

# BLUEPRINTS 2014

## PUBLISHED MST RESEARCH FINDINGS 2012 - Present

Scott W. Henggeler, Professor  
Medical University of South Carolina

# What is “MST”?

- Community-based, family-driven treatment for antisocial/delinquent behavior in youth
- Focus is on “Empowering” caregivers (parents) to solve current and future problems
- MST “client” is the entire ecology of the youth - family, peers, school, neighborhood
- Highly structured clinical supervision and quality assurance processes

# How is MST Implemented?

- Single therapist working intensively with 4 to 6 families at a time
- Team of 2 to 4 therapists plus a supervisor
- 24 hr/ 7 day/ week team availability: on call system
- 3 to 5 months is the typical treatment time (4 months on average across cases)
- Work is done in the community, home, school, neighborhood: removes barriers to service access

# MST QA/QI Overview

---> Input/feedback via internet-based data collection  
—> Training/support, including MST manuals/materials

**PIR**  
Program  
Implementation  
Review and  
other reports

**Output to –**  
Organization, Program Stakeholders  
and MST Coach

**Organizational Context**



**CAM**  
Consultant  
Adherence  
Measure

**Output to –**  
MST Coach

**SAM**  
Supervisor  
Adherence  
Measure

**Output to –**  
MST Expert

**TAM**  
Therapist  
Adherence  
Measure

**Output to –**  
MST Supervisor and MST Expert

# MST: 30+ Years of Science

## 34 published outcome, transportability and benchmarking studies including 23 randomized trials

- 13 with serious juvenile offenders
  - 4 independent studies
- 8 with adolescents with serious conduct problems
  - 7 independent studies
- 2 with substance abusing or dependent juvenile offenders
- 3 with juvenile sexual offenders
- 3 with youths presenting serious emotional disturbance
- 2 with maltreating families
- 4 with adolescents with chronic health care conditions
  - Diabetes and obesity
- 3 large-scale transportability (dissemination) studies

# MST: Key Component of Social and Large Systems Change

Research findings have enabled MST to be used as a key component of system change

Two Examples:

- Chile
- UK/Essex Social Impact Bonds

# MST - Part of Crime Reduction Initiative Driven by the President



Chile

Slides credit to: Cecilia Tijmes,  
Ministry of the Interior and Public  
Security

# General Background

## Goals of the 2010-2014 Plan Chile Seguro

- Reduce the percentage of households victims of crime by 15%
- Reduce the amount of crimes in public areas by 25%





# Process to Implement MST in Chile 2012-2013

## Phase 0:

- MST Services Representatives visit Chile to familiarize with the realities of Chile and assess the feasibility of the implementation in 2011
- Multisystemic Therapy Conference in Santiago open to professionals of related institutions
- Agreement between the Subsecretary of Crime Prevention and MST Services to implement MST starting 2012

# Process to Implement MST in Chile 2012-2013

## Phase 1: La Pintana, Pudahuel, La Florida and Puente Alto

- Translation of documents and protocols
- Process of selection of therapists and supervisors
- Site Assessment
- 5 day training for MST teams.
- Services started August 2012.

# Process to Implement MST in Chile 2012-2013

Phase 2: Peñalolén, Recoleta, La Granja and Lo Espejo

- Teams started September 2012

Phase 3: San Bernardo, Maipú and Valparaíso\*

- Teams started February 2013

Phase 4: Puerto Montt, Temuco and Los Ángeles

- Teams started May 2013

Phases 5-7: 11 additional teams scheduled to start

Total of 25 teams by the end of 2014

MST - Part of Innovative Approach Using  
Social Investment to *Increase Funding*  
for Effective Services

A dark blue ribbon graphic with a white outline, featuring a central rectangular section and two pointed ends. The text "Essex County, UK" is centered within the white-outlined section of the ribbon.

Essex County, UK

Credit for Slides: Cathy James,  
Department of Health

# Essex Faces Formidable Challenges

- Predominance of high cost residential placements
- Higher proportion of older adolescents with behavioral issues in care
- Poor parenting support in particular around managing behavior
- Underdeveloped early intervention and family support services
- Lack of higher level intensive interventions and limited resources to establish them
- Vicious circle: wrong service offer, young people in care unnecessarily, pressure on budgets, reducing available investment

Steven H. Goldberg, February 4, 2013

# What Private Investment in Future for Children Bonds Could Mean for the Growth of MST

- Possible expansion in ways that government spending and philanthropy can't provide
- Attractiveness of well-evidenced programs to investors
- Impact investment might work a lot better
- Working with new kinds of partners



“If we want civic-minded affluent people to make a lot more money available for social purposes, they need to know they’ll eventually get it back.



Philanthropy is disposable;  
social investment is  
recyclable.”

Steven H. Goldberg, February 4, 2013



- SIBs and other social investments don't make money more important than helping people
- The only way they make any money for investors at all is if they do help people
- Future for Children Bonds provide a small financial incentive for investors to pay for more MST
- Could reduce the number of children taken from their homes and save government a lot of money

Monetization creates an entirely new source of funding that doesn't compete with limited government budgets or donations.

Steven H. Goldberg, February 4, 2013

# Social investing has the potential to significantly change how we fund social programs



# Measurement of Implementation Components Ten Years after a Nationwide Introduction of Empirically Supported Programs - A Pilot Study

Terje Ogden, Gunnar Bjornebekk, John Kjobli,  
Joshua Patras, Terje Christiansen, Knut Taraldsen,  
and Nina Tollefsen

University of Oslo

*Implementation Science (2012)*

# Study Aim and Design

Compare implementation profiles of two evidence-based programs (MST vs. Oregon Parent Management Training [PMTO]) based on therapist, supervisor, and leadership reports 10 years after nationwide dissemination.

93 PMTO respondents and 56 MST respondents were surveyed.

# Overall Finding

**“The strong focus on implementation in MST and PMTO has paid off 10 years after the programs were introduced in Norway by revealing a strong and ongoing presence with agencies, and a relatively long median lifespan of program practitioners.”**

# MST Rated Higher than PMTO in:

Recruitment - practitioner selection

Training - initial acquisition of key skills

Supervision/coaching

Performance assessment - tracking integrity

Data systems for stakeholder feedback

Administrative restructuring to support program  
implementation

Interventions with community systems to support  
program implementation

# A Randomized Controlled Trial of MST and a Statutory Therapeutic Intervention for Young Offenders

Stephen Butler, Geoffrey Baruch, Nicole Hickey,  
and Peter Fonagy

University College London, Brandon Centre,  
and Imperial College

*Journal of the American Academy of  
Child & Adolescent Psychiatry (December, 2011)*

# Design

- Randomized, independent effectiveness trial (conducted with community-based therapists)
- 108 juvenile offenders
- Control condition: Tailored range of extensive and multicomponent evidence-based interventions
- 18-month post treatment follow-up



# Results

- Reduced offenses (41%)
- Reduced placements (41%) during the last 6 months
- Reduced self-reported and parent-reported delinquency
- Improved parenting
- Reduced psychopathic symptoms

# MST for Young Offenders: Families' Experiences of Therapeutic Processes and Outcomes

Andrea Tighe, Nancy Pistrang, Lucy Casdagli,  
Geoffrey Baruch and Stephen Butler

University College London and The Brandon Centre

*Journal of Family Psychology (2012)*

# Design

Qualitative study (37 interviews) explored parents' and youths' experiences of MST, and identified 2 overriding domains that prompted or limited therapeutic change.

1. Engagement in MST and Initial Process of Change
2. Outcomes are Complex

# Engagement and Initial Process of Change

- Families appreciated flexible scheduling
- Holistic approach (working with multiple systems)
- Solution-focused, practical approach, providing observable benefits
- Strong therapeutic relationship: A person-centered, collaborative approach
- Therapist as source of support: Companion, counselor, motivator, mediator

# Outcomes Are Complex (rarely clear-cut)

- Increased parental confidence and skills
- Relationships improve
- Young person choosing to create a different future
- Behavior mostly improves
- Not all targets are met or situation deteriorates after therapist leaves

# Economic Evaluation of Multisystemic Therapy for Young People at Risk for Continuing Criminal Activity in the UK

Maria Cary, Stephen Butler, Geoffrey Baruch,  
Nicole Hickey, & Sarah Byford

University College London, Brandon Centre,  
and Imperial College

*PLoS ONE 8(4): e61070 (2013)*

# Cost Offset Analysis

- Design: 18-month post treatment follow-up
- Findings: MST associated with cost savings related to crime reduction

# Higher Education Reform on EBPs: The Connecticut Transformation Initiative

Elisabeth Cannata and Michael A. Hoge

Wheeler Clinic and Yale University

*Emotional & Behavioral Disorders in Youth (2012)*



# The Problem

Despite calls to action, graduate school curricula have continued to lag behind demands for a workforce better prepared to implement evidence-based practice. For example, 57% of new clinicians were rated by supervisors as minimally prepared for evidence-based practice (3% were very prepared).

# Connecticut Context

By 2008, 22 provider agencies offered 8 EBPs.

Program managers across Connecticut reported great challenges in hiring viable clinicians.

University faculty were “lukewarm” about teaching EBP related skills.

# Solution: Curriculum Development

## “Current Trends” curriculum

- 14-week, 3 credit graduate level course developed with SAMHSA funding
- Goal of course: promote accurate understanding of and interest in EBP models
- Didactic, active learning, and outside presentations, including from families

# Course Toolkit

- Reading lists and all materials from the lists
- Sample syllabus
- Power point presentations
- Lesson plans
- Tools for skill building activities
- Videos
- Sample exam questions
- Topics for semester projects
- Certificates of course completion

ALSO - Extensive training and quality assurance of faculty

# Results

17 faculty members from 11 graduate schools have been trained.

Course has been offered 20 times.

270 students have completed the course.

Course is now required in 2 programs and is a regularly scheduled elective in 8 programs.

# A Randomized Controlled Trial of the Effectiveness of Multisystemic Therapy in the Netherlands: Post-Treatment Changes and Moderator Effects

Jessica Asscher, Maja Dekovic, Willeke Manders,  
Peter van der Lann and Pier Prins

University of Amsterdam and Utrecht University

*Journal of Experimental Criminology (2013)*

# Study Design

- MST vs. Treatment as Usual (TAU; community-based individual and family interventions)
- N = 256 adolescents (55% Dutch, 45% ethnic minorities; “severe and violent antisocial behavior”)
- Timing of assessments: baseline, monthly through 6 months post baseline

# Results

- Decreased youth antisocial behavior
- Increased parental sense of competence
- Increased positive discipline
- Improved relationship quality
- Increased youth association with prosocial peers



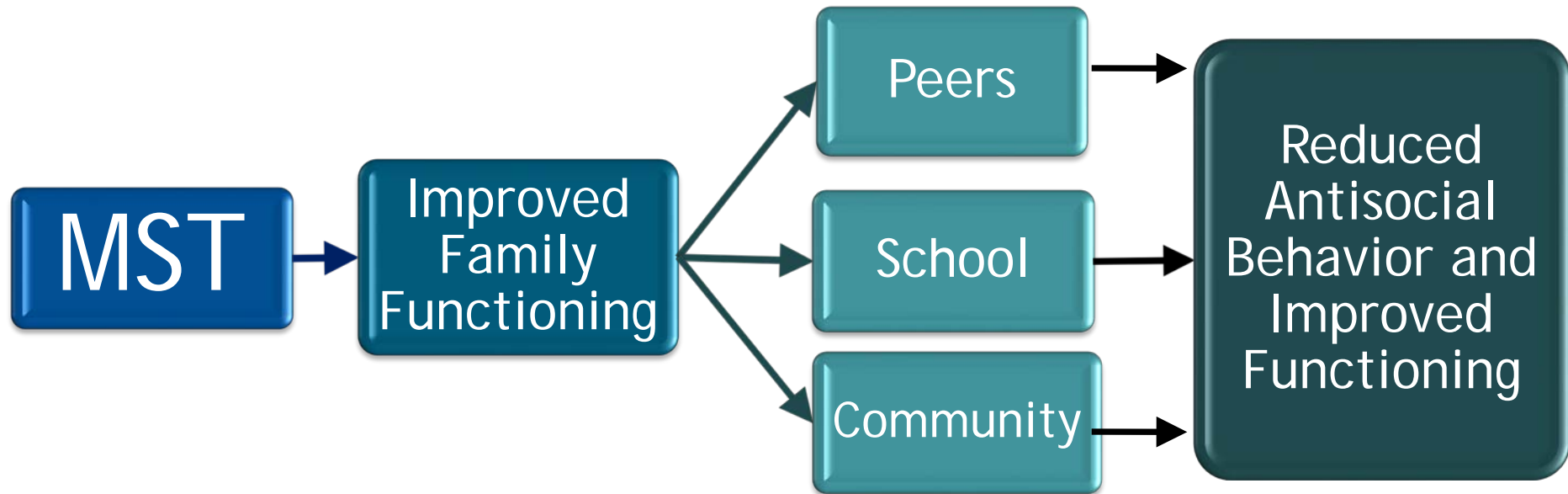
# Within-Intervention Change: Mediators of Intervention Effects During MST

Maja Dekovic, Jessica J. Asscher, Willeke A. Manders,  
Pier J. M. Prins, & Peter van der Lann

Utrecht University and University of Amsterdam  
De Waag and Yorneo in the Netherlands

*Journal of Consulting and Clinical Psychology (2012)*

# MST Theory of Change



# Measures

\* = MST Treatment Effect

Parental sense of competence\*

Positive discipline\* (consistency,  
monitoring, appropriate discipline)

Inept discipline (harsh, love withdrawal)

Relationship quality\* (acceptance, low  
conflict)

Externalizing problems\* (CBCL, SRD)

# Mediation Results

Increased parent sense of competence →  
increased positive discipline → decreased  
externalizing problems

Increased parent sense of competence →  
improved relationship quality

# Conclusions

“The increases in sense of competence may motivate parents to be more persistent in attaining their goals, following through their discipline efforts, and thus becoming more consistent in their behavior toward the adolescent.”

# Conclusions

Changes in relationship quality did not predict decreased behavior problems

\*\* “During first month of treatment quality of parent-adolescent relationship actually deteriorated, possibly due to parents’ newly acquired skills in limit setting and supervision.”

But relationship quality improved in subsequent months to well above TAU.

# Psychopathy as Predictor and Moderator of Multisystemic Therapy Outcomes among Adolescents Treated for Antisocial Behavior

Willeke Manders, Maja Dekovic, Jessica Asscher,  
Peter van der Laan, and Pier Prins

University of Amsterdam and Utrecht University

*Journal of Abnormal Child Psychology (2013)*

# Findings

Favorable MST effects on externalizing problems were moderated (attenuated) for youth with high narcissism and callous traits



# Sustainability of the Effects of MST for Juvenile Delinquents in the Netherlands: Effects on Delinquency and Recidivism

Jessica Asscher, Maja Dekovic, Willeke Manders,  
Peter van der Laan, Pier Prins, & Sander van Arum

University of Amsterdam and Utrecht University

*Journal of Experimental Criminology (2014)*

# Design and Findings

- Follow-up to Asscher et al. (2013)
- 12-month follow-up on parent and adolescent reports of antisocial behavior
- 3-year follow-up on judicial data
- Favorable 12-month outcomes were sustained
- No treatment effects were observed based on recidivism data (MST and TAU both had 71% rearrest rates)

Journal of Japanese Clinical Psychology  
2012, Vol. 30, No. 5, pp. 757-762

資料

## Multisystemic Therapy を用いた 社会的逸脱行動事例への介入\*

大宮 察一郎<sup>†</sup> 埼玉大学 医学部<sup>\*\*</sup> / 高田 拓郎<sup>†††</sup> 関西大学 社会学部<sup>\*\*\*</sup>  
下田 僚<sup>††††</sup> 中央大学 文学部<sup>\*\*\*\*</sup>

### I 問題と目的

社会的逸脱行動事例への介入は重要である。1995年にスクールカウンセラー（以下、SC）が導入されたことにより、心理臨床家が「非行少年」や「非行少年予備軍」と出会う機会は格段に増えているが（伊藤, 2002）、武田ら（2008）が指摘するように、心理職者による児童生徒の反社会的行動問題事例の援助に随する研究、およびSCによる援助の報告は、依然少ない状況にある。

そこで、本研究では、暴力的・反社会的行動を呈する少年への介入技法として世界的に注目を集めている Multisystemic Therapy（以下、MST: Henggeler et al, 1998/2008）を用いた事例について報告する。本論の展開に当たっては、少年法に規定されている内容を非行とし、厳密に少年法に規定されていないものを社会的逸脱行動とする。

### II MST の概略

MSTとは、米国サウスカロライナ医科大学精

神医学行動科学部門の Henggeler 教授らを中心に開発された技法である。深刻な反社会的行動やその他の深刻な臨床的問題を抱える少年を対象とし、家庭やコミュニティを基盤に集中的な介入を実施する。この技法の介入効果は多くの研究から実証されており（Schaeffer et al, 2005; Kliez et al, 2010）、現在では米国だけでなく欧米諸国を中心に実証されているほか、わが国では、吉川ら（2008, 2009）や大宮（2010）により、介入実践とその効果が報告されている。

MSTの介入では、MSTスーパーバイザーによるスーパーヴィジョンを定期的に受けながら介入プロトコルに従い（表1: 吉川ら, 2008参照）、家庭訪問による面接を週に数回程度実施する。介入中は、週7日、1日24時間体制で家族からの要求に応え、3~5カ月程度で終結することが通例である。MSTでは、少年の行動が「社会ネットワーク（家族、仲間、学校、近隣、地域社会）」との相互作用によって生じ、維持されているという社会生態系理論（Bronfenbrenner, 1979）に基づき問題行動理解を行う。そして、少年に最も強い影響力をもつ養育者と治療同盟を結び、行動療法（宮下ら, 2007参照）や家族療法（Minuchin et al, 1996/2000; Minuchin et al, 2006/2010参照）などの技法を用いて、少年をとりまく社会ネットワーク間の相互作用の変容を企図した介入を行う。介入中は、家族のストレス（長所）

- \* Multisystemic Therapy - Intervention for a deviant juvenile
- \*\* OMIYA, Souichiro: Graduate School of Medical and Pharmaceutical Science, Chiba University
- \*\*\* TOMITA, Takuro: Faculty of Sociology, Kansai University
- \*\*\*\* SHIMODA, Ryo: Faculty of Letters, Chuo University

# Examining Therapist Comfort in Delivering Family Therapy in Home and Community Settings

Tatiana Glebova, Sharon L. Foster,  
Phillippe B. Cunningham, Patricia A. Brennan  
and Elizabeth Whitmore

Alliant International University, MUSC, Emory University  
and University of Colorado

*Psychotherapy (2012)*

# Design

Examined therapists' feelings of comfort (cleanliness of home, comfort interacting with family) and safety (physical safety of neighborhood) when delivering family services in community-based settings

185 families treated by 51 MST therapists

Therapists were relatively young (2.6 years post degree) and inexperienced (9.5 months as MST therapist)

# Findings

Low therapist feelings of comfort/safety associated with:

- Low therapeutic alliance (therapist reported, not associated with caregiver reported alliance)
- Treating low-income families in poor neighborhoods
- Having less favorable attitudes toward MST

# MST Compared to Telephone Support for Youth with Poorly Controlled Diabetes: Findings from a Randomized Controlled Trial

Deborah A. Ellis, Sylvie Naar-King, Xinguang Chen,  
Kathleen Moltz, Phillippe B. Cunningham,  
and April Idalski-Carcone

Wayne State University and the Medical University of  
South Carolina

*Annals of Behavioral Medicine (2012)*

# Design

- Randomized controlled trial
- 146 adolescents with type 1 or 2 diabetes
- Control condition: Standard medical care enhanced with weekly telephone support for improving regimen adherence and metabolic control
- 12-month follow-up



# Results

- MST was more effective at improving metabolic control at 7 and 12 months.
- Parents of adolescents receiving MST reported greater improvements in treatment adherence by their youth (adolescent-reported adherence was unchanged).

# Comprehensive Treatment for Co-Occurring Child Maltreatment and Parental Substance Abuse: Outcomes from a 24-Month Pilot Study of the MST-Building Stronger Families Program

Cindy Schaeffer, Cynthia Swenson, Elena Tuerk,  
& Scott Henggeler

Medical University of South Carolina

*Child Abuse & Neglect (2013)*

# Design

- Single group pre-post; and quasi-experimental with 24-month follow-up
- 43 families with co-occurring parental substance abuse and child maltreatment
- Control condition was comprehensive community treatment

# Findings

- Pre-post in single group design: Mothers reduced substance use and depression, improved parenting; Youth decreased anxiety
- 24-month follow-up in quasi-experimental design: Decreased maltreatment and time youth spent in out-of-home placement

# Long-Term Prevention of Criminality in Siblings of Serious and Violent Juvenile Offenders: A 25-Year Follow-Up to a Randomized Clinical Trial of MST

David Wagner, Charles Borduin, Aaron Sawyer,  
& Alex Dopp

University of Missouri

*Journal of Consulting and Clinical Psychology (2014)*

# Design and Findings

Parent study: The Borduin et al. (1995) RCT comparing MST vs. individual therapy (IT) with 176 serious juvenile offenders

- Present study participants: 129 closest in age siblings
- 25-year follow-up - mean age of siblings = 38.4 years
- Arrest rate: MST = 43%; IT = 72%
- IT siblings 3X the felony rate as MST siblings
- IT siblings 2X the incarceration rate

# The Economic Impact of MST through Midlife: A Cost-Benefit Analysis with Serious Juvenile Offenders and Their Siblings

Alex Dopp, Charles Borduin, David Wagner,  
& Aaron Sawyer

University of Missouri

*Journal of Consulting and Clinical Psychology (2014)*

# Design and Findings

Parent study: The Borduin et al. (1995) RCT comparing MST vs. individual therapy (IT) with 176 serious juvenile offenders

- Present study includes original youths and 129 closest-in-age siblings in a 25-year follow-up
- Examined (a) taxpayer costs (e.g., community supervision, incarceration) and (b) crime victim costs (e.g., property damage, medical care, pain and suffering)
- Cumulative benefit of MST = \$35,582 per juvenile offender and \$7,798 per sibling



# Two-Year Follow-Up of a Randomized Effectiveness Trial Evaluating MST for Juveniles Who Sexually Offend

Elizabeth Letourneau, Scott Henggeler, Michael McCart,  
Charles Borduin, Paul Schewe, & Kevin Armstrong

Johns Hopkins University,  
Medical University of South Carolina,  
University of Missouri, and **University of Illinois-Chicago**

*Journal of Family Psychology (2013)*

# Design and Findings

Parent study: Letourneau et al. (2009): RCT with 127 juvenile sex offenders; MST vs. usual sex offender-specific treatment. 12-month results showed favorable outcomes for antisocial behavior, sexual behavior problems, and out-of-home placement

- 2-year follow-up for self-report measures and recidivism
- MST results sustained for problem sexual behavior, self-reported delinquency, and out-of-home placements
- Treatment effects not found for criminal recidivism

# Editorial: Journal of the American Academy of Child & Adolescent Psychiatry (2012)



**“Our present fractured system of care, problematic insurance structures, and limited public funding streams create obstacles to deploying evidence-based modalities such as MST. Yet, for the clinician in the community, MST is something to advocate for when consulted on cases or policies by local school authorities and government officials. We know what works but the challenge is figuring out how to get it to the young people who need it most.”**

# The Swedish Implementation of Multisystemic Therapy for Adolescents: Does Treatment Experience Predict Treatment Adherence?

Cecilia Lofholm, Kyle Eichas, & Knut Sundell

Lund University, Tarleton State University,  
National Board of Health and Welfare

*Journal of Clinical Child & Adolescent Psychology (2014)*

# Study Context

- 2003: MST programs started in Sweden -- 7 teams comprising the first wave of implementation
- 2004-2005: RCT conducted by Sundell et al. (2008)
  - No treatment effects
  - Low treatment adherence
  - Treatment adherence associated with arrest
- 2005-2006: 3 MST teams added, comprising the second wave of implementation
- 2007: MST Sweden (NP) began supporting MST implementation in Sweden
- 2003-2009: The time period examined by Lofholm et al. (2014)

# Study Purpose and Methods

To examine how therapists' adherence to MST and youth outcomes varied from 2003-2009

## Participants

- 973 youth referred from child welfare for severe behavior problems
- 68 therapists, 21 supervisors, 10 teams, 4 consultants

## Measures

- TAM (total sum of item scores)
- Youth at home, in school, no arrest (therapist report)
- Implementation wave (first or second)
- Years of team activity (0 to 5)
- Therapist experience (# of families treated)

# Findings

- High TAM predicted greater likelihood youth was at home, in school, and had no arrests (replicating findings from previous research)
- High therapist experience predicted greater likelihood youth was at home (new finding)
- Implementation wave and years of team activity predicted higher TAMs (extremely important new findings), which predicted better outcomes. For example, second wave therapists had first-year TAMs higher than the third-year TAMs of first wave therapists (see Figure 3 in manuscript).

# Swedish Implementation Study

## Löfholm et al. 2014

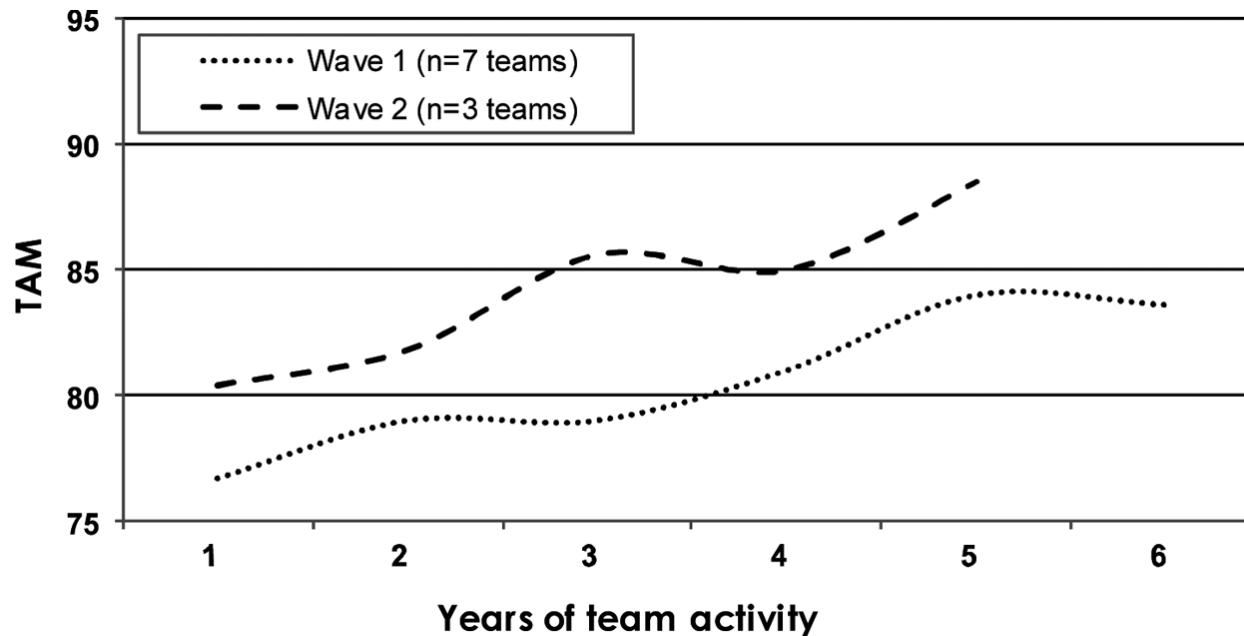


FIGURE 3 Averaged total treatment adherence (TAM) score by Years of Team Activity and Implementation waves



# Why are Wave and Team Experience Findings So Important?

- They explain the poor outcomes of Sundell et al. (2008). Low adherence is associated with poorer outcomes, and therapist adherence was the lowest during that study.
- Findings demonstrate the value (i.e., steadily improved adherence and outcomes) of continued quality assurance - "implementation is best considered a continuous process."
- More experienced teams and organizations seem to better support therapist adherence - supporting anecdotal views of optimal sites for MST expansions and adaptation pilots.

# Finally, a Critical Implication for Research

“An outcome evaluation that is initiated during early stages of implementation may result in a failure to find effect of the intervention, thus making it paramount to secure adequate treatment adherence before recruiting clients.”