Chapter Four

Strategies for Performance Measurement, Quality Improvement and Financing Services

Symposium

Using Logic Models as a Framework for Continuous Quality Improvement (CQI) Efforts: Results from the CMHS CQI Benchmarking Initiative

Chair & Discussant

Angela K. Sheehan

Authors

Jody Levison-Johnson
Melodie Wenz-Gross
Angela K. Sheehan

Discussants

Sharon Hodges
Mario Hernandez

Symposium Introduction

This symposium exemplified how logic models can be used as the framework for continuous quality improvement (CQI) efforts. The symposium included three paper presentations, including (1) an overview of the logic model in Monroe County, NY and how it has led CQI efforts, (2) an overview of the logic model in Central Massachusetts Communities of Care program and their plans for using the logic to guide CQI efforts, and (3) a presentation of the CMHS CQI Progress Report and how at the national level the program logic model provided a framework for performance measurement and CQI efforts. Two local examples of how developing theories of change and how clearly defined logic models serve as the framework for continuous quality improvement efforts were presented. Project staff from two federally funded system-of-care communities presented their logic models and highlighted the purpose and process of their efforts as well as their actual and intended utilization. Following the local presentations, the national evaluators for the Comprehensive Community Mental Health Services for Children and Their Families Program presented preliminary findings from the CQI Report and Benchmarking Initiative and discussed the utility of the program logic model in designing the report and interpreting the findings. Finally, Mario Hernandez and Sharon Hodges led a discussion that centered on the utility of logic models from various perspectives.

Theories of Change from a Continuous Quality Improvement (CQI) Perspective: Integration of the Logic Model, CQI and Technical Assistance in Monroe County

Jody Levison-Johnson

Acknowledgements: Monroe County ACCESS is a funded grant from the Substance Abuse and Mental Health Services Administration CMHS # 1-U79-SM57043-01

Introduction

The Comprehensive Community Mental Health Services for Children and Their Families Program provides funding to communities across the country to implement service programs that meet the emotional and behavioral health needs of children with severe emotional disturbance using a system of care model.

In 2005, Monroe County was awarded cooperative agreement funding by the Substance Abuse and Mental Health Services Administration to develop ACCESS: Achieving Culturally Competent Effective Services and Supports. An initial step in the planning efforts was to effectively articulate the community's theory of change which would establish the foundation for system of care development. Using several components of the logic model process outlined in *Crafting Logic Models in Systems of Care: Ideas Into Action* (Hernandez and Hodges, 2003), Monroe County used the original grant narrative submission to delineate levels of focus, population context, strengths and resources, strategies and actions, and intended short and long-term outcomes.

By engaging in this logic model process, ACCESS staff, both newly hired and established, were compelled to clearly define the intended purpose of the grant activities and assure that these activities were outlined for each level of intended impact—system, organization and practice. The process of committing an initial logic model to paper was a very valuable exercise for the community, and encouraged a dialogue between those involved in the original submission for grant funding and those who had joined the community's team as a result of the funding. It also encouraged participants to engage in interactions which resulted in further clarification and a deeper understanding by all.

Throughout the process, Monroe County committed to use the logic model as the basis for continuous quality improvement (CQI) activities including the identification of technical assistance needs. Because the logic model provides the foundation for all grant activities by articulating the community's theory of change, it requires frequent revisiting and revision as the community learns about the impact of strategies on outcomes and seeks to implement technical assistance in areas of identified need.

Methods

Continued concern regarding the community's ability to meet the complex needs of cross-systems children and youth, particularly those of African-American and Latino descent and those later in the age spectrum (14-21), was the foundation for Monroe County's cooperative agreement application. Prior to submission, Monroe County conducted an extensive needs assessment and planning process which involved multiple stakeholders from across the county. This forum, the "Children's System of Care Task Force," served as the initial agent to gain cross-community input and buy-in to what would ultimately culminate in the ACCESS Logic Model. The Task Force membership was broad-based, and included representation from all of Monroe County's formal child-serving systems (mental health, juvenile justice, child welfare, education, development disabilities, alcohol & substance abuse, health); it also incorporated the voices of families, youth and grassroots and community-based efforts. Because Monroe County was committed to formulating a theory of change that incorporated the views of representatives from the population of focus and the communities in which they live, the outreach beyond the traditional systems and providers was intentional.

Once funding was received, the ACCESS Project Team, which is comprised of a diverse group of individuals from a variety of backgrounds, set about to articulate what had been proposed by the Task Force into the ACCESS Logic Model. This logic model currently serves as the basis for Monroe County's emerging system of care and will be further refined as the community progresses through system of care development.

The logic model serves as Monroe County's "roadmap to success" by clearly articulating the theory of change and by setting the stage for the community's CQI process. Intended outcomes of this transformation initiative have been defined at all levels: system, organizational and practice (see Figure 1). The ACCESS evaluation team, together with the core project team, has worked to identify indicators for areas that will be assessed by the national and local evaluation. Through the input of the community's five Council governance structure (i.e., Transformation Leadership Council, Family Council, Youth Council, Cultural and Linguistic Competence Council, and Research to Practice Council and other workgroups, and constituent groups), the logic model will be adapted and modified to assure that defined strategies result in the intended outcomes. This will also allow the opportunity for refinements to the theory of change and logic model based on the community's progress to date. The process will establish the expectation that the logic model is not merely a document, but rather a living and evolving process which effectively and efficiently integrates new information to assure that Monroe County is successful in achieving its vision: to assure that all and youth within Monroe County facing emotional and behavioral challenges and their families attain their full potential and achieve success, as they define it, in an environment based on system of care values and principles. This process also will support the community in the identification of technical assistance needs in a coordinated manner and allow the community to seek support for areas of identified need in a data informed manner (see Figure 2).

Figure 1
Monroe County ACCESS Logic Model–Summary View

ACCESS Achieving Culturally Competent and Effective Services and Supports

ACCESS Vision: All families and youth within Monroe County facing emotional and behavioral challenges attain their full potential and achieve success, as they define it, in an environment based on System of Care values and principles. Families and youth are active participants in the collaborative process of transforming the way the community responds to the needs of children and their families in Monroe County.

Levels of Focus / Population Context

SYSTEM
- State & local system level policy makers from child-serving sectors – mental health, child welfare, juvenile justice, education, developmental disabilities, chemical dependency, social services, health, youth services
- Leadership from philanthropic, funding, faith & other community entities
- Family, youth & community

ORGANIZATIONAL
- Provider agencies from child serving sectors
- Community based organizations, associations, institutions
- Family, youth & community

PRACTICE
- All children ages 0 to 21 with serious emotional disorders & their families; with focus on:
  - Children of African-American or Latino descent
  - Children 0 to 18 involved in multiple systems
  - Youth/emerging adults ages 14-18 transitioning out of children's services
- Direct care staff / volunteers
- Monroe County community members

Strengths/Resources
- Strong community tradition of collaborative initiatives
- Infrastructure platform for systems integration & interagency collaboration – Coordinated Children's Services initiative, Youth & Family Partnership (YFP) Leadership Team
- Platform for infusing cultural competence – Monroe County Cultural Competence Initiative
- Platform for infusing family & youth voice & leadership for family & youth involvement – Better Days Ahead
- Network of family support organizations
- "Service rich" community; well-developed mental health & health & human services systems
- Single Point of Access process using Child & Family Team (CFT) process for high need youth with serious emotional disorders
- Monroe County Office of Mental Health/Coordinated Care Services financial, data, performance management & clinical expertise
- Experience with adult mental health transformation initiative – Western New York Care Coordination Program
- NYS OMH Initiatives – Achieving the Promise, Evidence-based Practices
- Community mobilization, community development & Asset Partnership Network initiatives

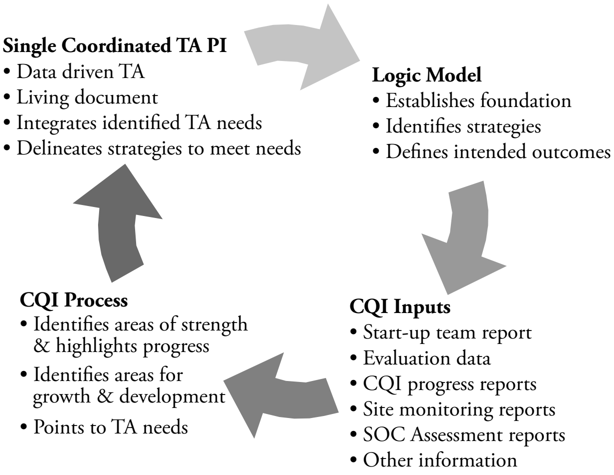
Strategies/Actions
- Implement cross-systems governance structure guided by common values, incorporate families, youth & community
- Prepare/train families, youth, community members to participate in governance structure
- Implement administrative infrastructure to support Continuous Quality Improvement (CQI) & other processes
- Develop cultural competence across all child-serving systems
- Use community assessment to inform expansion of service array & modifications to services
- Implement transition strategies from child-serving systems
- Broad-based & targeted training in System of Care, Child & Family Team (CFT) process cultural competence, evidence-based practices; conduct on-going assessment of training needs
- Assessment of communities' characteristics to include language, norms, beliefs, assets & information & education needs
- Implement Child & Family Team process including cultural discovery
- Make family advocates & care coordinators available for those to choose to have one
- Utilize community cultural brokers to support effective engagement with diverse communities
- Prepare families & youth to be in a position to drive their own care
- Make flexible funding available to support individualized services plans
- Implement CQI process to monitor fidelity, identify barriers & make changes
- Incorporate focus on wellness & recovery
- Develop strategies to ensure cultural & linguistic competence, family driven & youth guided care

Outcomes

Short Term
- Increased levels of cultural & linguistic competence in systems, organizations, services & practice behaviors
- Increased family, youth, community influence on & involvement in policies/ procedures of systems, organizations, services & practice behaviors
- Improved & earlier access to organizations & community-based services & supports
- Extended array of appropriate services
- Increased use of natural community supports & non-traditional services/ supports
- Increased satisfaction of family/youth with services
- Improved child & family functioning & emotional states

Long Term
- Increased family-driven, youth guided, culturally & linguistically competent, & community directed systems, organizations and services
- System & organizational policies & infrastructure support the CFT process and institutionalize practice change
- Reduce disparities, increase and maintain access, availability and utilization of community-based & culturally relevant services and supports that include providers from the population of focus, especially for families of color
- Improved system integration & interagency collaboration guided by common values
- Transformation efforts are sustained
- Funding resources are used in the most flexible way possible
- Increased family & youth participation in determining/ driving their own care
- Maintain child & family functioning and emotional states & satisfaction with care
- Increased skill to maintain wellness

Figure 2
The Monroe County ACCESS CQI Approach



Results

Monroe County has articulated its initial theory of change into the ACCESS Logic Model. The logic model process has served as a useful tool for bringing together the staff of the ACCESS project. The logic model has been shared with ACCESS Councils, workgroups and other constituent groups as an orientation to purpose, proposed strategies and intended outcomes for Monroe County's system of care.

Conclusion

The initial ACCESS Logic Model represents the community's "best guess" at articulating a theory of change at the beginning of grant funding. The logic modeling process served as an important exercise in developing critical understandings and moving toward uniting around a common vision for Monroe County's system of care. Moving forward, the ACCESS governance structure, workgroups and other constituent groups will use the logic model and data from the local and national evaluations to both refine the theory of change and to use it as a basis for CQI efforts, including the identification of technical assistance needs. This process is critically important for systems of care aspiring to realize their vision and ultimately attain sustainability and will result in a dynamic, data-informed and evolutionary system of care in Monroe County.

Reference

Hernandez, M., & Hodges, S. (2003). Building upon theory of change for systems of care. *Journal of Emotional and Behavioral Disorders, 11*(1), 19-26.

Theories of Change from a Continuous Quality Improvement (CQI) Perspective: Central Massachusetts Communities of Care Logic Model

Melodie Wenz-Gross

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Introduction

Central Massachusetts Communities of Care (CMCC) is a system of care grant awarded in 2005 to the Massachusetts Department of Mental Health by the Comprehensive Community Mental Health Services for Children and Their Families Program. The goal of this cooperative agreement is to decrease and prevent youth with serious emotional disturbance (SED) from becoming involved with the courts and to reduce the seriousness and duration of juvenile justice involvement for this group. This is the second system of care grant awarded to Central Massachusetts. The first, Worcester Communities of Care, was awarded in 1997 and focused on providing wraparound services to youth with SED in the city of Worcester; this grant helped to build stakeholder buy-in and momentum for expanding system of care services throughout the region, and provided some “lessons learned” for the generation of new ideas. The Central Massachusetts Communities of Care grant includes a much broader geographic area, including 50 cities and towns in mostly rural areas that have a relative lack of services and transportation. Further, the new grant takes a juvenile justice focus that necessitates collaboration among several agencies that do not normally collaborate.

Methods

The planning process for this grant application involved numerous stakeholders, including state agencies, probation, the courts, the schools, family members and youth. Out of these planning meetings (which extended over 18 months), barriers and challenges to accessing appropriate services, supports, and coordinated care were identified. The diverse group then identified goals and objectives, and the types of outcomes that each stakeholder felt were important. Finally, the group identified already existing services and service gaps, as well as the strategies they felt were important to breaking down barriers to access. The resulting system of care plan involved three main strategies: (a) the opening of Youth and Family Centers in each region with satellite locations throughout the rural area; (b) the development of a Training and Learning Collaborative to enhance system of care values and principals and increase collaboration across existing service delivery agencies; and (c) the importation of evidence based practices to enhance the quality of services and address the specific needs of this population (trauma, substance use). Once funding was received, the feedback from this extensive community planning process was used to develop a formal logic model. This logic model was then vetted with the different stakeholder groups for feedback and revision. Next, the revised logic model was converted to a dynamic interactive slide presentation to be uploaded to the CMCC website to support both CQI and social marketing.

Results

The interactive logic model provides a way for CMCC to clearly articulate its theory of change, its goals and objectives, its strategies for achieving them, and the outcomes that will be measured as benchmarks for success. To create this interactive logic model, we used a PowerPoint format and the “action settings’ tool to hyperlink conceptual aspects of the overall logic model diagram with slides that provide more detailed information about each of those aspects (e.g., target population, theory of change, objectives, strategies, outcomes, etc.) by simply clicking on the word in the diagram. For instance, clicking on the word “objectives” in the logic model diagram takes you to a page that lists CMCC’s nine objectives. Clicking on the word “strategies” takes you to a page that has a diagram of a house (representing the youth and family centers) with all of the program components and their relationship to each other clearly delineated. Further, by building the hyperlinks between slides, the interactive logic model allows "the logic" of what is being planned to be clearly articulated in a way that is not possible with traditional one-page static logic models. This is accomplished by using the action settings tool along with custom animation or color coding to hyperlink, for instance, specific strategies with specific objectives, or specific strategies with specific intended outcomes. In this way, the CMCC interactive logic model can be used for social marketing purposes—not only to explain what is being done within the project, but why.

The interactive logic model also allows CMCC a way of clearly publicizing its accomplishments and identifying program components/strategies that may not be working or may not be working for all groups. By building in and hyperlinking proposed outcomes to graphs of actual outcomes, and hyperlinking evaluation questions to actual outcomes, the interactive logic model provides a continuous quality improvement function that is easily accessible by stakeholders.

Finally, in an environment of limited resources, CMCC's logic model provides a guide for prioritizing resources for conducting the grant; it also advocates for sustaining strategies that work, once grant funding ends. The interactive logic model is able to evolve with the project because it provides room for updating and expanding the information provided within it, allowing for instance, the inclusion of updates of evaluation findings related to each identified outcome as they become available, or updates of new programs or groups provided within the Youth and Family Centers. Because it is web-based, this information can be accessed by all stakeholders at anytime.

Discussion

This paper presentation discussed how the CMCC logic model was developed, how it currently is used, and CMCC's future plans for using the logic model in CQI and social marketing. The format allows the presentation of layers of detail and information that can be expanded and built on as the system of care evolves, while still maintaining the original coherent logic and theory of change. Although it takes some time and effort to build and update, it is user friendly and appealing to stakeholders, and is a useful way to organize feedback loops for CQI and social marketing.

Using Logic Models as a Framework for Continuous Quality Improvement (CQI) Efforts: Results from the CMHS CQI Benchmarking Initiative

Angela K. Sheehan

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Introduction

Developing a well-defined concept for how a system will be built, the strategies necessary to affect change, and the accountability measures to assess change are critical components of continuous quality improvement (CQI) efforts. These components also constitute a well-defined theory of change (Hernandez & Hodges, 2003). As outlined by Hernandez and Hodges (2003), the first component of a theory of change includes conceptualizing and operationalzing three core elements, one of which is outcomes. A well-defined theory of change provides the framework for CQI efforts by linking a system's mission and roadmap with desired outcomes. These desired outcomes provide a framework for assessing the ability of a system to affect change and to continuously improve. Using a theory of change to guide CQI efforts is a key component to affecting system change.

As part of a community's CQI efforts, developing tools to measure how well a community is achieving their mission and reaching established goals, as outlined by the theory of change, is critical to success. However, the ability to measure desired outcomes is challenging in the children's mental healthcare system. Gaining consensus on indicators and associated benchmarks of care can be challenging. The challenges are compounded by the lack of reliable data across systems, variations in resources to support service provision, and the lack of consistent definitions of measures (Dougherty Management Associates, 2004; Hermann, Palmer, Leff, Shwartz, Provost, Chan, et al., 2004). The CMHS CQI Benchmarking Initiative is one example of a data-driven approach to support the realization of a program's theory of change in a CQI context. The CQI Benchmarking Initiative builds upon the program's theory of change to identify key indicators of performance and provide a reporting mechanism to assess performance at the national and the local level in support of CQI.

Methods

The primary purpose of the CMHS CQI Benchmarking Initiative is to implement a data-driven approach to technical assistance provision and peer-to-peer support, aimed at improving the quality of programs funded by this federal initiative. The CQI Benchmarking Initiative uses the program's logic model as a frame to operationalize five key areas of system performance: (1) System Level Outcomes, (2) Child and Family Level Outcomes, (3) Family and Youth Involvement, (4) Satisfaction with Services, and (5) Cultural and Linguistic Competency.

The CQI Benchmarking Initiative builds upon data collected as part of the national evaluation of the Comprehensive Community Mental Health Services for Children and their Families Program to report performance across these key areas. Data from the cross-sectional descriptive and longitudinal outcome studies are utilized to develop 35 performance indicators across the five domains. The CQI Progress Report includes raw scores for each indicator and benchmarks for performance, and calculates a scoring index to measure the extent to which benchmarks are achieved.

Analyses. Data across the five key domains were analyzed to produce 35 indicators of performance. Data submitted through September 2006 were included in the analyses. Indicators of performance included cross-sectional intake measures and longitudinal measures of change.

Results

Service Accessibility. Performance related to service accessibility was relatively high with improvement needed in timeliness of services. Accessibility to services in the families' preferred language was relatively high at 88.9% among non-English speaking families. The mean satisfaction with access to services score was 4.29 on a 5-point scale, with 5 indicating *strongly satisfied*. Multiple agency involvement in service provision during the first six months of services was also relatively high at 79.4%. Timeliness of services, measured by the average number of days from intake to first service receipt and a key indicator of potential barriers to services, was just over 20 days.

Service Quality. Overall, caregivers and youth were satisfied with the quality of services and with related outcomes. The mean caregiver score for satisfaction with quality of services was 4.01 and the mean score for satisfaction with their child's outcomes was 3.47, on a 5-point scale with 5 indicating *strongly satisfied*. On the same 5-point scale, the mean youth satisfaction with quality of services score was 3.88 and the mean satisfaction with their related outcomes was 3.83. Involvement in treatment planning by representatives from multiple agencies is a key indicator of service quality, as it measures the extent to which non-mental health representatives are involved in developing the child's service plan. For 38.8% of children served, staff other than mental health providers were involved in the development of the service plan. Support services are considered critical for stabilizing families and for enabling children and youth with serious emotional disturbance to remain in their homes. The receipt of informal supports (e.g., informal childcare, assistance from one's church or neighborhood group, food pantry, etc.) is a key indicator of overall service quality, as it represents the extent to which families receive supports other than formal services, and 36.9% of caregivers indicated receipt of informal supports.

Service Appropriateness. The ability of the system to meet the needs of youth with substance use problems with related services is a key indicator of service appropriateness. The substance use treatment rate was 60.6% of youth with substance use problems receiving related services, suggesting room for improvement.

Child and Family Outcomes. Overall, school-aged youth were enrolled in school at a rate of 95.7% during the first six months of services, and attended at least 80% of the time at a relatively high rate of 78.1%. Improvement in school performance from intake to six months, a key indicator of positive child-level outcomes, was demonstrated in 34.1% of cases. Stability in living situation and average number of inpatient hospitalization days are key indicators of positive child-level outcomes related to their home life. The percentage of children and youth with one living situation during the first six months was 76.7%, and the average number of inpatient hospitalization days was 5.94. Although the baseline number of caregivers reporting that their child attempted suicide in the previous six months was low, there was a 36.1% decrease in the percent of caregivers who reported a suicide attempt from intake to six months. The percentage of youth demonstrating improvement related to emotional and behavioral problems from intake to six months was 32.1%, according to the Child Behavior Checklist (Achenbach, 1991).

Key indicators of positive family outcomes attributed to program services are: (a) reduction in employment days lost due the child's behavioral or emotional problems, and (b) improvements in family functioning and caregiver strain. Accordingly, the average reduction in employment days lost from intake to six months was 1.32 days; the percent change in mean score on the family functioning scale was 3.0%; and the percent of cases demonstrating improvement in caregiver strain was 51.1%. Key indicators of positive child-level outcomes as reported by the youth include the rate at which from intake to six months after services youth experience fewer contacts with law enforcement, fewer suicide attempts, and experience decreased anxiety and symptoms of depression. The percent increase in youth with no arrests was 7.8% from baseline to six months. Although the baseline number of youth reporting suicide attempts was low, there was a 47.7% decrease in this percent from intake to six months. Similar gains were made in youth anxiety, with 12.7% of youth reporting reductions in anxiety, and 48.2% demonstrating improvement in depression related symptoms.

Family and Youth Involvement. The mean caregiver satisfaction with participation score was 4.15 on a 5-point scale, with 5 representing *highly satisfied*, with 92.0% of caregivers indicating that they participated in the development of their child's service plan. The mean youth satisfaction with participation score was 3.59 on the same scale, with 83.5% of youth age 11 or older participating in the development of their service plan.

Satisfaction with Services. The Satisfaction with Services domain combined satisfaction scores across all areas and presents a caregiver and youth overall satisfaction score, which is a key indicator of overall system performance[1]. The mean caregiver overall satisfaction rate was 4.12, on a 5-point scale with 5 representing *highly satisfied*. The mean youth overall satisfaction score was 3.89 on the same scale.

Cultural and Linguistic Competency. Two key indicators of cultural competency are caregiver and youth satisfaction with the consideration for their family's culture, religious/spiritual beliefs, and staff respect for the family. The mean caregiver satisfaction with staff cultural competency was 4.51 on a 5-point scale, with 5 representing *highly satisfied*. The mean youth satisfaction with staff cultural competency was 4.24 on the same scale. The linguistic competency rate was included in the access to services domain, as it can also be considered a significant factor facilitating access to services; yet it can also be considered a key indicator when assessing the program's cultural and linguistic competency.

Discussion

Results from analyses of the CQI Benchmarking Initiative demonstrate that progress is being made toward achieving the desired outcomes articulated in the program logic model. The ability to measure progress toward reaching program goals as outlined in the program logic model is the first step in supporting continuous quality improvement at the system level. However, the second and critical step will be to utilize performance data to implement improvement policies and procedures at the national and local level.

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[1] *Satisfaction rates presented in other domains on the CQI Progress Report are included in the overall satisfaction with services rate.*

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Symposium Discussion

Sharon Hodges & Mario Hernandez

Developing a theory of change is an important and necessary step in organizing a community's plans for implementing comprehensive community-based mental health services using a system of care approach. A community's logic model serves many purposes. The logic model is a road map for program goals and objectives, but also serves as a framework for ongoing monitoring and continuous quality improvement. The logic model is intended to be a guide that frames a community's goals and objectives for a system of care approach to service delivery. Once a logic model is established and put into action, continuous quality improvement efforts are necessary to test whether the logic model is working, and if not, to identify what adaptations are needed.

The community examples provided as part of this symposium exemplify how logic models provide a framework for continuous quality improvement efforts by incorporating program goals, objectives and methods to measure whether those goals and objectives are being met. The presentation on the national evaluation's CQI Progress Reports provided one example of a data-driven tool that was developed to monitor progress toward meeting the goals and objectives outlined in the program's logic model. Utilizing evaluation data to measure progress toward meeting goals as outlined in the program's logic model is an important and necessary step to ensure program improvement and sustainability. The examples provided as part of this symposium should be looked to as models for all system of care communities.

CONTRIBUTING AUTHORS

Mario Hernandez, PhD
Professor and Department Chair, Louis de la Parte Florida Mental Health Institute, Department of Child and Family Studies, 13301 Bruce B. Downs Blvd., Tampa, FL 33612, 913-974-4651, email: hernande@fmhi.usf.edu

Sharon Hodges, PhD, MBA
Research Assistant Professor, Louis de la Parte Florida Mental Health Institute, Department of Child and Family Studies, 13301 Bruce B. Downs Blvd., Tampa, FL 33612, 813-974-6460, email: hodges@fmhi.usf.edu

Jody Levison-Johnson, LCSW
Director, Child & Family Service Quality & System Development, Coordinated Care Services, Inc., Co-Principal Investigator/TA Coordinator, Monroe County ACCESS, 1099 Jay Street, Building J, Rochester, NY 14611, 585-613-7648, fax: 585-328-5211, email: jlevison-johnson@ccsi.org

Angela K. Sheehan
Project Manager, Macro International, Inc., 116 John Street, Suite 800, New York, NY 10038, 212-941-5555, email: aksheehan@yahoo.com

Melodie Wenz-Gross, PhD
Research Assistant Professor, UMass Medical School Department of Psychiatry, Director of Research and Evaluation, Central Massachusetts Communities of Care, 275-A Belmont Street, Worcester, MA 01604, 508-856-5075, fax: 508-856-5455, email: melodie.wenzgross@umassmed.edu

Symposium
Using Data to Transform Indiana's Behavioral Health System

Chair
Robert R. Friedman

Authors
Betty A. Walton
Ivor Groves et al.
John S. Lyons et al.
Vicki Sprague Effland et al.

Symposium Introduction

Betty A. Walton

The transformation of Indiana's behavioral health system has focused on the availability of quality data on which to base decisions. Lessons learned from a system of care study based on the state's existing database suggested that multiple tools are needed to improve the quality of mental health and addiction services. Specifically, Indiana has implemented the Child and Adolescent Needs and Strength (CANS) assessment (Lyons, 1999), the Consumer Service Review (CSR; Groves, 2007), and the Wraparound Fidelity Index (WFI-4.0; Bruns, et al., 2006) because of their focus on the needs of children and families and their consistency with system of care values.

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Predictors of Improvement for Children Served in Developing Systems of Care: Lessons for Transformation

Betty A. Walton

Introduction

Research regarding the effectiveness of systems of care (SOCs) for children with serious emotional disturbances is limited (Burns & Hoagwood, 2002). For example, there have been few studies using comparison groups (Rosenblatt, 1998), and SOC research is limited by issues related to determining the degree of adherence to the system of care framework (i.e., fidelity). The incremental development of local SOC in Indiana provided an opportunity for a quasi-experimental study. This paper focuses on the lessons learned that are relevant to the successful transformation of a behavioral health system.

Method

A state database was used to identify children receiving wraparound services and to identify a sample of similar children receiving usual public mental health services. Improvement in functioning related to psychosocial and contextual factors was measured using the Hoosier Assurance Plan Instrument for Children (HAPI-C; Newman, et al. 2002). Fidelity to the system of care framework was determined based on a developmental assessment (Sprague Effland, Walton & McIntyre, 2005) of emerging SOC's adherence to essential elements. The hypothesis was that children who are served in moderately to highly developed SOCs will have better outcomes than similar children receiving usual services. Logistic regression was used to identify predictors of improved functioning.

Sample

Three hundred eighty six children who were served in Indiana's developing SOC in 2004 were matched with youth served in the public mental health system. The following variables were considered: time between assessments, functioning, age, race, system functioning, living arrangement, gender, and ethnicity.

Fidelity measure: Level of Development. Fidelity to the SOC framework was measured by applying a theory of change (Prochaska, Norcross, & DiClemente, 1994; Rogers, 2003) which identified five stages of change (e.g., precontemplation, contemplation, preparation, action and maintenance) for SOCs. In a qualitative study (Sprague Effland, et al., 2005), the theory of change was combined with SOC values and essential elements (Pires, 2002) to create a coding structure for evaluation of the level of development of the state funded SOCs. A Strength Based Site Assessment (Sprague Effland, 2004) was used to evaluate local SOCs and to classify 25 local SOCs into the five levels of development. Level of development ratings at the service-delivery level were used to measure fidelity to wraparound. All five levels of development, corresponding to the five stages of change (Prochaska et al., 1994; Rogers, 2003) were represented in the study. Since the number of children served by sites in early levels of development was relatively small, the five levels were reduced to three. Precontemplation, contemplation, and preparation were combined as an Early Level of Development. Level four (action) became the Action Level; and level five (maintenance) became the Sustained Level.

Improvement in functioning. Functional assessment data from the state database were examined using nine logistic regression models. The HAPI-C includes scores for individual factors: affect, suicide, abuse, neglect, thinking, family, school, disruptive behavior, substance use, and reliance on mental health care. Psychosocial functional domains (e.g., affect, thinking, family functioning, school behavior, and disruptive behavior) were combined to create an overall wellbeing measure that had been correlated with the GAF (Newman, et al., 2002).

Results

Circumstances in which SOCs are effective are suggested in Table 1. Findings were not significant unless fidelity was considered. Specifically, children with impairments related to affective disorders who are served through child and family teams with high wraparound fidelity are more likely to experience improvements than children served in usual services. However, similar youth served by wraparound teams at the Action Level are predicted to do less well than children served in usual services. Abused children in Action Level SOCs are predicted to experience improvements in community functioning and less subsequent abuse. Most youth with disruptive behaviors, other than Hispanic youth, improve in wraparound teams. Families of children who live with their biological parents are more likely to improve than families whose children live in foster care, with extended family, or in out-of-home placements. Youth who are using substances have poorer outcomes.

Conclusions

In addition to the study's findings, practical lessons were learned by analyzing data from the state mental health database. The study moved from collecting data for external reports to using data to make decisions at the practice, program, and system levels. The complexity involved in analyzing the state's existing functional assessment data was beyond the capacity for routine reporting. Although rich outcome-based data existed, they were not accessible for use by providers or the state agency. The functional assessment had become a required "form" to determine eligibility for funding. After the assessment data were reported, they were only used for actuarial analysis to determine risk adjusted categories. The system was not helpful in making direct care decisions, improving quality, or monitoring outcomes.

Overall, the study highlights the relationship of fidelity to outcomes. However, the Level of Development "fidelity measure" for service delivery, although based on SOC values and principles, was complex to administer and was limited to one state's experience. During the study, these limitations were recognized, and the state's technical assistance center piloted the Wraparound Fidelity Index (WFI-3; Suter, et al., 2003); the state plans for wider use of the WFI-4 (Bruns, Suter, Force, Sather, & Leverentz-Brady, 2006) in 2007.

Table 1
Significant Predictors of Improvement Across Logistic Regression Analyses (Odds Ratios)

IVs	*A*	*F*	*H*	*I*	*AFGHI*	*C*	*D*	*G*	*L*
Male	1.997			.646					
African American	1.488								
Not Hispanic			.504	.379					.321
Extended Family							.043	.499	
Foster Family								.310	
Family Improvement	4.301	5.173	2.833	2.800	12.465	9.750	8.237		3.324
Baseline A	.358								
Baseline F		.720	1.192						1.285
Baseline G	1.409	1.367					1.813	.509	1.316
Baseline H			.406		.728			1.207	.792
Baseline I				.369	.755				
Baseline J						11.376			
Baseline L	1.077		1.327						.601
Baseline C		.606			.719	.011			.845
Baseline D					1.281		.034		
LOD1									
LOD2	.587				.644				
LOD3	1.658								
Interactions	ZjSOC .767	ZcLOD2 2.111		ZethnSOC 1.490	ZaLOD2 .447	ZcLOD2 5.994		ZfSOC 1.468	ZhLOD2 1.627
Interactions		ZgLOD3 .512			ZefxSOC .358	ZjLOD2 .142		ZhSOC .667	ZlLOD2 .429
Interactions					ZjSOC .721				ZlLOD3 .357
χ^2	265.003	209.452	239.274	234.861	274.404	363.151	366.483	161.22	265.640
R^2	.398	.322	.362	.354	.408	.839	.806	.260	.394

Definitions: A = Affective Symptoms, C = Abuse, D = Neglect, F = Thinking, G = Family, H = School, I = Disruptive Behavior, J = Substance Use/Abuse, L = Reliance on Mental Health Services, AFGHI = Overall Wellbeing
LOD = Level of Development of System of Care Wraparound Services, LOD1 = Early Development, LOD2 = Action Level, LOD3 = Sustained Development, SOC = wraparound services, ZjSOC = interaction between z score of substance abuse and receiving wraparound services

As Indiana adopts a state level SOC perspective, it is building the capacity to use multiple information based tools to improve the quality of mental health and addiction services, including the Child and Adolescent Needs and Strength (CANS; Lyons, 2004), the Consumer Service Review (CSR; Human Systems and Outcomes, 2006), and the Wraparound Fidelity Index (WFI-4.0; Bruns, et al., 2006). Each tool keeps the focus on the needs of children and families. Each is consistent with SOC values and principles. The following papers describe the application of these tools. Integrating these tools into an outcome quality management system will be an ongoing process.

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Implementation of Consumer Services Review (CSR)

Ivor Groves, Janet S. McIntyre & Vicki Sprague Effland

Introduction

As Indiana transforms its mental health and addiction treatment system, it is important to understand the status of current service delivery practices so that improvements can be measured over time. The Consumer Services Review (CSR) was developed by Human Systems and Outcomes, Inc. (HSO; 2006) for the Indiana Division of Mental Health and Addiction (DMHA) to measure what is working and what is not working at the treatment team level. The CSR promotes a model of practice using teamwork and good communication across child service systems to build resiliency and recovery. It provides a statewide appraisal of the quality of services, identifying successes and areas for improvement.

Method

Design

DMHA engaged HSO to implement a structured qualitative case review process reviewing the status, progress and practice indicators for persons served by the system. In January 2006, a cross-system committee developed Indiana's protocol for children. During 2006 a baseline review for every community mental health center (CMHC) was completed.

Sample. A random sample of cases was selected: 20-25 children from each of 30 CMHCs. From this initial sample, a purposive sample was selected to reflect youth in each region considering the following variables: age, gender, type and intensity of service. Five youth and five adults were reviewed from each agency.

CSR review protocol. The protocol requires reviewers to rate indicators for child and family status, recent progress, and practice performance. Each case review is completed in one day. Each regional review took place over a period of one week. Trained CSR reviewers interview key people, scan records, and make observations to determine the current status of the person in significant life domains. The CSR relies heavily on interviews with the child, family, behavioral health providers and other child service agencies. Planned supports and services are reviewed with the youth and family to determine how well practices are promoting recovery and demonstrating system of care values. Every case receives an overall rating of one to six (1 = *adverse status*, 2 = *poor status*, 3 = *marginal status*, 4 = *fair status*, 5 = *good status*, 6 = *optimal status*). Ratings of 5 and 6 are termed the maintenance zone, 3 and 4 the refinement zone, and 1 and 2 the improvement zone. Ratings from 4-6 are considered "acceptable," with ratings of 3 and below "unacceptable." In addition, focus groups are held during review weeks with agency staff including CEOs, middle management and front line staff, as well as other stakeholders including child services agencies, families and advocacy groups.

At the end of each review day, immediate feedback is given to treatment teams. The sharing of results as soon as they are available is an important part of the feedback loop necessary to foster a climate of acceptance for this ambitious statewide transformation initiative. When the 2006 statewide baseline review was complete, regional and statewide results were available in January 2007. In subsequent years, reviews will measure quality improvement against the baseline.

Reviewer training. In April 2006, approximately 60 peer reviewers received two days of intensive training from HSO consultants. Another cohort of Indiana reviewers was trained in August. Each reviewer shadowed a HSO consultant or experienced peer reviewer for the first review, and was in turn shadowed by a new peer reviewer for subsequent reviews. Proper use of the Consumer Services Review Protocol and other CSR processes requires reviewer training, certification, and supervision.

Results

Descriptive findings. There were 144 youth reviewed using the children's CSR protocol. Sixty-five percent were boys, 45% being 13 years or younger. Eighty-four percent of the youth lived in biological, adoptive or relative/kinship family homes; 10% of youth lived in foster care or therapeutic foster care and the remainder lived in other congregate settings such as group homes, residential treatment centers or detention centers. In the past year, 62% of the youth had not changed living placement, 25% had one or two placements, 10% had three to five placements and 1% had six to nine placements. Fifty-six percent of the children were served by special education, 24% were involved with child welfare and 11% were involved with juvenile justice. Seventy-four percent of the youth took one or more psychotropic medications, with 25% prescribed three or more of these medications. Sixty-two percent of youth had a diagnosis of Attention Deficit Disorder (ADD)/Attention Deficit-Hyperactive Disorder (ADHD), 38% had a disruptive behavior disorder, 31% reported mood disorders, 23% had medical problems and 21% had anger control difficulties. There were 24 children who also were diagnosed with mental retardation.

Child status. Most youth rated higher than 70% acceptable in the areas measured under safety and permanency (i.e. safety of child and others, stability in home and school, permanency, health and physical well-being, living arrangements); however only 65% were rated acceptable in the areas of emotional well being at home and just 71% rated acceptable emotional well being at school. In the areas of child status (e.g., developing life skills, lawful behavior of the child/youth and parent, and school attendance), most youth rated high in the acceptable range. However, 63% of youth were rated acceptable in instructional engagement and just 61% were rated acceptable in present school performance, and only 66% were rated acceptable in social connection and support.

Parent/caregiver status. Overall caregiver status was rated acceptable in 88% of cases.

Child progress. Overall child progress also was rated acceptable in 75% of cases; however school/work progress and meaningful peer relationships were each rated only 64% acceptable and progress toward transition was rated lowest (55% acceptable) in these areas.

Practice performance. In the area of engagement, teamwork formation (54%) and functioning (51%) were rated lowest in the acceptable category. Sixty-seven percent had family assessment rated as acceptable and only 56% had acceptable outcomes and ending requirements. In the area of intervention planning, 78% were rated acceptable in symptom reduction, but only 50% were rated acceptable in recovery/relapse planning, 44% rated acceptable in transition or independence planning and just 55% had adequate crisis response planning. Overall, 60% of cases reported adequate support and resources. There was a clear difference in team-based practice for children receiving wraparound than for children in usual services. The ratings on most domains of practice performance and quality and consistency of care were higher for children receiving services through a system of care.

Stakeholder interviews. Interviews were conducted with more than 250 stakeholders across Indiana. These individuals included juvenile probation staff, child welfare caseworkers and supervisors, educators, family court judges, and mental health case managers, therapists and supervisors. Overall results of the CSR pointed to considerable variability in quality of services across the state. The stakeholders suggested several issues that contributed to this lack of consistency: high turnover of therapists, difficulties accessing psychiatrists on a timely basis, poor communication among child-serving partners, weak individual team functioning, variable quality of skills among those providing therapeutic interventions, and lack of understanding of legal mandates and timelines.

Outcomes. Outcome categories for case reviews were defined based on the outcome status for the participant and the quality of ongoing services. For 56% of the youth, the child and family's status was good and level of ongoing services was acceptable. For 22% of the sample, the status of the child and family was good, but services findings were mixed or unacceptable. For the other 21% of the sample, the status of the child and/or family was poor and ongoing services were unacceptable or minimally acceptable with limited reach or efficacy. However, where a system of care was operational, there was better interagency coordination, communication, and satisfaction with the results achieved.

Discussion

The CSR is a quality improvement process that is a useful tool in transformation. Through the review, providers are trained in a team based recovery model. Baseline outcome measures not only provide a basis for comparison across time, but also identify areas of success and areas needing improvement. Although the sample size is small, the outcome patterns provide information about needed changes for providers and the state system as a whole. A clear target is further examining the 21% of youth and families who were not doing well and the 39% for whom services were unacceptable—not meeting expectations for engagement, team formation and functioning, assessment, outcomes and ending requirements, intervention planning, family support, crisis response, resources, adequacy of intervention, and tracking and adjustment. In response to the 2006 review results, many CMHC providers are using the CSR protocols to provide clinical supervision and enhance training and quality assurance efforts. Based on results from the 2006 review, in 2007 five CMHCs will receive a targeted review with a larger sample of cases. These centers will be offered technical assistance by the Choices Technical Assistance Center based on results of the reviews and the needs identified by each center. It is expected that the process of periodic in-depth reviews will continue in future years so that the system will have an ongoing basis for measuring quality and planning improvement initiatives.

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Implementation of a Common Assessment Tool and Quality Management Process across Child Service Systems: Child and Adolescent Needs & Strength (CANS)

John S. Lyons & Betty A. Walton

Introduction

Like many states, Indiana is transforming its behavioral health system. Indiana's transformation builds on a foundation of cross-system and family collaboration which was used to develop many local systems of care and a statewide early identification and intervention initiative for children in the child welfare system (Walton, 2006). A state Social, Emotional, and Behavioral Health Plan (Interagency Task Force, 2006) includes multiple strategies of change: performance based contracting, carving behavioral health into Medicaid managed care, implementing a common assessment tool and quality management processes across service systems, and initiating a quality service case review process.

An interagency team is working together to implement a common assessment tool and quality management processes across state child service systems: mental health and addiction, Medicaid services, child welfare, education, juvenile justice and corrections. This paper describes development of the Indiana version of the Child and Adolescent Needs and Strength (CANS; Lyons, Griffin, Fazio, & Lyons, 1999; Lyons, 2004) and the implementation plan.

A Common Cross System Assessment Tool

The CANS is an assessment tool that describes the needs and strengths of youth and their caretakers. The tool has evolved from earlier work in modeling decision-making for psychiatric services and the Childhood Severity of Psychiatric Illness (CSPI; Lyons, 1998). The CSPI, developed to assess those dimensions crucial to good clinical decision-making for expensive mental health service interventions, proved useful in reforming decision making for residential treatment (Lyons, Mintzer, Kisiel, & Shallcross, 1998) and for quality improvement in crisis assessment services (Lyons, Kisiel, Dulcan, Cohen & Chesler 1997; Leon, Uziel-Miller, Lyons & Tracy, 1998). The strength of the measurement approach is face validity and easy use, while providing comprehensive information regarding the clinical status of the child.

Building on the methodological approach of the CSPI, the CANS expands the assessment to include a broader conceptualization of needs and adds an assessment of strengths. The tool is designed to be used either prospectively for decision support during the process of planning services or retrospectively based on the review of existing information for use in the design of high quality systems of services. The CANS provides a comprehensive and contextual understanding of the needs of youth and informing decisions (Winters et al., 2005).

Reliability. Testing of the reliability of the CANS in its applications for developmental disabilities and mental health indicate that this measurement approach can be used reliably by trained professionals and family advocates. An interrater reliability of .74 on clinical vignettes and .85 on clinical cases has been demonstrated. There is also preliminary evidence of consistency reliability (Winters, Collett & Myer, 2005).

Structure. Due to its modular design, the tool can be adapted for local applications without jeopardizing its measurement properties. The dimensions and objective anchors used in the CANS are developed by focus groups with a variety of participants including families, representatives of the provider community, case managers, and staff. The goal of the measurement design is to ensure participation of representatives of all partners to begin building a common assessment language. Indiana's CANS is a comprehensive multi-system tool. A shorter reassessment will be used to modify care plans, inform changes in level of care, and measure outcomes. Indiana's CANS tool includes the following domains: Life Domain Functioning, Child Strengths, Acculturation, Caregiver Strengths and Needs, Child Behavioral/Emotional Needs, and Child Risk Behaviors. For children with specific needs, additional items are completed in attached modules related to school functioning, developmental needs, substance use, trauma, sexually aggressive behavior, juvenile justice, runaway and fire setting.

Rating. Unless otherwise specified, each item is rated based on the last 30 days. Each of the dimensions is rated on a 4-point scale after routine service contact or following review of case files. The basic design is that '0' reflects *no evidence*, a rating of '1' reflects a *mild degree* of the dimension, a rating of '2' reflects a *moderate degree* and a rating of '3' reflects a *severe or profound degree* of the dimension. Another way to conceptualize these ratings is that a '0' indicates *no need for action*, a '1' indicates a need for *preventive services or watchful waiting* to see whether action is warranted in the future, a '2' indicates a *need for action*, and a '3' indicates the need for either *immediate or intensive action*. Strengths are rated in the opposite manner to maintain consistency across the measure. Patterns of scores from domains are used to create algorithms that inform level of care decisions (e.g. counseling supportive case management, intensive community based services, out of home services).

Applications. A set of possible interrelated activities based on the CANS assessment tools is reflected the following chart. Total Clinical Outcome Management (TCOM; Lyons, 2004) uses information from the CANS to support decisions, implement quality improvement activities and monitor outcomes at the youth and family, program, and system levels.

Table 1
Total Clinical Outcome Management (TCOM) Grid of Activities

	Family & Youth	**Program**	**System**
Decision Support	Service Planning	Eligibility	Resource Management
Quality Improvement	Case Management & Supervision	Accreditation	Transformation
Outcome Monitoring	Service Planning & Celebrations	Evaluation	Performance Contracting

The core concept is to keep the vision, the focus, on the needs and strengths of children and their families. This focus provides a common ground for families, the various child service systems, and funders. Through training, certification, experience, and developing common decision models, communication is improved between families, providers, and across service and funding systems.

Ensuring that the assessment tool is meaningful to youth and families and to service providers in planning services is important for successful implementation of the tool and the quality of data. A simple rating system quantifies a comprehensive assessment of multiple domains, suggesting care plan actions. Patterns of ratings are used to create suggested thresholds for different intensities of service or levels of placement. Such decision models are sometimes used as eligibility criteria for a program or level of care. At a system level, an algorithm can help inform policy decisions. During the first year of implementation in Indiana's behavioral health system, a baseline will identify the intensity of behavioral health needs for Indiana's children.

Implementation Plan

Overview. Since 2004 there have been several local applications of the CANS. At the state level, the CANS tools are being implemented at some level across child service systems. The Department of Correction began using the CANS within their facilities in November 2006 and in targeted re-entry programs. The Department of Education is initiating a pilot in an entire school system combining a three-tiered model with the CANS to assess the needs of students who do not respond to general positive behavioral initiatives. Behavioral health providers who contract with the Division of Mental Health and Addiction or Medicaid will begin using the CANS in July 2007. The CANS has been written into Indiana's new Medicaid managed care contracts. Child welfare, involved in multiple reforms, will continue to screen children for behavioral health needs and refer youth to mental health providers for further assessment and recommendations.

Quality management. A web-based data system is being developed to collect CANS assessment data, calculate algorithms, and routinely report information to providers and state agencies. Client specific data will aid clinicians and families in making decisions and modifying plans prospectively to achieve better outcomes for youth and their families. Provider agencies will be able to use the information to enhance supervision, identify training needs, and other quality management purposes. At the state level, aggregate data will identify successes, gaps in services, possible needs for evidence-based interventions to be integrated into the system of care, and will inform policy.

Summary and Conclusions

Indiana is the first state to successfully design a common cross-system assessment strategy that includes the four major child serving systems of behavioral health, child welfare, juvenile justice and the schools. Initial implementation has begun in all four sectors. Decision support models for level of care have been designed. The next several years will be the test of whether such a strategy can be fully implemented and used as an active ingredient in a state-wide transformation process.

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Measuring Wraparound Fidelity in Indiana's Systems of Care

Vicki Sprague Effland & Janet S. McIntyre

Introduction

As the Indiana Family and Social Services Administration, Division of Mental Health and Addiction (DMHA) continues to support the development and implementation of systems of care, the need to understand the quality of those implementation efforts is increasing. The Technical Assistance Center for Systems of Care and Evidence Based Practices for Children and Families (TA Center) has assessed the level of fidelity to both the system of care framework (e.g., Stroul, 2002) and to the wraparound process (e.g., Miles, Bruns, Osher, Walker, et al., 2006). At the system level, a Strength-Based Site Assessment (Sprague Effland, 2005) is used to document the structures and processes that have been implemented in Indiana's systems of care. System of care sites are then assigned a level of development rating based on change theories (e.g., Rogers, 2003). Previous reports have shown that systems of care in Indiana are moving to higher levels of development through a combination of state and local efforts (e.g., Sprague Effland, Walton, & McIntyre, 2005).

To measure fidelity at the service-delivery level, the TA Center piloted the use of the Wraparound Fidelity Index, version 3 (WFI-3; Suter, et al., 2003). The WFI-3 measures the extent to which eleven essential elements of wraparound are implemented within systems of care. The WFI-3 consists of interviews with a youth's wraparound facilitator, caregiver and the youth if he/she is age 11 or older. The following discussion provides details on this pilot study and preliminary results.

Method

The TA Center entered into a collaborative agreement with the Wraparound Evaluation and Research Team at the University of Washington to administer the WFI-3. TA Center site coaches were trained on the WFI-3 and appropriate interview protocols. System of care sites were asked to provide enrollment dates for all youth enrolled in their system of care. A total of 238 youth enrolled for a minimum of six months and up to twelve months were identified for participation in the study. System of care project coordinators were then asked to obtain written consent from the identified youth and families. Once consent was received, the TA Center site coaches attempted to complete interviews with the youth's care coordinator and caregiver, as well as with the youth as appropriate.

Between July 2005 and January 2006, TA Center site coaches conducted 42 WFI-3 interviews with 18 care coordinators, 31 interviews with 28 caregivers and 10 youth. At least one interview was completed in each of 15 different systems of care. The majority of care coordinator interviews (71.1%) were conducted face-to-face rather than via telephone. Interviews with caregivers were conducted primarily by phone (90.3%), as were youth interviews (66.7%).

Youth and families participating in the WFI survey (i.e., families for which at least one respondent interview was completed; $n = 41$) had been involved in their system of care for six (41.5%), nine (43.9%) or 12 (14.6%) months at the time the demographic interview was completed. The average age of youth participating in the study was 11.96 ($SD = 3.51$), ranging from age 4 to age 17. The majority of youth were male (80.5%), White (90.2%) and not of Hispanic origin (100%). Given the lack of representation of females, African Americans, Hispanics and other racial/ethnic groups in this sample, the results presented in this report should be interpreted with caution and not generalized to more diverse populations. The majority of the caregivers interviewed were the biological parent (82.9%) of the youth enrolled in the system of care. The average age of caregivers included in the survey process was 38.64 ($SD = 11.43$) years and the majority were female (97.0%).

Results

Overall Wraparound Fidelity

The Wraparound Evaluation and Research Team has established benchmarks for wraparound fidelity based on total WFI scores. Specifically, 65% reflects a minimum standard for wraparound, 75% is the standard for adequate wraparound and 85% is the standard for high-fidelity wraparound. Total WFI scores are calculated by determining the percent of the maximum score attained for each respondent (see Figure 1). For care coordinators and caregivers, the maximum score is 88 (2 points for 4 questions in 11 elements). The maximum score for youth is 64 (2 points for 4 questions in 8 elements). To attain a total WFI score, the average percent score across respondents is calculated. Indiana's total WFI score is 75.1%, indicating an adequate level of wraparound fidelity (see Figure 1).

Figure 1
Percent Wraparound Fidelity

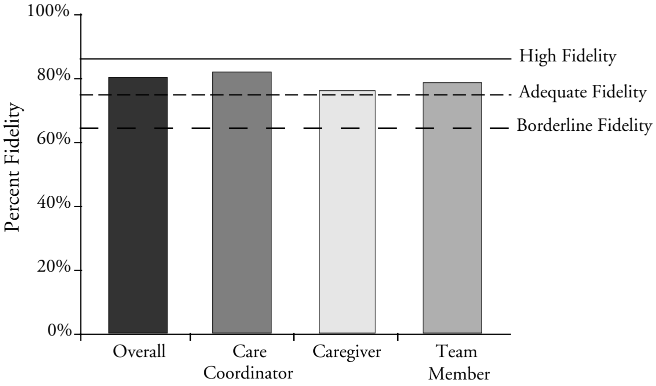
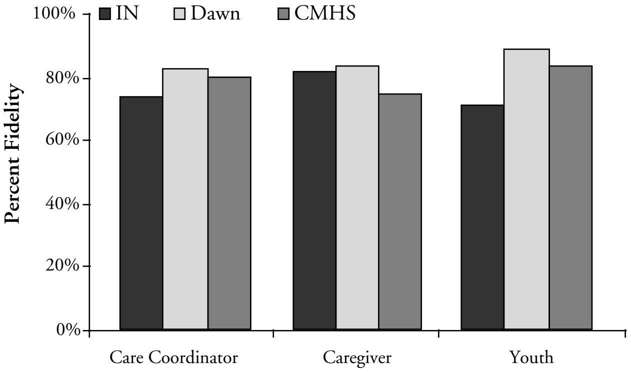


Figure 2 compares Indiana's WFI results (i.e., WFI score by respondent type) to those reported for the Dawn Project, which is the system of care in Marion County, Indiana, and for a national sample of system of care sites funded by the US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services (CMHS; Bruns, 2004).

Figure 2
Indiana Comparison with National Systems of Care



Conclusion

The WFI 3.0 results presented in this report suggest that, in general, the fifteen systems of care included in this project have an adequate level of fidelity to wraparound. The level of wraparound fidelity observed in this study is comparable to results obtained in system of care communities who received Federal funding, including the Dawn Project. The results of the study indicated that care coordinators, caregivers and youth differ somewhat in their experience of wraparound. These differences should be examined more closely and used to guide training and support for care coordinators and system of care communities.

There are several limitations to the data presented in this report that must be noted. First, only fifteen system of care communities are represented in this report. Currently, Indiana has over 50 systems of care in varying stages of development. Second, very few youth and their families from each system of care were interviewed for this study. For example, only one family was interviewed in six of the 15 systems of care included in this project and only two systems of care had five or more interviews completed. Third, TA Center site coaches—who have ongoing working relationships with Indiana's systems of care—conducted all of the interviews for this project. Finally, the youth and families included in this project are not necessarily representative of other families served by systems of care in Indiana, particularly in terms of race, ethnicity and gender. A larger sample is needed before the results of this study can be generalized beyond the systems of care included in this project.

To address the limitations of the current study, the TA Center has contracted with an independent organization to administer the WFI starting in January 2007. This provider will provide for a more objective interview process and will allow for a larger, more representative sample of system of care communities and participants within those communities to be assessed. During the next administration, version 4 of the WFI will be utilized (WFI 4; Bruns, Suter, Force, Sather, & Leverentz-Brady, 2006). This new iteration of the WFI incorporates the latest work by the National Wraparound Initiative and organizes questions into the engagement, planning, implementation and transition phases of wraparound. By using the latest version of the WFI, Indiana can continue to compare the performance of its communities to those of system of care sites throughout the country. This information will remain valuable to state and local decision makers as they continue their efforts to expand systems of care in Indiana.

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CONTRIBUTING AUTHORS

Ivor Groves, PhD
Director, Human Systems and Outcomes, 2107 Delta Way, Tallahassee, FL 32303-4224, 850-422-8900, fax: 850-422-8487, email: ivorgroves@mac.com

John S. Lyons, PhD
Mental Health Services and Policy Program, Northwestern University, 710 N. Lakeshore Drive, Abbott 1206, Chicago, Illinois 60611, 312-908-8972, fax 312-503-0425, email: JSL329@northwestern.edu

Janet S. McIntyre, MPA
Director, Technical Assistance Center for Systems of Care and Evidence-Based Practices for Children and Families, Choices, Inc., 4701 N. Keystone Ave., #150, Indianapolis, IN 46205, 317-205-8266, fax: 317-202-4248, email: jmcintyre@choicesteam.org

Vicki Sprague Effland, PhD
Director, Outcomes and Evaluation, Technical Assistance Center for Systems of Care and Evidence-Based Practices for Children and Families, Choices, Inc., 4701 N. Keystone Ave., #150, Indianapolis, IN 46205, 317-205-8232, fax: 317-202-4325, email: veffland@choicesteam.org

Betty A. Walton, PhD
Indiana University School of Social Work, Indiana Division of Mental Health and Addiction, 402 W. Washington Street, W353, Indianapolis, Indiana 46204, 317-232-7907, fax: 317-233-3472, email: Betty.Walton@fssa.in.gov

The Utility of Consumer Surveys for Improving the Quality of Behavioral Healthcare Services

J. Randy Koch
Mary Nash Shawver
Karen Cropsey
Rehana Kader

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Introduction

Over the past decade, there has been significant growth in the development and implementation of provider performance and consumer outcome measures for the behavioral healthcare field. The Substance Abuse and Mental Health Services Administration (SAMHSA) has led the development of performance measures for the public behavioral healthcare system. SAMHSA has sponsored several initiatives that have facilitated the acceptance of performance measurement as an essential business practice, including the Mental Health Statistics Improvement Program (MHSIP) Consumer-Oriented Report Card, the Outcomes Roundtable for Children and Families, and the Forum on Performance Measures. The private sector has also actively promoted the use of performance measures. Accreditation organizations typically require provider organizations to establish performance measurement systems (e.g., the ORYX program operated by the Joint Commission on Accreditation of Healthcare Organizations), and the National Committee for Quality Assurance has implemented the Health Plan Employer Data and Information Set.

A key rationale for requiring the implementation of performance measures is their presumed value to treatment providers for improving the quality of services they deliver to consumers. However, although there is anecdotal evidence that some providers have successfully used performance measurement results to improve the quality of services, it has not been determined the extent to which performance data have been used for quality improvement (QI), what barriers exist to using performance measurement data for QI, and how we can increase the usefulness of performance data (Chilvers, Harrison, Sipos & Barley, 2002; Garland, Kruse & Aarons, 2003; Manderscheid, 2006; Rawson, Marinelli-Casey & Ling, 2002). Given the widespread use of performance measures in both the public and private sectors and the cost associated with their implementation, it is critical that these and related questions be addressed.

While it is critical that we assess the QI value of performance measurement systems, these systems are very diverse and often quite complicated. In particular, performance measurement systems may include a variety of different types of measures (e.g., standardized clinical instruments and measures generated from administrative data). However, for a variety of reasons (e.g., cost, ease of data collection, and the desire to obtain input directly from consumers), consumer surveys have become one of the most common components of performance measurement systems. Consumer surveys are now widely used to assess such things as consumers' perceptions of service accessibility, cultural sensitivity and the outcomes of treatment. Thus, determining the usefulness of consumer surveys for improving the quality of behavioral healthcare services is particularly important.

Given this, the Commonwealth Health Research Board and the Virginia Department of Mental Health, Mental Retardation and Substance Abuse Services (DMHMRSAS) awarded a grant to the authors to examine the utility of consumer surveys for program quality improvement. The specific aims of this study are to:

1. Describe the use of consumer surveys for QI for a sample of public and private community treatment programs (CTPs), for adult and child/adolescent mental health and substance abuse services;
2. Identify critical issues that need to be addressed in order to improve the use of consumer survey data for QI; and
3. Develop recommendations to improve the use of consumer survey data for QI.

Method

This study has three major components: focus groups, a community treatment program survey, and follow-up interviews. Issues regarding the use of consumer surveys for program QI (e.g., how they are used, extent of use and factors that facilitate and hinder use) were identified and explored through a series of focus groups with "national experts," and with public and private sector behavioral healthcare program staff. The focus group with national experts was conducted with persons recognized as leaders in the field of behavioral healthcare performance measurement and QI, including persons from both the public and private sectors, who have specific experience with consumer surveys. They were identified by soliciting nominations from national organizations with a particular interest in this area, such as the Mental Health Statistics Improvement Program, Forum on Performance Measurement, National Association of State Mental Health Program Directors, National Association of State Alcohol Drug Abuse Directors, Center for Mental Health Services, Center for Substance Abuse Services, the National Committee on Quality Assurance, and the Outcomes Roundtable for Children and Families.

Four focus groups were conducted with CTP staff: two public-sector groups and two private-sector groups. Participants in all groups included staff with varying roles relative to QI, including CEOs, adult and child/adolescent program directors, and QI/program evaluation staff.

The focus group topics included how consumer survey data are used; factors that facilitate and hinder use; and organizational, staff and clinical factors related to use. The focus group discussions were content analyzed to identify issues/themes that—along with the findings of a literature review—would be addressed through items included in the CTP questionnaire. Following cognitive testing and piloting, the web-based questionnaire will be administered to key staff at all 40 community services boards (CSBs) funded by the Virginia DMHMRSAS and 12 private facilities managed by a private behavioral healthcare management services organization (e.g., agency directors, adult and child/adolescent clinical directors and directors of QI).

Following a preliminary review of the information gathered through the assessment described above, telephone interviews will be conducted with six staff from each respondent group from the CSBs (i.e., CSB executive directors, CSB clinical directors, etc.). They will be selected such that three of those interviewed from each respondent group were those that reported the greatest use of consumer survey data for QI while three will be those who reported the least use. The same protocol will be followed for the private sector sample. These interviews will be used to provide a more in depth examination about how consumer survey data are used for QI, perceived utility/lack of utility of these data, facilitating factors, obstacles, and strategies for overcoming obstacles.

Results

Seven persons participated in the national experts focus group, and there were 23 participants in the community treatment program focus groups (17 public sector, and 6 private sector). The majority of the CTP focus group participants hold masters degrees in psychology or social work, hold licenses as Professional Counselors, Clinical Social Workers or Registered Nurses, and have worked in the behavioral healthcare field for an average of 19 years. Table 1 illustrates the uses of consumer survey data as reported by the focus group participants.

Table 1
Reported Uses of Consumer Survey Data

- Accountability/Quality Assurance
- Accreditation/Licensure Requirements
- Community Education/Public Relations/Business Development
- Fidelity Assessment
- Funding Requests/Grant Applications
- Quality Improvement
- Staff Development/Supervision/Evaluation
- Target Technical Assistance

Factors that facilitate and hinder the use of consumer survey data, as reported by the focus group participants, are detailed in Table 2. In addition, there were other themes of concern that arose during the focus groups. These included the cost-benefit of the possible burden on staff and consumers compared to the benefits gained, concern regarding how funders may use data, the relative value of consumer surveys compared to other QI tools and evaluations, the development of specialized consumer surveys, and validity of self-report instruments in general.

Table 2
Factors that Facilitate and Hinder Use of Consumer Survey Data

Factor	*Description*
Types of Questions	
Facilitate	actionable; specific
Hinder	literacy/language barriers; too broad or general
Data Analysis and Reporting	
Facilitate	specific; include practical interpretation
Hinder	delay or infrequency of reporting; lack of interpretation
Organizational Structure and Process	
Facilitate	involved stakeholders in QI committee; established QI process
Hinder	catch consumers at different stages of treatment; insufficient dissemination of results/reports

Conclusion

The focus groups, held with both private and public sector treatment providers, as well as national experts, indicated a wide variety of ways that consumer survey data are used to inform quality improvement initiatives and address other needs. The focus groups also identified several factors that facilitate and hinder their use.

It is planned that the results of this study will be used to develop strategies to increase the utility and actual use of data gathered through consumer surveys for improving the quality of behavioral healthcare services. This information will be useful to both the developers of consumer survey instruments and those who require their use, such as funding and accrediting organizations.

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CONTRIBUTING AUTHORS

J. Randy Koch, PhD
Executive Director, Institute for Drug and Alcohol Studies, Virginia Commonwealth University, McGuire Hall, Rm. B08C, 1112 East Clay Street, P. O. Box 980310, Richmond, VA 23298, 804-828-8633, fax: 804-828-7862, email: jrkoch@vcu.edu

Mary Nash Shawver, MS, MEd
Research Associate, Institute for Drug and Alcohol Studies, Virginia Commonwealth University, McGuire Hall, Rm. B08C, 1112 East Clay Street, P. O. Box 980310, Richmond, VA 23298, 757-435-6589, fax: 757-369-0256, email: maryshawver@yahoo.com

Karen Cropsey, PsyD
Associate Professor, Department of Psychiatry and Behavioral Neurobiology, University of Alabama School of Medicine, 401 Beacon Parkway West, Birmingham, AL 35209, 205-916-0135 x505, email:kcropsey@beapsy1.his.uab.edu

Rehana Kader, M.Psych
South African Medical Research Council, Alcohol and Drug Abuse Research Unit, P.O. Box 19070,Tygerburg 7505,South Africa,+27 21 9380419, email: rehana@webmail.co.za

The Use of Risk Adjustment to Compare Mental Health Outcomes

John Robst
Norín Dollard
Mary Armstrong
Keren Vergon
Stephanie Romney

Introduction

Administrative claims data are frequently used in health services research due to the large samples and relatively low acquisition cost. However, beneficiaries in public sector health plans such as Medicaid and Medicare typically have input into whether they receive treatment, or the type of treatment received. Such self-selection into treatment is problematic for researchers because outcomes may vary across treatments (or across treatment versus control group) due to the *characteristics* of people who elect to receive a specific treatment (or treatment versus no treatment), not the treatment itself. A similar situation exists when patients are systematically assigned to a treatment, for example, based on age. Consequently, studies using claims data attempt to mimic random assignment by matching similar individuals across treatments. Much research matches observations using propensity score matching (PSM), but conditions for the appropriate use of PSM exist and those conditions are not always met (Rosenbaum & Rubin, 1983). This paper presents an alternative matching method for modeling evaluation outcomes that approximates a random experiment by accounting for differences in health status across treatment groups. The method is illustrated by comparing outcomes for two out-of-home care alternatives for Medicaid eligible youths in Florida with mental health care needs: therapeutic group care (TGC) and specialized therapeutic foster care (TFC).

Background

Propensity score matching (PSM) is frequently used to account for non-random differences between groups of people (Rosenbaum & Rubin, 1983). PSM utilizes logistic regression to predict which youth will be placed into TFC (or TGC). Youth in TFC or TGC with a similar probability of TFC placement are matched, and outcomes for matched individuals in different treatments are compared. However, if the logistic regression is highly predictive of placement, youth placed into TGC have a low probability of TFC placement, while youth in TFC have a high probability of TFC placement. Consequently, few youth are considered comparable, which is typically referred to as the common support problem (Imbens, 2004). Efforts to utilize PSM in this project were subject to common support problems, and thus PSM was deemed inappropriate for this analysis.

While PSM cannot be used, it is still important to determine which youth in TGC and TFC are comparable. Consequently, an alternative method is considered for matching similar youth based on the risk adjustment literature (Iezzoni, 2003). While risk adjustment refers to several different concepts, for the purposes of this paper “risk adjustment…describes a way of accounting for differences in health status among various study populations” (Greenwald, 2000, p. 1). Diagnosis based risk adjustment models use demographics and diagnoses from claims data to predict the mental health status of enrollees.

While there are many diagnosis-based risk adjustment models available to measure health status (e.g., Kronick, Gilmer, Dreyfus & Lee, 2000), none are really appropriate for this analysis. First, the focus of this study is on mental health care for children with diagnosed mental health needs, while most existing models focus on overall health care for the general Medicaid or Medicare population. Several models exist for mental health care, but these models focus on adults (e.g., Sloan, et. al., 2006). Second, most risk models are designed to be part of a managed care payment system and thus exclude information deemed inappropriate for payment models (e.g., race, prior period utilization). Thus a risk adjustment model is developed specific to this analysis.

As noted above, risk adjustment refers to different concepts and methods. Many use risk adjustment to refer to a regression model that controls for all known confounders, with a treatment effect measured through the inclusion of a categorical variable denoting whether the treatment was received. Such an approach is criticized because the functional form typically used assumes the treatment effect is constant across all people (Gibson-Davis & Foster, 2006). While a thorough discussion of these issues is beyond the scope of this short paper, the proposed risk adjustment method does not assume constant treatment effects, and indeed explicitly considers whether treatment effects vary based on mental health status.

Methods

Data

The data are from the Florida Medicaid eligibility and claims files. Two samples are created: one for youth receiving TGC services and another for youth receiving specialized TFC services. Therapeutic group care became a Medicaid service in Florida in October 2002; thus the group care sample includes all youth receiving TGC services between October 2002 and December 2005. The foster care sample includes all youth receiving TFC services between July 2000 and June 2005. A subset of youth with 12 months of Medicaid eligibility before and after their treatment episode is selected to assess service use, outcomes and costs. There are 190 youth who meet these criteria with a TGC episode and 507 with a foster care episode. Cross system outcomes are also examined by matching Medicaid data to Florida involuntary commitment data (Baker Act), Department of Juvenile Justice (DJJ), and Florida Department of Law Enforcement (FDLE) data.

Procedures

The risk adjustment model is estimated by ordinary least squares regression where the dependent variable denotes Medicaid behavioral health costs:

$$Medicaid\_cost_{ijt} = X_{ijt} \cdot \beta + u_{ijt} \quad (1)$$

Here i denotes individuals, j the treatment mode (TFC or TGC), t the 12 months prior to treatment in TFC or TGC, X demographics, diagnoses, and prior year treatment, and u_{it} the normally distributed error term. Eleven diagnostic categories are included (e.g., schizophrenia and psychoses, mood and affective disorders, anxiety and stress disorders, adjustment disorders, disruptive behavior disorders, and attention deficit disorders), while thirteen prior period treatment categories are included (e.g., general hospital-psychiatric inpatient, school-based care, targeted case management, emergency mental health services, and outpatient services). See Armstrong, et al. (2006) for a complete list of the diagnostic and treatment groups. Typically risk models exclude factors that are not significantly related to costs, with the criteria for significance varying across studies. Thus, a stepwise approach is used requiring *p*-values less than .2 for inclusion of the diagnostic and treatment variables, with all demographic variables constrained to be in the model. The risk score is computed by predicting expenditures for each individual based on the coefficients and individual characteristics standardized to a sample mean of 1.0:

$$Risk\_cost_{i} = (X_{it} \cdot \beta) \,/\, (\overline{X_{it} \cdot \beta}) \quad (2)$$

Higher risk scores imply the presence of more conditions and characteristics related to higher costs. As such, higher risk scores denote poorer mental health. The model provides a measure of mental health status prior to treatment group assignment and allows for a test of whether mental health status differs between individuals assigned to TFC and TGC.

The sample is stratified into groups based on the risk score, and outcomes in the year after the treatment episode ends are compared for individuals with similar mental health status in the year prior to the start of the treatment episode. While the PSM literature typically sorts the sample into five groups (Gibson-Davis & Foster, 2006), the small sample size limits this analysis to three comparison groups. The outcomes considered are Medicaid behavioral health care costs, involuntary commitment, juvenile justice, and law enforcement encounters.

Findings

The complete risk adjustment model coefficients are available in Armstrong, Dollard, Vergon, et al. (2006). The model coefficients indicate that boys utilize more services than girls ($t = 2.46, p = .0144$). Diagnoses of anxiety disorders ($t = 2.04, p = .0427$), attention disorders ($t = 3.26, p = .0012$), mood and affective disorders ($t = 4.39, p < .0001$), and other mental health disorders ($t = 3.12, p = .0018$) are associated with higher Medicaid costs. Treatment mode in the prior period (Statewide Inpatient Psychiatric Program [SIPP], TFC, or general hospital-psychiatric inpatient) is the most important determinant of pre-period costs. Risk scores are computed based on the normalized predicted values from the regression. Youth placed in TGC have higher risk scores than youth in TFC, indicating they have greater mental health care needs.

Outcomes are compared for three groups of youth. Similar to PSM, risk adjustment methods can also be subject to common support problems (Gibson-Davis & Foster, 2006), but sample sizes are adequate and average risk scores are similar for TGC and TFC youth in each group. The only significant differences in outcomes are for youth in the lowest risk score group. Individuals with TGC treatment episodes are more likely to have juvenile justice and law enforcement encounters. This result is consistent with research that shows that youth in group environments had a smaller reduction in juvenile offending than youth in specialized foster care (Chamberlain and Reid, 1998). The results suggest that the difference is greatest for youth with fewer mental health care needs.

Table 1
Outcomes Comparison for Therapeutic Group and Foster Care
Using Risk Scores to Match Observations

	Groups		
Risk scores	*Low risk score*	*Medium risk score*	*High risk score*
Therapeutic group care			
Risk score	0.289	0.547	2.296
Medicaid costs	2261	2586	3080
Baker Act	0.348	0.315	0.247
Juvenile justice	0.348**	0.263	0.333
Law enforcement	0.304**	0.158	0.235
Number of obs.	23	38	81
Therapeutic foster care			
Risk score	0.270	0.592	2.006
Medicaid costs	1990	2713	2922
Baker Act	0.183	0.239	0.333
Juvenile justice	0.137**	0.268	0.271
Law enforcement	0.085**	0.167	0.229
Number of observations	153	138	96

Notes: Medicaid costs are per member per month, while Baker Act, juvenile justice, and law enforcement denote the proportion of people in the group with at least one encounter during the year.
** indicates the difference between youth in group care and foster care is significant, $p < .05$

Discussion

Methods that account for pre-treatment differences in individual characteristics were discussed with an application to comparing outcomes for youth served by TFC and TGC in Florida. The results suggest that risk models may be a useful tool to create comparison groups in evaluation research particularly in cases where propensity score methods cannot be appropriately applied.

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CONTRIBUTING AUTHORS

John Robst, PhD
Department of Mental Health Law and Policy, 813-974-1505,
fax: 813-974-9327, email: jrobst@fmhi.usf.edu

Norín Dollard, PhD
Department of Child and Family Studies, 813-974-3761; fax: 813-974-0939,
email: dollard@fmhi.usf.edu

Mary Armstrong, PhD
Department of Child and Family Studies, 813-974-4601, fax: 813-974-7376,
email: armstrong@fmhi.usf.edu

Keren Vergon, PhD
Department of Child and Family Studies, 813-974-8949, fax: 813-974-0939,
email: vergon@fmhi.usf.edu

Stephanie Romney, PhD
Department of Child and Family Studies, 813-974-0517, fax: 813-974-7376,
email: sromney@fmhi.usf.edu

All Authors: Louis de la Parte Florida Mental Health Institute, University of South Florida, 13301 Bruce B. Downs Blvd., Tampa, FL 33612

Pooled Funding and Resource Allocation in a System of Care: A Review of Expenditures and Outcomes

James Papp
Ann Klein

Introduction

Meeting the needs of multi-system youth is a challenge for child serving systems nationally. A system of care is a promising approach that has shown positive clinical (Kutash, Duchnowski, & Friedman, 2005; Rosenblatt, 2005) and financial outcomes (Foster & Connor, 2005). Systems of care and programs operating within this framework have been cited as effective models for meeting the complex needs of youth and their families. With the publication of the New Freedom Commission on Mental Health Report (2003), the system of care framework has gained the attention of policy- and other decision-makers. As communities become involved in system of care planning and implementation activities, questions surrounding funding and sustainability bubble to the top.

Pires (2002) points out the "daunting" reality of financing child mental health services. This financial reality as well as other factors associated with implementing evidence-based programs (EBPs) and practices was further studied in the work of Naoom, Wallace, Fixen & Blase (2007). In their survey of EBP developers and implementers, concerns about funding and policy emerged. When asked to rank statements relating to these concepts, participants endorsed these issues among the most important, yet at the same time as ones over which they had the least amount of influence at the program level (Naoom, et. al., 2007). With programs' financial wellness as an ongoing area of concern, these recent findings help underscore the importance of a well-planned and implemented business model as key to program success and continued sustainability.

Background

As the administrator of a system of care serving the greater Cincinnati, Ohio region, Hamilton Choices (HC) is similarly challenged. Using a wraparound approach (Burns & Goldman, 1999), HC provides care coordination for youth at-risk of emotional and behavioral problems and their families. In accordance with a 100% at-risk contract, HC operates under a per diem case rate structure and is responsible for all aspects of care for enrolled youth. This applies to a wide range of service and supports including outpatient therapy, mentoring, and residential treatment. The business model and reimbursement system has been in place since November 2002, and uses a daily case rate that is divided into direct service and administrative portions. The number of enrollment days (E days) youth are served during a calendar month are multiplied by the contractually established daily case rate to generate operating funds.

As part of a pure pooled funding business model, each partner contributes a percentage of the total daily case rate. This case rate multiplier applies to all youth, and not just those referred by each individual funder. This puts into practice the philosophy that the system as a whole bears responsibility for the care of eligible youth and families, thus eliminating finger pointing and questions as to which system shoulders the financial responsibility for any one youth. The participation percentage varies by funder and is contractually established.

The purpose of this study was to examine the financial resources expended by each funder for project participation in relation to the dollar value of services received by referred youth. Driving this was the hypothesis that a pure pooled funding business model results in financial and clinical benefits for participating funding partners. A second question relates to changes in clinical functioning. Using the Child Adolescent Functioning Assessment Scale (CAFAS; Hodges, 2000), youth served during the same financial period were reviewed with the related hypothesis that improvements in functioning would be realized.

Methods

Participants

Records used in the study consisted of administrative claims data for all youth with case activity during fiscal year 2006 (FY 06; $N = 436$). CAFAS analyses were applied to the same pool of youth and included anyone with an initial and a discharge rating at the time of analysis.

Data Sources

Administrative claims data and CAFAS scores were obtained from HC's management information system, The Clinical Manager (TCM; Clinical Data Solutions, LLC, 1998). The CAFAS is a clinician-rated measure of functioning for youth aged 6 to 17 years of age and is divided in to eight life domains or subscales; lower scores indicate greater functioning. Financial analyses used a combination of FY 06 program revenue derived from the direct service portion of the case rate and expenditures for services provided during the same period and paid by HC. With the aim of accurately representing the total value (in dollars) of services received, a secondary calculation was applied to the care coordination service provided by HC resulting in a dollar figure used in the methodology. Medicaid services were not included in the analysis.

Procedure

Specific financial calculations using SPSS software (SPSS, 2002) were as follows, and resulted in two figures for comparison. The first was funder participation cost per E day and the second, service expenditures per E day. In essence, the first is defined as resources IN and the second as resources OUT, or value received in dollars per day of referred youth enrollment (see Table 1).

To calculate the IN numerator, HC FY 06 revenue derived from the direct service portion of the case rate was divided using each funder's contractual participation percentage. This figure represents the total participation cost for the direct service portion of the case rate, by individual funder. The denominator was the total number of E days for youth referred from each funding partner during the same FY 06 period. The IN ratio can best be defined as the participation cost per funding partner per day of youth enrollment. The corresponding OUT numerator is the sum of the dollar value of services received by referred youth and paid by HC as well as a figure that used a daily dollar multiplier for each day of care coordination received. The logic in using the care coordination multiplier was to represent numerically one of the major outputs of HC's service delivery model. The denominator is the same number of E days described previously. This OUT ratio can best be defined as the value of services (in dollars) received per enrollment day.

Results

As shown in Table 1, the cost of project participation per E day in relation to the monetary value of services received varied widely by funder. Because the pooled funding model is premised on shared resources and collateral benefits for those involved, average participation cost for all four funders was also calculated. A review of Table 1, shows that average resources IN were less than resources OUT.

Table 1
System of Care Resource Allocation

Funder	*% Contribution by contract*	*% Referred Youth (N = 436)*	*% all HC FY06 service expenditures*	*IN: Funder participation cost per E day*[a]	*OUT: Service expenditures per E day*[b]
1	58%	48%	43%	$134	$119
2	29%	22%	20%	$124	$102
3	7%	11%	9%	$66	$101
4	5%	20%	14%	$26	$93
				Average system participation cost	*Average service expenditures*
				$88	$104

[a] from referred E days and FY06 project contribution

[b] using referred E days and FY 06 service expenditures for referred youth

Child and Adolescent Functional Assessment Scale (CAFAS)

A second tier of the analysis included a review of changes in clinical functioning for discharged youth with activity during the same FY 06 period. This second phase of analysis is consistent with Kutash, et al., (2005) and Rosenblatt, (2005) who cite that outcomes research in systems of care should be accompanied by analyses of the cost necessary to produce those outcomes.

Statistically and clinically significant decreases in CAFAS scores reflecting an increase in functioning were observed between enrollment and discharge for youth referred by all funders (see Table 2).

Table 2
Change in Average CAFAS Total Score
between Enrollment and Discharge by Funder

Funder	*Enrollment* *Mean (SD)*	*Discharge* *Mean (SD)*	*t*
Funder 1	102.25 (42.15)	67.19 (47.60)	*t*(88) = 6.185***
Funder 2	98.46 (39.10)	65.64 (39.79)	*t*(38) = 3.688**
Funder 3	101.11 (48.25)	56.11 (40.31)	*t*(17) = 3.035*
Funder 4	125.09 (38.51)	91.32 (56.33	*t*(52) = 5.109***

$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$

Limitations

This study uses descriptive statistics in an effort to better understand the question of value as it relates to pooled or blended funding in a system of care. Using a simple dollar for dollar methodology, value in this instance applies solely to the cost per day to participate in the project in relation to the monetary value of services received. Whereas this helps answer questions regarding resource allocation, additional work is needed to understand how other relevant variables might contribute to the model.

Among these variables is avoidance cost (AV) or deferred spending. Although difficult to measure, a more complete understanding of AV could serve as the impetus and policy driver for communities to consider a similar business model. In this context, avoidance cost refers to the collateral benefit (both clinically and financially) that funder A may experience when youth are referred to the project by funder B, but maintain involvement in both funder A's and funder B's service system. Another way to conceptualize this is to consider the prevention effect associated with program participation. Since eligibility requires involvement with multiple child serving systems, an unanswered question remains whether or not funder B is able to conserve or possibly reallocate resources as a result of this collateral benefit. For example, youth referred by mental health also may have involvement with juvenile justice. The unanswered question remains whether or not a ripple effect can be observed when improvement in clinical functioning during program enrollment occurs. As it relates to the example above, this positive ripple could show itself in the form of decreased court involvement which could lead to a decreased need for monitoring on the part of juvenile court and possible graduation from the juvenile justice system.

A second factor to consider when using this type of model relates to the sum clinical benefit associated with various service package combinations irrespective of a package's monetary value. Ultimately, determinations of value must be answered by each individual funder and involve a combination of participation cost and outcomes for referred youth. Using this construct, attributions of value go beyond dollar-to-dollar comparisons and highlight the importance of the combination of care coordination and the "right" services over service packages that may exceed participation cost per E day but are ineffective. More does not always equal better.

Conclusion

The successful implementation of systems of care requires that several key elements exist. Friedman (2006) names these elements, describing fourteen interrelated factors that contribute to this success. Among these factors are collaboration among child serving systems and providers, and financing structures and strategies. In Cincinnati, area child serving systems have met these conditions and have committed to a structure that has produced positive outcomes for youth and their families (Klein & Papp, 2006) while maintaining a case rate that is acceptable to funders and HC.

As communities work to implement systems of care, questions of funding and sustainability are inevitable. Although a growing volume of literature is developing, identifying this framework as a promising way to meet the complex needs of youth and their families, questions of the best financial structure to support this remain. It is believed that questions raised from this study can help inform policy discussion and decision making. This, in turn, may assist other systems of care in defining and/or refining their business models with the end goal of financially sustainable programs that effectively address the multiple service needs of youth and their families.

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CONTRIBUTING AUTHORS

James Papp, MSW
Outcome Manager, Division of Health Policy & Clinical Effectiveness, ML 5040, Cincinnati Children's, 3333 Burnet Avenue, Cincinnati OH 45229, 513-803-0339, 513-636-2864, email: james.papp@cchmc.org

Ann Klein, MA
Director of Outcomes and Evaluations, Hamilton Choices, LLC, 644 Linn Street, Suite 900, Cincinnati, OH 45203, 513-765-5504, fax: 513-765-5555, email: aklein@hamiltonchoices.org

Child and Family Team Practice Improvement Reviews in Maricopa County Phoenix, Arizona

Nick D. Thelen
Lynette Tolliver
Toni Tramontana Issadore

Introduction

In collaboration with the Family Involvement Center, ValueOptions conducted three rounds of practice reviews in Maricopa County between October 2005 and July 2006. The Arizona Department of Health Services/Division of Behavioral Health Services (ADHS/DBHS) approved the Practice Improvement Review Tool developed for the assessment; the tool was designed to measure how well the local behavioral health system succeeded in transforming practice via the Child and Family Team process.

The Practice Improvement Review Tool included items to assess (a) four key elements of the practice model, and (b) implementation of the Arizona Vision. Due to a class action settlement known as the J.K. Settlement in 2001, the Arizona Vision was established, along with 12 Principles to govern system of care reform in Arizona. The Arizona Vision states that:

> *In collaboration with the child and family and others, Arizona will provide accessible behavioral health services designed to aid children to achieve success in school, live with their families, avoid delinquency, and become stable and productive adults. Services will be tailored to the child and family and provided in the most appropriate setting, in a timely fashion, and in accordance with best practices, while respecting the child's and family's cultural heritage.* (J. K. v. Eden, 2001, IV. 18)

This summary describes the methodology and results of the Practice Improvement reviews.

Method

Participants

With the assistance of the Maricopa County Assessment and Outcomes Subcommittee of the Maricopa County Collaborative, ValueOptions developed and implemented the qualitative review process to assess the status of practice among agencies. This multifaceted review process included interviews with youth receiving behavioral health services, their family members, Child and Family Team facilitators, and Child Protective Services caseworkers when applicable. An in-depth document review was also conducted for each child in the sample.

The Subcommittee established criteria for a stratified random sample of youth; with additional criteria for focus and diversity. That is, the Subcommittee determined that the sample should include the following characteristics:

- Child and Family Teams had been functioning for at least 90 days prior to the review.
- The sample was representative of the service population (e.g., gender, race, and ethnicity).
- A diverse sample of Child and Family Team facilitators ensured that a facilitator was not interviewed more than two times for any given agency.
- Inclusion of both children in the care of child welfare, and children not in state custody.

Instrument

The fundamental question underlying all of the questions in the review was: How well has the behavioral health system succeeded in transforming practice? The Practice Improvement Review Tool included items developed to generate ratings for four key domains of the practice model: (a) Engagement: Establish a trusting relationship with the child and family; (b) Clearly knows the family and has identified the Strengths, Needs and Culture of the child and family; (c) Creates an Individualized Service Plan that meets the needs of the child and family; and (d) Implements, monitors and modifies the service plan toward a successful outcome for the child and family. The reviewing team scored each of the four practice domains on a one to four point scale, with 1 = *substantially unacceptable performance*; 2 = *partially unacceptable performance*; 3 = *minimally acceptable performance*; and 4 = *substantially acceptable performance*.

Questions were developed to measure the implementation of the Arizona Vision and the 12 Arizona Principles as identified in the 2001 JK Settlement Agreement (see Table 1). In most instances, this information was obtained via a family interview and record review. Principles were rated as either *yes* = present, or *no* = not present. A composite score was calculated from results of both the Family Interview and Record Review.

Review Teams

The review teams consisted of a parent whose child received services through one of the child serving systems in Arizona or another state, and a behavioral health service professional, both with experience in behavioral health systems reform. Members of each team were knowledgeable about the standards for the domains of practice, as well as the Arizona Vision and 12 Principles governing the system of care reform in Arizona. Review teams were trained in the review methodology, including interviewing and accurate scoring; characteristics of the processes being reviewed; and indicators for the practice model being measured.

Findings

Baseline reviews were conducted in October 2005 ($N = 105$). As shown in Table 2, results indicated poor performance at baseline in each of the four practice domains. *Engagement* scored the highest, with 56% of all Child and Family Teams reviewed receiving acceptable performance. *Implement, Monitor and Modify* the service plan toward a successful outcome for the child and family had an acceptable performance rate of 37%. Create an *Individualized Service Plan* that meets the needs of the child and family had an acceptable performance rate of 30%. Clearly knows the family and has identified the *Strengths, Needs and Culture of the Child and Family* scored the poorest with an overall acceptable performance rate of 22%.

During each of the two reviews following the baseline review, scores for acceptable performance in each practice domain consistently improved. The final review conducted in July 2006 indicated a 12% increase in *Engagement*, 18% increase in identifying the *Strengths, Needs and Culture of the Child and Family*, 12% increase in creating an *Individualized Service Plan* that meets the needs of the child and family and a 6% increase in *Implement, Monitor and Modify* the service plan toward a successful outcome for the child and family.

As with the four key domains of practices, acceptable performance in demonstrating the 12 Arizona Principles increased throughout each of the three rounds of review (Table 1). The principles in which the system scored highest were Principle 10, *Respect for the child and family's unique cultural heritage* (84%), and Principle 8, *Services tailored to the child and family* (70%). The principles showing the poorest system performance were Principle 11, *Independence* (37%), and Principle 7, *Timeliness* (41%). For each of the 12 Arizona Principles (with the exception of Principles 9 and 10), the composite scores did not address the satisfaction of the families interviewed. As a result, the composite score for the 12 Arizona Principles may be lower than how the families actually interpreted the quality of the services they received.

Table 1
Percentage of Performance in Each of the Arizona 12 Principles
Based on Record Review and Family Interview Questions

Arizona 12 Principles		*Oct. 2005*	*Apr. 2006*	*Jul. 2006*
1	Collaboration with the child and family	39%	58%	68%
2	Functional Outcomes	48%	57%	65%
3	Collaboration with others	33%	58%	54%
4	Accessible Services	32%	49%	51%
5	Best Practices	44%	56%	52%
6	Most appropriate setting	37%	52%	56%
7	Timeliness	28%	39%	41%
8	Services tailored to the child and family	57%	60%	70%
9	Stability	35%	46%	55%
10	Respect for child and family's unique cultural heritage	79%	81%	84%
11	Independence	25%	28%	37%
12	Connection to natural supports	43%	56%	64%

Table 2
Percentage of Acceptable Performance in each of the Four Key Elements
of the Practice Model over Three Years

Domain	*Oct. 2005*	*Apr. 2006*	*Jul. 2006*
Engagement	56%	60%	68%
Strengths, Needs, Culture Discovery	22%	36%	40%
Individualized Service Planning	30%	34%	42%
Implement, Monitor, and Modify Service Plan	37%	36%	43%

Conclusion

At the completion of each agency review, the review team participated in a debriefing session to discuss their findings and identify areas of strengths and areas for improvement. ValueOptions and Family Involvement Center personnel partnered with each of the behavioral health agencies following each round of reviews and met with their leadership in an effort to identify possible resolutions for those teams that had obtained unacceptable performance ratings across all four domains. Each of the behavioral health agencies involved developed internal processes to measure the effectiveness of their Practice Improvement Plans and have begun to implement a variety of activities to address areas for improvement identified related to the 12 Arizona principles and four key elements of practice.

Throughout the process, family members, professionals and community members worked together to measure how well the local behavioral health system succeeded in transforming practice with the implementation of the Child and Family Team process. In January 2007, the Arizona Department of Health Services/Division of Behavioral Health Services decided to implement the Wraparound Fidelity Assessment Scale (WFAS) Version 4.0 in order to monitor the behavioral health system statewide. Ongoing monitoring of the system utilizing this tool was scheduled to begin in July 2007. In recognition of the involvement of family members in the review process, ADHS/DBHS has contracted with family organizations across the state to conduct the interview portion of the WFAS. Professionals at the Regional Behavioral Health Authorities and/or provider level will conduct the document reviews.

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CONTRIBUTING AUTHORS

Nick D. Thelen, MAHR
Stakeholder Services Manager, ValueOptions-Child and Adolescent Services Department, 444 N 44th St. Suite 400, Phoenix, AZ 85008, 602-685-3895, fax: 602-629-1595, email: nick.thelen@valueoptions.com

Lynette Tolliver
Systems Transformation Manager, Family Involvement Center, 1430 E. Indian School Rd., Phoenix, AZ 85014, 602-288-0155, fax: 602-288-0156, email: lynette@familyinvolvementcenter.org

Toni Tramontana Issadore
Network Development Manager, ValueOptions-Child and Adolescent Services Department, 444 N 44th St. Suite 400, Phoenix, AZ 85008, 602-685-3885, fax: 602-629-1595, email: toni.tramontana@valueoptions.com

Integrating Web-Based Data Management Tools to Assess the Impact of School-Based Programs

Alisha Nichols
Rebecca Kelley
Christie Crosby
Kenny Gilyard
Kimbaird Avant

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Introduction

Researchers advise that organizations commit to designing a program evaluation plan that will help to refine the organizational indicators and outcomes, develop effective data collection techniques, and construct a well-designed evaluation system (Poister, 2003). Furthermore, research suggests that program and evaluation be integrated to maximize organizational, program and service performance (Bennett & Rockwell, 1995). This paper proposes that school-based programs that use advanced technological resources, including web-based data management tools, for program evaluation purposes can provide high quality and effective assessments that ultimately have a positive system-level impact on an organization. As a result, evaluators are able to retrieve and report information directly from the internet for compliance and accountability purposes cost-effectively, removing barriers that might otherwise prolong the evaluation process (Gasiorowicz, Luther, Steiner, & Haanrahan, 2005). The ease of use and access for the evaluators has ultimately helped to advise youth-serving organizations in refining their desired goals and outcomes which are closely linked to ongoing education policy efforts at the school district-level. Online databases, although at times not perfect, may play a vital role in performing efficient and effective organizational and program assessments. Using CincyAfterSchool, a 21st Century Community Learning Center Program as a model, this paper will discuss two types of web-based data management tools: internal, organization-managed and external, privately managed. The strengths and challenges that are presented with using each method will be described in addition to the implications and contributions that online data tools have on evaluation in practice as they relate to organizations and their programs.

Model: Using Web-Based Data Tools to Assess the YMCA–21st Century Community Learning Center CincyAfterSchool Program

Background

CincyAfterSchool (CAS) is an afterschool and summer program administrated by the YMCA of Greater Cincinnati created to improve the academic achievement and quality of life of underserved, at-risk youth within nine schools within the Cincinnati public school district. The program is a collaborative effort of six community agencies, with support from parents, teachers, volunteers, students, and community partners. In its second year of operation, the CAS Program has expanded the scope of its afterschool programs, increased the number of partnerships, and strengthened its program evaluation design to better measure the needs of students and the impact of the program on promoting academic, social, and emotional development in students.

The CAS program design is comprehensive, with a focus on providing afterschool programming that covers nine general program components: family sessions, non-school day programs, telecommunications and technology, fine arts and culture, health and wellness (recreation), tutoring and mentoring, leadership, career exploration, and service learning activities.

Evaluation Design

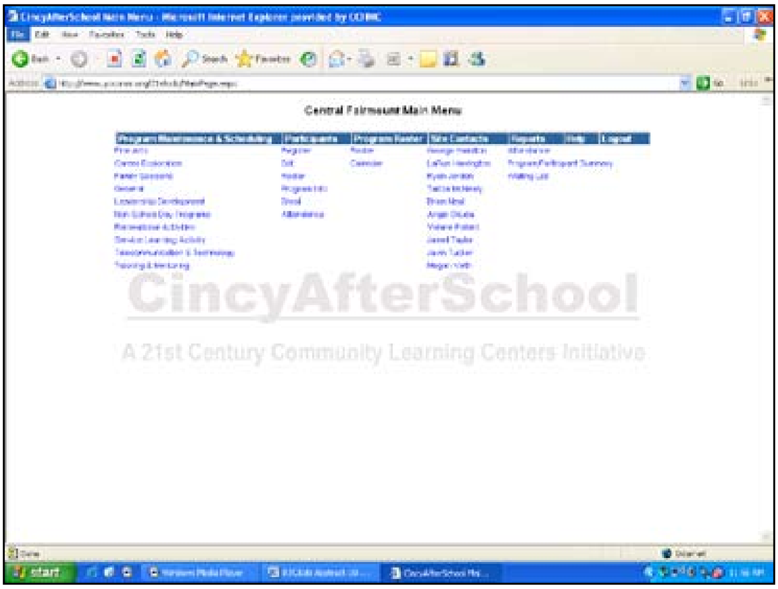
To assess both student performance and program impact, the YMCA has consulted with *INNOVATIONS*, a community-collaborative program of Cincinnati Children's Hospital Medical Center that oversees the program evaluation process. The program utilizes an internal, organization-managed online database and has begun to explore the options of implementing an external, privately owned online database. Data for the CincyAfterSchool (CAS) Program is collected by program site coordinators at each site using a combination of internally and externally developed measures and records, including survey questionnaires, program attendance, student grades, and additional supporting data collected at the individual-level.

Two Online Data Collection Methods

Internal Online Data System

Many organizations, including the YMCA of Greater Cincinnati, have opted to develop an internal web-based evaluation method to collect data that is reported to funders and other organizational stakeholders. The CincyAfterSchool Program utilizes a Microsoft ACCESS-based, online data system (see Figure1) that is designed to collect and store a variety of measurement items such as participant registration data, program roster, activities and services provided to participants, and participant attendance. These data are entered and stored directly into the secure internet-based database by program coordinators and are managed by an internal business systems analyst. From the website, *INNOVATIONS* is able to retrieve the data in Microsoft Excel format and analyze it for evaluating the program and developing mid-year and annual reports.

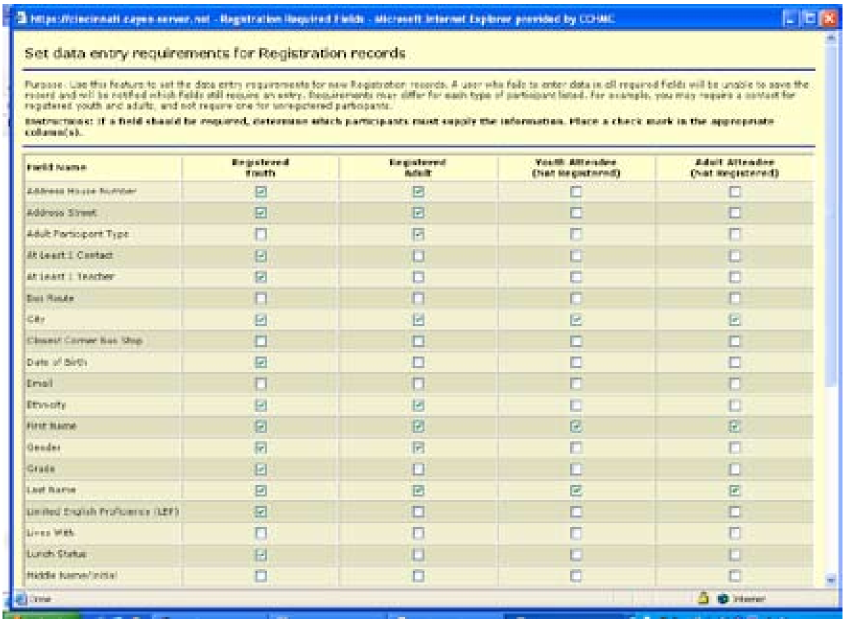
Figure1
Example: Cincy After School Online Database



External, Private Data System

Realizing the potential of online data systems in terms of the capability to track participants longitudinally, the CincyAfterSchool Program and the Cincinnati Community Learning Center Network (CLC) have begun to explore options for expanding the use of such technology to make a systems-wide impact within the Greater Cincinnati area. The complex web-based system would be used to store all services provided to participants of Community Learning Center providers including health-related information and academic performance, in addition to the measurement items that are already collected using the existing internal CincyAfterSchool data management system. A module of the privately owned web-based system has been purchased and utilized (see Figure 2) for agencies within the Cincinnati CLC Network to track the needs, services received, and progress of participants over time. The mega system will be customized to compile, summarize and transmit data directly into reporting formats required by the Ohio Department of Education and other stakeholders.

Figure2
Example: One Module of a Privately Owned Online System



Set data entry requirements for Registration records

Purpose: Use this feature to set the data entry requirements for new Registration records. A user who fails to enter data in all required fields will be unable to save the record and will be notified which fields still require an entry. Requirements may differ for each type of participant listed. For example, you may require a contact for registered youth and adults, and not require one for unregistered participants.

Instructions: If a field should be required, determine which participants must supply the information. Place a check mark in the appropriate column(s).

Field Name	Registered Youth	Registered Adult	Youth Attendee (Not Registered)	Adult Attendee (Not Registered)
Address House Number	☑	☑	☐	☐
Address Street	☑	☑	☐	☐
Adult Participant Type	☐	☑	☐	☐
At Least 1 Contact	☑	☐	☐	☐
At Least 1 Teacher	☑	☐	☐	☐
Bus Route	☐	☐	☐	☐
City	☑	☑	☑	☑
Closest Corner Bus Stop	☐	☐	☐	☐
Date of Birth	☑	☐	☐	☐
Email	☐	☐	☐	☐
Ethnicity	☑	☑	☐	☐
First Name	☑	☑	☑	☑
Gender	☑	☑	☐	☐
Grade	☑	☐	☐	☐
Last Name	☑	☑	☑	☑
Limited English Proficiency (LEP)	☑	☐	☐	☐
Lives With	☐	☐	☐	☐
Lunch Status	☑	☐	☐	☐
Middle Name/Initial	☐	☐	☐	☐

Other Cost-Effective Alternatives

Although many funders are now requiring that 5% of budget allocations are designated for evaluation purposes, agencies may not have enough resources to implement complex online data tools. Other cost-effective alternatives to developing web-based systems that collect, store and summarize data are available. Organizations can develop a minimal dataset that captures necessary data without non-essential features. Other simple data capturing systems can be developed and stored on the internally utilized network server within the organization. Finally, existing databases can be posted online, with the potential for information sharing across collaboratives.

Summary of Advantages and Limitations of Using Online Systems

The strengths of using online or web-based systems may include the following.

- generally cost-effective, time efficient, and user friendly,
- encourage internal data management,
- may be used to expand data collection and reporting for other programs within an organization,
- allow for the entry, retrieval and analysis of data directly from servers or the internet,
- facilitate the development and submission of reports to staff, administrators and funders,
- allow for large and complex databases to be stored and managed by various statistical and spreadsheet programs,
- may be configured for the level of security specified by users,
- allow for real-time data entry, analysis and program refinement,
- make tracking of participants and studies over time, across multiple programs and services possible through relational databases,
- offer reliability in data entry and management, particularly with technical support and codebooks,
- may protect confidentiality with greater certainty than paper and hard drive data management, and
- promote organizational self-sufficiency in collecting, entering and storing data.

The following limitations of using online/web-based systems may include:

- initial cost, which may be higher than other methods,
- risk of system errors or breakdowns is high during the start-up phase,
- sophistication and expertise needed to make modifications to system may not be readily available,
- risk of internet security breeches may pose threats to confidentiality,
- financial investments for program refinement and change may not be sustainable,
- costs and time associated with configurations for multiple parties will pose additional costs, and
- potential for staff turnover may be high due to skill, knowledge, ability, or other challenges.

Conclusion and Public Policy Implications

With program evaluation requirements for programs and services becoming more stringent, community agencies must develop innovative techniques that integrate program and evaluation components to maximize effectiveness and efficiency, and support organizational sustainability. Research also supports program and evaluation integration, which will impact the potential for agencies to become self-sufficient in the evaluative process (Bennett & Rockwell, 1995). This paper uses the CincyAfterSchool Program to highlight how online database systems have the potential to expedite the process of evaluating programs while setting the stage for larger and universal data entry, storage and program evaluations. Currently, the CAS Program is effectively utilizing an online data system for internal as well as for funding reporting purposes and is collaborating with the Cincinnati CLC providers to develop a multifaceted evaluation plan to capture data that will be used to track program impact on participants over time. Ultimately, the use of this new system will enable organizations to inform the public about the capability of aligning partnerships and services with evaluation to facilitate systematic impact across organizations, school systems, neighborhoods and governments.

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CONTRIBUTING AUTHORS

Alisha Nichols, MPA
Outreach Coordinator, INNOVATIONS, Cincinnati Children's Hospital Medical Center, 3333 Burnet Ave, MLC 3015, Cincinnati, OH 45229, 513-636-1307, fax: 513-636-7400, email: alisha.nichols@cchmc.org

Rebecca Kelley, JD
District Vice President, YMCA of Greater Cincinnati, 1105 Elm Street, Cincinnati, OH 45202, 513-362-2045, fax: 513-651-3540, email: rkelley@cincinnatiymca.org

Christie Crosby, BS
Research Assistant, Cincinnati Children's Hospital Medical Center, 3333 Burnet Ave, MLC 3015, Cincinnati, OH 45229, 513-636-7746, fax: 513-636-7400, email: christie.crosby@cchmc.org

Kenny Gilyard, MBA
Consultant, Gzine Technology LLC, 4000 Redden Rd, Drexel Hill, PA 19026, 610-781-6611, email: kennygilyard@hotmail.com

Kimbaird Avant, AS
Application Specialist, Cincinnati Children's Hospital Medical Center, 3333 Burnet Ave, MLC 3015, Cincinnati, OH 45229, 513-636-3674, fax: 513/636-5677, email: kimbaird.avant@cchmc.org

Transforming the Child Mental Health Agency through Research and Evaluation

Michele Solloway
Derenda Schubert
James K. Whittaker

Introduction

This summary describes the process of developing a practice-based research center at Trillium Family Services, Inc., a Portland, OR based voluntary child mental health agency. The foundation for the research center—Center for Applied Research and Evaluation (C.A.R.E.)— had been built through a series of intersecting activities, including developing a system of care approach throughout the agency, producing logic models for each of the program areas, evaluating and implementing evidence-based practices (EBPs), and developing strategic partnerships with staff, families, and community stakeholders (see Whittaker et al., 2006). The intended outcomes of these activities are to establish the agency as both a consumer and generator of research-based knowledge, to integrate theory and practice at the staff level, and to provide continuous feedback to clinicians to improve outcomes for children and families. Further, The Oregon Children's Change Initiative, implemented October 1, 2006, required mental health agencies to spend a significant proportion of state funding on EBPs. One function of the research center is to evaluate the EBPs.

Methods

This qualitative study involved conducting key-informant interviews with the agency leadership, management and key staff. Semi-structured interviews were conducted with 28 individuals from Trillium's four campuses including executive leadership, senior management, and program management staff. Interviews were approximately 1 hour and requested information in 6 areas: (1) respondent's role, responsibilities and background; (2) major issues and resource needs; (3) data collection efforts, data needs and "information wish-list:" (4) program evaluation information, including development of outcome or performance measures; (5) research experience, interests and priorities; and (6) expectations for and anticipated relationship with the Center. Data were collected manually during the interviews and synthesized using thematic and content analysis.

The study also involved reviewing legislative mandates, state requirements and documents, agency planning and management documents (Trillium Family Services, Inc. 2005a; Trillium Family Services, Inc. 2005b), and logic models; reviewing the history of EBPs at Trillium; evaluating staff information needs and data systems; and conducting environmental scans for opportunities for collaboration and extramural funding. A strategic plan was developed from this information.

Findings

Research and evaluation at Trillium. An Evaluation Specialist was hired to assist Trillium with developing program research and evaluation activities. Descriptive program reports were generated on a regular basis and included basic demographic characteristics and limited data on patient outcomes. In addition, Trillium produces monthly reports on seclusions and restrains, medication errors, health care utilization, and (broadly) the use of EBPs. However, few formal, analytical program or practice evaluations had been conducted and research was limited primarily to what was required for the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) or state accreditation, external compliance audits and agency quality control.

One exception was the development and implementation by the Evaluation Specialist of a cohort study to measure outcomes at six months which to be completed in 2007. Because of the significant ground wok done prior to this effort, management and staff were familiar with logic modeling as well as the need for and importance of data in improving clinical outcomes. There was substantial interest in research and evaluation providing it did not create additional work burden for the staff.

Data needs. Respondents reported needing or wanting data for marketing and public relations, quality control, training and recruitment, family involvement and cultural competency. Additionally, because of the state mandate for evidence-based practices, the leadership experienced a great need to have information on the specifics of what practices were being employed and what the outcomes were of those practices. An infrastructure containing contextual information to support these data needs (e.g., census-level data, provider type and location data, or community needs data) was lacking at the agency. The development of a data infrastructure system was of great interest to staff and leadership, particularly because it affected marketing efforts and the use of community forums or outreach activities.

Integrating research. Using existing data systems for research and evaluation and integrating research needs into the system required careful thought, planning and some realignment. Data considerations include methods and standardization of data entry (e.g., who inputs the data, whether choices for data entry are standardized, or allow text); data quality and validity; user interfaces; data system modeling; and data extraction and analysis. Because of the Oregon Children's Change Initiative, Trillium's electronic data system has undergone significant change and improvements. Currently, it includes numerous linked data domains including individual and family characteristics, program characteristics, clinical information, financial information, client outcomes, and family and youth satisfaction reports. This rich data source provides significant potential for practice-based research and evaluation.

Current initiatives and collaborations. Prior to the development of a research center, Trillium had created four initiatives to improve services and outcomes: evidence-based practices; family-centered care; cultural competency, and reduction of seclusions and restraints. Through an iterative process between Trillium leadership, the university-based partners, and the Center director, the research agenda is being shaped to focus on research that supports these initiatives as well as evaluations of new programs as they are developed. Opportunities for collaboration include partnerships with specific clinical staff interested in research, the Trillium Family Partner (a person dedicated to ensuring the delivery or high quality family-centered care and who acts as a liaison with families and the community); families; local and state stakeholders; learning institutions; and similar child mental health agencies. Of particular interest to the Trillium leadership was the concept of a national practice network collaboration in which Trillium would work with similar agencies to conduct national-level research on topics of interest.

Dissemination. A final aspect of the project focused on the importance of both internal and external dissemination of research and evaluation efforts. This would include conducting in-house trainings on data issues, research initiatives, and program evaluations; developing a "think tank" seminar which would bring staff together to focus on particular issues of interest to them or address specific clinical needs; publication in peer-reviewed journals, and attending and presenting at national conferences.

Comprehensive Strategic Plan

From this information, a comprehensive strategic plan was developed that included a mission, vision and guiding principles, and encompassed eight goals:

- Evaluate Trillium programs and develop new knowledge;
- Create data infrastructure to meet leadership and staff needs for data;
- Promote, evaluate and disseminate models of care that are family-centered and culturally competent;
- Diffuse the research culture within Trillium and to community stakeholders;
- Establish collaborations with learning institutions including the re-engagement of a Research Advisory Council;
- Develop collaborations with local and state policymakers;
- Promote resource sustainability; and
- Encourage professional development.

Conclusion

Examination of the processes related to development of the Trillium practice-based research center revealed five major challenges: (a) Developing a cohesive research agenda that meets multiple needs; (b) working with Trillium's electronic medical records system; (c) timing for funding opportunities; (d) conflicting needs and priorities among Trillium's four regional facilities and program treatment silos within the agency that cut across the regions; and (e) establishing a culture of research and evaluation at the staff level.

Trillium Family Services appears well positioned to overcome these challenges and continue to develop in-house research and evaluation capacity. The foundation has been built, evidence-based practices are being implemented, a Director for the Center has been hired, and a strategic plan was developed. The vision and mission of the Center is being implemented through a coherent set of activities. Specific activities for Year 1 include developing a charter and strategic plan for the Center, re-engaging the Research Advisory Council; completing the discharge outcomes study; conducting evaluations of new programs; developing a plan to evaluate Trillium's use of evidence-based practices; collaborating with the Family Partner; developing the "think tank" seminar series and conducting in-house trainings on research and data issues; developing linkages with learning institutions and state policymakers; grant writing; and professional development. Leadership and staff have begun to be acculturated to practice-based research and evaluation of evidence-based practices.

Through this process, we learned that staff education, ownership of the research process, and leadership are key to successful integration of research and evaluation in a voluntary child mental health agency. A successful model for Center development includes partnerships with leadership, staff, families and a university-based partner.

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CONTRIBUTING AUTHORS

Michele Solloway, PhD
Director, Center for Applied Research and Evaluation (C.A.R.E.), Trillium Family Services, Inc.,

3550 SE Woodward St., Portland, OR 97202, 503-813-7750, email: msolloway@trilliumfamily.org

Derenda Schubert, PhD
Chief, External Affairs, Trillium Family Services, Inc., 3415 SE Powell Blvd., Portland, OR 97202, 503-234-9591, email: dschubert@trilliumfamily.org

James K. Whittaker, PhD
School of Social Work, University of Washington, 4101 15th Avenue N.E., Seattle, Washington 98105-6299, 206-543-5731, email: jimw@u.washington.edu

A Needs Assessment of Conflict in Systems of Care

Mary E. Evans
Andrea Blanch
Roger A. Boothroyd
Robyn Boustead
Huey-Jen Chen
Patricia Gilliam
Sheryl Schrepf

Introduction

In our work with evaluation or technical assistance to systems of care, we have noticed that many sites were experiencing conflict of various types somewhere during their period of federal funding. These conflicts often created unease among the participants and hindered the functional efficiency of the collaborative effort. Conflict is not unexpected in activities involving multiple stakeholders with varying roles and perspectives and may be an inevitable outcome of trying to make dramatic changes in the ways that people think and act. It can be a source of positive transformation in a system or, if unresolved, conflict may result in damaged relationships, undermine collaboration, and sabotage system integration.

The field of conflict management or conflict resolution is a large and growing discipline, with roots in psychology, business administration and law (Barsky, 1999). A significant literature has developed focused on identifying, assessing and intervening with different types of organizational conflict (Rahim, 2002). Our review of literature from a number of fields identified common sources of conflict including incompatible goals, competition for resources, overlapping authority, communication difficulties, selection of evaluation criteria, decision-making power, unequal status of participants and a past history of difficult relationships among the partners. There are also some unique challenges in systems of care that can result in conflict.

The purpose of this project is to learn about the sources of conflict and conflict resolution in systems of care. Based on what we learn, we plan to develop a mediation approach to conflict resolution and to evaluate its use in a pilot study at several sites.

Method

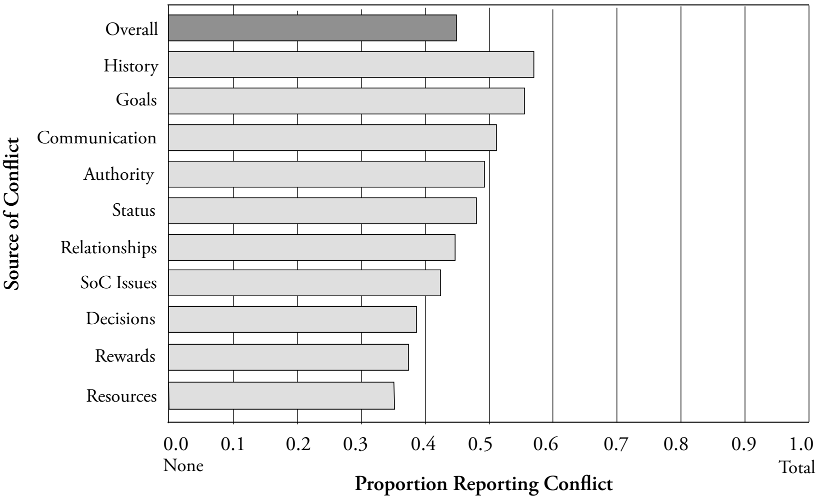
We obtained a mailing list of 86 currently funded systems of care sites from ORC Macro, the national evaluator of the federally-funded systems of care initiative. Sites that were newly funded were not included in the first round of data collection because their experience with conflict would be limited. Based on the literature review, we designed a needs assessment instrument requesting information on whether the sites had experienced any of ten domains of sources of conflict, the effects of conflict on the governing board and the system of care, the strategies used to resolve conflict, and demographic characteristics of the respondents. Copies of the needs assessment survey were mailed to the Project Director of each of the 86 systems of care with directions to distribute the needs assessment to their board members. When the needs assessment instrument was completed it was mailed back to us in stamped and individually addressed envelopes to protect the confidentiality of the data. The needs assessment instrument was also available online for those who preferred to respond in that manner. Data were entered into SPSS for analysis (SPSS Inc., 1999).

Results

We received 218 individual responses from 44 of the 86 sites (51% response rate). Of the respondent sites, 26 had four or more respondents. Two-thirds of the respondents were female and 62% were Caucasian, 10% were Black, 4% were Asian/Pacific Islander, 6% were Native American, and 15% were other or unknown. Eleven percent were Hispanic. The most common roles of the respondents were family member (18%) and mental health specialist (14%). There was good representation of respondents from juvenile justice (8%), child welfare (8%), schools (8%) and other child serving agencies (9%) among others.

Respondents from all sites indicated conflict in the 10 domains of interest. The sources of conflict endorsed by 50% or more of the respondents included past history, incompatible or overlapping goals, and communication difficulties. A repeated measures ANOVA was performed and indicated that significant differences existed across the 10 conflict domains with respect to the prevalence of conflict. Although all pair-wise comparisons were not examined, conflict associated with prior history (.56) and incompatible goals (.55) were reported significantly more often than conflict associated with overlapping authority (.49) and status inconsistencies (.48) which were in turn significantly more prevalent compared to conflict associated with decision making (.39), incompatible reward systems (.38), or scarce resources (.35). Overall, the prevalence of perceived conflict was 45% suggesting that it is a rather common occurrence. These data are displayed in Figure 1.

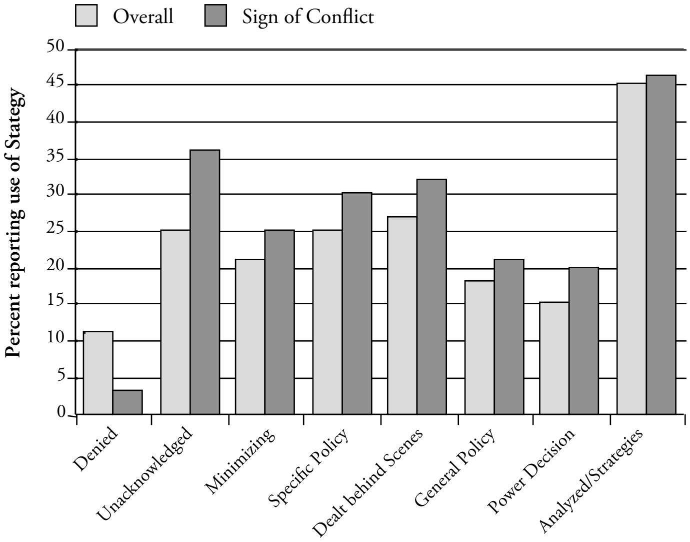
Figure 1
Prevalence of Conflict by Source (*N* = 207)



The reported levels of perceived conflict of respondents reporting their primary role as representing a parent perspective were compared to respondents who indicated representing a professional perspective. The results of independent *t*-tests performed in each of the 10 conflict domains indicated that although parents reported somewhat higher rates of conflict compared to professionals in 9 of the 10 conflict domains (prior history being the exception), as well as on the overall prevalence of conflict variable, none of these differences were statistically significant.

Two-thirds of the respondents noted that signs of conflict were apparent during governing board meetings. The most common strategies used when conflicts arose were: analysis of the problem and development of strategies to resolve the conflict (45%), conflict unacknowledged (35%), and conflict dealt with behind the scenes (31%). Some of the sites had had experience with mediation strategies including facilitation (46%) or negotiation (30%). Thirty percent reported no experience with mediation strategies. Figure 2 shows the strategies used to resolve conflict for those indicating that sources of conflict were apparent in governing board meetings and for all respondents.

Figure 2
Strategies Used to Resolve Conflict



Conclusions

Conflict is a common event in systems of care and derives from a number of sources including unequal power among board members, financial issues and communication difficulties. Governing Boards have tried a number of ways to resolve conflict, and not all of them are positive, for example ignoring conflict and dealing with it behind the scenes. To gain a better understanding of how conflicts are resolved, we are conducting concept mapping exercises at three to five sites with varying amounts and types of conflict. We will also be conducting semi-structured interviews with key informants during the site visits. Based on what we learn, we will develop and test the effectiveness of a mediation approach to resolving conflict.

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CONTRIBUTING AUTHORS

Mary E. Evans, RN, PhD, FAAN
Professor, College of Nursing, University of South Florida, 12901 Bruce B. Downs Blvd., Tampa, FL 33612, 813-974-9112, fax: 813-974-5418, email: mevans@health.usf.edu

Andrea Blanch, PhD
Collaborative for Conflict Management in Mental Health, Louis de la Parte Florida Mental Health Institute, University of South Florida 13301 Bruce B. Downs Blvd., Tampa, FL 33612, 941-312-9795, fax: 941-312-0205, email: kblanch@aol.com

Roger A. Boothroyd, PhD
Associate Professor, Louis de la Parte Florida Mental Health Institute, University of South Florida 13301 Bruce B. Downs Blvd., Tampa, FL 33612, 813-974-1915, fax: 813-974-9327, boothroy@fmhi.usf.edu

Robyn Boustead, MPA
Policy Liaison, Missouri Institute of Mental Health, 1706 East Elm Street, Jefferson City, MO 65102, 573-751-8724, fax: 573-751-7815, email: obyn.boustead@dmh.mo.gov

Huey-Jen Chen, PhD, ARNP
Byrdine F. Lewis School of Nursing, Urban Life Building #946, P.O. Box 4019, Atlanta, GA 30302-4019, 404-651-3919 fax:404-651-3096, nurhjc@langate.gsu.edu

Patricia Gilliam, MEd, MSN, ARNP, BC
PhD Student, College of Nursing, University of South Florida, Tampa, FL 33612, 727-934-1728, fax: 813-272-7116, pgilliam@health.usf.edu

Sheryl Schrepf, MSW
Project Director, Early Childhood Mental Health, Partnership, Sarasota County, 4630 17th Street, Sarasota, FL 34235, 941-684-0900, fax: 941-684-0093, email: Sheryl_schrepf@doh.state.fl.us

Symposium

Financing Strategies and Structures to Support Effective Systems of Care

Chair
Mary I. Armstrong

Authors
Mary I. Armstrong et al.
Sheila Pires et al.
Beth A. Stroul

Symposium Introduction

Mary I. Armstrong

This symposium discusses findings from the study, *Financing Structures and Strategies to Support Effective Systems of Care.* The study uses a case study design to test a conceptual theory regarding a hypothesized set of financing structures and strategies, and investigates and describes how these factors operate separately, collectively, and in the context of states and local communities to create effective financing policies for systems of care. An overview of the study to date is presented, along with specific findings and examples from the first round of site visits on financing to support family and youth partnerships and financing to support a broad array of services and supports.

Study Overview and Findings: Financing Strategies and Structures to Support Effective Systems of Care

Mary I. Armstrong & Roxann McNeish

Introduction

A review of the literature indicates that there are three primary challenges facing the financing of children's mental health services: reliance on Medicaid, managed care strategies, and the restrictiveness of the multiple funding sources that are used. Over the past 15 years, states have increasingly relied on Medicaid to pay for health and mental health services. In recent years all state Medicaid budgets have escalated, primarily due to increasing health care costs and rising enrollment (Buck, 2001). Given the key role that Medicaid plays in health care financing, the choices to policymakers regarding how it is used are critical for children with serious emotional problems and their families (National Mental Health Association, 2003).

Financing for behavioral health care in both the commercial and public sectors has moved increasingly to managed care strategies. Issues regarding the impact of managed care have been raised in a number of national studies, including limited benefit plans, medical necessity criteria, and pre-authorization and utilization review mechanisms (Koyanagi & Semansky, 2003; Mandell, Boothroyd, & Stiles, 2003). In addition to the introduction of managed care strategies, funding sources for children's mental health services have diversified over the past 20 years with the result of multiple funding sources across numerous systems. The consequence of these disparate trends in financing policy is a system that has been described as complex, irrational, and contradictory.

This study aims to (a) identify critical financing structures and strategies to support effective systems of care, (b) use a case study design to test a conceptual theory regarding a hypothesized set of financing structures and strategies, and (c) investigate and describe how these factors operate separately, collectively, and in the context of their community to create effective financing policies for systems of care. Financing structures that organize the study's theoretical framework include:

1. Identification of current spending and utilization patterns across agencies
2. Realignment of funding streams and structures
3. Financing of appropriate services and supports
4. Financing to support family and youth partnerships
5. Financing to improve cultural/linguistic competence and reduce disproportionality in care

6. Financing to improve the workforce and provider network for behavioral health services for children and families
7. Financing for accountability

Within each structure, a number of associated financing strategies are identified for assessment. A related goal of the study is to promote policy change through dissemination, targeted technical assistance, and utilization of its findings by state and community planners and policymakers.

Methods

The information for this study is gathered through a participatory action research approach and a multiple-case embedded design.

Participatory Action Research

Participatory action research is consistent with the study's values and principles, and will contribute to the development and dissemination of products that are useful for the intended users of the research findings. Throughout the five-year study, the team will continue to develop its theory of change regarding how financing structures and mechanisms contribute to and operate within effective systems of care. The team has constructed a panel of national financing experts, family members, and state and county administrators that reviewed the initial list of critical financing components and related evaluation questions, and will contribute to the study's theoretical framework regarding financing structures. The panel was asked to review each component to ensure significance and comprehensiveness, and to review and provide input regarding key questions to be explored related to each factor. Panel members have been invited to make recommendations for site visits, review products, and recommend dissemination strategies.

The Multiple Case Study Design

The multiple case study design serves a number of purposes. A case study design is recommended when the goal is to explain causal linkages in complex environments where survey or experimental designs cannot be tested (Yin, 2003). The multiple case design is preferable over a single case design because it allows for replicating findings across a number of sites with varied circumstances, such as established sites (active implementation of at least 16 of the critical financing strategies) and potential sites (active implementation of fewer than 11 critical financing strategies). The embedded unit of analysis is the implementation of financing processes at selected sites. Each selected site is the subject of an individual case study, and the critical financing components detailed above will serve as the embedded units of study within each site.

Site Selection

A pool of potential sites was nominated by the national panel of financing experts and state children's mental health directors. To meet the study's overall sampling criteria, all participating sites must have an expressed commitment to system of care values and principles. The study includes 10 case study sites. In order to test the theoretical framework, sites are selected for their perceived ability to predict similar or contrasting results across sites. The site selection process involves document reviews and key informant telephone interviews in order to identify established and potential communities. These data are summarized using the financing factors framework outlined above (see http://rtckids.fmhi.usf.edu/rtcpubs/hctrking/pubs/AssessPlanGuide2006/default.cfm). Sites will be invited to provide feedback regarding their summary of financing strategies and structures. In addition to the ten sites that will be visited, we also will include telephone interviews with up to five additional sites with promising financing strategies recommended by the expert panel. This additional complement of sites provides an opportunity to further test the financing hypotheses.

Site Visits

The method includes site visits to 10 communities having some promising financing features. This is the primary activity of Phase II, beginning in the last quarter of Year 1 and continuing in Years 2 and 3 of the Center. Each site is asked to identity key informants prior to the site visit. Guidance is provided so that the selected key informants have intimate knowledge of policy and operational decision-making related to financing strategies and knowledge of the outcomes achieved by these strategies, including the fundamental role they play in the development and sustainability of effective systems of care. The study team developed a semi-structured interview protocol that was reviewed and modified with the expert panel. The protocol questions relate to the set of critical financing components, as well as current challenges, priorities, and system expectations.

During Year 2 of the study, site visits were conducted with:

- Maricopa County, Arizona
- Vermont
- Bethel, Alaska
- Hawaii
- Central Nebraska

Telephone interviews were held with the Dawn Project and Wraparound Milwaukee. The team is now selecting five additional study sites.

Findings

A final theory of change and set of financing critical structures and strategies were developed during the first year of the study. These structures and strategies were reviewed, revised and approved by the expert panel and will be tested using the case study methodology.

Using the framework of financing strategies, a technical assistance tool was developed: *A Self-Assessment and Planning Guide: Developing a Comprehensive Financing Plan* (Armstrong, Pires, McCarthy, Stroul, & Wood, et al., 2006) This product is a self-instructional guide that state and community policymakers and planners in community-based systems of care can use to assess the effectiveness of their financing structures and mechanisms. Using the findings from the first round of site visits, a companion tool is under development that will provide site visit examples of these financing strategies and structures.

During Phase 2 of the study, brief case study reports will be developed and disseminated, both through mailings and on the Center's website. These reports will focus on the distinguishing features of established communities, and detailed descriptions of the promising features of their financing structures and strategies. In addition, as the case studies are conducted, the financing team will refine the data collection methods, tools, and protocols. The expected outcome is a set of protocols and tools that will be made available through the Center's website, http://rtckids.fmhi.usf.edu/

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Financing to Support Family and Youth Partnerships

Sheila Pires & Ginny Wood

Introduction

Integral to the system of care philosophy is the notion that services and supports must focus on the entire family, that services must reflect the needs and preferences of the child and family, and that families must be actively involved as partners at all levels of systems of care—in policy and system management as well as in service planning and delivery. The concept of family and youth involvement and partnership has evolved to encompass a strengthened concept of "family-driven, youth-guided" systems of care. The study on *Financing Structures and Strategies to Support Effective Systems of Care* hypothesized that financing strategies to support family and youth partnerships are essential to ensuring family-driven, youth-guided systems of care.

Method

During site visits and telephone interviews, the study team gathered information from key informants including system managers, family organization leaders, and other family members. Inquiry focused on systemic financing mechanisms and strategies used to ensure family and youth involvement at the system level in policy making and system management and at the service delivery level in planning and delivering services for their own child and family.

Findings

Financing to Support Family and Youth Involvement and Choice in Service Planning and Delivery

Family and youth involvement in planning and delivering care is a cornerstone of family-driven, youth-guided services, as is choice in both the types of services received and in the providers of care. The study examined financing strategies that support family and youth involvement and choice, including: financing supports that enable families and youth to participate in service planning meetings; financing peer advocates to provide guidance, support, and advocacy to families and youth; and financing to provide training to providers on how to develop successful partnership with families and youth.

Financing supports for families and youth to participate in service planning meetings. In Arizona, the service system provides transportation, food, and interpreters. In Hawaii, ancillary funds are used to provide child care, food and transportation, particularly if the family member has to fly to another island to participate in a child and family team meeting. The statewide family organization, Hawaii Families As Allies (HFAA), provides some training for families on how to participate in service planning.

Financing family and youth peer advocates. In Arizona, the managed care system covers family and youth peer support. Additionally, each of the comprehensive services programs in the state's ValueOptions network must have "family partners" on staff, paid for out of the managed care system. These partners provide services in any location (school, court, home, etc.) and provide a range of support and advocacy services for families. In Nebraska, the site matches a family partner with each family served through the wraparound process. Hawaii Families As Allies also employs parent partners who serve as peer advocates and provide assistance and support, attending IEP meetings, court proceedings, and other meetings with families. The partners also conduct workshops and support groups for families, etc. New work in Hawaii involves recruiting youth mentors to provide positive role models in areas such as social and life skills; some mentors will receive stipends from the new system of care grant. A new RFP in the state requires provider agencies to have a Family Specialist and a Youth Specialist to facilitate family partnerships.

Incorporating financing to train providers on how to partner with families and youth. In Arizona, contracts with the family organization include provisions for training and technical assistance to providers and others on family partnership. In Hawaii, family members are routinely employed as co-trainers, and the current budget allocates resources for parent partners to provide group and individual training to front-line providers on partnering with families and youth. Additionally, the site's second annual Young Adult Support Group Planning Summit will be used as a vehicle to share with providers the vision of youth voice and involvement and to provide training about how to partner with youth.

Financing Family and Youth Involvement in Policy Making

Family-driven, youth-guided systems of care require that families and youth are partners in policy making and system management functions at the state and local levels. The study examined strategies including: contracts with family organization for participation in policy making and financing training and leadership development activities to prepare family members and youth for meaningful roles in policy making.

Contracting with family organizations for participation in policy making. Arizona's discretionary (SIG grant) and block grant dollars are used to contract with two family organizations – MIKID, a statewide family organization and the Family Involvement Center (FIC) in Maricopa County. In Maricopa County, the FIC's $1 million contract includes many policy level functions, including participating on the Children's Advisory Committee, as well as a range of functions such as family recruitment and training, organizing education for families, information and referral, etc. Hawaii uses $600,000 in general fund and block grant dollars annually to contract with HFAA for participation in policy making, resulting in a staff of 17-18 who are available to participate on a range of state-level committees and other policy activities. HFAA also is providing assistance in the newly received federal system of care grant focusing on youth in transition to adulthood. Hawaii's family members also serve as co-chairs with professionals on the state's 17 Community Children's Councils (CCCs) that meet monthly to plan for and assess the strengths and needs of the children's mental health system in their respective communities. The Nebraska site contracts with Families CARE at $472,000 per year with funds saved from the Intensive Care Coordination Unit (ICCU) case rate. This began as a cost reimbursement contract, and then moved to 8% of the case rate, based on actual costs. Vermont law mandates family participation at all levels of the system of care (i.e., individual case/treatment teams, Local Interagency Teams, State Interagency Team and its Case Review Committee, and State Advisory Board). A contract with the Vermont Federation of Families provides funds to support policy-level participation.

Financing training and leadership development to prepare families and youth for participation in policy making. Arizona's tobacco settlement money has been used to pay for training and coaching of families, providers and others on the concept of family-centered practice and the principles that govern the system. In Hawaii the contract with HFAA Allies includes family leadership training; the curriculum developed for this purpose is now used nationally.

Financing Services and Supports for Families and Other Caregivers

Systems of care that are family focused provide needed services and supports to families and other caregivers, in addition to services provided to the "identified child." Often, the restrictions imposed by particular financing streams preclude providing services and supports to families and caregivers by limiting reimbursable services to the individual who has a diagnosis and/or a service plan, or who is authorized as the recipient of care. These are particular barriers for providing mental health services to young children and their families. The study examined strategies to allow services and supports to families under Medicaid and other financing streams, and strategies to finance family organizations to provide services and supports.

Incorporating strategies under Medicaid and other financing mechanisms that allow services and supports to families. Hawaii's Medicaid system allows services and supports to be provided to families in addition to the identified child; for example, family therapy is billable even if the child is not present. Nebraska set aside $700,000 to serve family members of children served through the ICCUs. The care coordinator and family determine service needs and use these flex funds to purchase services.

Financing family organizations to provide services and supports. As part of the JK lawsuit settlement agreement in Arizona, Medicaid expanded covered services to include a new provider type, "community service agency," to allow family organizations and others to be funded like a licensed Medicaid provider. Both family organizations (FIC and MIKID) became community service agencies, authorized to provide certain services, including skills training and development, health promotion, support services (peer and family support), respite, and personal care services. Hawaii's HFAA is contracted to provide direct services and peer supports to families/caregivers, and In addition, arrangements are being completed to enable the organization to deliver an evidence-based parent skills training program, Common Sense Parenting, as a billable service under Medicaid. Central Nebraska's family support and advocacy organization, Families CARE, assists families through individual family advocacy, family support groups, outreach, evaluation, information dissemination, and a lending library. Families CARE also coordinates Youth Encouraging Support (YES), a group of youth in Region 3 who work to educate professionals, families, and peers on mental health issues and to reduce stigma, as well as providing support to other youth who have mental health disorders and provides a youth voice within the local systems of care.

Financing to Support a Broad Array of Services and Supports

Beth Stroul

Introduction

This segment of the symposium addressed findings related to financing to support a broad array of services and supports. By definition, systems of care include a comprehensive array of services and supports that are made available to meet the multiple and changing needs of children and adolescent with emotional disorders and their families. Financing to cover this broad array of both clinical and supportive services is a fundamental requirement. However, the system of care philosophy and approach emphasizes an individualized approach to service delivery, such that the needs, strengths, and preferences of the youth and family dictate the types, mix, and duration of services and supports. Thus, in addition to financing that covers a broad service array, financing mechanisms must support and promote individualized, flexible service delivery. Financing strategies also are needed to support the incorporation of evidence-based and promising practices to improve the effectiveness of services, and mental health services to young children and their families.

During site visits and telephone interviews, the study team gathered information from key informants on systemic financing mechanisms and strategies used to ensure the funding of appropriate services and supports. Presenters highlighted:

- ***Financing to cover a broad array of services and supports,*** including the array services and supports that are covered; using financing from multiple systems; maximizing Medicaid coverage; utilizing diverse funding streams in addition to Medicaid; redirecting resources from deep-end to home and community-based services; blending funds; sharing costs; and investing in service capacity development.
- ***Financing to promote individualized, flexible service delivery,*** including incorporating flexible funds, financing staff and provider participation in child and family teams, and using care authorization mechanisms that support individualized, flexible service delivery.
- ***Financing evidence-based and promising practices.***
- ***Financing early childhood mental health services.***

In each of these areas, examples of strategies from the sites included in the study sample are provided below.

Methods

During site visits and telephone interviews, the study team gathered information from key informants including system managers, providers, and family members. Inquiry focused on systemic financing mechanisms and strategies used to ensure the provision of a broad array of services and supports, as well as financing to support individualized and flexible service delivery, evidence-based practices, and early childhood mental health services. Findings are presented from sites including the states (Arizona, New Jersey, Hawaii, and Vermont) and communities (Central NE, Choices, Wraparound Milwaukee).

Findings

Financing to Support a Broad Array of Services and Supports

Array of covered services and supports. The study assessed coverage of the array of services and supports shown in Table 1. All of the sites studied cover virtually all of these services and supports and, often, additional services and supports. These services and supports typically are covered using Medicaid and a variety of additional financing streams from mental health and other child-serving systems.

The additional services and supports covered by the sites include the following:

- ***Arizona.*** Supported employment; peer support; traditional healing and flexible funds.
- ***Wraparound Milwaukee.*** Peer support; supported employment; flexible funds
- ***Hawaii.*** Respite homes; respite therapeutic foster care; independent living services; intensive outpatient for co-occurring MH/SA disorders; treatment/service planning; parent skills training; and ancillary support services
- ***Central Nebraska.*** After school and summer programs; substance abuse prevention; youth development; and supported independent living
- ***Choices.*** Mentors – community case aide, clinical, educational, life coach, parent and family, recreational/social, supported work, tutoring; supported independent living team meeting; camp; and discretionary (flex funds).

Table 1
Array of Services and Supported Assessed

Nonresidential Services
- Assessment and diagnostic evaluation
- Outpatient therapy – individual, family, group
- Medication management
- Home-based services
- School-based services
- Day treatment/partial hospitalization
- Crisis services
- Mobile crisis response
- Behavioral aide services
- Behavior management skills training
- Therapeutic nursery/preschool

Residential Services
- Therapeutic foster care
- Therapeutic group homes
- Residential treatment center services
- Inpatient hospital services

Supportive Services
- Care management
- Respite services
- Wraparound process
- Family support/education
- Transportation
- Mental health consultation

Using financing from multiple systems. The sites studied use resources from multiple child-serving systems to finance services and supports. Resources from mental health Medicaid, child welfare, juvenile justice, and education are used by all of the sites. Resources from the substance abuse, developmental disabilities, and health systems are included in the financing mix less frequently, but are included in some of the sites. Table 2 shows the extensive use of cross-system funding to contribute to financing a broad array of services and supports.

Table 2
Use of Multiple Resources

Source	*Arizona*	*Hawaii*	*Vermont*	*Central Nebraska*	*Choices*	*Wraparound Milwaukee*
Mental Health	X	X	X	X	X	X
Medicaid	X	X	X	X	X	X
Child Welfare	X	X	X	X	X	X
Juvenile Justice	X	X	X	X	X	X
Education	X	X	X	X	X	X
Substance Abuse	X			X		
Developmental Dis.	X	X			X	X
Health			X			

Maximizing Medicaid Coverage. All of the states included in the sample cover a broad array of services and supports under the Medicaid programs. Arizona, Hawaii, New Jersey, Vermont, and Alaska are examples of states that have included an extensive list of services in their state Medicaid plans, including services such as respite, family and peer support, supported employment, therapeutic foster care, one-to-one personal care, skills training, intensive in-home services, and many others. Alaska has developed a mechanism to cover traditional native healing services under its state Medicaid program.

The sites studied have maximized Medicaid financing of behavioral health services for children by taking advantage of the multiple options available to states under the Medicaid program, including the clinical and rehabilitation options, targeted case management, EPSDT, and several different types of waivers. Table 3 demonstrates the extensive use of multiple options.

Table 3
Use of Multiple Medicaid Options

	Arizona	*Hawaii*	*Vermont*	*Nebraska*
Clinic Option		X	X	X
Rehab Option	X	X	X	X
Targeted Case Management		X	X	X
Psych Under 21	X	X	X	X
EPSDT	X	X	X	X
Katie Becket (TEFRA)			X	X
H & CB Waiver (1915c)		DD	X	DD
1915b Waiver			X	
1115 Waiver	X	X	X	
Family of One	X			

Arizona, Hawaii, and Vermont provide examples of states that have implemented other strategies to maximize their ability to use Medicaid. In Arizona, use of Tribal Behavioral Health Authorities enables a 100% federal Medicaid contribution for Indian-run facilities. Hawaii created a behavioral health carve-out under Medicaid for youth with serious emotional disorders that is operated by the state Child and Adolescent Mental Health Division (CAMHD), and Vermont obtained a home and community-based services Medicaid waiver. Choices demonstrates strategies to maximize Medicaid by becoming a Medicaid provider in one state or by employing its care managers in mental health centers that are Medicaid providers in another.

Utilizing diverse funding streams in addition to Medicaid. The sites all use diverse funding streams in addition to Medicaid. For services and supports not covered by Medicaid, the most frequent funding sources are behavioral health general revenue funds and mental health and substance abuse block grant funds. Funds from other child-serving systems (e.g., child welfare, juvenile justice, and education) typically are used to fund specific services (such as therapeutic foster care, school-based services) or are used to contribute to a case rate.

Redirecting resources from deep-end to home and community-based services. All of the sites have implemented strategies to redirect resources from deep-end placements to home and community-based services and supports. The purpose of Arizona's 1115 waiver is to build community-based service capacity; the state has reduced the percentage of its budget spent on inpatient and residential treatment and has increased the use of therapeutic foster care. Hawaii has used training and an individualized service approach to shift practice and resources and has reduced out-of-state placement significantly, and New Jersey implemented a statewide system of care reform. Vermont implemented gate-keeping processes for residential and inpatient care and developed community-based service capacity in each region. The local systems of care in Central Nebraska, Choices, and Wraparound Milwaukee have reduced out-of-home care significantly and redirected resources to home and community-based services with improved outcomes.

Blending funds. Central Nebraska blends funds from multiple systems to create case rates to finance services. The case rate serves as a primary funding strategy to support and sustain an intensive care management model, the work of the family support organization, a number of services and its system of care. Choices and Wraparound Milwaukee also provide examples of pooling or blending funds to finance services. In the areas currently served by Choices, various child-serving agencies contribute to the financing of care, with different approaches. In Indiana, each referring agency pays the case rate for each child referred for care. Funds are provided by the child welfare, juvenile justice, and education systems, each paying the case rate for children they refer for services. The state's mental health managed care system adds to the case rate paid by the referring agency for each child served in Indiana as part of their contribution to building Indianapolis' system of care. In Ohio, the participating agencies include child welfare, mental health and addictions, juvenile justice, and developmental disabilities. Each participating agency contributes a negotiated percentage amount of funding into a large pot of money, which is then blended by Choices. A "shareholder" referral system is used whereby a committee with cross-agency representation makes the decisions about youth who are referred to services based on eligibility criteria. Wraparound Milwaukee blends several funding streams: Medicaid dollars through a capitation from the state Medicaid agency, child welfare dollars through a case rate, mental health block grant dollars, and both contract dollars and case rate dollars from the juvenile justice system. Vermont, through its new Medicaid waiver, is working to establish a pool of resources from multiple agencies to finance services for children with multiple and serious needs.

Sharing costs. Arizona, Hawaii, Vermont, Central Nebraska, and Wraparound Milwaukee provide examples of sharing costs for specific services. In Arizona, funding for therapeutic foster care, in-home services, and others is shared between the mental health and child welfare system. The mental health system in Hawaii shares costs with the child welfare, juvenile justice, and education systems for specific services, such as therapeutic foster care and mental health services in the detention facility. Vermont, Central Nebraska, and Wraparound Milwaukee also demonstrate cost sharing among partner agencies for a range of services including care coordination, Multisystemic Therapy (MST), school wraparound, family support, and crisis services.

Investing in service capacity development. Arizona, Hawaii, New Jersey, Vermont, Central Nebraska, and Wraparound Milwaukee have invested funds to develop home and community-based service capacity. In Arizona, the behavioral health and Medicaid agencies worked in partnership to invest in expanding the availability of home and community-based services by spending increased dollars, adding new service types, restructuring rates, and creating new types of providers. In Hawaii and New Jersey, state funds have been used for capacity building and start-up resources, and in Vermont, multiple sources of funding (including state general revenue, federal grants, and foundation grants) have been used to create new service capacity, particularly for early childhood mental health services. In both Central Nebraska and Wraparound Milwaukee, savings generating by avoiding deep-end services are reinvested in the system of care to expand service capacity.

Financing to Promote Individualized, Flexible Service Delivery

Incorporate flexible funds for individualized services and supports. Most of the sites incorporate flexible funds that can be used to pay for services and supports that are not covered by Medicaid or other sources. Arizona, Hawaii, New Jersey, and Vermont designate funds for this purpose. Typically, child and family teams can access these funds to provide these ancillary services and supports as needed. In other sites, such as Central Nebraska and Wraparound Milwaukee, the managed care financing approaches make the resources within the system inherently flexible and available to meet individualized needs. Choices also uses its case rate financing to provide flexible funds. Eleven categories of flexible funds have been established that allow child and family teams to finance supports including transportation (bus, car repairs, etc.), housing, utilities, clothing, food, summer camps (also for siblings), home repairs, and others.

Finance staff participation in individualized service planning processes and the functions of child and family teams. In addition to flexible funds, individualized care requires the convening of a child and family team that, in partnership with the youth and family, develops and implements an individualized service plan. Strategies to finance the participation of staff and providers in the individualized service planning process and on child and family teams have been implemented by the sites. In several sites (Arizona, Vermont, and Choices), staff can bill for time spent in child and family team processes as case management. In addition, contract providers can bill the local lead agency in Vermont or Choices for their time. Hawaii has a billing code for "treatment planning." Central Nebraska and Wraparound Milwaukee use their blended resources to cover staff and provider participation.

Incorporate care authorization mechanisms that support individualized, flexible service delivery. A number of the sites use child and family teams as the mechanism for authorizing services. In Arizona, Hawaii, Vermont, Choices, and Wraparound Milwaukee, the plan of care developed by the child and family team determines medical necessity and all services specified by the plan are considered to be authorized.

Financing Evidence-Based and Promising Practices

Incorporate financing/incentives for using evidence-based and promising practices and financing for development, training, and fidelity monitoring. The sites are involved in promoting and financing the implementation of evidence-based and promising practices. Their strategies range from establishing billing codes for specific evidence-based practices to providing financial support for the initial training and start-up or developmental costs involved in adopting evidence-based practices, and, in some cases, providing resources for ongoing training and fidelity monitoring. A range of evidence-based approaches are supported in the sites, for example in Arizona, Multisystemic Therapy (MST), Functional Family Therapy (FFT), Multidimensional Treatment Foster Care, and Dialectical Behavior Therapy currently are provided, and there is interest in developing others for substance abuse treatment. Hawaii's approach has been to identify the specific "practice components" or elements that compose those clinical approaches that are supported by research evidence. The state has promoted the use of these evidence-based practice components among providers and now collects information from providers about their use as part of the clinical intervention process in service delivery. The use of MST is integral to Central Nebraska's system of care. The technical assistance center operated by Choices is charged with helping to "build a culture" in the state that is supportive of implementation of evidence-based practices. There are billing codes for MST and FFT under Indiana's current Medicaid plan. In Bethel, Alaska, some state grant funds are used for training and implementation of evidence-based practices, particularly related to substance abuse, and some evidence-based practices are covered by Medicaid.

Financing Early Childhood Mental Health Services

Finance a broad array of services and supports for young children and their families. Both Arizona and Vermont finance a broad array of services and supports for young children and their families. In Arizona, a cross-walk was completed with Medicaid-covered services to guide providers on how to bill for services for children ages 0 to 3. Vermont's childhood mental health system includes a broad array of prevention, early intervention, treatment, and consultation services designed to incorporate mental health in early childhood natural settings, use a public health model (i.e., promotion for healthy social-emotional development of all children and families; prevention that focuses supports for child and families considered at-risk; and intervention to serve children with diagnosed problems), and approach the work as a partnership with families, caregivers, early childhood providers, mental health providers, and the community.

Use multiple sources of financing for early childhood mental health services. Multiple sources of funding are utilized to finance early childhood mental health services in Arizona and Vermont, including Medicaid, general revenue, Part C of IDEA, Head Start, and a variety of other federal, state, and local funding streams.

Finance early childhood mental health consultation to natural settings. Mental health consultation to early childhood settings (such as day care centers, Head Start, preschools, pediatricians' offices, etc.) is an important component of the array of early childhood mental health services and supports. Arizona and Vermont finance early childhood mental health consultation using Medicaid dollars in Arizona and mental health general revenue funds in Vermont.

Finance services to families of young children. Arizona and Vermont both finance services to families of young children, without the requirement of the child being present. These services are reimbursable as long as the services relate to the child's behavioral health needs and are outlined in the individualized service plan.

Discussion of the Overall Symposium

Mary I. Armstrong

The first presentation in the symposium discussed the basis of the study and the activities to date. Last year the team began site visits; five sites were visited and telephone interviews were conducted with three others. All selected sites have demonstrated commitment to system of care values and principles. A semi-structured interview protocol was developed by the team. The protocol questions and probes relate to the critical financing components identified by the study, as well as current challenges, priorities, and system expectations. Findings from the site visits are presented by Pires & Wood, and Stroul.

Financing to support family and youth partnerships involves such strategies as involving the family and youth partnership in service planning; payments and supports for family and youth participation and support for development and growth of family and youth organizations, etc. The system of care should treat costs associated with building, growing and integrating family and youth voice as a fundamental "cost of doing business," and draw on financing to support family and youth voice from multiple sources. Findings were presented from almost all the sites visited and examples of how each of these states or communities finances their systems were provided.

Financing a broad array of services and supports involves financing from multiple systems, maximizing Medicaid coverage and utilizing diverse funding streams.

The study assessed coverage of an extensive list of services and supports and the findings were presented from the states (Arizona, New Jersey, Hawaii, and Vermont) and communities (Central NE, Choices, Wraparound Milwaukee).

CONTRIBUTING AUTHORS

Mary I. Armstrong, PhD
Louis de la Parte Florida Mental Health Institute, Department of Child and Family Studies, 13301 Bruce B Downs, Tampa, FL 33612, 813-974-4601, fax: 813-974-7376, email: armstron@fmhi.usf.edu

Roxann McNeish, MSW, MPH
Louis de la Parte Florida Mental Health Institute, Department of Child and Family Studies, 13301 Bruce B Downs, Tampa, FL 33612, 813-974-4601, fax: 813-974-7376, email: rmcneish@fmhi.usf.edu

Sheila Pires, MPA
Human Service Collaborative, 1728 Wisconsin Avenue, NW, #224, Washington, DC 20007, 202-333-1892, fax: 202-333-8217, email: sapires@aol.com

Beth A. Stroul, MEd
Vice President, Management & Training Innovations, Inc., 7417 Seneca Ridge Drive, Suite 100, VA 22102, 703-448-7570, fax: 703-448-7571, email: bstroul@mtiworld.com

Ginny Wood, BS
President/Founder, Family Support Systems Consulting Firm, 20487 North 94th Avenue, Peoria, Arizona 85382, email: gmwood@worldnet.att.net