Evaluating the Statewide Implementation and Outcomes of Evidence-Based Practice:
Results of Connecticut’s MST Progress Report

21st Annual Research Conference
Tampa, Florida
February 26th, 2008

Presenters
Robert P. Franks, Ph.D.
Director
Connecticut Center for Effective Practice (CCEP)
Jennifer A. Schroeder, Ph.D.
Program Associate for Mental Health
Connecticut Center for Effective Practice (CCEP)
Dean L. Fixsen, Ph.D.
The National Implementation Research Network, Co-Director
Department of Child and Family Studies, Louis de la Parte Florida Mental Health Institute, University of South Florida

Additional Authors
Christian M. Connell, Ph.D.
Assistant Professor, Yale School of Medicine,
Department of Psychiatry, The Consultation Center (TCC)

Jacob K. Tebes, Ph.D.
Deputy Director
Associate Professor, Yale School of Medicine,
Department of Psychiatry

Special Thanks to:
Court Support Services Division (CSSD)
Steve Grant, BA, MA, CASA
Director, Family Services
Julie Rever, HSW
Program Manager, Center for Best Practices

Brian Hill, MS
Manager, Center for Program Analysis, Research, and Quality Improvement

Peter Kochol, MA
Program Manager, Center for Program Analysis, Research, and Quality Improvement

The Consultation Center (TCC),
Yale University
Kari Katz, M.S.
Program Analyst, Department of Psychiatry,
Yale University School of Medicine

Advanced Behavioral Health, Inc. (ABH)
Samuel May, Ph.D.
President & CEO

Michael Williams, LMFT
MST Program Manager

Connecticut’s History of EBP Development

- Legislative Program Review: 1997
- DSS/DCF Memorandum of Understanding: 1999
- Report on Financing/Delivering Children’s Mental Health Services: 1999
- DCF developed first Multisystemic Therapy team: 1999
- Connecticut Community KidCare Legislation: 2000
- Connecticut Community KidCare Legislation: 2000
- Development of the Connecticut Center for Effective Practice: 2001
- Connecticut Policy and Economic Council (CPEC) Report: 2002
- Statewide implementation of MST and other EBPs: 2002 - present

History & Description of Multisystemic Therapy (MST) in Connecticut
Multisystemic Therapy (MST)

Program Overview:
• Intensive family- and community-based treatment that addresses the multiple determinants of serious anti-social behavior in juvenile offenders.
• The multisystemic approach views individuals as being nested within a complex network of interconnected systems that encompass individual, family, and extrafamilial (peer, school, neighborhood) factors.
• Intervention may be necessary in any one or a combination of these systems.

Program Targets:
• MST targets chronic, violent, or substance abusing juvenile offenders at high risk of out-of-home placement and their families.

Implementation of Multisystemic Therapy:

WHY MST???
• Identified need to target “deep end” children who were accounting for most of resources
• Acknowledgment that existing “business as usual” was not working
• Much emphasis on juvenile justice population
• Policy focus on keeping children in their communities and providing intensive in-home services through KidCare legislation
• Strong evidence-base
• Well-defined implementation and delivery system for MST
• Champions within the State

Multisystemic Therapy (MST)

Current Number of MST programs in Connecticut:
10 (DCF)
15 (CSSD)

Current Number of MST Specialty Teams:
3 (DCF)

Current Capacity for Children Served:
350 (DCF)
625 (CSSD)

975 Total Capacity
Study Methodology & Results

Overview of Full Evaluation Components

Study Time Period: January 1, 2003 to June 30, 2006

CSSD—15 Providers, N=993
DCF—9 Providers, N=857

Qualitative
- Interviews & Focus Groups
  - Key Stakeholders: Agency Staff, Probation Officers, Judges, Consultants, Supervisors, Therapists

Quantitative
- Data Collected:
  - Youth demographics
  - Therapist demographics*
  - MST ultimate outcomes (in school, living at home, not arrested)
  - Therapist/supervisor fidelity (TAM & SAM Scores)
  - Pre-treatment arrests
  - Juvenile & adult recidivism

Overview of Qualitative Methods

- Interviewers conducted by the principal investigator and co-investigator using a structured interview protocol with open-ended questions
- Interviews and focus groups lasted approximately 1-2 hours
- Audio recordings were transcribed and coded by two of the co-investigators
  - Identified themes were synthesized into higher-order categories that allow for aggregation of thematic categories across interviews

Participants in Qualitative Interviews and Focus Groups

- Individual Interviews (N=17):
  - Connecticut Stakeholders, state-level agency leadership and policy makers instrumental in the adoption of MST (N=9)
  - MST System Supervisors for MST contracted providers (N=3)
- Focus Group Interviews (15 Groups; N=79):
  - Juvenile Justice system staff, judicial agency leadership, and probation officers (P.O.’s) (4 Groups; N=21)
  - MST Administrators and Supervisors (4 Groups; N=15)
  - MST Therapists (5 Groups; N=31)
  - Families who received MST services during the study time period, January 2003 to June 2006 (2 Groups; N=12)


- Fixsen et al. (2005) completed a synthesis of the research literature on implementation to determine what is known about its relevant components and conditions
- Research synthesis was based on an extensive literature review of articles, book chapters, and reports across a broad range of disciplines
- Implementation was defined as “a specified set of activities designed to put into practice an activity or program of known dimensions.”
- Implementation is grounded on the premise that there exists a gap between what is known to be effective (theory and science) and what is done (policy and practice)

Implementation Research Framework (cont.)

- Stages of Implementation:
  - Exploration & Adoption: Assess the “fit,” decide to proceed with implementation
  - Program Installation: Put into place needed resources and structural supports (prior to first consumer contact)
  - Initial Implementation: Enact changes to current practice in line with newly adopted program
  - Full Operation: Integrate new learning at practitioner, organization, and community levels
  - Innovation: Opportunities for refinement and expansion based on unique needs
  - Sustainability: The shifting ecology of influence factors determine the long-term survival of a new program in a changing world
Implementation Research Framework (cont.)

- **Core Components of Implementation (key factors that drive adoption of evidence-based practices)**
  - Staff selection: Qualifications, recruitment, selection. Who is most likely to do this well?
  - Pre-service and in-service training: Provide knowledge of background information, theory, philosophy, values, and key practices. Provide opportunities to practice new skills and receive feedback.
  - Ongoing consultation and coaching: Consolidate training and learning on the job.
  - Staff and program evaluation: Assess key aspects of the performance of staff members and the performance of the organization as a whole.
  - Facilitative administrative support: Use of data-driven decision-making by leadership to guide the overall process.
  - Systems interventions: Strategies of working with external systems to ensure ongoing availability of resources to do the work.

Development of Interview Protocol

- Fixsen et al.’s framework of implementation was used as a framework in the development of the interview protocol.

- In order to operationalize implementation for participants with a wide range of perspectives in implementing MST, responses to five broad categories of questions with detailed follow-up prompts were elicited:
  1) MST adoption
  2) Training
  3) Service delivery
  4) Implementation
  5) Program outcomes

Qualitative Results for MST Implementation in Connecticut

Themes from Qualitative Analysis

- Exploration and Adoption of MST
  - A policy and practice shift toward evidence-based practice began to emerge in the state just prior to the adoption of the first MST pilot program.
  - MST was adopted in response to the number of youth in the Juvenile Justice system in need of behavioral health services.
  - Stakeholders reported MST offered an opportunity to implement an evidence-based treatment statewide that includes a rigorous training and evaluation component.

Quote from Qualitative Analysis: Exploration and Adoption

“There was evidence, and that’s what we were looking for. The Feds loved it. Other states loved it. So, we were convinced that there was something out there that we could adopt. We didn’t need to go out and reinvent the wheel.” — State Agency Leader
Quote from Qualitative Analysis: Exploration and Adoption

“If we could use MST as an inroad to begin to change the culture of the state agencies... then it was a good opportunity.”
- State Agency Leader

Themes from Qualitative Analysis

- Program Installation
  - DCF adoption of MST was gradual and incorporated a more diverse referral population, whereas CSSD adoption was rapid and targeted delinquent youth based on JAG scores (Systems Intervention)
  - Having individual "champions" that advocated for implementing MST was cited by many state agency leaders as imperative to successful statewide adoption and installation
  - The initial promises of MST may have oversold the efficacy of the program

Quote from Qualitative Analysis: Program Installation

“Probably without the political will and momentum that was created by the crisis of the CPEC study, any changes that we [CSSD] made would have been slower or more moderate. But that crisis allowed us the opportunity to really make some radical changes quickly. And as such we cancelled three program models and reinvested in Multi-Systemic Therapy.”
- State Agency Leader

Themes from Qualitative Analysis

- Initial Implementation
  - Provider readiness
  - There was some initial and ongoing skepticism and resistance from providers, probation, and the community in adopting evidence-based practices
    - Concern that MST was being oversold
    - Some resentment related to CSSD shifting resources from 25 provider organizations to 5 MST providers
  - Providers who showed readiness to adopt MST were already implementing evidence-based practices and demonstrated a willingness to engage in the quality assurance components of MST, such as therapist fidelity measures and supervision

Quote from Qualitative Analysis: Initial Implementation

“I had the erroneous notion that because these are so explicated and prescribed models that it was like buying a can of soup off the shelf or something. I really thought that setting up the services was going to be as simple as creating a contract and executing it and it turned out that it’s a lot more complicated than that.”
- State Agency Leader

Quote from Qualitative Analysis: Initial Implementation

“I think MST (was presented as)... an actual cure. When it’s presented that way... the program naturally loses its credibility. And there’s a resentment that exists throughout the system. It’s a systemic resentment, not just from probation officers.”
- Probation Officer
### Themes from Qualitative Analysis

**Full Operation - Referrals and Program Fit**
- MST referrals shifting away from pure delinquency to cases with more mental health difficulties
- Related to this, both youth and parents may have mental health and substance abuse issues that the program is not designed to address
- Belief by P.O.'s and providers that MST might work better for medium to lower risk youth
- Providers feel that CSSD is more streamlined in their referral process than DCF because they rely primarily on the JAG to identify referrals, but CSSD may also have less flexibility in the type of cases that are referred to MST (Program Evaluation)

**Full Operation - Workforce Issues**
- MST referrals shifting away from pure delinquency to cases with more mental health difficulties
- Related to this, both youth and parents may have mental health and substance abuse issues that the program is not designed to address
- Belief by P.O.'s and providers that MST might work better for medium to lower risk youth
- Providers feel that CSSD is more streamlined in their referral process than DCF because they rely primarily on the JAG to identify referrals, but CSSD may also have less flexibility in the type of cases that are referred to MST (Program Evaluation)

**Innovation**
- DCF and CSSD providers occasionally collaborate if based at the same location (Consultation and Coaching)
- JAG scores for youth who are referred were reported to be adjusted if a P.O. thinks youth may not be a perfect fit for MST (Systems Intervention)
- Providers reported that they may also accept cases that are not a perfect fit if they have open slots to fill (Systems Intervention)
- Issues with how outcomes were defined and measured (Program Evaluation)
- Discouraging services other than MST during and post treatment made it difficult at times for clinicians to help families with complex needs meet their goals (Program Evaluation)
- Providers generally work well with the court and school systems, but it may be more difficult in larger courts and schools if they are required to collaborate with difficult individual personalities in each system (Systems Intervention)

### Quote from Qualitative Analysis: Full Implementation - Referrals

"We have been seeing a lot more cases...over the past 6 months to a year that are very acute psychiatrically. And I think that the therapists get often frustrated with that, because it's not the target population MST was designed to work with...They don't technically meet our exclusionary criteria, but they're definitely—for example they're not actively suicidal or homicidal...However, we'll start treatment, and they'll all of a sudden go off of their meds and begin to exhibit...psychotic symptomatology."

---

MST Therapist

### Quote from Qualitative Analysis: Full Implementation - Workforce

"In our first year, we had therapists who turned over pretty quickly. Maybe they stayed for a year or less. And as everyone was learning at the same time, we got some therapists probably didn't practice with the best fidelity or even best practice, of clinical work."

---

MST Therapist

### Quote from Qualitative Analysis: Full Implementation - Workforce

"But chances are the P.O. has known the kid for a long time, and they know if it will work...regardless of their JAG score. So if the P.O. got to be a little more choosy, and said, 'Even if the kid has a high JAG score, I just know the kid, I know the mother and father or whoever's in the house; it's just not going to work with them. Let's put him aside or her aside and let's take this kid instead.'"
**Quote from Qualitative Analysis: Innovation**

“I’ve dealt with families where everybody is on the same page—the P.O.’s working with you, the school’s working with you, and like I said it can be the best type of treatment out there, but then if you have a school that’s not really working with you, or maybe a P.O. doesn’t really want to do something you think might be helpful, then I think it makes it harder. But I mean working with the kid [alone], it’s just... ridiculous ... It’s got to be with the parent and... the adults that are in their life.”  

— MST Therapist

---

**Quote from Qualitative Analysis: Sustainability**

“Yes, you do see some [success stories]. And if you dug through the system and had people report to you, I suppose you could find more, but we don’t.”  

— Juvenile Court Judge

---

**Quote from Qualitative Analysis: Sustainability - Workforce**

“[The interview process involves] not sugar-coating anything. Because we’ve done that. I remember being in an interview, “Love my job, love my job.” Basically anybody would have taken the job because you’re selling the job—it’s so great! And then they start, and they’re like “Wow! This is not what I thought!” They [will be] influenced by our enthusiasm, and so even though you’re being very honest and clear, we’ve actually taken the tactic sometimes to try to scare people away in a way that is informative.”  

— MST Supervisor

---

**Themes from Qualitative Analysis**

- **Sustainability – Participant Suggestions for Improvement**
  - Multi-systemic Collaboration (System Intervention)
    - A strong partnership between providers and probation, especially at intake, helps to engage families in treatment
    - Judges sometimes feel under-informed on a case, but they did report that MST therapists seemed organized and competent for the most part
    - Judges also have no way of gauging whether or not MST is working well

- **Sustainability – Participant Suggestions for Improvement**
  - Workforce Issues
    - Hiring, Turnover, Incentives to Therapists
      - Turnover among MST clinicians has been a difficult problem (Facilitative Administrative Supports)
    - Providers have learned to hire therapists who are a good match for MST (Clinician Selection)

- **MST Outcomes**
  - Factors believed to be associated with successful outcomes include:
    - Parent/family involvement
    - Appropriateness of referrals
    - Fidelity to model
    - Expectations of program success
    - Youth involvement in community activities
Quote from Qualitative Analysis: Program Outcomes

"The therapist who consistently has positive outcomes, whose TAMs are in range, and who (has) ... really bought into the model......is so crucial... in terms of helping to make that case a success." – MST Therapist

Quote from Qualitative Analysis: Program Outcomes

"I think the good thing about MST... is that we look at things multi-systemically... and we do a comprehensive assessment... and really analyze ecological factors, systemic factors, therapist variables... caregiver variables, client variables, school. So we'll really look at in a sense everything, which is very helpful, then we'll prioritize maybe the main things that we thought had affected." – MST Therapist

Lessons Learned from Implementation of MST in CT

- Statewide implementation of MST
  - Provider readiness is key to effectiveness
  - The referral process may need to vary between agencies
  - The target population receiving MST has shifted to include youth with more mental health and substance use problems
  - Some collaboration issues exist within the service system

- Workforce Development Issues
  - Essential qualities for therapists include working independently and as a team and having a high tolerance for working with difficult populations
  - High therapist turnover prompts the need for incentives
  - Training, supervision and consultation should be ongoing and responsive to therapists’ needs
  - Ongoing need for bilingual and bicultural therapists

Lessons Learned from Implementation of MST in CT (cont.)

- Key factors that predict positive outcomes according to interview participants
  - Parent/Family Engagement
  - Appropriateness of Referrals
  - Fidelity to the Program Model
  - Youth Involvement in Community Activities

- Key factors to consider when evaluating MST program outcomes
  - An emergent skepticism about MST’s impact
  - Use of independent and objective outcome measures
  - Measuring outcomes over time

Recommendations for Policy Makers and Practitioners from Fixsen et al.

- Greater attention to issues of implementation can lead to more effective service delivery
- Develop “program- or practice-centered” services rather than “practitioner-centered” services
- Align policies, practices, and procedures to promote desired changes
- Government investment in the development and use of effective implementation strategies that are grounded in research
- Financial support for system transformation, which requires time and resources
- Partnerships between practitioner and research communities that examine issues of effective implementation
- Create self-sustaining learning communities

Quantitative Results related to MST Implementation
Presented in Tampa, February 2008

Quantitative Results related to MST Implementation:
Therapist Length of Employment (CSSD)
- Average length of employment was 13.1 months
- However, as of January 2007, average length for current employees was 16 months compared to 11 months for past employees
- One provider had significantly less turnover with an average of 21 months for length of employment
- Interview participants from this site reported a great deal of agency, supervisor, and peer support

<table>
<thead>
<tr>
<th>Therapist Turnover</th>
<th>All Sites</th>
<th>Site 1</th>
<th>Site 2</th>
<th>Site 3</th>
<th>Site 4</th>
<th>Site 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of employment (months)</td>
<td>13.1 (sd=9.4)</td>
<td>12.8</td>
<td>21.4*</td>
<td>12.5</td>
<td>10.5</td>
<td>12.2</td>
</tr>
</tbody>
</table>

Quantitative Results related to MST Implementation: Measure of Fidelity to the MST Model
- Therapist Adherence Measure - TAM
  - Family report
  - Therapists met criteria for each of the 5 adherence scales almost 2/3 of the time
  - Mean total TAM score was 4.2 or an endorsement of "pretty much"
  - There was very little variability in TAM scores, making it difficult to predict youth outcomes with this measure
  - Scores for Adherence to the MST model significantly increased in Year 3 of the study time period from the first two years of statewide implementation

Quantitative Results:
Youth Recidivism Outcomes Post MST Charges (CSSD & DCF)

Dissemination of Results
- Will produce several studies to be published in peer reviewed journals
- Will disseminate results at statewide and national conferences
- Plan to host a statewide forum for stakeholders in Spring of 2008, including legislators, agency representatives, state providers, and families to discuss implications of results for policy, practice, and systems change

Quantitative Results:
Youth Recidivism Outcomes Post MST Convictions (CSSD & DCF)

Quantitative Summary
- Connecticut MST recidivism outcomes are comparable to other MST outcome studies nationwide
  - This is encouraging considering that MST was implemented statewide by two separate state agencies through community-based providers as opposed to the more controlled implementation practices reported in previous studies
  - Despite different implementation processes for each state agency, post-MST rates of recidivism are comparable
Summary

- Evaluation of a statewide implementation of an evidence-based practice was both time and labor-intensive.
- Both qualitative and quantitative approaches were vital to understanding implementation and outcome issues.
- Vast amount of qualitative data is difficult to quantify in simple terms.
- Implementation factors are complex, multi-determined and continually evolving.
- Continuously sharing data with stakeholders is vital to long-term program success and sustainability.

Contact Information:

Robert P. Franks, Ph.D.
Principal Investigator, MST Statewide Evaluation Director, Connecticut Center for Effective Practice (CCEP)
860-679-1536
rfranks@uchc.edu

Jennifer A. Schroeder, Ph.D.
Co-Investigator, MST Statewide Evaluation Program Associate for Mental Health, Connecticut Center for Effective Practice (CCEP)
860-679-1535
jschroeder@uchc.edu
Evaluating Innovations in Human Services

Dean L. Fixsen
National Implementation Research Network
Louis de la Parte Florida Mental Health Institute

Evidence-Based Movement

The “evidence-based movement” is an international experiment to make better use of research findings in typical service settings.
The purpose is to produce greater benefits to consumers and society.

Implementation

Context and “confounders” are not extraneous to implementation, they are an integral part of it. The multiple (and often unpredictable) interactions that arise in particular contexts and settings are precisely what determine the success or failure of an implementation initiative.

Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou (2004)

Stages of Implementation

Implementation occurs in stages:
- Exploration
- Installation
- Initial Implementation
- Full Implementation
- Innovation
- Sustainability

Fixsen, Naoom, Blase, Friedman, & Wallace, 2005

Implementation

Research designs (adaptive technologies; multiple baseline)
- Research methods (univariate methods in a multivariate world)
  - Qualitative/complexity
  - Quantitative/simplicity
- Research analyses (policy & practice audiences, immediate uses)

Implementation

Our colleagues from Connecticut are on the leading edge of the new science of implementation
Thank you for showing us the way!
Thank You

We thank the following for their support:

- Annie E. Casey Foundation (EBPs and cultural competence)
- William T. Grant Foundation (implementation literature review)
- Substance Abuse and Mental Health Services Administration (implementation strategies grants; NREPP reviews; SOC analyses of implementation; national implementation awards)
- Centers for Disease Control & Prevention (implementation research contract)
- National Institute of Mental Health (research and training grants)
- Juvenile Justice and Delinquency Prevention (program development and evaluation grants)
- Office of Special Education Programs (Capacity Development Center contract)

For More Information

Dean L. Fixsen
813-974-4446
dfixsen@fmhi.usf.edu

Karen A. Blase
813-974-4463
kblase@fmhi.usf.edu

National Implementation Research Network
At the Louis de la Parte Florida Mental Health Institute
University of South Florida
http://nirn.fmhi.usf.edu


Download all or part of the monograph at:
http://nirn.fmhi.usf.edu/resources/publications/Monograph/index.cfm