollar amounts associated with each variable can be seen in Table 2.

**Table 1**  
Overall Respite Spending at 6, 9 and 12 Months in Services

|                | 6 Months   |              | 9 Months    |              | 12 months   |              |
|----------------|------------|--------------|-------------|--------------|-------------|--------------|
|                | All        | Respite only | All         | Respite only | All         | Respite only |
| <i>N</i>       | 212        | 127 (60%)    | 162         | 114 (70%)    | 91          | 71 (78%)     |
| Mean           | \$605.20   | \$1,010.26   | \$1,096.94  | \$1,558.81   | \$1,784.90  | \$2,287.69   |
| Median         | \$139.50   | \$600.00     | \$571.50    | \$1,029.50   | \$1,043.00  | \$1,435.00   |
| Std. Deviation | \$1,017.64 | \$1,149.68   | \$1,636.27  | \$1,757.36   | \$2,836.97  | \$3,030.06   |
| Minimum        | \$0.00     | \$3.00       | \$0.00      | \$10.00      | \$0.00      | \$10.00      |
| Maximum        | \$7,197.00 | \$7,197.00   | \$11,374.00 | \$11,374.00  | \$18,621.00 | \$18,621.00  |

**Table 2**  
Stepwise Multiple Regressions with Flex Fund Respite Spending as the Dependent Variable

| Months in the program | <i>N</i> | <i>R</i> | <i>R</i> <sup>2</sup> | Adjusted <i>R</i> <sup>2</sup> | Std. Error of the Estimate | <i>F</i> | Predictors in the Model | \$              |
|-----------------------|----------|----------|-----------------------|--------------------------------|----------------------------|----------|-------------------------|-----------------|
| 6                     | 144      | .300(a)  | .090                  | .084                           | 1101.833                   | 14.231*  | Somatic YOQ             | \$61            |
| 9                     | 124      | .350(b)  | .123                  | .108                           | 1679.770                   | 19.618*  | Somatic YOQ<br>PTSD     | \$88<br>\$768   |
| 12                    | 77       | .540(b)  | .291                  | .272                           | 2583.452                   | 28.245*  | Somatic YOQ<br>PTSD     | \$217<br>\$2025 |

\**p* < .0001

## Discussion

Little research to date has examined of the role of respite services as part of treatment programs for children with SED. This oft-requested service is increasingly becoming a part of comprehensive community-based care paid for through creative funding mechanisms such as Medicaid waivers and blended funding. This study is among the first to examine specific client variables associated with respite utilization among children with SED, and findings suggest direction for further inquiry.

Our results indicate a number of diagnostic variables associated with respite spending. As respite care is designed to give parents a “break” from the stresses associated with caring for a child with SED, we expected to see respite use associated with externalizing behaviors and conduct problems. Contrary to our initial hypothesis, externalizing behaviors were *not* associated with increased respite spending. (In fact, a diagnosis of Attention Deficit/Hyperactive Disorder was associated with less respite spending). Instead, a pattern emerged where clinical symptoms associated with trauma were related to respite use. These are also the types of clinical symptoms often associated with inpatient care. Our analyses did not find a relationship between hospitalizations while in the program and respite use. We were unable to determine whether respite use is associated with prevention of hospitalizations. Future research efforts will seek to examine pre-intake claims to help understand how respite utilization fits into a larger service plan, and how it may be related to other service use in this population.

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## **Symposium Discussion: Very Important Research; Very Difficult to Do**

**Brian T. Yates**

What I had hoped to hear from these presentations was (a) what actually works when providing mental health services to children, (b) how much those effective services cost, and (c) whether and how quickly those services pay for themselves in terms of reduced use of behavioral health care and corresponding reductions in costs. The papers presented in this symposium show that we're getting there, but a bit slowly and in a manner that allows for a variety of alternative interpretations of findings.

Very briefly, the first presentation provided self-reports from programs of what they considered to be the most effective ways of achieving the outcome of maximizing income from those programs (and, presumably, for participating families). It could be useful to validate these self-reports with data on the actual income received. It also could be useful to request reports of costs of these different strategies, in terms of the value of professionals' time, participants' time, and delay of receipt of benefits—and risk of subsequent "checking by Medicaid."

The second presentation provides much of the foundation for a cost-benefit analysis of managed care and wraparound programs. I question, however, whether we can consider the withdrawn group to be a completely valid comparison group. This study might benefit from propensity scaling analyses to compensate statistically for possible differences between the two groups. Also, this is an "as treated" analysis: intent-to-treat analyses also could be performed and might increase generalizability of findings. Finally, for a full cost-benefit analysis in future research, costs of treating withdrawn as well as graduated children need to be summed before contrasting these to potential savings in reduced utilization of services after participation in CFFC.

This analysis shares with many presentations on cost-savings outcomes the surprisingly common omission of the costs of the program that is hoped to reduce costs of other services. Instead, only the potential cost-savings benefit, and not what is expected to obtain these benefits, was reported. This prevents a complete cost-benefit analysis.

The third study describes how therapists and families allocated funds that were available in amounts and for purposes that were largely at the discretion of the therapists and families. How these funds were spent, and the specific decision-making procedures developed by therapists to distribute these monies could be important to study, and could provide insights into program operations once additional data are available. Algorithms for distribution of these funds to families may be difficult to make explicit or to routinize, but case examples go a long way toward helping others understand how this component of the CFFC wraparound services works.

Future research on financing and financial implications of providing mental health services to children and families can examine the potential cost-benefit of such services by routinely reporting costs as well as benefits. It is important to measure these costs and benefits with similar completeness, so that a bias is not introduced for or against finding that the monetary benefits resulting of our services reliably exceed the costs of providing those services.

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# **Challenges in Measuring Level-of-Restrictiveness for Analyses of Cost Effectiveness**

**Katherine E. Grimes  
Sara L. Nechasek  
Brian Mullin**

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*Acknowledgments: We are indebted to the Psychiatric Research and Academic Center, Cambridge Health Alliance, for valuable support for this presentation.*

## **Introduction**

One of the assumptions that guides service delivery within systems of care is that youth should be maintained in the least restrictive setting possible, consistent with the Child and Adolescent Service System Program (CASSP) principles (Stroul & Friedman, 1986). Because of the importance of this concept in terms of quality in children's mental health, it holds promise as a possible performance measurement indicator. However, systems of care vary a great deal in how level-of-restrictiveness is measured. The term generally connotes something about the physical setting of a service, something about the cost of a service and something about the intensity of supervision, but has no standard definition. Change in level of restrictiveness of care is also challenging to compare across programs, since it might refer to change within a period of program participation, change before and after participation or even change compared to an earlier episode of care. Measurement of out-of-home placements, another potentially valuable quality indicator, is similarly complicated by a lack of consistency in definition (American Academy of Child and Adolescent Psychiatry [AACAP], 2004). "Out of home" might or might not mean "out of community;" permanent foster home might or might not be considered out of home. There is also variation in whether hospital use, arguably a restrictive setting and certainly a service level frequently included in outcome reporting for systems of care, is counted when tallying twenty-four hour settings or out-of-home data. The variable use of these terms creates challenges in creating a performance measurement standard for restrictiveness and for interpreting program clinical efficacy. There are further complexities regarding cost-effectiveness, in that not all service or placement categories are available within every system of care, and separate community-based programs carry different kinds of financial accountability for services used. Given the interest in establishing an evidence base for systems of care, it would appear valuable to begin to try and standardize measurement of restrictiveness for the purposes of evaluation.

Some methodologies have been used by other systems of care to examine level of restrictiveness. Hamilton Choices Mosaic Project, a system of care established in 2002 in Cincinnati Ohio, reports changes in placement to the same or less restrictive settings and any out-of-home placement days paid by the program which include: residential treatment, foster home, group home, supported living and paid independent living (Hamilton Choices, 2004). Community Kids, a Substance Abuse and Mental Health Services Administration-funded system of care site in Montgomery County, Maryland, measures changes in living environments in comparison to intake. Results show that 88% of youth remained stable or moved to a less restrictive setting and 12% moved to a more restrictive setting (AACAP, 2004). Wraparound Milwaukee tracks average daily census for residential treatment center care and juvenile correctional commitments (AACAP, 2004).

This paper describes how the Mental Health Services Program for Youth (MHSPY) uses its report on level of restrictiveness to inform analyses of overall program cost effectiveness. MHSPY is a non-profit, public-private system of care for children ages 3 to 18 with serious mental illness in Massachusetts; MHSPY blends funding from multiple state agency purchasers, including Medicaid, to finance the delivery of integrated health care (Pires, 2002). Measurement of clinical and cost outcomes for enrolled children in MHSPY includes a report on hospital use and out-of-home placements which displays service use both within and outside of the MHSPY program benefit. The creation and refinement of this report led its authors to greater appreciation for the advantages of defining standard terminology and measurements for this concept within the field.

## Method

Pre-enrollment interviews of parents and caregivers are conducted by the MHSPY Clinical Enrollment and Evaluation Manager during which information regarding prior hospitalizations or out-of-home placements is collected. In addition, all available clinical records, discharge summaries and other reports from the referring agency (child welfare, mental health, juvenile justice, and/or special education) are reviewed for supplementary information. While in the program, level of restrictiveness for each child for every day of enrollment is entered into an electronic database on a weekly basis by the MHSPY Clinical Site Supervisors based on information provided by the Care Managers. Regular reports are created which include number of days within the week, if any, when the child is not residing at home, location and type of service (i.e. hospital, acute residential) and funding source. Days at home are reported as a percentage of total days enrolled for each MHSPY site, as well as for the MHSPY program overall. Days not spent at home are grouped by service categories, then combined into two distinct summaries: the first represents all out of home settings/service types paid for within the MHSPY benefit, and the second represents any out of home placements paid for outside of the MHSPY benefit. MHSPY also captures data on the location of all children at disenrollment which is documented by the clinical Care Manager at the time of disenrollment.

## Results

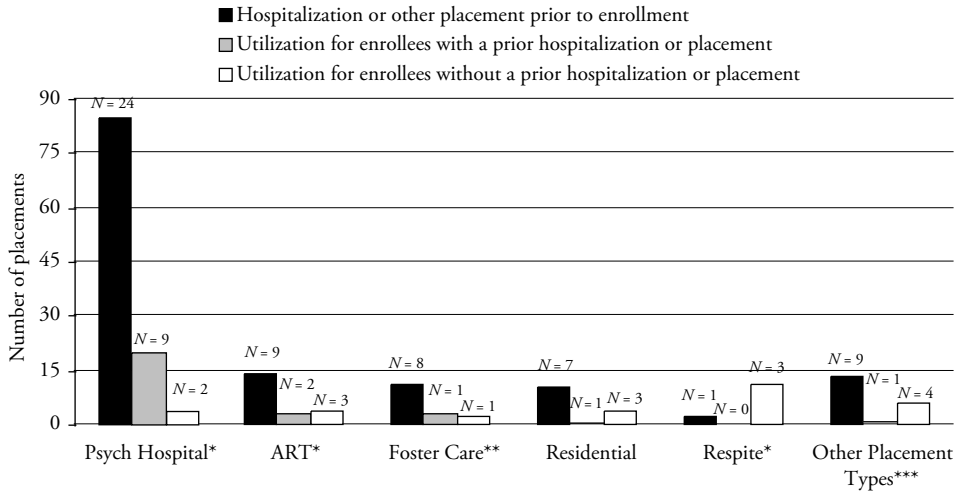
Regarding the specific outcome of maintaining children at home and in least restrictive settings, MHSPY found that sixty-one percent (61%) of members enrolled from July 2003 to December 2004 had at least one hospitalization or out-of-home placement prior to enrollment. Forty-six percent (46%) had two or more hospitalizations and/or out-of-home placements prior to enrollment. Despite these high rates of prior hospitalizations and out-of-home placements, a comparison of these children prior to and during enrollment shows a decrease in hospital use and every other category of prior utilization (refer to Figure 1). The improvement is most dramatic for members with four or more hospitalizations or prior placements: 14 children had 68 hospitalizations prior to enrollment, five of those children had no hospitalizations during enrollment and nine of those children each had one hospitalization during enrollment in MHSPY. Psychiatric hospitalization was the most frequent non-home setting experienced by MHSPY members prior to enrollment; 83% of those with any type of out-of-home episode had at least one psychiatric hospitalization before entering MHSPY.

Analysis of program days spent at home also demonstrates MHSPY enrolled youth are being maintained at high rates in the least restrictive setting possible. Findings indicate eighty-six percent (86%) of program days were spent at home in calendar year 2004 (see Figure 2). Three and a half percent (3.5%) of the total program days were spent in out-of-home settings paid for by MHSPY, which included acute residential treatment facilities, out of home respite, and inpatient psychiatric hospitals. The remaining 10.5% were for placements determined by the purchasers to fall outside of the MHSPY benefit; these included foster care, residential care, group home, detention/juvenile justice facility, secure treatment, and pre-independent living. Significantly, the majority (57%) of days in this latter category were spent in foster care, the least expensive out-of-home setting and also the one with the lowest level of restrictiveness. MHSPY also reports the location of the child at the end of enrollment. Data on 112 children through December 2004 indicated that the majority, 73%, were being maintained at home at the time of disenrollment.

## Discussion

Information on restrictiveness of settings used by children and adolescents in the MHSPY program is reported at six month intervals and longitudinally as part of internal and external clinical quality improvement activities. Aggregate and site-based data are used by purchasers and stakeholders to track utilization and financial trends within the program. Trends and variations in overall service distribution are used in evaluating cost-effectiveness and to identify areas for improvement. In struggling to create

**Figure 1**  
**MHSPY Comparison of Hospitalization and Out of Home Placement**  
**Prior to and During Enrollment**  
**July 2003 – December 2004**  
**N = 48**



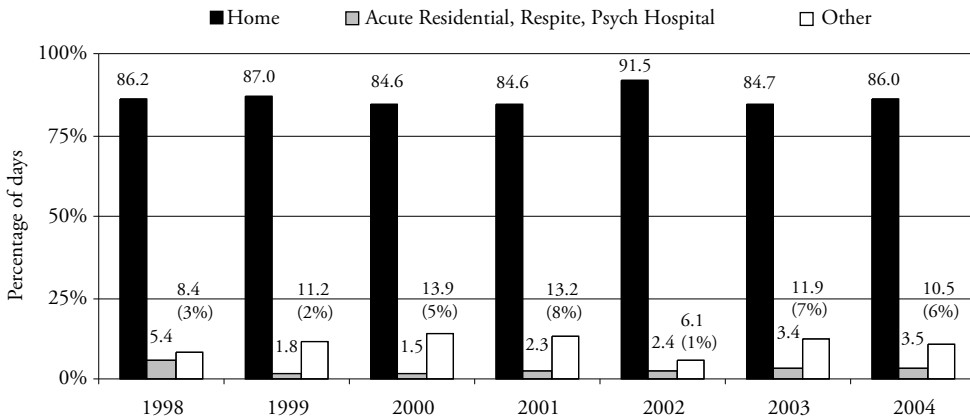
*Notes.*

\* Denotes services inside the MHSPY benefit.

\*\* Foster Care includes both regular and therapeutic foster care.

\*\*\* Other placement types: Black includes assessment, crisis stabilization, detention/DYS facility, group home, shelter. Grey includes group home. White includes assessment and group home.

**Figure 2**  
**MHSPY Level of Restrictiveness**  
**for March 1998 – December 2004**  
**(N = 175)**



*Notes.*

“Other” includes foster care, residential, group home, detention/juvenile justice facility, assessment, secure treatment, and boot camp. All of these are paid outside of the MHSPY benefit. Percentage of children within “Other” who are in foster care is identified in parentheses ( ). Foster care is the least restrictive setting outside of home (and the least expensive).

broadly relevant reports, the concept of “days out of home” has proven to be a generally accessible measure that stakeholders with different mandates (education, mental health, physical health, legal and social services) can all understand. Clinicians and policy makers find data on hospitalizations and other placements prior to and during enrollment to be informative in tracking clinical results.

These uses of restrictiveness data all work within the MHSPY program. But, there are challenges in comparing findings across systems of care at this stage of definition, given the lack of a standard measure for level of restrictiveness. Most programs would not label a hospital day a “placement,” yet it is an intensive, restrictive out of home setting from the child and family perspective. Another question about how to define “least restrictive” is demonstrated by the categorization of foster care placements. Foster care placements are home and community-based non-institutional settings, very much less restrictive than a hospital, and arguably should be counted as “days at home” on restrictiveness only. However, foster care represents an out-of-home placement paid for by the child welfare agency; even if the foster home is intended to be a long-term setting for the child. Placement definitions and categorical groupings have implications for cost analyses as well as for clinical program evaluation. More consistent methodologies for performance measurement regarding least restrictive settings would facilitate cost comparisons and clinical quality improvement efforts across both systems of care and usual care.

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# ***The Financial Impact of Decreased Residential Treatment Utilization in a Newly Managed System of Care***

James M. Papp

## **Introduction**

In November 2002, Hamilton Choices, LLC (Choices) began the management of an integrated system of care (SOC) in Hamilton County, Ohio. Using a wraparound (Burns & Goldman, 1999) approach and a case rate reimbursement system, the Mosaic Project (Mosaic) is a replication of the Dawn Project (Pires, 2002) with both projects built on the same system of care framework as Wraparound Milwaukee (Kamradt, Gilbertson, & Lynn, 2005). Mosaic serves at-risk youth and families in the greater Cincinnati, Ohio area by providing intensive care coordination through the use of child and family teams (CFTs). These teams “develop individualized treatment plans and ensure that needed services are obtained, organized, and directed toward common goals.” (Wright, Kooreman, & Anderson, 2005, p. 61). A capitated funding system is in place and a managed care model is used.

In a recent study, Foster & Conner (2005) reported on the merits of SOC and cited cost reductions in juvenile justice and child welfare expenses for youth served. Although these reductions in other child serving systems failed to completely offset the increased cost of mental health services in the SOC site studied, further analyses revealed other positive outcomes for youth in the SOC compared to the matched site (Foster & Conner, 2005). The SOC initiative managed by Choices includes a business model with managed care concepts such as capitated funding and financial risk. These practices, once absent from the industry, have found their way into child serving systems over the years bringing with them a broad array of challenges (Broskowski, 1997, 1998). Although questions have been raised as to the impact these financial decisions have on quality of care and outcomes (Wholey & Burns, 2000), Wright, Kooreman, & Anderson’s (2005) study of the Dawn Project “suggest(s) that a managed care approach can be used effectively without compromising clinical care” (p. 72). This paper uses descriptive statistics to explore both sides of this debate by examining the cost implications associated with the achievement of a clinically efficacious outcome (decreased utilization of residential treatment or RT).

## **Background**

As part of a three-year contract, Choices has agreed to assume all costs associated with providing care for a maximum of 256 case rate and 16 fee for service (FFS) youth at any one time. Care Coordinators manage caseloads of eight to ten youth and facilitate monthly CFT meetings.

In accordance with contract requirements, Choices tracks a variety of effectiveness, efficiency, and satisfaction outcomes for the Mosaic Project. Reporting includes measures of clinical functioning as measured by The Child and Adolescent Functioning Assessment Scales (Hodges, 2000) and the Ohio Youth Problem, Functioning, and Satisfaction Scales (Ogles, Melendez, Davis, & Lunnen, 2001) along with service utilization and expenditure data (Papp, 2003, 2004). Of particular interest to funders is the utilization of highly restrictive levels of care and with that the cost associated with this resource-intensive service. A review of the literature has revealed positive results in these areas of stakeholder interest. In their study of the Dawn Project, Kooreman, Wright, & Anderson (2005) reported longitudinal reductions in the use of residential treatment and hospitalizations. Similar results have been found in other system of care initiatives with Kamradt et. al., (2005) reporting reductions in residential treatment utilization and average monthly cost over time. Because Mosaic works primarily with youth at risk for out of home placement or with youth already placed out- of-home, many times in highly restrictive settings, the project is expected to evidence similar decreases in this utilization over time (Figure 1). It is also known that RT utilization is the primary cost driver for the project. Given this fact, along with the downward trend seen in Figure 1, the question was raised as to the financial impact of this decreased utilization.

## Definitions

**Enrollment Days (E Days).** The E Day metric is used to determine monthly project reimbursement. Each day that a case rate enrollee is in open case status during a calendar month is equal to one E Day. Monthly E Days for all enrollees are multiplied by a predetermined dollar amount (case rate) to generate monthly operating funds.

**Case Rate Youth.** Choices is financially at risk for all costs related to the care of case rate youth and is reimbursed for each day of case rate enrollment.

**Fee For Service (FFS) Youth.** Youth in this reimbursement category must meet specific clinical and service expenditure criteria. The FFS category emerged as the result of an actuarial analysis contracted by the funding group. In this analysis it was discovered that three demographic attributes (age, placement at enrollment, and placement out of county) were highly predictive of future service utilization and cost. Using this information, it was hypothesized that the proposed case rate amount would be unable to support the youth who met these criteria and that it would be unwise to include them along with the case rate enrollees as part of one large risk pool. As a result, Choices is not financially at risk for this group and is reimbursed at 100% for all monthly service expenditures.

## Methods

**Service Expenditure Data.** Analyses use service expenditures paid by the project for any youth with case activity during the period November 1, 2002 – August 31, 2004. Date of service is used to equate costs to a particular project month. Services paid by Medicaid are not included in the analyses.

Data on the type, amount, and cost of utilized services for persons in the project is obtained from Choices' management information system. The Clinical Manager (Clinical Data Solutions, LLC, 1998) is used to record all service related activity ranging from electronic progress notes and treatment plans to types of services authorized, the number of units authorized, and their cost.

**Percent E Days in Residential Treatment.** Using paid service expenditure data, the numerator is the number of paid residential treatment days in a project month and the denominator is the total number of E Days for all persons served that same month. As the denominator varies monthly based on the number of youth served and their total days, the following is given to provide greater context to the data points in figure 1. E Days: Mean = 7,550; Min. = 6,567; Max. = 7,987; *SD* = 377.62 and unduplicated youth: Mean = 256.64; Min. = 231; Max. = 275; *SD* = 12.22. Figure 1 displays the percentage of monthly E Days that were spent in a residential treatment level of care. A decrease in this percentage over time should be viewed as favorable.

**Cost Per Enrollment Day – All Youth.** Service expenditures for the period under analysis were assigned to the corresponding project month. The numerator is the total monthly project service expenditures and the denominator is the total number of monthly E Days. The same set of E Days summarized previously were also used in this calculation.

**Cost Per Enrollment Day – Case Rate Youth.** The method is the same used for all youth; however, only case rate expenditures and E Days are included in the analysis. As the denominator varies monthly based on the number of case rate youth served and their total days, the following is given to provide greater context to the data points in Figure 3. E Days: Mean = 6,969; Min. = 6,143; Max. = 7,553; *SD* = 479.22. As Choices is financially at risk for this group, the management of case rate youth has tremendous implications for project operations.

**Cost Per Enrollment Day – Fee For Service Youth.** The method is the same used for the other two groups; however, only FFS expenditures and E Days are included in the analysis. As the denominator varies monthly based on the number of FFS youth served and their total days, the following is given to provide greater context to the data points in Figure 4. E Days: Mean = 452; Min = 420; Max = 478; *SD* = 22.61.

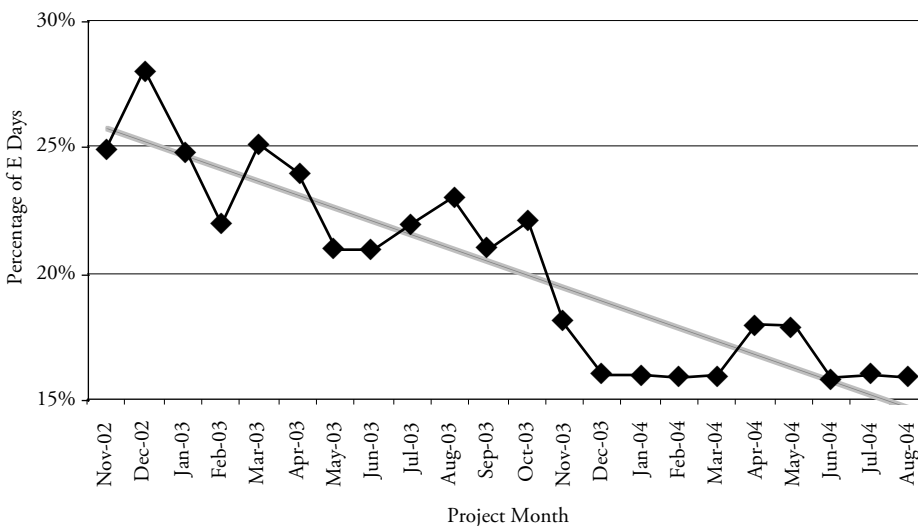
Although the agency is not financially at risk for this group, the question was raised as to whether or not the project could impact cost with a group whose historic utilization pattern has been cost intensive and relatively static in nature.

## Results

### Analysis of Decreased Residential Treatment Utilization

As shown in Figure 1, Mosaic has demonstrated the ability to decrease its utilization of the system's most restrictive and highest service expenditure category. As utilization of the service decreased over time, the percent of monthly days decreased and with that cost followed. As the percent of E Days has decreased over time, a positive effect has been seen in both the clinical status for enrolled youth as well as the overall financial picture for the project (Papp, 2004).

**Figure 1**  
Percent E Days in Residential Treatment – All Youth



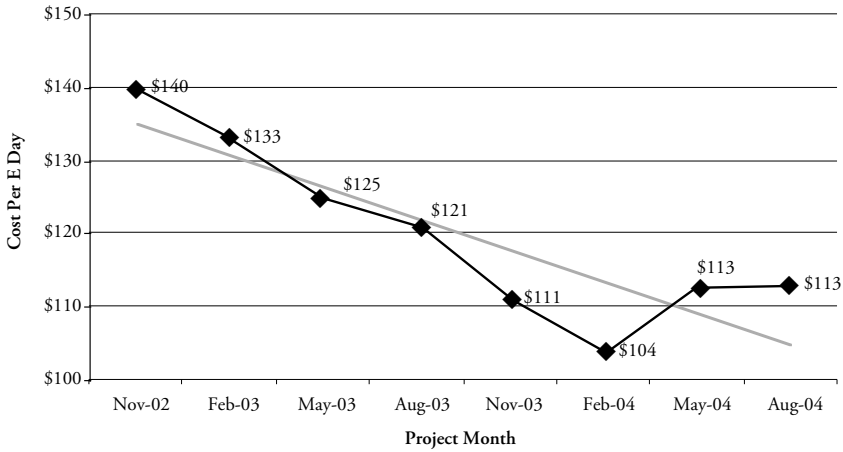
### Analysis of Cost per E Day by Billing Category

**All Youth.** As seen in Figure 2, over the twenty-two month span, the project has shown the ability to decrease cost per E Day for all youth served during that period. Due to the unavailability of expenditure data for a comparison group that did not get the Choices treatment variable, it is difficult to make claims of direct cost savings. However, when actual cost for the period (\$7.1 million) is compared to projected cost (\$8.3 million), calculated by multiplying monthly E Days by the \$140 constant, a substantial difference of \$1.2 million is found.

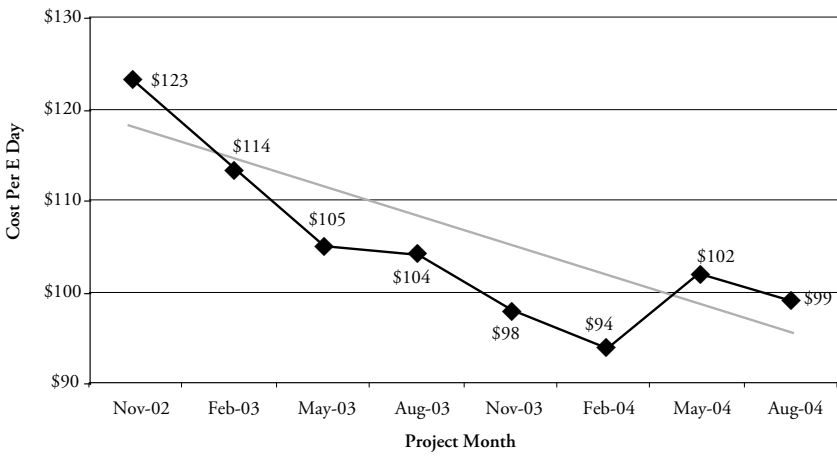
**Case Rate Youth.** Figure 3 shows the same positive downward trend over time with a decrease of \$24.00 per E Day between the first month of operations and the comparison month (August 2004).

**Fee for Services Youth (FFS).** Figure 4 displays the most dramatic decrease over time at \$87.00 per E Day. Unlike Figures 2 & 3 in which a consistent downward trend was seen as early as the first quarter, several months elapsed before a significant impact was seen with this group. As the project neared its one year anniversary, cost per E Day for this group began to decline dramatically. It is believed that a number of factors contributed to this, namely the maturation and refinement of the wraparound service delivery model as well as the growth of the local system of care and with that a broader array of service options and lower cost or no cost supports available to persons served.

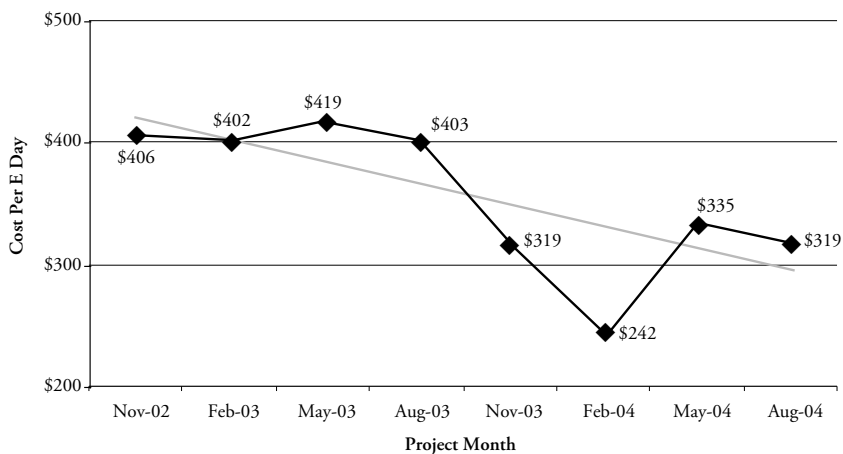
**Figure 2**  
**Cost per Enrollment Day – All Youth**



**Figure 3**  
**Cost per Enrollment Day Case Rate Clients – Case Rate Youth**



**Figure 4**  
**Cost per Enrollment Day – FFS Youth**



## Discussion

Findings from this paper suggest that the Mosaic Project administered and managed by Hamilton Choices, LLC, has been able to demonstrate positive downward trends in its utilization of highly restrictive residential services. As residential services are Mosaic's highest cost category, it is believed that this decrease has been the primary causal factor in the reduction of monthly service expenditures and cost within the case rate and FFS billing categories.

The dramatic decrease seen with the FFS population is worthy of particular mention. Many factors are at work here including increased youth and family capacity, adjustments to service packages, and transitions from years of residential treatment living to placements within the county and, in the best cases, home. As a result of these clinical and financial positive outcomes, Mosaic has remained significantly under budget for the FFS group. This, in combination with other positive clinical and financial outcomes, has helped secure a contract extension through October of 2007.

## Conclusion

The analyses in this paper grew from the need to better understand how specific service utilization financially impacted the project. From earlier evaluative efforts focused mainly on clinical effectiveness, the project has demonstrated substantial progress in this area (Papp, 2003, 2004). The analyses for this paper, though simple in design, use the metric for project reimbursement (E Days) to better understand cost at a macro level. By drilling deeper into these data sets a number of possibilities emerge for practice application. These include the identification of particular cases that may benefit from additional supervision or other types of management intervention as well as a clearer understanding of specific attributes that predict future utilization and cost. With this added information and application perhaps the ongoing challenge of balancing both the clinical and financial aspects of the work will be a task borne with a lesser burden.

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## **Chapter Ten**

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### **Measurements and Instrumentation**





# **A ‘Special Feature’ for America’s Children— Key National Indicators of Well-Being, 2005: Parental Reports of Emotional and Behavioral Difficulties**

Gloria Simpson

## **Introduction**

In 1994, the leaders of seven federal agencies or offices<sup>1</sup> met for the purpose of improving the data collection, reporting and dissemination of information about U. S. children and families. This group, the Federal Interagency Forum on Child and Family Statistics, was formalized by Executive Order of the President in 1997. One of the Forum’s first initiatives was to publish a volume of key indicators of child well-being. The first issue of *America’s Children: Key National Indicators of Well-Being* was released in July 1997 with 25 indicators.

This report, which calls attention to the well-being of children and families, receives widespread media attention. In 2004, it was estimated that media coverage (including print, radio, television, and the Internet) for *America’s Children* reached 37 million people in the U. S. International coverage was known to include Canada, South Africa, and Great Britain.

Since the first report, an indicator measuring children’s mental health has been among the measures identified in the “Data needs” section of *America’s Children*. In 1999, the Forum’s Reporting Committee created a work group to explore closing this data gap. This work group includes staff from the National Institute of Mental Health (NIMH), the Substance Abuse and Mental Health Services Administration (SAMHSA), the National Center on Birth Defects and Developmental Disabilities, CDC, and the National Center for Health Statistics (NCHS, CDC).

Criteria for indicators in *America’s Children* include that they:

- be easy to understand by the general public;
- be based on substantial research relating to child well-being;
- be representative of large segments of the national population;
- use data from a federal survey; and
- be measured regularly, (if not annually, at least every two or three years).

The following summary presents the process and rationale behind selection of a children’s mental health indicator, preliminary findings from its administration, and predictive ability related to service use and diagnoses of mental health issues in children.

## **Methods**

Finding a mental health indicator that would meet these criteria presented a real challenge. Complicated measures and scales may not be understood by the general public and could be misinterpreted by the media. There are few federal surveys that include questions on children’s mental health, and most of these were not done with a large enough sample or on a regular basis. The Mental Health Work Group examined data from several different federal surveys and consulted with an outside expert panel in order to find an appropriate and acceptable indicator. Because no one available mental health scale or measure met the report criteria, the Mental Health Work Group and the outside consultant panel agreed on a simple direct indicator derived from a question used in the Strengths and Difficulties Questionnaire (SDQ) developed by Robert Goodman in London, England (Goodman, 1997).

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<sup>1</sup> The founding agencies/offices of the Forum were the Bureau of the Census, the Bureau of Labor Statistics, the National Center for Education Statistics, the National Center for Health Statistics, the National Institute for Child Health and Human Development, the Office of Management of Budget, and the Office of the Assistant Secretary for Planning and Evaluation, DHHS. The forum has now grown to represent 20 federal agencies. These agencies are listed on the forum’s Web site at: [www.childstats.gov](http://www.childstats.gov).

The items from the SDQ were first introduced to the annual National Health Interview Survey (NHIS) in 2001 (NCHS, 2002). The SDQ questions were also included in the NHIS in 2003 and 2004 (NCHS, 2004). A shortened set of six SDQ questions were included in the NHIS in 2002 (NCHS (2003). In the NHIS, the SDQ is asked of parents (or someone in the household who knows the most about the children's health) of a sample child in the household, including approximately 9,000 to 10,000 children ages 4 to 17. The SDQ includes an overall question before the questions on impairment: "Overall, do you think that your child has difficulties in one or more of the following areas: emotions, concentration, behavior or being able to get along with other people?" Response choices are: *No*; *Yes, minor difficulties*; *Yes, definite difficulties*; or *Yes, severe difficulties*. Responses of **definite** or **severe** difficulty are considered an indicator of emotional and behavioral difficulties.

The rationale for this approach was largely based on the fact that responses of a *definite* or *severe* difficulty to this question had been a reasonable predictor of DSM-IV diagnostic status among 10,201 children in a British sample (Goodman, Ford, Richards, Gatward, & Melzer, 2000). In addition, a three-year follow-up of the British sample revealed responses of *definite* or *severe* to this question to be predictive of future mental health service use among children (Goodman, 2004). In the NHIS, this indicator was significantly related to parent reports of children having mental retardation, ADHD, a learning disorder, and autism. Responses of *definite* or *severe* to this question were also significantly related to contact with mental health services in the NHIS. In the 2003 NHIS, over 60% of these children used some type of mental health service (Bourdon, Goodman, Rae, Simpson & Koretz, 2005; Federal Interagency Forum on Child and Family Statistics, 2005).

## Results

Data from the 2003 administration of the NHIS indicate that 5% of U. S. children ages 4 to 17 had definite or severe difficulties in emotions, concentration, behavior, or being able to get along with other people. The percentage of children with definite or severe difficulties varied by sex, age, family structure and poverty level. Six percent of boys had definite or severe difficulties compared to 3% of girls. Younger children were less likely to have definite or severe difficulties compared to older children. These percentages ranged from 3.3% for children 4-7 years to 6.1% for children 15-17 years. Children living with two parents were less likely to have definite or severe difficulties (4%) compared to children living with a single mother (7%). Poor children were more likely to have definite or severe difficulties compared to other children (8% versus 5-6%).

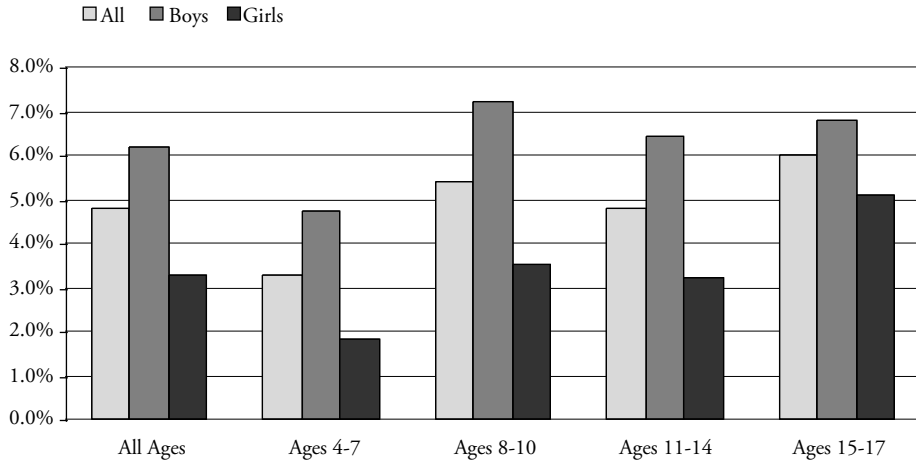
## Conclusion

The draft chart proposed to report 2003 data for *America's Children, 2005* is provided below. The final 2005 *America's Children* report has an anticipated release date of July 2005. Validity work on this question and other questions in the SDQ is on-going. Further information on *America's Children* may be found at: [www.childstats.gov](http://www.childstats.gov). Information on the SDQ may be found at: [www.sdqinfo.com](http://www.sdqinfo.com).

When the *America's Children* report is released each July, it receives a great deal of national media attention. It is hoped that including a mental health measure in *America's Children* will call attention to mental health as a critical aspect of children's overall well-being.

A final note. The NHIS data files which include data on the SDQ, provide a wealth of information that can be used for analysis of mental health and mental health services in relation to other health conditions, insurance, socio-demographic and other variables. Furthermore, data from additional questions on children's use of mental health services will be available sometime in 2006. These data may be accessed on the NHCS website: [www.cdc.gov/nchs/](http://www.cdc.gov/nchs/) and used by researchers to further our knowledge in this area.

**Figure 1**  
**Percentage of Children Ages 4 to 17 Reported by a Parent**  
**to have Definite or Severe Emotional or Behavioral Difficulties, by Age and Sex, 2003**



*Notes.* Children with definite or severe emotional or behavioral difficulties are defined as those whose parent responded “yes, definite” or “yes, severe” to the following question on the Strengths and Difficulties Questionnaire (SDQ): “Overall, do you think that (child) has any difficulties in one or more of the following areas: emotions, concentration, behavior, or being able to get along with other people?” Response choices were: (1) No; (2) Yes, minor difficulties; (3) Yes, definite difficulties; (4) Yes, severe difficulties.

Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey

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# **Level of Care Determination in Child Welfare: Evidence from the Child Program Outcome Review Team (CPORT) Review**

**Andres J. Pumariega  
Pat Wade  
Udema Millsaps  
Michele Moser  
Terrence Clark**

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## **Introduction**

Level of care determination is an important process in treatment and service. This process has always been fraught with unreliability across clinicians, given the multiple factors involved in arriving at this determination (Lyons and Abraham, 2001). In previous decades, prevailing orientations led clinicians to treat children and adolescents in facilities away from the child's home, making level of care determination a simpler task. Such practices have changed with the advent of evidence-based psychosocial and pharmacological treatment modalities, the community-based systems of care model (supporting intensive treatment services within the child's home and community), and resource and financial pressures increasingly placed on care delivery systems (Pumariega, et al., 1997; Pumariega & Winters, 2003). The child welfare system faces similar changes and challenges as those faced by the mental health system around service delivery, planning, and funding. Although many children are shared across child serving agencies, the translation of approaches from the mental health sector to the child welfare sector is not certain. There are added challenges for children in state custody whose families are either not available or functional, and overall greater levels of stressors faced by both child and family. Tools and approaches used within child mental health require formal evaluation with the population of children served by child welfare to ensure their applicability and need for adaptation.

As a response to this evolution in practice, and to develop an open and objective level of care decision support tool, the American Academy of Child and Adolescent Psychiatry (AACAP) Work Group on Community-based Systems of Care, with the assistance of the American Association of Community Psychiatrists (AACP) developed the Child and Adolescent Service Intensity Instrument (CASII; American Academy of Child & Adolescent Psychiatry, 2004). The CASII is based on key dimensions in the determination of level of care (risk of harm, level of function, stability of the child's environment, presence of co-morbidity, resiliency and recovery potential, and engagement by the child and family in the care process) that are relevant to services delivered by child welfare. The levels of care defined by CASII were constructed from an inter-agency, community-based systems of care perspective, and outline levels of intensity of care/treatment that can be translated to child welfare levels of care. This summary outlines results from evaluation of the CASII as a level of care decision support tool for children served in child welfare.

## **Methods**

### **Participants**

The annual Tennessee Child Program Outcome Review Team (CPORT) Review provided the opportunity to evaluate the reliability, validity, and applicability of a level of care tool to a population of children served in child welfare. We report on data collected in the 2003 CPORT Review, which include 437 children in custody ages 6 to 19 years of age, from dependent/neglected populations. They constitute a stratified probability sample 95% representative of the over 11,000 children in custody in the state. These children were in levels of care ranging from residential treatment, therapeutic and regular foster care, to family placements.

### **Instruments/Ratings**

The 49 raters of the CPORT Review (bachelors and masters level social workers) were trained on the CASII in six hour workshops by trainers trained by one of the original developers of the instrument. They also underwent similar training for the CAFAS and the rest of the CPORT evaluation protocol and were evaluated for inter-rater reliability, reaching the 90% to 95% level of reliability for overall level

of care recommendations in training vignettes with trained and experienced reviewers/supervisors. The children and youth were rated using the CASII, the Child and Adolescent Functional Assessment Scale (CAFAS, Hodges & Wong, 1996), the Child Behavior Checklist/Youth Self Report/Teacher Report Form (CBCL/ YSR/ TRF; Achenbach, 1991), and child and family and systems indicators defined by the CPORT review.

We examined the inter-rater reliability of these raters in the overall CASII total score and level of care as well as its dimensions. We analyzed CASII total scores and level of care recommendations for these children across age, gender, racial (primarily Black-White), and mean CASII total scores diagnostic status (whether or not the child has a psychiatric diagnosis). Additionally, we compared the CASII dimensional ratings and total score to the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges & Wong, 1996) composite scores, and the CASII total scores and levels of care to CBCL, YSR, and TRF sub-scales, internalizing and total T scores. We also analyzed the correlations between CASII total scores and level of care scores to both actual level of care placement as well as to child welfare outcomes (child and family outcomes and system outcomes) defined by the CPORT Review.

## **Results**

The overall inter-rater reliability (ICC 2,1) of raters were CASII total scores (0.916) and level of care recommendations (0.918), with dimension scores ranging from 0.885 to 0.619, except for the Environmental Stress dimension (0.034). There were no significant differences across level of education (bachelors versus masters) or level of experience (less than the 16 years' median versus 16 or more years). CASII levels of care were not significantly correlated to gender, race, or diagnosis, but were correlated to age  $\chi^2(df= 12, N = 437) = 58.5, p < .001$ , suggestive of higher levels of care in older children.

The Pearson correlation coefficients between CAFAS composite scores and CASII dimensions ranged from 0.708 to 0.381, with a correlation to CASII total score of 0.710 (all  $p < 0.001$ ). The Pearson correlations to CBCL sub-scales ranged from 0.456 to 0.225, with those to CBCL Total T (0.454), Internalizing T (0.385) and externalizing T (0.445) being similarly significant (all  $p < 0.001$ ). The correlations to the YSR and TRF sub-scales, total T scores, and Internalizing and Externalizing T scores were similarly significant, all being significant and ranging from 0.432 to 0.180, except for the YSR Somatic and TRF Somatic and Withdrawn sub-scales (which were non-significant). CASII total scores and recommended levels of care are correlated to actual level of care placement for the children surveyed ( $p = 0.011$ ). They are also highly correlated to CPORT child and family outcome indicators (most at the  $p < .001$  level and no less than 0.018) and to many of the system outcome indicators, though strongly correlated to the summary indicator (Overall Adequacy of Services,  $p < .001$ ).

## **Conclusions**

The CASII has demonstrated its capability of functioning within an inter-agency context with equal reliability and validity as in child mental health contexts. It also promises to be a measure that promotes better child welfare outcomes in this era of resource constraints. CASII has potential utility in placement decisions on child welfare as well as in utilization review and as systems of care planning for children in child welfare.

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# **The Use of Qualitative Methods in Systems of Care Research**

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## **Introduction**

Qualitative research methods are valued in the development of knowledge through the exploration of experience and context, in understanding multiple perspectives on an issue or topic, and in understanding the complexity in which phenomena exist. In children's mental health, a field that is largely informed by the results of quantitative research, there has been no analysis of the contribution of qualitative research has made to the knowledge base or the range and depth of qualitative research in this field. This paper presents a review of the proceedings of the annual research conference, *A System of Care for Children's Mental Health: Expanding the Research Base* (RTC Conference), for the purpose of summarizing the qualitative content presented at this conference since its inception in 1988. This review was undertaken as an initial and rudimentary effort to understand the impact of qualitative methods on the field of children's mental health. The goal of the review was to assess both the focus and frequency of qualitative research presented at the RTC conferences from 1988 through 2003. It is hoped that this work will set the stage for developing a more in-depth understanding of how qualitative methods have contributed to this research base and provide a platform for developing recommendations regarding future qualitative research to advance our knowledge of systems of care.

## **Method**

The proceedings of the annual research conference are presented in an edited volume published annually by the Research and Training Center for Children's Mental Health at the University of South Florida. Each year this national conference is host to researchers, policy makers, service professionals, educators, and family members who gather to share their research findings, insights, and experiences in an effort to improve mental health services and outcomes for children and their families. Immediately following the conference, submissions to the proceedings are solicited from all presenters, with the goal of providing brief snapshots of the discussions, papers, and posters presented at this conference. The proceedings are designed to identify those contributing to current work in the field and to promote future research on aspects of design, implementation, and evaluation of systems of care for children and families.

The data presented in this review resulted from an analysis of the presentation summaries included in the 16 volumes of Proceedings from conferences held from 1988 – 2003<sup>1</sup>. It should be noted that RTC conference presenters are not required to prepare and submit summaries to the published proceedings, and therefore the contents do not capture all of the research presented at the conference. Consequently, results of this analysis are based only on presentation summaries formally submitted for publication to the Proceeding editors.

The first step in conducting this review was to establish a shared definition for qualitative research among members of the research team so that initial criteria identification of the published findings as qualitative research could be established. These criteria were applied to three years of proceedings and then refined as summaries were reviewed and the research team discussed studies on a case-by-case basis. The revised criteria that were applied across all 16 years of the published proceedings were as follows:

- Analysis of narrative data that generated themes and patterns was considered qualitative.
- Studies identified as qualitative by the authors were included, unless reported results were based solely on quantitative analysis.

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<sup>1</sup> Electronic versions of the Proceedings from 1996 to the present are available at [http://rtckids.fmbi.usf.edu/conference\\_proceedings.htm](http://rtckids.fmbi.usf.edu/conference_proceedings.htm). Information regarding previous volumes is available from the editors, Research and Training Center for Children's Mental Health, [liberton@fmbi.usf.edu](mailto:liberton@fmbi.usf.edu), 813-974-4661.

- Interviews were generally considered qualitative, unless results were reported according to a rating system or checklists and there was no evidence of narrative analysis.
- Focus groups of any kind were considered qualitative.
- Documents were considered qualitative if they were treated as narrative data sources and analyzed thematically.
- Literature review was considered qualitative if information pulled was highly thematic.
- Concept mapping was considered qualitative when data analysis focused on the themes identified in the generated statements.
- Backward mapping approaches to policy analysis were considered qualitative if they considered patterns and themes in the data.
- Summaries reporting evaluation results that met the criteria described above were considered qualitative.
- If research was described by authors as using mixed method approaches, this analysis focused on the qualitative aspects, but noted the mixed method approach.
- Coded case record review was considered qualitative when there was thematic emphasis in the review.

Based on the review, a data matrix was developed to record information about presentations that were determined to fit the criteria of qualitative research described above. This matrix included information in the following domains: presentation title, topic, researchers, funders, research design, sampling, data collection, data analysis and results. Information was entered into the data matrix in the form of direct quotes from the RTC conference proceedings. The data listed in each domain were reviewed across studies and across years. Graphs and tables were created to represent and communicate the patterns and themes that emerged in the data, in order to draw conclusions and clarify recommendations.

## Results

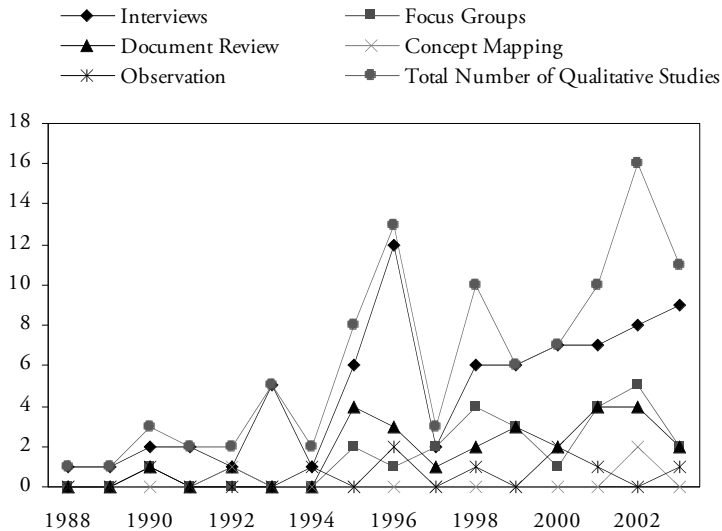
A total of 100 studies were identified as qualitative in this review of conference proceedings. The number of qualitative studies presented at the conference and included in the proceedings has generally been on the increase (1988,  $N = 1$ ; 2003,  $N = 11$ ). Federal agencies ( $N = 15$ ) and private foundations ( $N = 8$ ) were the most commonly identified funding sources for qualitative research; however, the majority of qualitative studies ( $N = 72$ ) did not identify a funding source. The most common topics of study were (a) stakeholder perspectives ( $N = 18$ ); (b) program description or evaluation ( $N = 17$ ); (c) system-of-care description or evaluation ( $N = 15$ ); (d) understanding mental health services funding ( $N = 8$ ), and (e) understanding process of collaboration ( $N = 6$ ). Although many studies ( $N = 28$ ) addressed multiple service delivery subsystems, many more studies ( $N = 47$ ) specifically addressed the mental health subsystem. Table 1 provides descriptions of the most common qualitative study topics.

With regard to research design, data collection, and analysis, most studies ( $N = 85$ ) did not specify research design independently of describing methods used. Half of the studies ( $N = 50$ ) gathered and compared data from multiple informants. Interviews were the most commonly identified method of data collection ( $N = 76$ ), and semi-structured interviews were most commonly reported ( $N = 23$ ) in studies that specified the type of interview conducted ( $N = 42$ ). Document reviews ( $N = 12$ ) and record reviews ( $N = 11$ ) were more often reported than literature reviews ( $N = 5$ ). Observation was rarely reported as a method of data collection ( $N = 9$ ). Most studies ( $N = 71$ ) did not specify the method used to analyze data.

**Table 1**  
**Author-Provided Descriptions of Most Common Qualitative Study Topics**

| <i>Topic of Study</i>                                  | <i>Descriptions</i>  |
|--|--|
| Understanding Stakeholder Perspectives                 | <p>“To provide information about the evaluation interests and technical assistance needs of three key stakeholders”</p> <p>“To learn more about what caregivers included in a very broad definition of ‘culture’”</p> <p>“[The study] examines the impact of inclusion on special educators working with nine children with Emotional Behavioral Disturbances”</p> <p>“[A] critical issues analysis of the permanency and support needs of children at risk of parental loss due to HIV/AIDS”</p>  |
| Service Delivery Description & Evaluation              | <p>“Discovering the basic social processes and values underlying the agency’s service philosophy”</p> <p>“An assessment...to address the following goals: (a) identify key elements of the program, (b) describe relationships between program elements, (c) identify interpretable dimensions of the program, (d) determine the perceived importance and effectiveness of services and (e) identify categories of services”</p> <p>“To gain knowledge about the factors related to positive treatment outcome, barriers to accessing services, and methods for improving service delivery for adolescents receiving school-based mental health services”</p> <p>“Evaluation of the On-Campus Intervention Program”</p> <p>“To evaluate a behavior management system created to improve interpersonal functioning and classroom achievement”</p>                 |
| System of Care Description & Evaluation                | <p>“This detailed case study represents one portion of an evaluation of the Vermont Community Integration Demonstration Project”</p> <p>“The impact of CASSP and changes in California’s service delivery system over the last four years”</p> <p>“summarizes preliminary findings and their relationship to evaluative challenges encountered while measuring child and family outcomes when ___ multiple innovative services at the local level, within a dynamic and complex state administered system”</p> <p>“To determine the relationships among policy development, policy implementation, and the development of collaboration in systems of care”</p> <p>“To elucidate the local theory of change behind implementation and dissemination of the High Point Initiative’s application of a system-of-care approach to the area of juvenile justice”</p> |
| Understanding Mental Health Services Funding Processes | <p>“To report...the effectiveness of the pilot program and the challenges encountered during the transition from a traditional program to a managed care mental health treatment program for youth”</p> <p>“To understand the impact of the new regulations on families and children whose serious emotional disability had previously qualified them to receive SSI disability benefits, and for whom the continuation of this benefit is now in jeopardy or has already been lost”</p> <p>“To identify the various funding sources used by programs which serve and support youth and young adults”</p>  |
| Understanding Collaborative Processes                  | <p>“A qualitative evaluation of a locally-based effort to increase levels of interaction between schools and parents from East Tampa, Florida”</p> <p>“To better understand the factors that affect the provision of effective service coordination”</p> <p>“[To study] (a) the nature and extent of interagency involvement in systems of care; (b) what approaches are used to enlist interagency involvement in system of care governance, program operations, and direct services; (c) what challenges impede interagency involvement; and (d) the relationship between interagency involvement and referral patterns”</p> <p>“To identify the most effective strategies that promote collaborative relationships on evaluation teams”</p>   |

**Figure 1**  
**Method of Data Collection in Qualitative Studies (N = 100)**  
 (Method of data collection was explicitly identified in data extracted from Proceedings)



## Discussion

A system of care has been defined as a comprehensive spectrum of mental health and other necessary services which are organized into a coordinated network to meet the multiple and changing needs of children and adolescents with severe emotional disturbances (Stroul & Friedman, 1994). This review of RTC conference proceedings suggests a growing recognition of the value of qualitative research in studying systems of care, particularly for the purpose of studying the complex, dynamic and emergent properties of these systems. While the Proceedings do not capture all research presented at the annual conference, the contents do reflect themes in research and evaluation methodology over time. Based on this review of qualitative research presented at RTC Conferences since 1988, the following recommendations for researchers as well as funding and research institutions are offered below.

Many of the qualitative studies included in the RTC conference proceedings did not describe the specifics of research design, methodology, or data analysis. It is not possible, on the basis of this review, to determine whether this absence of specificity regarding the research process is a result of space constraints imposed by the conference proceeding format or if it reflects the need for more attention to methodological issues among researchers conducting qualitative studies. However, it is recommended that researchers make every effort to present qualitative findings in a manner that conveys the conceptual, methodological and analytical rigor with which they have approached their work, in terms of: (1) being explicit in describing the research design and how the design is expected to contribute to expanding the knowledge base regarding systems of care, (2) clearly distinguishing between the research design and the methods of data collection and analysis employed within that design, and (3) specifically describing efforts to address issues of reliability and validity.

Funding agencies and institutions that support research and evaluation activities are encouraged to continue using qualitative approaches in the study of systems of services and supports in children's mental health. Qualitative studies are especially recommended when the goal is to: (a) clarify local need and the perspectives of multiple stakeholders; (b) better understand systems-of-care efforts within context; (c) gain insight into complex systems-level phenomena (such as collaboration, cultural competence, access, financing and governance); or (d) track the impact of policy changes and system reform.

Because the findings of qualitative studies can be used to inform future qualitative research efforts and might also generate hypotheses that could be tested in future quantitative research, institutions that provide funding or conduct research and evaluation are encouraged to review existing qualitative studies for results and conclusions that elucidate real world phenomena linked to systems-of-care theory and practice. Furthermore, these institutions are encouraged to provide opportunities for training and consultation in order to build understanding of the potential contributions of qualitative research, to build understanding of the nature of qualitative evidence, and to build qualitative research skills. Finally, funding agencies and institutions that support research and evaluation activities are encouraged to provide formatting guidelines and structure for grant applications that support the proposal and conduct of qualitative research in ways that take full advantage of the investigative opportunities offered by these methods and fully support their rigorous design and implementation.

Institutions and organizations that support peer reviewed publications and conference submissions are encouraged to provide opportunities for the dissemination of qualitative research findings in ways that maximize the contributions of these methodological approaches to the knowledge base.

## **Conclusion**

There is a gap between what we know and what we need to know about systems of services and supports in child mental health. In order to bring about positive change in the structure and function of systems that serve children with serious emotional disturbance and their families, we must build a body of knowledge that integrates a rich and in-depth understanding of the how and why of services and supports with our more developed knowledge of the what, when, how many, and how much. It is hoped that this review of qualitative research presented at the RTC conferences from 1988 through 2003 will contribute to our understanding of the contributions of these methods and further suggest ways of closing the gap between what we know and what we hope to learn about serving children with serious emotional disturbance and their families.

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# Assessing Outcomes Over Time: Questioning Measurement Precision

Ann Doucette

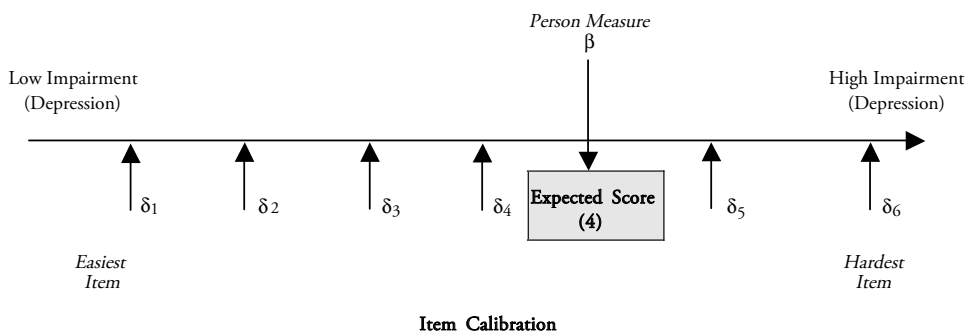
## Introduction

Our interest in the psychometric properties of measures is essentially an assertion that measurement is not error-free. We typically rely on reliability estimates as the degree to which measurement is free from error. The more reliable a measure is, the greater the confidence we have in the score obtained on that measure. However, as a group is exposed to treatment and intervention, the group is hypothesized to move toward improvement reflected by a change in scores. While reliability may remain consistent as the relative position of individuals in the groups remains stable as their scores move on the measure as a group, the measure may not adequately assess individuals who have experienced improvement. Most assessment measures used in behavioral healthcare are developed using Classical Test Theory (CTT; Lord & Novick, 1968). From a CTT perspective, it is important to note that the error associated with measurement is equally applicable to all respondents. Intuitively this assumption is not reasonable. Educational assessment provides a clear-cut illustration—more error would be anticipated for low ability students on a difficult test than would be expected for high achieving children on the same test, yet the error of measurement would be equal for both groups of students under the CTT model. In addition, reliability cannot be generalized beyond the sample on which it is estimated—reliability is *sample specific*. This limits the usefulness of measures when they are applied to populations beyond the samples on which they were developed, and may have consequences as samples change over time as a result of exposure to interventions. Many studies assume the reliability reported from normative samples, and fail to report the reliability of measures applied to study samples or consider that reliability may change as the sample is studied over time.

Item Response Theory (IRT) is an alternative to CTT. IRT is a model-based measurement, latent-trait theory approach that addresses many of the shortcomings of CTT (Embretson & Reise, 2000; Embretson, 1996). IRT provides item estimates that are not sample dependent (Wright & Douglas, 1977). For example, items on a depression scale would be identified in terms of levels of impairment and accordingly matched to persons having more or less of the attribute, in this case depression. Any person with severe depression would be expected to respond in a similar fashion. Figure 1 identifies the respondent's position on the impairment continuum: above the easier items indicate lower levels of impairment/milder-moderate depression, and below the two items indicating a higher level of impairment. A person with this impairment level would be expected to endorse the first four depression items, but would not likely endorse items five and six. For example, an adolescent diagnosed with mild to moderate depression would not be expected to endorse depression items indicating suicide and self-harmful behaviors; but a suicidal youth would be expected to endorse items indicating sadness and feeling blue. However, as the adolescent improves he/she would be expected to endorse fewer and fewer items at the difficult end of the continuum, which may result in an assessment that is unable to reflect continuing change because there are few or no items at the mildest end of the impairment continuum. Measures that tap narrow bands of impairment would be insensitive to other impairment levels (high or low depending on the measure) and the results of using such measures may be interpreted as ineffective interventions, as opposed to measurement artifacts.

This paper presents analyses that illustrate that measures may be sensitive only to specific segments of the construct that is being assessed. For example the Child Behavior Checklist (CBCL; Achenbach, 1991) *narrow-band scales* (e.g., anxious-depressed, delinquency, etc) assess moderate to high levels of impairment. As individuals improve, there are few if any items in the scale that allow respondents to demonstrate continued improvement.

**Figure 1**  
**Defining Psychological Constructs using IRT Model-Based Measurement**



**Method**

A secondary analysis of existing data was used to illustrate the precision of measures used in longitudinal studies. The Anxiety-Depressed narrow band scale on the Child Behavior Checklist (CBCL; Achenbach, 1991) was used in the following analyses. The CBCL specifies that the caregiver report on symptoms and behaviors of the youth in his/her care over the last six months. Baseline, six and 12 month caregiver responses to the CBCL Anxiety-Depressed scale were used in the IRT analyses. Data samples included families participating in the Nashville Connection ( $N = 103$ ; no missing CBCL data), a Substance Abuse and Mental Health Services Administration/Center for Mental Health Services-funded system of care initiative, and the Ft. Bragg Evaluation ( $N = 439$ ; no missing CBCL items; Bickman, et al., 1995).

The Rasch measurement model (Rasch, 1966) was used to conduct an examination of the depression/anxiety narrow band scale of the CBCL. Rasch is often referred to as a one-parameter IRT model. While some psychometricians (Goldstein, 1979) argue that the use of two and three-parameter models provide better precision, many contend that the Rasch model more adequately addresses the fundamental issues associated with measurement development (Bond & Fox, 2001; Overton, 1999). Essentially, the Rasch model questions how well empirical data (measure scores/response) fit in terms of the measurement model constraints. Two and three parameter models ask an opposite question: how can additional parameters be manipulated to increase model fit to the available data? The additional parameters are item discrimination (2-parameter) and guessing (3-parameter).

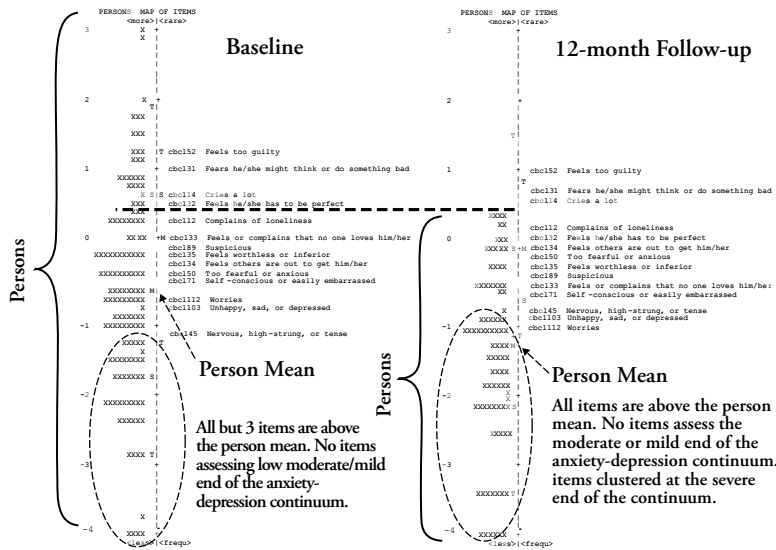
**Results**

Figure 2 below illustrates that many children have improved to the extent that there are no items on the CBCL Depression-Anxiety scale that are sensitive to assessing continuing change. Data were collected over a 36-month period in both the Nashville Connection and the Ft. Bragg Evaluation. The trend illustrated in Figure 2 continues, as the number of children with impairment at the level tapped by the CBCL Anxiety-Depressed decrease as a result of improvement. While these children may continue to have more moderate and mild problems, the CBCL is not sensitive to assess this level of difficulty.

The Rasch analysis provides an estimate called a separation index, the number of statistically distinct strata of “trait difficulty” (anxious-depressed) that can be represented in the sample using this measure. At baseline the separation index is 2.65, indicating that measure can reliably identify three statistically distinct groups of youth: those youth with mild, moderate and severe impairment. At six- and twelve-month follow-ups the separation index decreases to 1.90 and 1.85 respectively, indicating that there are two statistically distinct groups, those with some clinical concerns and those below the clinical thresholds.



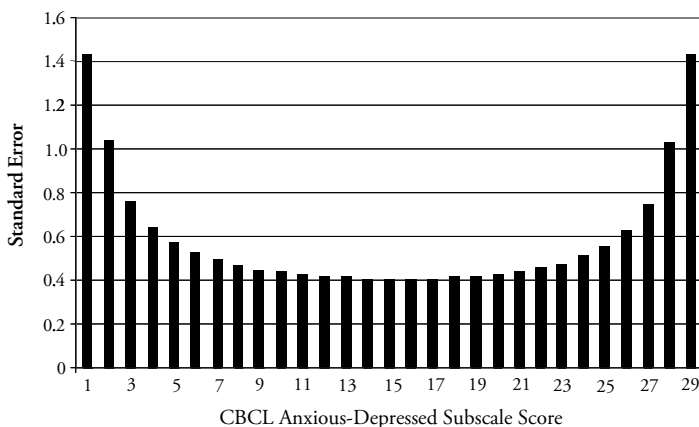
**Figure 2**  
Sensitivity of the CBCL Depression-Anxiety Scale



Forty-five percent of youth at baseline assessment had scores below the clinical cutoff indicating mild to moderate impairment; 76% of those youth with mild/low moderate scores maintained that status between baseline and follow-up (6 six and 12 months) assessments. The stable scores may be interpreted to mean these youth made no progress during the 12 month period, as opposed to reporting that the CBCL was no longer sensitive for youth at the milder ends of the impairment continuum.

The Rasch analyses indicate that items differentially contribute to scale scores, and that error contributes to items. Figure 1 illustrates that items such as feeling guilty, cries a lot, loneliness, and fears about having to be perfect tap a higher level of impairment than do items such as unhappiness and nervousness. Additionally, as Figure 3 depicts, error is associated with the extreme (high/low) CBCL Anxiety-Depressed scores. It is important to remember that errors of measurement are assumed to be uncorrelated.

**Figure 3**  
Standard Error: CBCL Anxious-Depressed Subscale Scores



## Discussion

We typically assume that measures sensitive to the initial, more severe levels of impairment continue to be sensitive to later moderate and/or mild impairment levels. Often we fail to consider whether there are sufficient items at the milder end of the continuum to provide an opportunity to demonstrate improvement for youth with low baseline scores, or youth making rapid improvement. As children improve the measures we depend upon to reflect the continued effectiveness of interventions may not be sensitive beyond specific points on the impairment continuum of constructs that are of interest in children's behavioral healthcare. The lack of measurement sensitivity may compromise the meaningfulness and the actionability of the information that is yielded by these measures. For example, a child having stable scores may be misinterpreted as not making progress, when it is an artifact of the measures and not a reflection of the intervention or treatment. While the analyses presented in this brief summary focus on anxiety and depression, the same trends were evident for externalizing behaviors (delinquency, conduct and ADHD) narrow-band CBCL scales using the same analytic approach.

In conclusion, the measures used at baseline in longitudinal studies may have compromised utility in providing meaningful and actionable information as the study progresses and youth improve. Measures having sensitivity across a broad impairment continuum would undoubtedly be lengthy and burdensome for the caregiver and/or youth to complete. However, measures developed and/or later calibrated using an IRT approach can be equated, providing researchers with an opportunity to link measures assessing severe and moderate impairment levels with measures addressing milder levels that more sensitively reveal continued improvement. As stated earlier, the lack of demonstrated improvement may well be an artifact of the measures used than a reflection of ineffective intervention and/or treatment.

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# Exploring Relationships among Child Outcomes in Kentucky's System of Care

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## Introduction

The assessment of child and family outcomes has become a fundamental component of children's behavioral health service delivery. A growing number of studies have been conducted to examine the impact of service on outcomes, such as adaptive functioning or symptom severity (Epstein, Kutash, & Duchnowski, 1998). Despite an increased focus on outcome, studies of the relationship among outcomes for children with serious emotional and behavioral disabilities are scant (Rosenblatt & Rosenblatt, 2002). The current study examined changes in functioning and hopefulness across time from both the child and parent perspective, and the predictive properties of selected outcome measures on improved functioning after six months in service. Child outcomes were derived from two behavioral health programs in Kentucky: the Bridges Project, a school based mental health program in eastern Kentucky, and IMPACT Plus, a statewide Medicaid funded community-based program. Determining how child outcomes, such as hopefulness and functioning, interact is a critical step in improving services for children and families.

## Study 1 – Bridges Project

### Study 1 Method

**Participants.** This study included a subset of 115 children and youth with serious emotional disabilities (72 males and 43 females) served in the Bridges Project for whom six-month follow up data were available. As part of the national evaluation of the Center for Mental Health Services-funded grant communities, a comprehensive evaluation system is in place, including the gathering of longitudinal outcome data. Child and family outcome data were gathered for children between the ages of five and 17.5 years at program entry whose caregiver provided consent for participation. The average age of the sample was 11.4 years. Mirroring the population of eastern Kentucky, the sample was predominantly White/NonHispanic (96%). The most common youth diagnoses were Attention Deficit Hyperactivity Disorder (26%) and Oppositional Defiant Disorder (17%). Most families received Medicaid assistance (90%) and 43% of caregivers had completed high school or higher levels of education.

### Measures and procedures

**Symptomatology – Caregiver Report.** The Child Behavior Checklist (CBCL; Achenbach, 1991) measures the caregiver perspective of a child's competencies and problem behaviors. The problem behavior scale includes 118 items yielding a Total raw score that was used to measure the caregivers' perspective of their child's symptomatology.

**Functioning – Caregiver Report.** The Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1990) yields a measure of functioning across life domains. The total functioning score was used to measure the caregivers' perspective of their child's functioning.

**Strengths – Caregiver Report.** The Behavioral and Emotional Rating Scale (BERS; Epstein & Sharma, 1997) is a 52-item measure assessing five strength dimensions. The Strengths Quotient was used to measure the caregivers' perspective of their child's overall strengths.

**Caregiver Strain – Caregiver Report.** The Caregiver Strain Questionnaire (CGSQ; Brannan, Heflinger, & Bickman, 1998) uses a 21-item scale to measure the level of strain experienced by the

caregiver while caring for a child with a serious emotional disability. The 21-item total score was used to measure the caregivers' self-report of strain.

A paired-samples *t*-test was used to compare mean functioning scores as measured by the CAFAS at intake and six-month follow up. A multiple regression was used to explore predictive properties of symptomatology, strengths, and caregiver strain on functioning at six-month follow up. The influence of baseline functioning on follow up functioning was controlled by including it as a predictor in the model.

### Study 1 Results

**Change in functioning.** Caregivers ( $n = 115$ ) reported a significantly lower (better) mean functioning score from baseline ( $M = 100$ ) to six-month follow up ( $M = 77.6$ ),  $t(114) = 6.18$ ,  $p = .000$ .

**Predictive properties.** Correlations among the variables included in the regression analysis were analyzed to examine the strength of covariance among the constructs (Table 1). As expected, all correlations were statistically significant with child strengths being negatively associated with child functioning ( $r = -.47$ ,  $p < .001$ ) and negatively associated with caregiver strain ( $r = -.36$ ,  $p < .001$ ). A multiple regression was conducted using the CAFAS functioning score at six months as the dependent variable. Baseline functioning and caregiver strain contributed significantly to the prediction of functioning; however, after controlling for baseline functioning, only an additional 6% of the variability in functioning at six months was predicted (see Table 2). Baseline functioning had the greatest influence on follow up functioning ( $\beta = .39$ ), followed by caregiver strain ( $\beta = .27$ ).

**Table 1**  
Intercorrelations Between Variables Included in Study 1  
Multiple Regression Model ( $n = 115$ )

| Variable          | 1 | 2      | 3      | 4       | 5       |
|-------------------|---|--------|--------|---------|---------|
| 1. Functioning T1 | – | .54*** | .53*** | -.47*** | .49***  |
| 2. Functioning T2 |   | –      | .39*** | -.30**  | .48***  |
| 3. Symptoms       |   |        | –      | -.48*** | .52***  |
| 4. Strengths      |   |        |        | –       | -.36*** |
| 5. Strain         |   |        |        |         | –       |

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 2**  
Summary of Step Wise Regression Analysis for Study 1 Variables  
Predicting Youth Functioning at 6-Month Follow Up ( $n = 115$ )

| Variable         | Unstandardized Coefficients |     | Standardized Coefficients |
|------------------|-----------------------------|-----|---------------------------|
|                  | B                           | SE  | $\beta$                   |
| <b>Step 1</b>    |                             |     |                           |
| Functioning T1   | .54                         | .08 | .54*                      |
| <b>Step 2</b>    |                             |     |                           |
| Functioning T1   | .39                         | .10 | .39*                      |
| Caregiver Strain | .26                         | .09 | .27*                      |
| Symptoms         | .04                         | .10 | .04                       |
| Strengths        | -.001                       | .09 | .001                      |

Notes:

Adj.  $R^2$  for Model 1 = .29,  $F(1, 113) = 47.4$ ,  $p = .000$

$R^2$  change for Model 2 = .06,  $F(3, 110) = 3.48$ ,  $p = .02$

\* $p < .05$ .

## Study 2 – IMPACT Plus

### Study 2 Method

**Participants.** This study included a subset of 84 youth (45 males and 39 females) served in IMPACT Plus. The sample was restricted by including youth who were old enough, and had parent consent, to complete outcome measures. All participants received Medicaid assistance and all participants had a severe emotional disability contributing to behavioral difficulties across home, school, and community settings. The sample of 84 included 75 Whites, five Blacks, and four unknown. Standardized outcome data are collected by a service coordinator at intake and six month intervals.

### Measures and procedures.

**Hopefulness and Functioning – Parent Report.** The Ohio Scales, Parent Short Form (Ohio Scales-P; Ogles, Melendez, Davis, & Lunnen, 1999) yields a parent hopefulness subscale (4 items) and a child functioning subscale from the caregivers' perspective (20 items).

**Hopefulness and Functioning – Youth Report.** The Ohio Scales, Youth Short Form (Ohio Scales-Y; Ogles et al., 1999) parallels the parent version of the same scale, yielding a child hopefulness subscale and a child functioning subscale from the child's perspective.

**Symptom Severity – Parent Report.** As in Study 1, the CBCL total raw score was used to measure symptom severity.

A paired-samples *t*-test was used to compare mean child functioning scores from both the parent perspective and the child perspective as measured by respective short-form versions of the Ohio Scales at intake and six-month follow up. A paired-samples *t*-test was also used to compare the mean child hopefulness scores with the mean parent hopefulness scores as measured by the respective short-form versions of the Ohio Scales. Lastly, a multiple regression was used to explore predictive properties of child's perceived hopefulness, and parent's perceived symptom severity on functioning from the child perspective at follow up. As in Study 1, the influence of baseline functioning on follow up functioning was controlled by including it as a predictor in the model.

### Study 2 Results

**Changes in functioning and hopefulness.** Youth ( $n = 84$ ) reported a significantly higher mean functioning score from baseline ( $M = 55.01$ ) to six-month follow up ( $M = 57.87$ ),  $t(83) = -2.08$ ,  $p = .041$ , as measured by Ohio Scales-Y; whereas caregivers ( $n = 84$ ) reported a nonsignificant higher mean child functioning score from baseline ( $M = 42.02$ ) to six-month follow up ( $M = 45.00$ ), as measured by Ohio Scales-P. Youth also self-reported a higher mean hopefulness score at baseline ( $M = 17.88$ ) when compared to their parent report of mean hopefulness ( $M = 14.77$ ). Little change occurred with the youth mean hopefulness score at six-month follow up ( $M = 17.45$ ); however, the parent mean hopefulness score had a statistically significant positive change ( $M = 16.42$ ),  $t(83) = -.288$ ,  $p = .005$ .

**Predictive properties.** Correlations among the variables included in the regression analysis were analyzed to examine the strength of covariance among the constructs (see Table 3). Most correlations were statistically significant with child hopefulness at baseline being positively associated with child functioning at baseline ( $r = .71$ ,  $p < .01$ ) and positively associated with child functioning at six months ( $r = .47$ ,  $p < .01$ ). A multiple regression was conducted using the Ohio Scale-Y functioning score at six months as the dependent variable. As expected, baseline functioning scores were predictive of functioning scores at six months; however, no other variables were significant predictors of functioning at six months (see Table 4).

**Table 3**  
**Intercorrelations Between Variables**  
**Included in Study 2 Multiple Regression Model ( $n = 84$ )**

| <i>Variable</i>   | <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> |
|-------------------|----------|----------|----------|----------|
| 1. Symptoms       | –        | -.19     | -.19     | -.13     |
| 2. Functioning T1 |          | –        | .71**    | .59**    |
| 3. Hopefulness    |          |          | –        | .47**    |
| 4. Functioning T2 |          |          |          | –        |

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 4**  
**Summary of Step Wise Regression Analysis for Study 2 Variables**  
**Predicting Youth Functioning at 6-Month Follow Up ( $n = 84$ )**

| <i>Variable</i> | <i>Unstandardized Coefficients</i> |           | <i>Standardized Coefficients</i> |
|-----------------|------------------------------------|-----------|----------------------------------|
|                 | <i>B</i>                           | <i>SE</i> | $\beta$                          |
| <b>Step 1</b>   |                                    |           |                                  |
| Functioning T1  | .63                                | .09       | .60*                             |
| <b>Step 2</b>   |                                    |           |                                  |
| Functioning T1  | .55                                | .13       | .53*                             |
| Symptoms        | -.02                               | .09       | -.02                             |
| Hopefulness     | .10                                | .13       | .10                              |

Notes:

Adj.  $R^2$  for Model 1 = .35,  $F(1, 82) = .00$ ,  $p < .001$

$R^2$  change for Model 2 = .36,  $F(2, 80) = .73$ ,  $p < .001$

\* $p < .05$ .

## Summary of Study 1 and Study 2

Significant correlations between different constructs coupled with divergent perspectives between caregivers and their children support the complexity of various relationships within the context of behavioral health treatment. At the same time, divergent respondent perspectives should provide greater insight for more comprehensive treatment planning (Rosenblatt & Rosenblatt, 2002). The significant predictive value of caregiver strain validates the importance of family support within the treatment planning process (Heflinger, Northrup, Sonnichsen, & Brannan, 1998).

Although divergent respondent perspectives (i.e. parent versus child) can be useful for individual treatment planning (Rosenblatt & Rosenblatt, 2002), more sophisticated research methodologies are needed to better understand how differing perspectives and interactions thereof should be considered when evaluating service outcomes. As such, analyses of differential patterns of change by subgroups (e.g., level of severity, by diagnoses, by gender) may provide more specific information for interpreting outcome data. Due to the small sample sizes, the number of predictor variables included in each study was limited.

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## **Chapter Eleven**

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### **Creating Integrated Service Systems**



# **Evaluation of the Privatization of Child Welfare in Florida: An Organizational Analysis**

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Mary Armstrong  
Neil Jordan  
Mary Ann Kershaw  
Svetlana Yampolskaya**

## **Introduction**

The Florida 1996 Legislature mandated the privatization of child welfare services (known in Florida as Community-based Care; CBC) through the use of a lead agency design. The intent of this statute was to strengthen the support and commitment of local communities to the “reunification of families and care of children and their families,” and to increase the efficiency and accountability of services.

In fiscal year (FY) 2003-04, the Florida Department of Children and Families (DCF) contracted with the Louis de la Parte Florida Mental Health Institute, University of South Florida to conduct an evaluation of the 11 lead agencies and 28 counties in which CBC was operational. Lead agencies included Child and Family Connections, ChildNet, Inc., FamiliesFirst Network, Family Continuity Programs, Family Support Services of North Florida, Inc., Heartland for Children, Inc., Hillsborough Kids, Inc., Partnership for Families, Inc., Partners for Community-Based Care, YMCA Children, Youth & Family Services, Inc., and United for Families, Inc. The goal of the evaluation was to provide policymakers with concrete information and recommendations about next steps and mid-course corrections. The following research questions were the focus of the organizational analysis component of the evaluation:

1. How effective is Community-based Care at designing and improving systems and services for child protection?
2. How effective is Community-based Care at involving the community in child protection, both as service partners and as resource contributors?

To address the design and improvement of services, the organizational analysis examined how lead agencies were organized and provider networks were structured. To evaluate community involvement, the analysis looked at how services were accessed by lead agencies and what types of community governance boards had emerged. This summary describes results of organizational analyses for these questions.

## **Methods**

To describe the organizational and community involvement components, 11 lead agency CEOs were asked to complete a 30 question survey covering: (a) community governance/participation, (b) financial risk, (c) differences in lead agency service systems, and (d) lessons learned in CBC implementation. The CEOs were also asked to provide any available supporting documents related to these areas.

In addition, the project team asked each Community Alliance Chair and Vice Chair to provide information on Alliance membership, and to complete a survey regarding examples of connectedness to lead agencies and CBC. Community Alliances are comprised of key stakeholders actively involved in the community. Community Alliance Chairs and Vice Chairs also were asked to submit pre-existing documents such as meeting minutes to show evidence of interaction with lead agencies.

Qualitative analysis of the data from the surveys and documents was conducted by independent review with coding of the data by multiple investigators. Coding was completed according to coding schemes developed by the investigators based on the survey protocols.

## Results

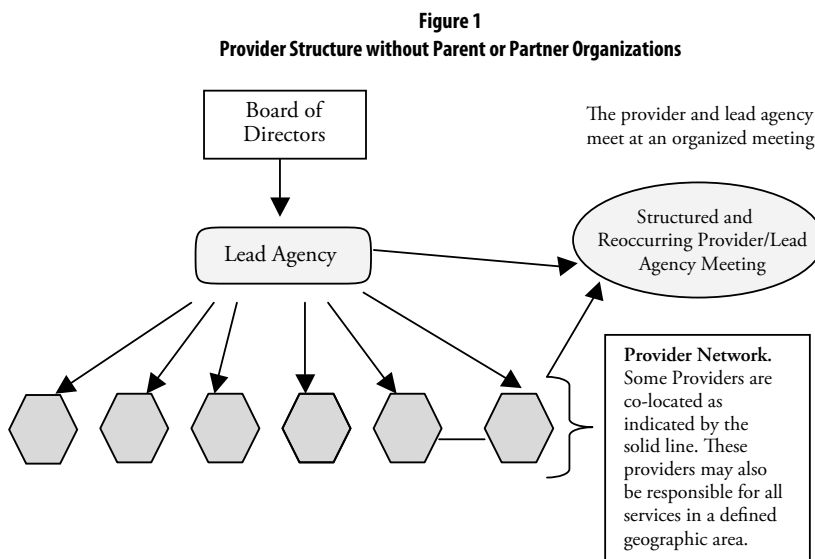
### Question 1: How effective is Community-based Care at designing and improving systems and services for child protection?

While there are multiple components used to describe organizational structure (i.e., complexity, formalization, and centralization), this analysis addressed the component of complexity (Hall, 1996). Knowing the level of complexity of an organization is important because it can dictate how communication and interaction occur throughout the organization.

The degree of complexity in an organization is measured by the amount of horizontal differentiation, vertical differentiation, and spatial dispersion (Fitzgerald, 2002). In terms of horizontal differentiation, all lead agency organizational charts examined for this evaluation ( $n = 7$ ) showed four or five different departments/divisions across their organizations as indicated by a distinct personnel title. In all, approximately eight different titles appeared across the organizations that represent the varied divisions of the lead agencies and reflect distinct areas of specialization, including titles such as chief financial officer, quality assurance, and client services/case management.

While horizontal differentiation was consistent across the lead agencies, analysis of the lead agency organizational charts showed varying amounts of vertical differentiation. Four lead agencies had an average of three persons between the lowest and highest levels of the organization. In contrast, the remaining agencies had an average of 4.6 persons between the lowest and highest level of the organization. While the difference may seem negligible, the group with the higher vertical differentiation has two more people between the lowest level and the top-level administration. The hierarchical increase could require more process and communication standardization than that needed in the less vertically differentiated agencies. Two organizations had greater spatial dispersion because services were spread across the county or counties they served through service centers.

With respect to the CBC lead agencies' relationship with the provider network, the analysis identified three models to describe results related to provider network configurations and their relationship to the lead agency, including: (a) a provider structure that maintains parent or partner organizations that provide either all, or part, of the services related to case management, foster care, adoption, and crisis intervention; (b) a more traditional provider model that excludes parent/partner organizations (see Figure 1); and (c) a model that depicts the use of service centers in the provider structure for provision of services to a defined geographic area.



**Question 2: How effective is Community-based Care at involving the community in child protection, both as service partners and as resource contributors?**

Alliances generally reported that they were comprised of those members specified in the statute, in addition to members at large from each county within the Alliance’s domain including: DCF, county government, juvenile welfare, school district, court system, United Way, and the Sheriff’s Office.

Some of the Alliances reported that while there was a preliminary communication process in place to discuss issues with their respective lead agency(ies), the lead agency was too new to warrant much critical feedback. In these cases, Alliances seemed pleased that the lead agency was routinely providing information on their transition process. In some communities, the Alliances had been able to assist new lead agencies through their members’ collective experience in areas such as foster care recruitment.

Several Alliances, however, reported that they were not able to make recommendations to their lead agency because DCF Central Office has made it clear that the Alliance was “advisory only,” and therefore, in the opinion of many Alliance members, has no authority. One Alliance Chair explained that while they might occasionally make recommendations to their lead agency, the communication process primarily involved listening to presentations and receiving updates, rather than being asked for recommendations.

Many Alliance Chairs were concerned that their members did not feel like they were contributing stakeholders. They expressed a need for more ongoing dialogue, as many Alliance members were only passively receiving information. Chairs suggested that lead agencies should actively solicit feedback from Alliance members via open-ended questions regarding their system of care. Facilitators and barriers identified by Alliance leadership are summarized in Table 1.

**Conclusion**

Analysis of the organizational structures of the CBC lead agencies revealed differences in their level of complexity across the state. While the agencies were consistent in the amount of horizontal differentiation, they varied on their level of vertical differentiation. With regard to provider network structure, three models emerged representing how lead agencies are organizing service delivery for CBC. These models included those agencies with partner/parent organizations involved, the traditional model that does not involve partner/parent organizations, and a model that includes service centers. The differences in provider network structures would suggest that CBC lead agencies develop their provider networks based on the availability of resources in their communities while seeking ways to reach all of the children and families in their service area.

The majority of Community Alliances reported that child welfare is a standing agenda item but several felt limited by their advisory role and expressed desire for more involvement in local system of care development. Community Alliances are potential community governance partners, but clarification is needed regarding their authority, and their role vis-à-vis the lead agency boards of directors and other

**Table 1  
Facilitators and Barriers to Communication**

| <i>Facilitators</i>  |
|--|
| <ul style="list-style-type: none"> <li>• When DCF/lead agency is receptive to Alliance Chair’s request for further engagement</li> <li>• High quality of professionalism and leadership of Lead Agency administration</li> <li>• Excellent Communication between DA and lead agency CEO</li> <li>• When lead agency exceeds community’s initial expectations</li> <li>• When DA is member of the Alliance and any other pertinent subcommittees</li> <li>• When lead agency is responsive to Alliance’s requests for information</li> <li>• Email and/or newsletter updates</li> </ul> |
| <i>Barriers</i>  |
| <ul style="list-style-type: none"> <li>• Secretary and Central Office DCF have made it clear that Alliances are “advisory only”</li> <li>• Alliances that cover several counties and multiple lead agencies may lose local authority and momentum in shaping local systems of care</li> <li>• Alliances in less populated areas feel other Alliances are driving decisions at the state level</li> <li>• No incentives to be an Alliance member, such as administrative support, authority, or pay</li> </ul>  |

community stakeholder groups. Legislatively appropriated incentives for Alliance membership and engagement in child welfare issues should be considered. Also, more direct communication is encouraged between DCF central office and the Community Alliances—for example, through legislative updates on child welfare related bills—so that the Alliance members have an opportunity to add their perspectives to influence policy.

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# **Topical Discussion**

## **Applying the Systems of Care Framework to Advance Comprehensive Prevention and Resilience: Implications from an Environmental Scan of SAMHSA-Funded Initiatives**

Evelyn R. Frankford  
Jennifer Kitson  
David Osher

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### **Introduction**

Given the field's growing focus on comprehensive approaches that include mental health promotion, prevention of disorders, early intervention, and intensive intervention/treatment to improve outcomes for children and adolescents, it is urgent to understand the challenges to cross-systems work and to identify strategies for overcoming barriers. This paper summarizes a topical discussion that addressed findings from the authors' environmental scan of nine sites across the country that have received both Systems of Care (SOC), and Safe Schools/Healthy Students (SSHS) grants from the Substance Abuse and Mental Health Services Administration. The purpose of this scan was to identify both successes in collaboration across systems and challenges to the coordination necessary to build comprehensive community approaches to prevention and early intervention. The emerging themes pose issues for policy research about collaboration and system transformation.

### **Method**

Literature was reviewed to identify the dominant theoretical approaches to promotion and prevention, particularly current research related to preventing the trajectory toward serious mental health and substance abuse disorders in young people. The literature reviewed suggests that programs that implement comprehensive approaches show promise for preventing multiple negative outcomes, emotional and behavioral problems for adolescents (Greenberg, Domitrovich, & Bumbarger, 1999; SAMHSA, 2002). Research regarding reduction of common risk factors and building protective factors—on which comprehensive programs are often based—was reviewed (USDHHS, 2001b; Osher, Dwyer, & Jackson, 2004, Appendix A).

This environmental scan was focused on the perceptions of project directors from the SSHS and SOC grant communities. SSHS is a collaboration among the U.S. Departments of Education, Health and Human Services (SAMHSA) and Justice that awards grants to local education agencies (LEAs) working in partnership with local law enforcement and mental health agencies to ensure a comprehensive approach to violence prevention and healthy development. The SOC grant program provides funds to State or local mental health departments to assure that children and adolescents with serious emotional disturbance receive access to comprehensive, integrated, individualized home, school, and community based services. Collaboration is a core component defining both programs.

Through cross-mapping from lists of grantees of the two programs, the authors identified nine sites across the country that have received both SSHS and SOC funding to provide mental health interventions for children and adolescents. Open-ended interviews were conducted with the 18 project directors to elicit their perceptions regarding key elements that promote or inhibit collaboration among multiple agencies. Interview questions addressed themes identified in the literature reviewed regarding comprehensive mental health promotion, prevention, early intervention, and intensive intervention services; of risk and protective factors; and of factors involved in collaboration. The questions clustered into the five elements listed below:

- The role of schools, including issues of lead agency
- Definition of prevention: shared values, operations, planning
- Collaboration successes and challenges
- Other challenges
- Relationship to state efforts to advance mental health system transformation

## Results

Informants reported that substantial collaboration occurs between these initiatives, but true integration and systemic change remain elusive. Interdisciplinary work is not easily done; professionals in the mental health and education systems have different vocabularies and different approaches to problem-solving. Although progress has occurred, buy-in to deep collaboration, and the norm of joint decision-making, particularly for the education system, remains a major challenge.

Some frustration was expressed regarding the concept of *lead agency*. Although legislation requires collaboration, each agency desires lead agency status because of how funding comes down the pipeline. Differences in program direction were also identified as a barrier. Decision making in the SSHS initiative is guided by the LEA as the lead agency with input from its partner agencies, and is broadly focused on global objectives and outcomes in the community. The SOC model, on the other hand, is more likely to be guided by the identified and expressed needs of the targeted children and families served. Informants recommended that collaborations require a council where all decision-makers sit.

Although both initiatives have the goal of building infrastructure for systemic change based on theories of comprehensive interventions to reduce risk and build protective factors across service systems, operationally they tend to focus on discrete programs. SOCs are coordinated by State Mental Health Authorities (SMHAs) while SSHS initiatives are not, and further, informants suggest that SMHAs have not routinely been kept informed of local efforts. Three communities with strong SOC initiatives appear to have had a positive impact on SSHS with regard to collaboration, access to schools, and buy-in to the concept of the continuum, and it would seem advantageous for coordinating authorities for the two programs to find ways to facilitate development of joint initiatives.

Barriers were also perceived at the local administrative level. Initiatives were often undermined by changes of people in positions of authority across agencies; new leaders often ignored prior commitments. Informants perceived that education administrators were the most difficult to engage in recognizing the need for interagency work. Some respondents suggested that more explicit expectations for collaboration by federal funding agencies could provide positive pressure for the efforts necessary for sustained integration and systemic change.

## Comments from the Field

Participants in the topical discussion reported that they experience the difficulties that result from categorical programs and funding, with their diverse requirements. They understand the benefits of comprehensive initiatives that build on collaboration, approaches that the research supports. They seek opportunities to practice what the research preaches if the policies would allow them to do it.

They suggested new focus on integrating the measures of collaborative groups.

- develop a structure for analyzing and presenting data from all groups
- organize key indicators to focus on needs, assets, and supports across groups
- provide joint feedback to agencies and families

The also stressed the importance of re-structuring relationships and funding to promote collaboration

- *county level*, e.g., Children's Services Council to address county systemic issues through a public mental health model, and also address deep end kids
- *state level*, e.g., Pennsylvania County CASSP coordinators have some blending of funds for preventive work
- *federal level*, e.g., SS/HS funded by three federal agencies



## **Discussion and Recommendations**

This scan found that SAMHSA's two discretionary initiatives (SSHS and SOC) remain distinct and not integrated, even when they have been implemented within the same community. Contemporary mental health promotion and behavioral disorder prevention initiatives face similar fragmentation problems to those that engendered systems of care (SOC) 20 years ago. They are challenged to overcome categorical funding streams that seek to “fix” specific problems in children and adolescents. The research tells us that comprehensive approaches based on risk and protective factor theory may be essential for interventions to be effective in promoting mental health and preventing/intervening early with incipient mental and behavioral disorders (Greenberg, Domitrovich, & Bumbarger, 1999; SAMHSA, 2002, in Frankford et al., unpublished).

Those interviewed fundamentally agree on the importance of prevention and resiliency based approaches, and accept the Institute of Medicine (IOM) population-based classification system of universal, selective, and indicated preventive interventions. To deliver the full range of necessary supports and services, it will be necessary to recognize where intervention is currently occurring and make adjustments to fill gaps and promote coordination.

Research suggests that schools may be strategically the best places to implement child and adolescent prevention interventions. Most children attend school, and school personnel see the full continuum of young people's mental health needs, from emotional and behavioral disorders to serious emotional disturbance. More than three-fourths of children receiving mental health services receive services through the education system, and, for many, this is the sole source of care (USDHHS, 1999b). About half of the care for common mental disorders is now delivered in general medical settings. Primary care providers prescribe the majority of psychotropic drugs for both children and adults. (President's New Freedom Commission) Primary care is the other major setting, after schools, for the early identification of mental disorders in children (USDHHS, 1999b). The community, as a whole, represents the third locus for prevention and early intervention.

The mental health field's systems of care (SOC) approach may offer direction for organizing comprehensive community-based preventive approaches with school and primary health partners. The approach recognizes that “coordinated systems of care, providing a range of services” are required to effectively serve children and their families, as such systems view children in the context of their families and communities, rather than by the singular problems they might have (Stroul & Friedman, 1986).

Outcome measures for children with emotional and behavioral disorders at SOC sites include reduced symptoms, improvements in school attendance and performance, and reductions in law enforcement contacts. These goals are consistent with those of SSHS and other prevention initiatives. SOC values and principles are also consistent with the underlying principles of SSHS:

- Link security with healthy childhood development.
- Take a school-based public health approach.
- Provide comprehensive, coordinated services that are developmentally appropriate.
- Encourage school/law enforcement/mental health partnerships.
- Implement science-based programs with demonstrated outcomes.

Research is needed on how the SOC framework can be applied or adapted to increase collaboration with and sustain SSHS initiatives. To build the public mental health infrastructure that is central to transformation, our findings suggest that successful strategies must be identified for:

- Better integration of school-based and community-based personnel, and to get superintendents, principals, and human services agencies to “own” comprehensive, interagency work with mental health agencies; and
- Greater collaboration and communication between SSHS initiatives and key state partners, especially SMHAs, to align SSHS with states' mental health planning and budget processes, in order to strengthen SSHS sustainability.

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# **Findings: Examining the Impact of Policy on Collaboration in Systems of Care**

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Mary E. Evans

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## **Introduction**

The premise of this study is that collaboration is a key principle in developing systems of care to serve children with serious emotional disturbance and their families (Stroul & Friedman, 1986). The purpose of this study was to understand better how policy implementation affects collaboration at the state and community levels that, in turn, contributes to effective systems of care. A related outcome was to inform policymakers about the most effective policy implementation strategies for promoting collaboration. These strategies, often called policy instruments, include legislative mandates, inducements, capacity building efforts, and other system change initiatives (Elmore, 1987). Mandates are rules that govern the behavior of individuals and organizations. The premise of mandates is that goals are achieved by achieving compliance. Inducements are defined as transfer of money or resources to individuals or agencies on a conditional basis, in return for performance of certain actions. Capacity building is the conditional transfer of money to individuals or agencies for the purpose of investment in future human, intellectual, or material resources. System change instruments are those involving the actual transfer of authority among individuals and agencies in order to change the system of service delivery. Multiple policy instruments can be used simultaneously.

Based on previous research, the study identified facilitating and inhibiting factors in three broad areas—attitudinal, behavioral, and structural/organizational—that impact how policy development and implementation contribute to effective collaboration.

## **Method**

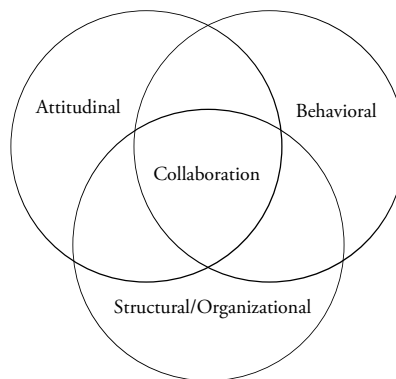
The first phase of the study was a national survey of state mental health authorities to collect information regarding the types of policy instruments that states used to promote collaboration in children's systems of care. A coding scheme was developed to reflect types of policy instruments, agencies involved in the policy, target population, and system-of-care principles. The documents from the states were coded, and the data were entered into a cluster analysis program to identify like groups of states. The solution produced five clusters of states with similar policy instrument approaches.

The second phase of the study was to conduct site visits of two states from each cluster, in order to understand from the perspective of key informants, how policy implementation had affected collaboration at the state and community levels. The research team used a backward mapping approach on-site, beginning each visit with data collection in one or more local communities, and then collecting data at the state level from state policymakers and advocates. Site visit methods included key informant interviews, focus groups, observation of group meetings, and document reviews. Providers and policymakers who participated in the visit were asked to complete the Interagency Collaboration Scale (Greenbaum et al., 2003). Both quantitative and qualitative data were analyzed using a conceptual framework of facilitating and inhibiting factors in three broad areas (structural/organizational, behavioral, and attitudinal) that impact policy development and implementation.

## Results

The framework of facilitating and inhibiting factors that effect policy development and implementation (see Figure 1) organizes the study findings.

**Figure 1**  
**Domains that Affect Policy Implementation Regarding Collaboration**



**Facilitating Structural/Organizational Factors.** One facilitating factor is a tiered infrastructure of mandated interagency coordination entities. Often, there are tiers at three levels of collaboration: (a) the child and family level, focusing on individual case planning using child and family teams; (b) the county or regional level, with roles of local planning, identification of service gaps, and service development; and (c) the state level, focusing on policy development and barrier reduction.

At the state level within the Executive Branch, one successful strategy is to bring all child serving systems together in one agency. Such an infrastructure can ensure that cross system policies are consistent in promoting collaboration and other system of care values. If child-serving systems are in different state agencies, it is useful to have shared theories of change that view collaboration as an active ingredient in effective systems of care. A common theory of change is often the result of cross-agency visioning and strategic planning activities as well as a history of policy and legislative initiatives that encourage interagency collaboration at state and local levels. When there are interagency initiatives, rotation of leadership roles can promote shared ownership of collaboration. In some states, consent decrees that mandate interagency coordination have facilitated high levels of collaboration. Finally, statewide parent organizations can be useful in playing an advocacy role for stronger collaboration.

***Inhibiting Structural/Organizational Factors.*** Two or more state entities with mandates and resources for children with mental health problems may result in confusion and friction across agencies. Likewise, two or more types of collaborative efforts sponsored by different state agencies with overlapping populations and geographic areas may result in competition for funds and silo structures at the state and/or local levels. Another inhibiting structural factor is financing systems, including managed care arrangements and Medicaid waivers, with funding levels that are not able to support a comprehensive service array and/or flex dollars. Finally, frequent changes in administration and leadership at the state level can detract from the development of collaboration.

***Facilitating Behavioral Factors.*** One of the strongest study findings is that policies with clear accountability mechanisms are associated with high levels of collaboration. Collaboration is strengthened by shared, active use of data by policymakers at state and local levels to drive decision-making, planning, and problem solving.

A series of consistent policies and initiatives that provide moderate resources for collaboration and system of care development facilitates collaboration. Leadership that is visionary, strong, and sustained, by at least one state agency is effective in promoting collaboration. Collaboration may be facilitated by the development of a coherent, cross-agency strategy for the integration of activities into a coordinated approach to system-of-care development.

***Inhibiting Behavioral Factors.*** Behavioral factors that may inhibit collaboration include a history of territorial and turf issues that have created mistrust. Collaboration is not promoted when policies of child-serving agencies do not reflect system-of-care values, including family involvement and collaboration. An additional inhibiting factor is variability in local implementation of collaboration and other system-of-care values and principles.

***Facilitating Attitudinal Factors.*** A shared cross-system vision and support for system-of-care values and principles, coupled with mutual respect for each other's mission, facilitates interagency collaboration. Other facilitators are a long-term cross-agency focus on barrier reduction at the state level, and a perception among stakeholders that there is willingness to compromise regarding goals and strategies. Finally, adequate local authority to "do whatever it takes" to serve children in their homes and communities fosters interagency collaboration.

***Inhibiting Attitudinal Factors.*** When there is competition among cross-agency partners for resources and power, territorial and turf issues inhibit interagency collaboration. Belief systems that focus on blaming and deficits rather than a family-centered and strengths-based approach discourage family involvement and collaboration. In addition, mistrust among system partners, including a mistrust of parent's perceptions about the system of care, reduces collaboration and cooperation.

## **Conclusion and Policy Recommendations**

The study findings lead to a series of policy recommendations. Infrastructures, such as tiered coordinating entities, a super agency that includes several child-serving systems, or a Children's Cabinet, are useful structures for promoting collaboration. This is particularly true when these structures use their authority to convene and task partners on a regular and ongoing basis. Interagency collaboration needs to be viewed as an essential element of the culture of serving children and their families. Strong and sustained leadership, across child serving agencies, promotes effective collaboration.

Legislation can facilitate and institutionalize interagency collaboration. Policies that are clear in their statement of the population to be served, will lead to more positive outcomes regarding collaboration. A shared causal theory of change also is useful in promoting collaboration and effective systems of care. Policies should promote local autonomy in the use of human and financial resources, whether the resources are modest or substantial.

Finally, policymakers should encourage and support efforts to strengthen interagency collaboration and establish systems of care, whether or not these efforts begin at the local or the state level.

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# **Intensive In-home Therapy as Early Intervention: Results from a Clinical Trial**

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## **Introduction**

Children who get in trouble with the law are often placed in programs to complete a course of mental/behavioral health treatment as an alternative to detention or other punitive sanctions. Such programs usually are conducted in congregate care facilities (group homes or residential treatment centers; Sickmund, 2000), are expensive (estimates range to more than \$350 per day per child; New York City Department of Juvenile Justice, 2001), and have little evidence to suggest that they produce positive behavior change in children. Preventing such placements through the provision of needed mental health services in a child's own home may provide a cost-effective alternative. A randomized clinical trial to examine the effectiveness of intensive in-home services in preventing juvenile court contact and placement was conducted for children who were at increased risk of such involvement with the court. Juvenile court contact, placement, and changes in custody were examined to determine the differences between those who received in-home services (treatment group) and those who received referrals for alternative services available in the community (comparison group). Additional information on differences between groups was generated through analysis of school performance and assessment of youth psychosocial and family functioning.

## **Study Design**

A total of 240 families were recruited from a variety of referral sources including the local juvenile court, city and county school districts, and the Community Service Agency (CSA). Following a face-to-face intake interview, participants were assigned (stratified by race, sex, and referral source) to the treatment or comparison group. Those in the treatment group received four to six months of intensive in-home therapy based on the principles of the Multisystemic Therapy model (MST; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998); those in the comparison group received contact information for three to five organizations in their geographic area that specialized in the issues that the parent/primary caregiver had identified as their most pressing concern. Follow-up interviews were conducted face-to-face at six months and by phone at 12 and 24 months post-intake.

The sample was nearly evenly split according to gender (51% male), and the majority of youth (81.4%) were African American. The largest proportion of youth (48.3%) was in the 12- to 14-year-old age group (range 2 to 15; average age 12.9 years). The most common source of referrals was the local juvenile court (40.7%), followed by the CSA (26.3%), schools (18.6%), and self-referrals (14.4%).

## **Measures**

An extensive intake interview was conducted to gather information on the presenting problems, current family, school, and social functioning, as well as information about the parents' background such as education, employment, mental health, and alcohol and drug use history. During the intake interview and again at six months post-intake, youth psychosocial functioning was assessed using the Child Behavior Checklist (CBCL; Achenbach, 1991), the Youth Self-Report (YSR; Achenbach, 1991), and the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1997). Involvement in delinquent behavior among participants was assessed with the Self-Report Delinquency Scale (SRDS; Elliott & Ageton, 1980). Family functioning was measured with the Family Assessment Measure: General Scale (FAM:GEN; Skinner & Steinhauer, 1993) and the Family Adaptability and Cohesion Evaluation Scale (FACES III; Olson, Portner, & Lavee, 1985). The CAFAS, SRDS, and the Delinquency sub-scale of the CBCL were repeated at 12 and 24 months following intake, along with a parent and a child interview that contained items concerning perceived change in primary concerns, and changes in school, social, legal, and family status since the previous interview.

Primary data were requested from schools at 12 and 24 months following study admission, including number and type of suspensions, number and type of absences, and average academic and conduct grades during the follow-up period. Overall, 74% of the requests for information from schools were completed. Analysis of potential bias in the respondent pool demonstrated no significant bias in those for whom information was vs. was not obtained based on demographic variables, group (treatment vs. comparison), and presenting problem.

The local juvenile court was asked to provide information on contacts with study participants, including type of contact, charges, disposition of case, custody changes, and placement in a juvenile facility at 12 and 24 months after program admission. Thanks to the high level of cooperation from the court, 100% of the information requested was provided. Given that contact with juvenile court is one of the primary outcome indicators, the accuracy and completeness of the data provided by the court is an essential factor in the quality of the evaluation of this project.

## Results

Children in the study faced significant life challenges. Almost 20% of the families in the study reported that they lived in a high-crime area. Approximately 18% of the families had an income of less than \$10,000 per year, and only 10% of children in the study lived with both biological parents. Almost half of the study participants (47.1%) had been to the principal's office within the month prior to intake, and over 75% in each group had been suspended from school at least once in their lifetime. Almost half (48.8%) of the children in the study had repeated at least one grade, and one in four participants (25.0%) had a history of running away from home.

Concern about oppositional behavior was identified by the majority of parents (67.8%) as the primary referral problem. The next most frequently cited presenting issue (12.1%) was problems with peers. School problems were the third most frequent concern (9.6%), family problems were next (5.4%), followed closely by concern about illegal behavior (5.0%). There was no significant difference in presenting problems between the two groups.

Analysis of differences in the primary outcome indicators (juvenile court contact, out-of-home placements, change in custody) suggested a slight trend toward the treatment group having fewer juvenile court contacts over 24 months (52.5% vs. 60.0%), fewer juvenile court placements (35.8% vs. 36.7%), and fewer changes in custody (10.0% vs. 12.5%) than the comparison group. However, the differences were not statistically significant.

Information gathered from schools demonstrated differences between groups in academic and conduct grades during the follow-up period at both the 12- and 24-month points. Participants in the treatment group were significantly more likely to earn *satisfactory, good, or excellent* conduct grades than those in the comparison group at each follow-up (12-month:  $t(144) = -2.20, p = .03$ ; 24-month:  $t(106) = -6.90, p < .001$ ). Those in the treatment group also were more likely to be earning adequate academic grades (A, B, or C) than those in the comparison group; the difference between groups was significant at the 24-month follow-up, but not at the 12-month time period (12-month:  $t(149) = -1.34, p = .182$ ; 24-month:  $t(110) = -3.53, p < .001$ ). The total number of suspensions experienced during the 24-month study period did not differ by group. Total absences from school during the study also did not differ by group.

Several of the assessments were administered only at intake and six months, including the CBCL, YSR, FAM:GEN, and FACES III. The first three measures showed mixed results, with trends generally favoring more improvement in the treatment group than in the comparison group. No differences in family functioning between the treatment and comparison groups at either time point were demonstrated by the FACES III. The CAFAS, which was administered at all four time points, showed significant improvement for both groups in the Role Performance domain, but virtually no difference between groups or across time on other domains.



## **Discussion**

The results of this clinical trial examining the effectiveness of intensive in-home services with children at-risk for out-of-home placement demonstrated a substantial amount of success for children and families in the program. Participants in the treatment group showed trends toward fewer negative juvenile court outcomes (though differences were not statistically significant), significantly better average academic and conduct grades, and improvements in youth psychosocial functioning.

Analysis from this project presented elsewhere (Hurley, Vander Weg, & Goldsmith, 2004) suggests that the level of therapist adherence to the MST model is important in achieving positive outcomes for children and families, and that adherence may be affected by family, client, and therapist characteristics. Preliminary analysis of the data in this study indicates that outcomes may be more positive for those in the treatment group whose caregivers reported higher levels of therapist adherence. Future research focusing on the mechanisms through which therapist adherence impacts children and families would make a significant contribution toward a greater understanding of optimal approaches to treatment and prevention for youth at high risk of negative involvement with the juvenile justice system.

As more funding entities require agencies to make use of evidence-based treatment models, it becomes of greater importance to examine the effectiveness of those models with a variety of populations. In addition, clearer explication of the processes involved in achieving positive outcomes is needed for each therapeutic model. Much work remains to be done in understanding the complex links between the level of therapist adherence as reported by caregivers and the outcomes achieved by children and families. Data gathered from this project will continue to be used to examine these important questions.

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# **The Multiple Needs of Youth Entering the Juvenile Justice System**

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## **Introduction**

Most needs assessments of youth involved with departments of juvenile justice (DJJ) have focused on detained populations, such as youth who have been incarcerated because they were found guilty of a serious crime or are deemed to pose a threat to the community. Among this population, high rates of psychiatric disorders, educational failure, and family problems have been observed (Garland et al., 2001; Teplin, Abram, McClelland, Dulcan, & Mericle, 2002; Wasserman et al., 2003). However, little is known about the needs of a larger population of juvenile justice youth—those who come into contact with DJJ but are not incarcerated because their violation of the law does not merit immediate detention, they are awaiting trial, or their case is otherwise resolved. It is widely agreed that many of these youth would benefit from targeted interventions to reduce the likelihood of repeated offenses and future incarceration. Although some state juvenile justice systems have adopted health screening procedures for youth in detention (Cauffman, 2004), there are few statewide efforts that use validated instruments to systematically screen youth at the first point of contact with DJJ before the case is resolved.

## **Method**

This research was undertaken to validate a health risk and needs screening intake instrument for the Maryland Department of Juvenile Services (MDJS); it involved having 231 youth age 12-17 and one of his/her caregivers present for intake at one of two urban or four rural jurisdictions from May 2002 – April 2003.

Following intake, the officer explained that MDJS was collaborating with Johns Hopkins University to gather additional information about youth to refine the intake process. A researcher contacted interested families within two weeks of intake.

Following the ascertainment of consent/assent and a brief reading assessment, the youth and parent individually completed a paper and pencil self-administered questionnaire compiled from well-validated and widely used measures to determine the youth's level of need across functioning domains. These questionnaires were completed in the youths' home or at another convenient private location and required less than one hour. The research was approved by the Committee on Human Research of Johns Hopkins University Bloomberg School of Public Health and the State of Maryland.

The Behavioral and Emotional Rating Scale (BERS; Epstein & Sharma, 1998) was administered to parents to assess the youth's behavior, emotion, education, and family needs. The Caregiver Strain Questionnaire (CSQ; Brannon, Heflinger, & Bickman, 1998) was administered to parents to report family needs. Parents also completed the Child Behavior Checklist (CBCL; Achenbach, 1991) to assess their child's behavior. Youth self-reported their behavior, education, emotion, family, and somatic health needs using the Child Health Illness Profile—Adolescent Edition (CHIP-AE; Starfield et al., 1995). The Children's Depression Inventory (CDI; Kovacs, 2000) was administered to youth to self-report emotional needs. The Massachusetts Youth Screening Instrument (MAYSI; Grisso, Barnum, Fletcher, Cauffman, & Peuschold, 2001) was administered to youth to self-report emotional and substance use needs. Finally, youth self-reported substance abuse using the Simple Screening Instrument (SSI; Center for Substance Abuse Treatment, 1994).

Scores for each measure were computed using the algorithm provided by the developing author. Proportions are used to describe youth who scored above the problem threshold on a requisite number of measures used to assess each functioning domain. The number of scales or subscales for which a youth scored above the positive threshold was summed to determine whether the youth demonstrated a need within that domain. In order to report conservative estimates of need, a youth must have scored above the positive threshold on at least more than one scale or subscale within the domain. For example, only youth who met the problem threshold on four out of a possible seven administered subscales were identified as likely to have an emotional need. The number and proportion of youth demonstrating a need across domains is reported.

## Results

This sample was highly representative of statewide youth at MDJS intake on the basis of age, race, gender, and offense severity. Only 3% of youth were less than age 12 years of age; 31.12% were between the ages of 12-14; 61.03% were between the ages of 15-17; and 4.72% were 18 or older. Nearly half of the sample (48%) reported being African-American, 46.7% were Caucasian, 3.9% were Hispanic, and less than 1% identified themselves as being Native American or of mixed race. Seventy-four percent of the sample was male. The offense level and type of crime also represented the MDJS intake population, with most youth (73.1%) charged with a misdemeanor offense and nearly half (44.9%) of youth charged with the least serious offense category.

Table 1 presents the proportion of youth identified as meeting the problem threshold on a requisite number of scales or subscales within each functioning domain. Youth who completed all scales within that domain compile the denominator. Over half of youth demonstrated family problems and education problems. Almost half of youth demonstrated a substance use problem. Less than one-quarter of youth demonstrated behavior, emotion, or somatic health problems.

**Table 1**  
**Youth Demonstrating a Need within Functioning Domains and Number of Positive Subscales Required**

| <i>Domain</i>  | <i>Proportion and Number of Youth with Need</i> | <i>Number of Positive Subscales Required</i> | <i>Scale</i>         | <i>Subscales Used</i>  |
|----------------|---|--|----------------------|--|
| Behavior       | 22.0% 49/223                                    | 2/4  | BERS<br>CBCL<br>CHIP | Interpersonal strength<br>Aggression and Delinquency<br>School behavior                                |
| Education      | 65.8% 150/228                                   | 1/2  | BERS<br>CHIP         | School functioning<br>Academic performance   |
| Emotion        | 21.3% 49/230                                    | 4/7  | BERS<br>CDI<br>MAYSI | Interpersonal and Affective strength<br>Total score<br>Depressed, Anxious, Somatic complaints, Suicide |
| Family Needs   | 59.0% 135/229                                   | 1/3  | BERS<br>CSQ<br>CHIP  | Family involvement<br>Global strain score<br>Family involvement  |
| Somatic Health | 18.0% 41/229                                    | 2/3  | CHIP                 | Overall satisfaction, Physical discomfort, Limitations of activity                                     |
| Substance Use  | 46.5% 107/230                                   | 1/2  | MAYSI<br>SSI         | Alcohol and drug<br>Total score  |

**Table 2**  
**Youth Demonstrating Needs across Functioning Domains**

| <i>Number of Functioning Domains Positive</i> | <i>Number of Youth (N = 222)</i> | <i>Proportion of Youth</i> |
|---|----------------------------------|----------------------------|
| 1 or more                                     | 203                              | 91.4%                      |
| 2 or more                                     | 143                              | 64.4%                      |
| 3 or more                                     | 93                               | 41.9%                      |
| 4 or more                                     | 48                               | 21.6%                      |
| 5 or more                                     | 22                               | 9.9%                       |
| 6   | 5                                | 2.25%                      |

Table 2 presents the proportion of youth with a need across multiple functioning domains using the definition of need provided in Table 1. Only youth who completed all scales across domains were eligible for inclusion in the denominator. Almost all youth demonstrated a need within at least one domain. More than half (64.4%) of youth demonstrated need within two or more domains. Only 2.25% of youth demonstrated a need in all six domains of functioning.

## Discussion

To the best of our knowledge, this is the first published systematic investigation of the health, mental health, substance abuse, and psychosocial needs of youth at DJJ intake prior to resolution of their case that is representative of a statewide DJJ intake population. The investigation uses highly reliable and valid measures that illicit responses from both youth and parents.

The majority of youth demonstrated multiple needs across life domains, requiring at minimum further evaluation and possibly intervention. Unlike research focused on detained or adjudicated populations, the present study did not find high rates of mental health problems. Of the youth who completed all behavior and emotional health measures, only 8.5% were identified with needs in both domains. This suggests that although mental health, behavioral health, and emotional health are frequently combined into a single service delivery system, youth may benefit from services that directly target internalizing or externalizing mental health problems. However, the range and specialization of services available to DJJ youth may inhibit such a reasonable distinction. Providing effective services to this population requires considerable collaboration between service sectors.

Given the authors' strict criteria to define need within domains and the self-reported nature of the measures, these data are likely under-estimates of true problems. Requiring that youth meet the problem threshold on fewer measures would increase the proportion of youth demonstrating a need within each domain. Despite the researchers' assurance of confidentiality and anonymity to the participants, the investigation took place within the context of MDJS, often with a court case pending. Although no information was shared with MDJS, the youth and parents still may have been more likely to under-report problems to avoid perceived punitive sanctions.

Although this investigation was not intended as an epidemiologic assessment of need, it does indicate that among a diverse and representative population of DJJ youth, there exists a range of health and psychosocial needs. This population constitutes a larger group of youth than those who are detained. These youth are poised to receive interventions that will decrease their problem behavior, improve their emotional well-being, and prevent recidivism to DJJ.

This research also demonstrates that needs screening at the point of intake generates useful and important information which can be used to not only identify youth problems, but also for the management of resources within juvenile justice systems. Collecting needs information at intake provides agencies with the data necessary to justify the delivery of health-related services. Because large numbers of youth will be identified as having a need during intake screening, departments of juvenile justice will struggle with how to appropriately use intake data and partner with other child serving agencies to meet the needs of youth.

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# **Juvenile Justice Outcomes of Youth in Systems of Care: Comparison Study Results**

**Anna Krivelyova  
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Robert Stephens**

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## **Introduction**

Research shows that a large overlap exists between those with mental health problems and those involved in the correctional system (Lurigio 2001; Potter & Jenson 2003; Teplin, Abram, McClelland, Dulcan & Mericle, 2002). Many youth who commit criminal offenses suffer from mental health problems, and many youth who receive mental health services commit criminal offenses (Atkins et al., 1999; Dembo, Voie, Schmeidler & Washburn; 1987; Foster, Qaseem & Connor, 2004; Rosenblatt et al., 2000). Although the exact proportion of mentally ill youth involved with the juvenile justice system is unknown, youth with mental health problems are likely over represented in the juvenile justice system (Cocozza & Skowrya 2000; Potter & Jenson 2003, Teplin et al. 2002). Offenders with mental illnesses are often placed in detention where they receive no mental health services (Gurian-Sherman, 2001). Because evidence suggests that there is a strong association between mental illness and involvement with the police and the correctional system, cross-agency collaboration in the community may address the complex needs of those with emotional and behavioral problems and reduce future criminal offending (Lurigio 2001).

Due to the overlap of youth who are involved in the juvenile justice system with mental health and/or substance abuse problems, a comprehensive system-wide approach is necessary to meet the needs of these youth. The cross-agency collaboration and service coordination are central elements of systems of care funded by the Center for Mental Health Services (CMHS) as part of the Comprehensive Community Mental Health Services for Children and Their Families Program. The system of care approach to treatment requires that child-serving agencies such as mental health, social services, and juvenile justice work together to develop an individualized treatment plan for youth. Presumably through cross-agency interaction, outcomes for youth will be improved in multiple areas such as mental health, school performance, and less involvement with juvenile justice. This study examines the effectiveness of systems of care in reducing the incidence of juvenile justice involvement among youth with behavioral and emotional disorders and the clinical outcomes of youth involved in the juvenile justice system.

## **Method**

### **Participants**

Participants were drawn from youth and families who participated in the comparison study component of the national evaluation of the Comprehensive Community Mental Health Service for Children and Their Families Program. The 1997 comparison study collected information from four communities: two CMHS-funded system-of-care communities and two matched non-funded comparison communities in Alabama and Nebraska. Given the availability of extensive juvenile justice information, this paper focuses primarily on the information about the juvenile justice involvement of children participating in the Alabama comparison study. The present sample included 202 youth served by the system-of-care grant-funded program, the Jefferson County Community Partnership, that includes the city of Birmingham, and 189 youth from the matched community located in four contiguous counties that are served by the Montgomery Area Health Authority.

### **Measures**

A variety of information was compiled from the national evaluation of the Comprehensive Community Mental Health Service for Children and their Families program data base which included a series of standardized scales administered to parents within an interview format. The Child Behavior Checklist (CBCL; Achenbach, 1991) is a widely used caregiver report measure that assesses children's emotional and behavioral problems (Achenbach, 1991). The Child and Adolescent Functional Assessment Scale (CAFAS;

Hodges & Wong, 1996) is a widely used instrument that assesses the degree to which a child's emotional, behavioral, or substance abuse disorder is disruptive to his or her functioning in each of several psychosocial domains (Hodges and Wong, 1996). The Behavioral and Emotional Rating Scale (BERS; Epstein and Sharma, 1998) identifies the emotional and behavioral strengths of children (Epstein and Sharma, 1998.). The juvenile justice records were compiled using the administrative data provided by Jefferson County Family Court and Montgomery Area Probation Administration Office.

## Results

The implementation of interagency approaches by the Jefferson County Community Partnership includes particular focus on children with mental health or behavioral problems who are involved in the juvenile justice system. The differences in the referral sources of the children served by the two communities reflected the juvenile justice focus of the system-of-care community in Jefferson County, Alabama. Among these children, 63.9% were referred to the program by the court and corrections system. The corresponding figure in Montgomery, Alabama, was 3.3%. In both communities, youth with prior juvenile involvement were older, more likely to be male and more likely to come from lower income families. They had more externalizing problems (as measured by CBCL) and higher functional impairment (as measured by CAFAS). In addition to externalizing problems, children with prior juvenile justice involvement who entered the Jefferson County system of care also exhibited more serious internalizing problems (as measured by CBCL). There were important differences between the two communities with regard to their age, family income, risk experiences, child behavior and functioning. These differences must be considered in both the analysis and interpretation of the outcome data<sup>1</sup>.

The juvenile justice records that covered a period of 36 months (18 months prior to intake and 18 months post intake date) were examined to assess the extent of juvenile justice involvement of the children in the comparison study. Among the 202 children served by the Jefferson county system of care, 135 children (66.8%) had juvenile justice records prior to enrolling into the system of care. In Montgomery, 18 out of 189 (or 9.5%) of the children participating in the evaluation had contact with the juvenile justice system prior to intake. The proportion of children charged with various crimes decreased significantly to 46.5% ( $z(202) = 4.1, p < .001$ ) during the first 18 months of services in the Jefferson County system of care. Conversely, the rates of juvenile justice involvement during the first 18 months of services among children in Montgomery, Alabama, increased to 13.7%<sup>2</sup>. A multivariate analysis of changes in crime rates in the two communities that accounted for variation in age, gender, family income, and clinical characteristics revealed that the successful reduction in crime rates in the Jefferson County system of care relative to the Montgomery comparison community was even greater once the baseline differences in demographic and clinical characteristics were taken into account<sup>3</sup>.

Figure 1 presents the most frequent charges brought against the children in the two communities during the 18 months following entry into services<sup>4</sup>. In the Jefferson County system of care, children were most likely to be charged with status offenses (18.8%) such as truancy, running away, and uncontrollable/unmanageable behavior, followed by offenses that represent danger to persons (12.4%) and offenses involving damage to property (9.8%). In Montgomery, charges of theft were most likely to occur (22.2%), followed by damage to property (19.4%) and offenses involving danger to persons (18.1%). The children in the Jefferson County system-of-care community were less likely to be charged with more serious (Part I) crimes than children in the comparison community. In the system-of-care community, 31.0% of charges filed were Part I crimes, while in the comparison community the corresponding number was 39.4%<sup>5</sup>.

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### Author notes

<sup>1</sup>The sample descriptive statistics are available from the authors.

<sup>2</sup>The increase was not statistically significant.

<sup>3</sup>The results of the logistic regressions with and without additional controls are available from the authors.

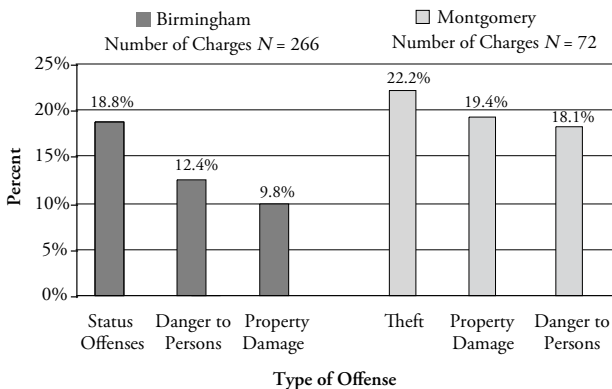
<sup>4</sup>The charges were classified using the Alabama State Code.

<sup>5</sup>The User's Guide to Alabama Juvenile Justice Case Records was used to further classify charges into Part I and Part II offenses. Part I offenses include violent and property crimes which are generally more serious. Part II crimes include less serious offenses such as receiving stolen property, possession of a weapon, possession of drugs, trespassing, and status offenses.

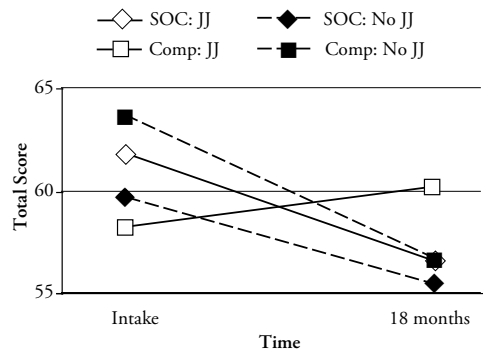


Next, a Generalized Linear Modeling method was employed to examine whether mental health outcomes of children involved in juvenile justice system differ in the system-of-care community relative to the comparison community. Figure 2 presents the trajectories of change in the CBCL Internalizing Problems for the children in the two communities. The results indicated that youth with prior juvenile justice contact served by the Jefferson County system of care had shown significantly greater improvement in their internalizing problems than their counterparts in the comparison community ( $F(242) = 4.165, p < .05$ ). No significant differences were found in the changes in the externalizing problems.

**Figure 1**  
Types of Offenses Reported in the Alabama Comparison Study Sites



**Figure 2**  
Internalizing CBCL Score by Juvenile Justice Involvement: Intake to 18 Months



## Discussion

The findings from the longitudinal comparison study demonstrate enhanced outcomes related to juvenile justice involvement for children in Alabama served in the system-of-care setting, as compared to those served in a services-as-usual environment. The findings confirm previous research that found that improved mental health outcomes of children served by systems of care reduced the risk of juvenile justice involvement (Foster et al., 2004, Foster & Connor, 2005). In addition to the decrease in the number of contacts with the system, children served by the system of care appeared less likely to commit more serious offenses. Youth with prior involvement in juvenile justice system served by Jefferson County system of care showed significantly more improvement in their internalizing behavioral problems relative to their counterparts in the matched comparison community. Given that youth with mental health problems who are involved in the juvenile justice system often exhibit externalizing behavioral problems, it is important to note the possibility of co-occurring internalizing problems for these youth and address these problems appropriately.

There are some limitations that should be considered when interpreting the results of this study. The samples were unequal and small. Further, the the analysis and discussion regarding new offenses examined and compared percentages between the two groups; findings expressed in percentages are particularly sensitive to small sample sizes.

These findings also must be contextualized within the differing organizational structures of these two mental health service environments. The Jefferson County Community Partnership expanded upon State funding for the Family Integrity Network Demonstration (FIND), a project designed to work collaboratively with other public child-serving agencies. FIND teams are outstationed at the family court (juvenile justice) and the Department of Human Resources (child welfare). For systems of care targeting particular agency-based populations, a key element of success may be the organizational placement of mental health workers within those targeted agency environments.

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# **Project CATCh: Examining a Community- and School-Based Model for Prevention and Mental Health Services in a Rural Community**

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## **Introduction**

There has been an increasing emphasis on primary schools to provide mental health services. Schools have become the *de facto* mental health system for many children, with 70-80% of children who receive mental health services being seen by providers in a school setting (Burns, et al., 1995). According to the Surgeon General (US Department of Health and Human Services, 1999), schools are the largest provider of mental health services for children in this country. The President's New Freedom Commission report calls for a transformation of the mental health care system in America (Hogan, 2003). Doing so will require an increased reliance on evidence-based school mental health interventions.

The benefits of providing school-linked mental health services are numerous. Aside from accessing children "where they are" (Weist, Evans, & Lever, 2003, p. 1), schools can facilitate outreach to students, particularly those from disadvantaged or marginalized communities with minimal resources. When families are faced with daily living stressors, mental health services may not be of prime importance. Families may also not recognize the signs and symptoms of more serious impairment in their child, particularly if the student has more internalizing symptoms and does not exhibit behavioral difficulties. For those who do recognize when a problem exists, they may be reluctant to seek services due to stigma about mental health care. Schools can provide outreach that decreases stigma and avoidance of mental health issues by providing services at the school, rather than the clinic, and in a setting more comfortable for parents and their children. School-linked mental health services can also help overcome common barriers to care (Armbruster, Gerstein, & Fallon, 1997; Flaherty, Weist, & Warner, 1996). Families may not have the means to attend a community clinic for a variety of reasons, including financial, insurance, transportation, or limited flexibility with jobs. Providing services in or near school facilities, however, minimizes many of these barriers.

The need for school district collaboration is especially evident in rural, under-served areas, such as Columbia County, Florida, where substance abuse and violence exposure rates are disproportionately high (Slovak & Singer, 2002; Florida Department of Education, 2003). Similar to other rural communities, resources in Columbia County are inconsistently available, with multiple barriers to access. This presents an ideal opportunity for partnering with the school district to increase access to children's mental health services. The National Rural Behavioral Health Center (NRBHC) at the University of Florida has partnered with the Columbia County School District to provide preventative and primary mental health services to rural students and their families. The present research examined community feedback regarding the collaborative program and the lessons learned from this successful school district collaboration.

## **Method**

Researchers at the National Rural Behavioral Health Center (NRBHC) at the University of Florida have partnered with the Columbia County School District to implement and evaluate primary and tertiary mental health services to students and families in Columbia County, Florida. Working in collaboration with the local mental health sector, Columbia Acting Together for Children (Project CATCh) is a federal Safe Schools/Healthy Students site that has invested heavily in bringing community entities (e.g., school, mental health, law enforcement, public health, local business) together to increase

coordinated care for at-risk children. A critical component of Project CATCh is the Prevention Management Team (PMT), which includes service providers and families to identify students' needs and design tailored service plans to best address these needs. Families who participated were referred for services by school staff, typically the school guidance counselor.

We surveyed the 12 school guidance counselors from participating schools, 12 representatives from the community agencies collaborating in Project CATCh, and 12 parents who participated in the PMT process regarding their experience with Project CATCh and the PMT. Frequency data were obtained and analyzed by NRBHC staff. Results were used to advise Project CATCh staff of the perceptions and experiences of participating agencies and families, and to inform and improve procedural issues in the program and the PMT. The respective pen-and-paper surveys were self-administered and included 18-19 questions developed by NRBHC staff. The survey included questions in both Likert scale and open-ended format.

## Results

**Limitations.** The limitations of the survey should be noted. The purpose of the survey was to assess participant satisfaction with the project overall. As such, the results are from a satisfaction survey only and are not intended to identify causal relationships or group differences. Second, the sample size is small and not intended to represent the community as a whole, but rather the specific individuals who participated in the PMT.

Overall, community agency representative responses were positive, suggesting significant benefit to families as well as community agencies. Agencies indicated the program provided more service options for families, and increased inter-agency awareness, collaboration, communication, and sense of unity. Suggestions for improvement included better follow-up with families, more consistent attendance by community members, and increased awareness of Project CATCh in the schools. Of the agencies interviewed, 91% said they understand the service planning process. Eighty-three percent of these respondents agreed that the PMT meeting is convenient to attend and useful for treatment planning, but two respondents (17%) said the process was inefficient. For instance, they indicated that the meeting ran longer than needed.

Guidance counselors from most of the schools in the district were also interviewed. Overall, counselors indicated the program was positive and said they would continue to refer students. Suggestions for improvement included increased feedback from agencies providing services, decreased time between the referral and service provision, and improved follow-up from the families. All felt they could explain Project CATCh to students and families, and 90% felt it was not too involved. However, 43% reported that attending the PMT was inconvenient, and three of the eleven respondents who answered (28%) were dissatisfied with the time between the initial referral and PMT.

Parents reported general satisfaction with the program, stating that it provided expanded resources to children, it educated parents about mental health issues, and "re-instilled faith" in the school system. Parents generally felt comfortable discussing their child's case with the community agencies, but two of the eleven parents who answered (18.2%) reported they were "unsure" about confidentiality issues (see Table 1), which is not surprising given the small community setting.

**Table 1**  
**Parent Likert-Scale Responses**

|  | <i>SD</i> | <i>D</i> | <i>MD</i> | <i>U</i> | <i>MA</i> | <i>A</i> | <i>SA</i> |
|--|-----------|----------|-----------|----------|-----------|----------|-----------|
| I felt comfortable talking to UF during the assessment | —         | —        | —         | —        | —         | 16.7%    | 83.3%     |
| I was listened to                                      | —         | —        | —         | —        | —         | 16.7%    | 83.3%     |
| I felt comfortable talking at the PMT                  | —         | —        | —         | —        | —         | 16.7%    | 83.3%     |
| I am worried about confidentiality                     | 54.5%     | 27.3%    | —         | 18.2%    | —         | —        | —         |
| We had to wait too long for the initial assessment     | 41.7%     | 41.7%    | —         | —        | 8.3%      | —        | 8.3%      |
| We had to wait too long for the PMT                    | 75.0%     | 16.7%    | —         | —        | 8.3%      | —        | —         |
| Seeking services through CATCh has been hard           | 72.7%     | 27.3%    | —         | —        | —         | —        | —         |
| I am satisfied thus far                                | 9.1%      | —        | —         | 9.1%     | —         | —        | 81.8%     |

*Notes*

SD = Strongly Disagree, D = Disagree, MD = Mildly Disagree, U = Unsure, MA = Mildly Agree, A = Agree, SA = Strongly Agree

**Discussion**

Obtaining feedback from community stakeholders, service providers, and families is an essential component of successful community collaboration. To assess participant satisfaction with Project CATCh, self-administered satisfaction surveys were given to community representatives, school guidance counselors, and families. Overall satisfaction with Project CATCh is high. Community agencies, guidance counselors, and families rated the program positively, suggesting the school-linked services have been helpful in providing services to students and their families. Service providers reported being satisfied with the program and noted that it increased community awareness regarding available services for families, and the families themselves indicated they felt more resources were available. However, concerns were expressed regarding the program’s efficiency. The primary area in need of improvement was decreasing the waiting time for services. Based on the results of the survey, Project CATCh staff collaborated on methods to improve the process of service delivery. Namely, the interval between the initial referral for services to the actual therapy intake was streamlined to reduce family wait time and initiate services more efficiently. Guidance counselors have responded positively to this change and feel the system is less cumbersome for families.

Preparing the survey and analyzing the results gave us a chance to reflect on additional lessons we have learned during the process of implementing a school-linked program in the context of community partnership. While not inclusive, these guidelines address potential pitfalls and highlight issues to consider in community-participatory research.

First, identifying the needs of the community is vital to program development as well as working toward increasing stakeholders’ and community members’ perceptions of program acceptability. The obvious first step in building any successful collaboration for prevention and mental health services is to identify the specific needs for services and build motivation to expand current services. Gaining entrance into the school community first requires recognition for the need for mental health services. Second, addressing resistance must be a priority at all phases of program development and implementation. Introducing a new mental health program is more likely to succeed if there is the capability of building on some form of intervention that is already in place. However, despite the existence of a school-based model of mental health services, convincing administrators to incorporate additional services can be a challenge. Third, program developers should consider methods of expanding the investment to increase

the sustainability of the program. Once the administration has accepted the need for services, engaging other school staff in the design of the program increases chances for successful implementation. Further, this decreases the likelihood that community and school partners will be disenfranchised by a common occurrence: termination of school-linked mental health services following the termination of initial funding streams (Owens & Murphy, 2004). Fourth, providing timely follow-up should be a priority of all school-linked mental health service program developers and providers. One of the most common complaints of school staff toward school-linked mental health services was that they referred a student for services and then heard nothing more about the student or how specific concerns were addressed. Fifth, communicating with community members during all phases of the project is key to both program development and sustainability. Indeed, it is essential to build and maintain open communication between all involved parties, especially as the collaborative relationship progresses (Owens & Murphy, 2004). Finally, school-linked mental health programs must always maintain sensitivity to the community's cultural needs and values. The community is, after all, what is being served. Furthermore, maintaining such cultural sensitivity increases the likelihood that a school-linked mental health program can be fully integrated into the network of community resources in an acceptable and accessible manner.

Consideration of these factors, together with self-evaluation and flexibility, will aid in the implementation and sustainability of collaborative community programs, such as school-linked services, which are indispensable providers for under-served children and families.

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## **Chapter Twelve**

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### **Workforce Development**



# **Symposium**

## **Building a National Strategic Plan for Workforce Development**

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### **Symposium Introduction**

**Carol MacKinnon Lewis**

There is a growing consensus that improvements in quality of care will not be achieved without systematically addressing a range of problems related to the behavioral health workforce. These problems include severe shortages of qualified providers, driven in part by difficulties in both recruitment and retention. There are also substantial concerns regarding the education and training provided to members of the workforce: major segments of the workforce receive no substantive training; graduate and residency education programs have not kept pace with dramatic changes in the field's approach to service delivery; continuing education is based almost exclusively on ineffective lecture models; and consumers and families receive little educational support despite their major role in caring for themselves and others. The Substance Abuse and Mental Health Services Administration (SAMHSA) is supporting the development of a National Strategic Plan on Workforce Development in Behavioral Health.

This symposium provided the historical development of and necessity for this initiative. Sybil Goldman, Senior Advisor on Children at SAMHSA described the objectives of this initiative and placed them in the context of SAMHSA's efforts to foster the transformation of care as envisioned in the report of the President's New Freedom Commission. Development of the National Strategic Plan is being coordinated by The Annapolis Coalition, which is an organization dedicated to improving behavioral health workforce education and development. The Coalition's Co-chair, Michael Hoge, provided an overview of workforce planning efforts, to date, and described the process that will lead to the development of the National Strategic Plan. Larke N. Huang, a member of the President's New Freedom Commission and Senior Consultant to The Annapolis Coalition, discussed the workforce crisis in children's behavioral health and presented preliminary ideas on the essential elements of the National Strategic Plan as it pertains to caring for children and their families. Randolph Muck, Team Leader for Adolescent Treatment in SAMHSA's Center for Substance Abuse Treatment presented information on the workforce issues specific to treatment for adolescents with substance use disorders and discussed possibilities for improvement within behavioral health in the screening, identification, and treatment of these youth.

### **Behavioral Health Workforce Education and Development: Initiatives Supported by The Substance and Mental Health Services Administration**

**Sybil K. Goldman**

#### **Introduction**

The best intended plans for systems of care for youth and families cannot succeed unless the pressing issues of workforce development and personnel shortages in behavioral health are addressed. These are not new issues; indeed, they have been discussed and recommendations made for more than a decade. In the late 1980s, key leaders in children's mental health met at Boston University to discuss what they saw as an emerging problem around workforce recruitment, retention of workers, and the quality and training of a workforce that could deliver state-of-the-art services to children and their families. Even then, the complexities of the problem were recognized, along with the number of players and systemic levels: universities; accrediting bodies; federal, state and local agencies; insurers; provider agencies and many more.

#### **Chair**

**Carol MacKinnon-Lewis**

#### **Authors**

**Sybil Goldman**

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The concerns of that group were later echoed in national reports such as the Surgeon General's Report on Mental Health (U.S. Department of Health and Human Services, 1999); *Crossing the Quality Chasm: A New Health System for the 21st Century* (Institute of Medicine, 2001); *Achieving the Promise: Transforming Mental Health Care in America*, President's New Freedom Commission on Mental Health Report (2003), and by other prominent organizations across the field. There was a consensus among all of the reports that America needs a better health care workforce: one that includes consumers and families in decision-making, is responsive to and reflects the myriad of cultures and languages found in our society, is knowledgeable about best practices, and has the skills, attitudes, and knowledge based on the progress made and the lessons learned in the field of child behavioral health. Moreover, over the next 10 years, these issues are projected to reach critical proportions and represent a serious threat to children, adolescents and families who have or are at risk for mental, emotional, and substance use disorders. In this presentation, the complexity and enormity of the workforce problem facing us was addressed as well as the Substance Abuse and Mental Health Services Administration's (SAMHSA's) efforts to respond.

A new and improved workforce cannot be produced through old, out-dated training programs. Too many university programs throughout the country are still using the traditional models. They are not relevant to current needs and thus are not producing a workforce with the necessary core competencies to adequately serve children who have or are at risk for mental and/or substance use disorders, and their families.

Currently, training programs do not include key components of an effective service delivery system that reflect the dramatic shifts that have occurred in the last 20 years, such as:

- Family driven and youth guided care where families and youth are part of the decision making process and are partners in all aspects of the service system;
- An individualized care planning approach, based on family strengths and culture;
- A comprehensive array of services and supports that include evidence-based interventions;
- An understanding of the multiple systems and funding streams that comprise the child service delivery system;
- Strategies for working collaboratively across systems and working in teams;
- Outcome-based accountability; and
- New ways to put technology to use for behavioral health for children and their families. Most graduate training programs in social work, psychiatry, psychology, counseling, and nursing are not teaching these core competencies.

A vast array of in-service and continuing education training opportunities exist to address some of these training needs for the human service workforce, including professionals, those with undergraduate degrees, consumers, families, youth, and the front-line providers who make up much of the service delivery system for children and families. But overall, continuing education and in-service training—while important components of ensuring a quality workforce—are idiosyncratic: some are very effective, but most are not. Until we work in partnership with our universities, professional associations, and state and community service providers around meaningful, integrated, consumer- and family-driven, culturally competent and evidence-based training programs—and until all university programs start doing a better job of recruiting students—our work force crisis will prevail.

## **Shortage of Providers**

The need for a better-prepared workforce is only half of the workforce problem. We currently have a shortage of providers, making matters even worse. Some children and families do not have access to any mental health or substance abuse professionals adequately trained in the arena of children's mental health. This is especially the case in rural areas. Since rural populations tend to be poorer, few child psychiatrists choose to live in rural areas, causing a severe "mal-distribution" of child psychiatrists. For example,

Massachusetts has 17.5 child and adolescent psychiatrists per 100,000 youths while West Virginia has only 1.3. Recruitment, retention, and retirement issues contribute to the shortage problem, a problem that must be addressed given that the prevalence of children's mental health problems is likely to increase as stressors in society continue to increase, according to the previously cited reports.

**Recruitment Issues.** There are many factors contributing to the recruitment problem. Low salaries, poor benefits, and the hassles of third-party reimbursement have been cited as obstacles to attracting more graduate students to child and family behavioral health programs. Extensive and costly training is another deterrent. We must overcome these obstacles and improve our recruitment efforts, otherwise the workforce shortfall will only worsen.

**Retention Issues.** Retaining professionals in the field is as problematic as recruiting them. The difficulty in persuading people to stay in behavioral health is fueled by the same reasons that make it difficult to recruit them in the first place. While work in this field can be rewarding, it can also be stressful and challenging without adequate support and training. Turnover is a major concern in both the substance abuse treatment and prevention system and in the mental health delivery system. One study by McLellan found that more than half of the substance abuse treatment program directors and a similar proportion of counselors surveyed were in their current jobs for less than a year.

**Retirement Issues.** The forecast over the next 10 years is even more daunting. An estimated one-third of the workforce will be reaching retirement age. Many of the current generation of leaders will be retiring and their replacements are not being recruited or retained. Further exacerbating the problem is a trend that shows—unlike their baby boomer predecessors—that the next generation of workers, typically, do not stay in one career but pursue multiple careers throughout their lifetime. (This trend, by the way, may be very positive for our field!)

Although a rather bleak picture has been painted, there is hope that we can make changes; where there is crisis there is opportunity. Through leadership and partnerships, concerted steps are being taken to repaint this picture. SAMHSA is taking strategic action to increase the number of behavioral health care providers and improve their training. SAMHSA's Administrator, Charles Curie, has made improving the workforce a cross-cutting principle on the SAMHSA Matrix which means these activities and resources are receiving priority status.

## **Goals and Strategic Plan**

The President's New Freedom Commission on Mental Health report (New Freedom Commission, 2002) identified six goals as the foundation for the transformation of mental health. SAMHSA, specifically the Center for Mental Health Services (CMHS), is working with 19 Federal agencies on an action agenda to implement these goals, as well as the other goals and recommendations of the Commission Report. As part of the mental health transformation agenda and the Administrator's other priorities for Reducing the Substance Abuse Treatment Gap and Implementing a Strategic Prevention Framework, SAMHSA is investing in the development of a strategic plan on workforce that will include children/youth and adults and will address both mental health and substance use, a plan presented below in the summary by Michael Hoge.

The Strategic Plan grows out of the work of the SAMHSA-funded Annapolis Coalition. The Annapolis Coalition examined training offered in many graduate programs and continuing education programs and has identified core competencies for training and education in behavioral health. This Plan will be important because it will provide a blueprint for SAMHSA activities, identify priorities and gaps, and determine critical partnerships. To address these workforce challenges, we recognize we must work in concert with others. The plan will help us be smart in how we can best utilize our resources and impact change. For example, SAMHSA spends millions of dollars annually in training and technical assistance. It is important that those dollars are used effectively to enhance our workforce. This Plan will help to inform future initiatives as well as those in which we are currently engaged, some of which are described below.

### **Minority Fellowship Program**

One important SAMHSA initiative to address the disparities in care and provide culturally competent care is the Minority Fellowship Program. Ethnic groups continue to increase across the country and represent about 25% of the population. Meanwhile, the number of professionally trained minority mental health providers is only 8%. The Minority Fellowship program invests \$3.3 million per year to the American Nurses Association, the American Psychiatric Association, the American Psychological Association and the Council on Social Work Education to support graduate education fellowships for minority students in these fields.

### **Federal National Partners**

As Senior Advisor on Children, I convened a workgroup across the three centers at SAMHSA—The Center for Mental Health Services, The Center for Substance Abuse Prevention and The Center for Substance Abuse Treatment—to develop a blueprint for action to guide our children’s activities through SAMHSA. Because workforce emerged as a priority issue of concern across the three Centers of SAMHSA, a subcommittee was formed to address workforce issues. Given that the issues are complex and resources limited, our approach has to be strategic. So through Georgetown University, federal agencies were convened to inventory and share information on workforce training. We discovered that our federal partners are also allocating significant resources for training and competency development.

An outgrowth of the workgroup was a meeting of Federal National Partners for Mental Health Transformation, which was held in November of 2004. More than 20 key federal agencies and more than 40 public/private organizations were represented and discussions included a focus on leadership and human services workforce issues. A task force of federal agencies and national partners will continue to work together on action steps.

### **SAMHSA Human Services Workforce for Children and Families Project**

Another product of the SAMHSA Children and Families Workgroup is a directory of web based training resources for mental health and substance abuse professionals working with children and adolescents developed by the University of South Florida, Louis de la Parte Florida Mental Health Institute.

### **Center for Substance Abuse Treatment Programs**

The Center for Substance Abuse Treatment (CSAT) has been active in providing leadership on workforce issues in the substance abuse field. A CSAT publication, *Addiction Counseling Competencies: The Knowledge, Skills and Attitudes of Professional Practice*, is currently being used by several professional organizations as the basis for developing certification requirements for addiction counselors. Randy Muck’s summary to follow provides more detail on CSAT workforce activities.

### **Strategic Plan for Interdisciplinary Faculty Development**

SAMHSA’s Center for Substance Abuse Treatment, the Health Resources and Services Administration’s Bureau of Health Professions and the Association for Medical Education and Research in Substance Abuse jointly developed the *Strategic Plan for Interdisciplinary Faculty Development: Arming the Nation’s Health Professional Workforce for a New Approach to Substance Use Disorders*. The report includes a summary of the core knowledge, attitudes, and skills needed by health professions in all disciplines to effectively identify, intervene with, and refer persons with substance use disorders.

### **Conclusion**

The initiatives highlighted may appear to be small steps toward the transformation of our behavioral health care workforce, but they can make a big difference. As we continue to engage each of the players involved and as each of us does our part, we will reach the goals outlined by the President’s

New Freedom Commission. I adhere to the Confucius proverb, “A journey of a thousand miles begins with a single step.” Our journey has begun; now it is up to all of us to do what is necessary to reach our destination. Together, we will succeed...we must succeed...because future generations are depending on us. We must never forget that children living with or at risk for mental illnesses and their families across this great nation deserve to receive treatment from a competent and well trained workforce. They deserve an opportunity for resilience and recovery, and they deserve to live a full life in their community.

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## **A National Initiative to Improve Behavioral Health Workforce Development**

Michael A. Hoge

### Introduction

There is a national crisis regarding the behavioral health workforce. This crisis is marked by a number of paradoxes that characterize the education of providers in mental health and addiction services. First, graduate programs have not kept pace with the dramatic changes wrought by managed care and subsequent health care reforms, leaving students unprepared for contemporary practice environments. Second, continuing education models persist in using passive, didactic models of instruction that have been proven ineffective in controlled research (Mazmanian & Davis, 2002; Freemantle, Wolf, Mazmanian & Taylor-Vaisey, 1999). Third, non-degreeed and bachelor-degreeed direct care providers, who may have the most contact with consumers, receive very little training. Fourth, consumers and families, who play an enormous care-giving role, typically receive no educational support, nor is their unique knowledge and their experience used in the training of other members of the workforce. These problems of relevance and effectiveness of training are compounded by major difficulties recruiting and retaining qualified individuals as members of the workforce.

### Origins of The Annapolis Coalition

Two organizations have joined forces to address this crisis by creating The Annapolis Coalition on the Behavioral Health Workforce. The two founding organizations of The Coalition are the American College of Mental Health Administration (ACMHA) and the Academic Behavioral Health Consortium (ABHC). ACMHA is a national, interdisciplinary body with a 25-year history of efforts to preserve and improve the quality of behavioral health care, with a special emphasis on administration and leadership. Since 1997, ACMHA has convened the Santa Fe Summits on Behavioral Health, which have brought national leaders in the field together to address topics such as quality improvement, practice guidelines, education and training, financing of services, and cultural competence. ABHC is a non-profit membership organization comprised of universities and their departments of psychiatry. Its mission is to foster the adaptation of academic behavioral health departments to the changing health care environment and to promote reform in the arenas of clinical care, education, and managed care.

### Mission of The Annapolis Coalition

The members of the Annapolis Coalition on the Behavioral Health Workforce are engaged in efforts to build a national consensus on the nature of the workforce crisis, promote enhancements in the quality and relevance of education and training, and improve recruitment and retention to the field. Draft objective, mission, and vision statements (described below) and a draft set of strategic workforce goals (Table 1) have been circulated by the Coalition for public review and comment.

**Objective.** To forge a national plan of action to strengthen the behavioral health workforce.

**Mission.** To ensure the availability of a workforce, sufficient in size and skill, to meet the needs of individuals with mental illnesses and substance use disorders by providing care that is safe, person-centered, effective, efficient, equitable and timely.<sup>1</sup>

**Vision.** With respect to the workforce, we envision a future in which:

- persons with mental illnesses, substance use disorders, and their families are empowered through knowledge and skills, valued as full partners in the treatment process, recognized for the care they provide to themselves and others, and called upon to educate members of the workforce about these illnesses;
- a culturally diverse group of individuals who value and respect persons with these illnesses are recruited to work in this field and are retained through career paths that offer continued professional growth, mentoring, and compensation commensurate with the requirements and responsibilities of this work;
- those who provide treatment and prevention activities engage in a process of lifelong learning, informing their work with the most current scientific evidence and offering interventions that are most likely to be effective;
- educators use teaching strategies of proven effectiveness to assist students and trainees in achieving and demonstrating the competencies that are essential for practice in a rapidly changing healthcare environment; and
- systems, organizations, and interdisciplinary teams that provide services actively support the recruitment, retention, continued development, and competent performance of individuals in the workforce.

**Table 1**  
**Strategic Workforce Goals**

1. Empower consumers and families as caregivers and educators;
2. Recruit and retain a qualified workforce in adequate numbers;
3. Use effective training strategies;
4. Employ competency-based approaches for workforce training and development;
5. Engage members of the workforce in a process of life-long learning;
6. Develop managers and leaders for all segments of the workforce;
7. Ensure that workforce education, development, and oversight processes (certification, licensure, accreditation) have relevance to current practice;
8. Use interdisciplinary training to teach interdisciplinary practice;
9. Ensure that systems of care and the organizations within them actively foster and support competent performance of individuals in the workforce; and
10. Secure financing that is adequate to maintain a qualified workforce and create incentives for excellence.

<sup>1</sup>The "six aims" of care are adopted from the Institute of Medicine's *Crossing the Quality Chasm: A New Health System for the 21st Century* (2001).



## Activities of the Annapolis Coalition to Date

The Annapolis Coalition's principal activities have focused on knowledge development, network creation, and consultation and technical assistance. Members have synthesized published recommendations on strategies for improving the quality and relevance of workforce education and training—the goal being to identify innovation in workforce education, as well as change strategies and tactics for overcoming the obstacles to educational reform. Another primary function of The Coalition is creation and maintenance of a network of stakeholders concerned about the future of the workforce; this entails linking those who have similar interests, and those who can be of assistance to each other regarding innovation, curriculum content, teaching strategies, etc. To support this network and identify best practices in workforce education, educational events for stakeholders and national working meetings have been convened. Finally, drawing on this knowledge base, Coalition members now provide expert testimony to national initiatives on workforce issues, provide consultation to states and others regarding curriculum development and performance-based purchasing of training, and support the Substance Abuse and Mental Health Services Administration (SAMHSA) in the development of a national action plan for improving the workforce.

### Project Phases

The work has evolved in five phases:

**Phase I: Building Consensus.** At the recommendation of SAMHSA leadership and with the support of AHRQ, this initial phase focused on developing a national consensus on the nature of the workforce crisis and key strategies of reform. To accomplish these objectives, a meeting of 65 stakeholders was held in Annapolis, Maryland on September 10-11, 2001. The name of The Annapolis Coalition is derived from this initial gathering of providers, academics, consumers, and family advocates. In advance of the meeting, a series of position papers were prepared and circulated, each outlining the problems and potential solutions for improving the training of various segments of the workforce. During the Annapolis meeting, participants critiqued these papers, which were then revised based on the feedback received and published as a special double issue of the journal *Administration and Policy in Mental Health* (2002).

**Phase II: Dissemination of Recommendations.** The second phase of this work, funded by SAMHSA, with in-kind support from the founding organizations, involved several elements. Dissemination of the recommendations from the first Annapolis Conference occurred through a dozen presentations at national professional meetings, distribution of over 500 copies of the proceedings to key leaders in the field, and creation of a website, listserv, and database of interested stakeholders. As an outgrowth of these dissemination efforts, The Annapolis Coalition has built informal working partnerships with numerous professional and advocacy groups that are invested in addressing the workforce crisis.

As part of this dissemination effort, Co-chairs of the Coalition formulated and presented a series of recommendations to the President's New Freedom Commission. They then consulted the Commissioners and Commission staff, preparing language on the workforce crisis that was subsequently included in the final report.

The final element of Phase II involved the preparation of five additional position papers, which expanded the intellectual and scientific foundation on which further workforce reform efforts can be built. The papers outline best practices in workforce education, teaching strategies that have an evidence base, a compendium of innovative practices in behavioral health workforce education, children's workforce issues, and the need for substance use disorders training among the mental health professionals. These papers were subsequently published as a special issue of *Administration and Policy in Mental Health* (2004).

**Phase III: Focus on Competencies.** SAMHSA awarded The Annapolis Coalition funding for a third wave of activity focused on furthering the use of competency-based approaches to building a stronger workforce. Four position papers were developed in this phase, drawing heavily on advanced work

on competencies in business and general medicine. The topics included: fundamental concepts and definitions; strategies for building competency models; tools for assessing competency; and progress in competency development for key segments of the behavioral health workforce. This phase of work included convening a second national meeting, focused on competencies, in Annapolis, Maryland on May 10-11, 2004. The papers developed as part of the focus on competencies were published as a third special issue of *Administration and Policy in Mental Health* in May 2005.

**Phase IV: Consultation to the Institute of Medicine.** As part of the work of the Institute of Medicine's (IOM's) Committee on Crossing the Quality Chasm, Adaptation to Mental Health and Addictive Disorders, the Annapolis Coalition was commissioned by the IOM and SAMHSA's Center for Mental Health Services to prepare a white paper for the Committee on Behavioral Health Workforce Issues. The Coalition Co-chairs collaborated with Eric Goplerud of George Washington University as a co-author of the white paper. Dr. Goplerud is an expert in substance use disorders treatment and workforce issues.

The Annapolis Coalition also convened an expert panel comprised of consumers, family members and professionals from the mental health and addiction fields to generate a report of recommendations for the IOM Committee to consider including in its final report.

**Phase V: National Strategic Plan.** Again with support of SAMHSA (in this instance, a joint funding effort of the Office of the Administrator and the Directors of the Center for Mental Health Services, the Center for Substance Abuse Treatment, and the Center for Substance Abuse Prevention), The Annapolis Coalition has entered the most ambitious phase of its work.

Over the course of calendar year 2005, The Coalition will undertake two major tasks: (1) creation of a national strategic plan on behavioral health workforce improvement, and (2) providing technical assistance to the field on workforce issues. The national technical assistance effort will focus on consultations, clearing house functions, an improved and expanded Annapolis Coalition website, creation of a database of stakeholders, list-serves, and other activities. The national strategic planning process is designed to seek broad input from the field in order to identify a core set of practical, viable strategies for strengthening the workforce. A variety of strategies are in place to seek input and expert opinion on the highest priority elements of an action plan, and the net is being cast as broadly as possible to ensure the relevance of the findings. The action plan expands the work of The Coalition from its initial focus on education and training to now include issues of recruitment and retention.

Vehicles for development of the national plan include: engagement of senior advisors in selected content areas; creation of expert panels; review of existing workforce documents, reports, and literature; presentation of the planning process and requests for recommendations in national meetings; specially convened planning meetings; and open calls for input. The draft plan is due to SAMHSA at the end of 2005, and will be distributed to the field for review and comment in the spring of 2006.

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## **Challenges and Solutions in Developing the Children's Behavioral Health Workforce**

Larke Nahme Huang

### **Introduction**

The need for “significant changes in practice models and in the organization of services to improve access, quality and outcomes in mental health” was described in a report from the President's New Freedom Commission on Mental Health (2003). The Commission recognized that changes are needed, both in terms of who does the work in mental health and how that work is done. There are a number of challenges that must be addressed in order to accomplish those changes.

### **Challenges for the Children's Workforce**

Workforce issues are particularly critical in the child and adolescent area. The mental health needs of children and adolescents are complex, as they are constantly changing and those changes are linked to developmental stages. Children and adolescents with mental health needs interact with multiple child-serving systems that are “fluid and unboundaried” (e.g., child welfare, education, juvenile justice, substance abuse, childcare, early intervention, etc.). Traditional mental health service delivery has involved child psychiatrists, psychologists, clinical social workers, psychiatric nurses, case managers, and others. However, there are other nontraditional resources such as parents and paraprofessionals who are positioned to partner in providing mental health services to children and their families. Indeed, family members have described themselves as an untapped “silent army” ready to partner with professionals although many professionals do not understand or make effective use of partnerships with families in treatment.

*Demographic challenges.* There are demographic trends that have significantly influenced the challenges facing the workforce area in children's mental health. It is projected that by 2030, there will be more than 83 million children in the United States under the age of 18, an increase of 16% over 2000 Census figures. Moreover, the growth rates among ethnic and racial youth are expected to dramatically shift between 1995 and 2015: 74% among Asian American children and youth; 59% among Latino children and youth; 19% among African American children and youth; 17% among American Indian children and youth; and minus 3% among white, non-Hispanic children and youth.

*Population challenges.* There are also epidemiological trends that will contribute to concern about issues related to workforce development. There are increasing numbers of youth with emotional behavioral problems (Friedman, Kutash & Duchnowski, 1996; Pottick, 2002), including very young children referred for treatment with social-emotional disturbances (Meyers, 2005; Pottick & Warner, 2002). One child in five in the United States has a diagnosable mental disorder and one in 10 has a serious emotional disturbance that causes substantial impairment in their functioning. There are increasing numbers of children and youth with co-occurring mental health and substance abuse disorders (Pottick, 2002; Holden & Santiago, 2002), as well as mental health disorders and developmental disabilities (Emerson, 2003). Children are being cared for by family members who themselves have mental health and/or substance abuse problems.

*System challenges.* There are a number of key principles that have been identified as critical by the President's New Freedom Commission on Mental Health (2003) if the proposed transformation is to be accomplished. Some of these are system-level issues and are specific to training. There is an overall critical shortage of behavioral health providers, particularly for children from targeted populations (e.g., young, diverse populations, co-occurring disorders, in rural areas). Further, there is a mismatch between the training that universities are providing and the realities of practice. Education must be aligned with the necessary core competencies to adequately serve children with behavioral health needs. Human service providers need to be trained to have the attitudes, behaviors, and skills that are congruent with the changing field of children's mental health. This calls for:

### *Adopting New Values and Principles:*

- Providing services for children in context of family, a “whole family approach”
- Working with the cultures of the child and family
- Best serving children and families in their homes and communities

### *Adapting to a New Operating Environment:*

- Work is collaborative, e.g., cross-agency service planning teams
- Work is interdisciplinary, e.g., broader view of who are the providers
- Outcomes are based on goal of maximizing potential and resiliency
- Using technology and information technology to improve services

The President’s New Freedom Commission provided an opportunity to highlight workforce development issues, reflected in goals 3, 4, and 5 (see Hoge’s summary, above). The development of a comprehensive strategic plan to improve the recruitment, retention, diversity and skills of the workforce is called for. The Center for Mental Health Services (CMHS) has authorized the development of a National Strategic Plan for Workforce Development that includes a Child and Adolescent Workforce Panel with the explicit task of providing recommendations for expanding and improving the children’s behavioral workforce; these recommendations will be included in the National Strategic Plan.

A variety of approaches are being utilized in the following order: (1) gather and review reports, plans, written documents, (2) hold discussion groups at child-focused meetings, (3) make general and targeted requests for recommendations from key stakeholder groups, (4) convene meetings of the Panel to synthesize key recommendations, within the framework of 10 strategic workforce goals, (5) submit recommendations to the National Panel, and (6) sustain a collective voice in the field to move this agenda for children and families forward.

## **Discussions with State Mental Health Directors**

Early discussions with State Children’s Mental Health Directors have revealed a number of trends. They are experiencing: a high turnover rate; a shortage of child psychologists and psychiatrists, particularly in early childhood; a lack of high quality supervision; a lack of bilingual staff, and; a lack of staff to serve rural communities, or who understand rural cultures. A high proportion of the early entry staff is inexperienced and they have to “unlearn” what they were taught in graduate school. Pay is grossly inadequate, with too few benefits. A number of strategies that been implemented by several states are:

- Connecticut: forged collaboration between State Mental Health Authority and State University (UConn)
- Kansas: Kids Training Team at Wichita State uses case managers from the field as trainers/faculty
- Vermont: collaboration with the Federation of Families to put a 7.5% salary increase in the Governor’s three-year plan
- Iowa: working with neighboring states to share clinicians
- South Carolina: telemedicine and telepsychiatry; differential pay for underserved areas; system of care training in medical schools
- Idaho: “new worker academy,” based on system-of-care principles, for child welfare and mental health workers; mandatory during six-month probation period
- Arizona: pre- and post-service workforce trainings by family members and consumers
- Indiana: Technical Assistance center for systems of care that conducts state-wide regional trainings

## Selected Recommendations from State Children’s Directors

Recommendations were solicited from the State Children’s Directors pertaining to doable action steps/interventions that are feasible in response to the 10 Strategic Workforce Goals. Their recommendations included: (a) in university pre-training and in-service training, incorporate families as developers of training, and as co-trainers and evaluators across the disciplines; (b) develop a fidelity scale for training in system-of-care values and principles to ensure that the workforce has the competencies required to work in systems of care; and (c) develop benefits, salary and loan repayment incentives to help retain a quality workforce

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## **Adolescent Substance Abuse Treatment Workforce Training and Development of Effective Interventions for Adolescents**

Randolph Muck

### **Introduction**

Since the early 1990s through 1997, the rates of adolescent substance use almost doubled and the number of adolescents presenting for substance abuse treatment increased by 57%. However, as of 1997, there were few published studies of adolescent treatment and many were of relatively weak methodological quality (e.g., low participation rates, high attrition rates, few to no standardized measures, non-experimental designs with just two observations and no comparisons, low sample sizes, low statistical power and weak analysis). Even where there were some promising approaches, there was a lack of manualized approaches that could be readily replicated or disseminated. The state of adolescent treatment and workforce development lagged similarly behind, since there was a paucity of training in interventions related to adolescent substance abuse treatment. Many treatment programs serving adolescents used adult models of treatment that have now been proven to be ineffective.

### **CSAT Funding Program**

Given the dearth of knowledge about treatment for youth and the concomitant lack of proven effective protocols specific to adolescent treatment, The Center for Substance Abuse Treatment (CSAT) began in 1997 to fund studies/programs to develop effective interventions for adolescents that could be transported to the field, using standardized measures, multiple sources of information (e.g., self-report, collaterals, urine screens, records reviews) and with multiple follow-ups at least at 3, 6, and 12 months post intake (the majority of CSAT's adolescent treatment grant recipients have maintained at least 85% participation and follow-up rates of 85-95%).

The Global Appraisal of Individual Needs (GAIN; Dennis, Dawud-Noursi, Muck, & McDermeit, 2002) is the assessment instrument used by the majority of the CSAT funded adolescent treatment grantees since 1997, of which there are currently over 140. The use of a standardized assessment with uniform datapoints for follow-up has allowed for the pooling of data across sites and has led to numerous publications and many ongoing investigations. Currently, with data on over 6,000 youth nationwide, this data set is being used by investigators to answer pertinent questions related to the treatment and outcomes of youth with substance use disorders. Additionally, training and certification is provided to clinicians to use this tool for clinical decision-making, and as a crosswalk to DSM-IV-TR (American Psychiatric Association, 2000) and ASAM Patient Placement Criteria (Mee-Lee, Shulman, Fishman, Gastfriend, and Griffith, 2001).

In 1997 CSAT funded the first grant program geared specifically to adolescents—the Cannabis Youth Treatment (CYT) Study. As a result of this study, five effective outpatient treatment interventions were identified and manualized, allowing for training of clinicians in these interventions. Following CYT other grant programs have evaluated and manualized effective approaches for intensive outpatient and short-term and long-term residential treatment for adolescents that are in the public domain and readily available to program managers and clinicians for use within a variety of settings.

### **Intervention Program Replication and Workforce Development**

In 2003, as a direct outcome of CYT, CSAT funded 22 programs across the nation to replicate one of the treatment protocols developed in CYT (Motivational Enhancement Therapy/Cognitive Behavioral Therapy 5; MET/CBT5) within their treatment programs. Over the next three years this naturalistic experiment of the adaptation/adoption of this protocol into standard clinical practice will be tested. A major goal of this grant program is improvement of the workforce. A national certification program for supervisors and clinicians providing this intervention has been instituted. A train-the-trainers approach has been

developed to allow for ongoing training at local program sites and viability of continued workforce training once the federal funding ends. Individual sites are adding what they believe are clinically necessary adjuncts to the approach, including family sessions and case management. The intervention is being replicated in primary care, juvenile justice, student assistance, and community outpatient treatment programs.

On September 30, 2004, CSAT funded an additional 16 sites to replicate this protocol. In addition to the workforce training in the intervention and the GAIN, a cohort of those funded in 2004 are involved in a process evaluation to better understand the barriers and facilitators in adopting/adapting a manualized approach within a community treatment setting. This is a response to the needs of program administrators and program managers to understand how to implement effective treatment protocols for adolescents within their community settings.

Across CSAT-funded adolescent programs, upwards of 70% of all youth presenting for treatment have concomitant mental health issues. Additionally, trauma has been identified as an important and frequently occurring experience in the lives of youth who have presented for treatment within CSAT funded programs. Work is ongoing to identify effective treatment approaches and treatment settings wherein these youth can experience the best outcomes. The Addiction Treatment Technology Transfer Centers, funded by CSAT and located in seven regions serving the U.S. treatment system, are providing on-line and face-to-face training for clinicians in these and other areas of need for adolescent treatment providers.

## **Continuum of Care**

Assessment, clinical placement, treatment interventions, and continuing care are all components of a continuum of care. The ability to intervene with youth and step them up, or down, within a continuum of care is recognized as important for a treatment system. To explore how this might be realized within communities, CSAT funded cooperative agreements for the development of systems of care for adolescents with substance use disorders. This program, Strengthening Communities—Youth (SCY), is developing systems of care in a number of communities around the country. This program is also collaborating with SAMHSA's Center for Mental Health Services Comprehensive Community Mental Health Services for Children and their Families program. Training in the provision of effective interventions is one of the major goals of this grant program.

Understanding the importance of continuing care following treatment, CSAT funded 17 residential treatment sites to provide continuing care services after the active phase of residential treatment. This program, known as Adolescent Residential Treatment (ART), and its Continuing Care Component, is in its third year of operation. Clinicians in these programs have been provided training in various models of continuing care (e.g., intensive case management, assertive community reinforcement) and will have much to add to the field in the next several years, both in terms of workforce development and continuing care approaches that provide the best clinical outcomes.

## **Next Steps**

As the number of adolescent programs funded by CSAT has increased, there has been concern about the lack of infrastructure at the state level to support these programs once federal funding has ended. CSAT will award grants to states to develop infrastructure and hire a full-time coordinator for adolescent treatment services throughout the state. Training and supports for program managers and clinicians in community-based settings is one of the requirements for each of the funded sites. These awards are expected to be made during the summer of 2005 and will include a multi-site evaluation component to identify promising practices, policies and procedures that can be effectively transported to other states.

CSAT and the National Institute on Alcohol Abuse and Alcoholism (NIAAA) have initiated planning for a meta-analysis of the experiments to date and to begin a "synthesis" to calibrate the non-experimental evaluation studies. With over 6,000 youth observed at least at intake, 3, 6, and 12 months later, the current CSAT adolescent treatment data set already includes over half the available data in the field. This

project is a direct response to the needs of the workforce to understand practice parameters or the active ingredients in treatment for adolescents to which they must attend to achieve positive clinical outcomes.

Through its discretionary grant portfolio CSAT is dually focusing on developing and identifying effective treatment approaches, and training the workforce in implementation and sustainability of these approaches. These efforts are interwoven across a variety of grant programs and contracts that serve adolescents and their families throughout CSAT.

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## **Topical Discussion**

# **Building the Workforce Plan for Children**

Carol MacKinnon-Lewis

John A. Morris

Joan Dodge

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## **Introduction**

The purpose of this session was to foster discussion around the creation of a National Strategic Plan on Workforce Development in Behavioral Health, which is being sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA). This plan is to address issues related to workforce recruitment and retention and to the quality and relevance of workforce education and training. The Annapolis Coalition, which has been engaged by SAMHSA to coordinate the development of this plan, has been seeking broad input from the field to inform the plan's development and recommendations. Participants in this discussion had been invited to attend a preceding symposium, *Building a National Strategic Plan for Workforce Development*, in which an overview of the workforce planning efforts was provided and the process that would lead to the development of the National Strategic Plan was described. In that session there was discussion regarding the workforce crisis in children's behavioral health and preliminary ideas were presented on the essential elements that should constitute the plan as it pertains to caring for children and their families.

The Ten Strategic Workforce Goals of the National Strategic Plan were presented as follows:

1. Empower consumers and families as caregivers and educators;
2. Recruit and retain a qualified workforce in adequate numbers;
3. Use effective training strategies;
4. Employ competency-base approaches for workforce training and development;
5. Engage members of the workforce in a process of life-long learning;
6. Develop managers and leaders for all segments of the workforce;
7. Ensure that workforce education, development, and oversight processes (certification, licensure, accreditation) have relevance to current practice;
8. Use interdisciplinary training to teach interdisciplinary practice;
9. Ensure that systems of care (SOC) and the organizations within them actively foster and support competent performance of individuals in the workforce; and
10. Secure financing that is adequate to maintain a qualified workforce and creates incentives for excellence.

The topical discussion session was designed as a highly interactive discussion in which participants were encouraged to share their ideas about practical and achievable strategies for improving the behavioral health workforce. This summary reflects ideas presented during this session pertaining to workforce development in the mental health field, feedback related to the ten strategic workforce goals previously identified by the Coalition, and possible interventions that may be effective in implementing the goals. Common themes that were evident throughout the session related to: characteristics of the future workforce, recruitment and retention incentives, and organizational culture; family/consumer involvement and cultural competence; skills development and training; and the role of government, policy makers, guilds, and licensing regulators. Specific issues/strategies related to each of these themes are described below.

## **Characteristics of Future Workforce, Recruitment and Retention Incentives**

A number of recommendations were made pertaining to the characteristics of the future workforce and ways in which the organizational culture can enhance the recruitment and retention of providers. The need to develop a system of education *and* training was emphasized whereby the benefits of each are clearly defined. It was suggested that the concept of "workforce" needs to be broadened beyond

those individuals in traditional mental health to include those who provide a host of services in the care of children (e.g., pediatricians and other health providers, paraprofessionals, families and youth). Much better incentives to recruit and retain providers (including increased salaries) are needed, as well as an organizational culture that supports front line staff. Supervisors must recognize the importance of training for front line staff and coaching.

### **Family/Consumer Involvement and Cultural Competence**

The shift in families' roles from consumers of care to genuine partners must extend to professional training programs. Family members, as well as youth, should be included in both the design and provision of training. Youth participants sensitized the group to the assumption that "family" also includes youth, which may not be the case; youth voice is imperative. Ways in which family members could be supported were discussed, including stipends, "train the trainer" programs, CEU credits, coaching programs, etc. The need to incorporate cultural and linguistic competence into workforce development initiatives was emphasized.

### **Skills Development, Training, and Internships**

Several strategies were discussed and recommendations made for enhancing skills development and training in the behavioral health field. Education and training should not be defined by discipline, as is the case by professional guilds, but rather should be tied to core competencies, skills, *and* practices. A standard curriculum could be designed to enhance those competencies, focusing on the knowledge, skills and attitudes consistent with current values and principles of systems of care. The need for alternative educational and training opportunities, such as the SOC Professional Training Consortium, was stressed. It was acknowledged that there is not a "Child and Family Behavioral Health Care" program currently. It was suggested that we look beyond traditional disciplines, and possibly create such a degree so that people enter the field by design, rather than through other disciplines such as social work, public health, etc. In addition, a Behavioral Health Institute could be established at a state level that focuses on broad training of the workforce, with an emphasis on life-long learning. Finally, the innovative use of technologies was encouraged, possibly borrowing from telehealth strategies.

### **Role of Government, Policy Makers, Guilds, and Licensing Regulators**

Additional suggestions were offered regarding ways in which government, policy makers and professional organizations could contribute to the education and training of a competent, qualified workforce. A call for strong political leadership for children's mental health was made—leaders who champion the workforce are sorely needed. It was acknowledged that professional guilds could play a significant role; however, a mechanism is needed to transform the way that training and workforce development are conceptualized—and should be tied to skills and competencies rather than disciplines.

Concrete strategies suggested included:

- Distinguishing between educational development and oversight (oversight includes licensure and certification [state regulatory issues]);
- Assessing licensing issues and reciprocity state by state for continuity across states;
- Ensuring federal guidelines are followed at the state level; having available a listing of recommended guidelines that have been published at the federal level;
- Developing individual plans for addressing workforce issues state by state;
- Working with funders and states regarding licensure and reimbursement for more professionals and expand who can be reimbursed, to include paraprofessionals and possibly parents;
- Developing national workforce fellows for each state; and
- Establishing a form of surveillance for data and measurable outcomes; evaluation is needed.

## **Conclusion**

A couple of common themes that emerged were that we need to think of ourselves as “child-serving systems” instead of “mental health providers,” and that there needs to be a combination of demand and reward that entices people to approach workforce development and provision of services differently. We need to identify core competencies, market the competencies, and have accountability. Developing a theory of change for the workforce may aid in this process.

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## **Topical Discussion**

# **Workforce Development & Emerging Technology in Children's Mental Health**

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### **Introduction**

The crisis in mental health care was identified by the former U.S. Surgeon General Satcher's first national report on mental health, with a subsequent conference report focused on children's mental health (US Department of Health and Human Services, 1999, 2001). In 2001, the Institute of Medicine released its report on creating a new health system for the 21st century, increasing quality of care and developing new technologies (2001). More recently, the President's New Freedom Commission report (2003) emphasized the need to utilize emerging technologies, the potential impact on access to care, the application of technology in addressing workforce development issues, and the relevance of the impact of care and workforce development in meeting the needs of underserved populations.

Clearly, advances in new service delivery models and research in treatment effectiveness have outpaced preparation of the human service delivery workforce (Huang, Macbeth, Dodge, & Jacobstein, 2004), resulting in a crisis, both in terms of a shortage of providers and the need for training in new models of care. The academic literature and popular media illustrate shortages in the provision of mental health services to children within private practice, community clinics, public hospitals, and public mental health care systems, including respite care, day treatment, and therapeutic foster care programs. This critical need calls for significant changes in both clinical practice models and service organization to improve access, quality, and outcomes in mental health care, all of which will be challenging—if not impossible to achieve—without a prepared workforce. The purpose of this topical discussion was to introduce three initiatives: (a) the System of Care Professional Training Consortium, (b) the System of Care Curriculum Initiative Listserv, and (c) the Substance Abuse and Mental Health Services Administration (SAMHSA) Human Services Workforce for Children and Families Project, all of which utilize technology in children's mental health to address workforce development issues; participants were encouraged to provide feedback on their potential usefulness.

### **Workforce Development and Emerging Technologies**

Technology has changed the delivery of education and training. Early telehealth and telemedicine initiatives began with the delivery of courses via the media of radio and television. Today, the development of course instruction, delivered through a variety of distance learning methods (e.g., including web-based synchronous and asynchronous communication, e-mail, and audio/video technology), has attracted major university, corporate, and federal participation (Burke, Levin, & Hanson, 2003). These electronic learning environment initiatives increase the number of courses and undergraduate/graduate degree programs being offered without increasing the need for additional facilities.

### **System of Care Professional Training Consortium**

Building on emerging technologies, the Research and Training Center at the University of South Florida, in collaboration with ten other universities, has instituted a System of Care Professional Training Consortium through which coursework in children's mental health, with an emphasis in systems of care, will be offered. In the first year, a Curriculum Committee, consisting of faculty representatives of the participating institutions as well as family members and youth, are working together to plan two web-based/distance learning interdisciplinary training programs—a Master of Science and a Graduate Certificate Program. These programs are being designed to provide a rigorous, values-infused and empirically-based education to individuals in the behavioral health care services field to work with agencies and systems that serve children who have mental health needs and their families, at different developmental stages, within the contexts in which they live.

There are many advantages to forming this System of Care Professional Training Consortium to prepare students to enter the children's mental health workforce. First, the consortium of participating universities can design and offer degree programs and coursework that train professionals in competencies and skills based on system-of-care values and principles, thereby helping to ensure the availability of a qualified workforce. Moreover, this can be accomplished more efficiently through a consortium utilizing state-of-the-art technology than by a single institution, which is noteworthy given the budget cuts that many states and universities are experiencing. Second, the training will be available to a much broader and culturally diverse student body than could reasonably be provided by any one institution, thereby increasing the diversity of mental health providers working with children and families. Third, the Consortium is building upon the strengths of the participating universities in developing its curriculum. Fourth, the accessibility of web-based training will be particularly useful to rural areas, where the recruitment and retention of child welfare workers is especially problematic. Finally, students' experiences will be enriched by the different perspectives of faculty from the participating universities, but also by experts who will contribute through "weekly seminars" via the Listserv.

### **The System of Care Curriculum Initiative Listserv**

A complement to the degree program is an innovative web-based discussion board technology that was recently launched by the Research and Training Center for Children's Mental Health at the University of South Florida. The System of Care Curriculum Initiative Listserv was designed as a resource and communication tool for university educators, students, and mental health professionals who share the system-of-care philosophy and integrate system-of-care values and principles into their provision of services for children and adolescents with serious emotional disturbance and their families.

The purpose of this initiative, which was designed to be used by a broad audience, features document sharing and e-mail subscription services to support the transfer of knowledge within the field and to provide a set of resources and partnerships aimed at incorporating key system-of-care concepts and approaches into curricula. This resource may be used in the development of university-based training programs for new professionals entering the behavioral and mental health field, as well as to retrain and retool existing providers to perform roles and responsibilities for which they have not been explicitly trained.

Unlike traditional listserv or bulletin board applications, this hybrid approach allows registered participants to customize their interactions in several different ways. They may choose to join in a web-based discussion of key topics, utilize the mailbox created by the package for correspondence, or subscribe to topics of interest so that posts in these areas are automatically sent to their preferred e-mail address. This software solution also integrates easy-to-use text editing and formatting, document upload and linking abilities, announcements, and polling features. User access to all features can be customized for each course of study/seminar (e.g., introduction of new topics can be reserved for the moderator/instructor, released upon review by the moderator, or allowed without restriction).

What this means for the delivery of coursework or seminars through the System of Care Training Consortium, is that participants and instructors can post private or public questions and responses, communicate easily among fellow participants, access resources from links, provide documents for review, and receive automatic e-mail alerts to apprise them of new postings. Moreover, this listserv can be used not only by faculty who are explicitly responsible for course offerings, but also to engage national experts as "guest lecturers," exposing students to different perspectives on special topics on a weekly seminar basis.

## **SAMHSA Human Services Workforce for Children and Families Project**

The purpose of the SAMHSA Human Services Workforce Project was to develop a base of common knowledge and understanding about the current status of education and training programs for the human services workforce serving children and adolescents with behavioral health disorders within community-based service delivery systems that are provided under the sponsorship of the public federal child-serving agencies.

As part of its contract with the Workforce Project, the Louis de la Parte Florida Mental Health Institute created a directory that describes web-based training resources that focus primarily on training provided by federal agencies or through funded technical assistance centers, with selected web-based training materials provided by other private and public providers (see <http://www.fmhi.usf.edu/samhsa/>). The project focused on educational and training resources that teach new knowledge, skills, and attitudes to professionals and paraprofessionals serving children with behavioral health needs and their families and address the major components in the system-of-care framework.

All materials in the training directory are catalogued with annotations and describe existing education and training curricula, web-based trainings and web resources for professionals working with children with behavioral health needs, with priorities on those that are consistent with system-of-care values and demonstrate evidence-based and emerging best practices. All items in the database are classed using a controlled vocabulary to ensure precision and relevance for user-based searches.

The database is searchable with both a simple and advanced search engine. The simple search engine features searching (a) by one of the six key domains: Assessment, Cultural Competency, Family Centered, Inter-agency Programs, Strength-based, and Substance Use Disorders; (b) keywords (user-supplied language), (c) for only CEU-based training, and (d) for free (see <http://www.fmhi.usf.edu/samhsa/>) or fee-based training. The advanced search feature allows the user to search across multiple data fields.

In summary, the idea that new technology can cause systemic change is, of course, not a new one. The three initiatives described in this summary demonstrate innovative and viable approaches in workforce development that may fill the gap” between the norm in our educational systems and a vision of what a state-of-the-art, or perhaps state-of-the-science, education could be” (Hoge, 2002, p. 311).

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