Multisystemic Therapy for Youths With Problem Sexual Behaviors: From Development to Dissemination

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Missouri Delinquency Project Mission

- **To develop, validate, and study the dissemination of clinically effective and cost effective mental health services for youths presenting violent and other serious antisocial behaviors**

Juvenile Sexual Offenders Need Treatments That Can Change the Course of Their Lives

- Males under age 18 account for 17% of all arrests for sexual crimes (not including prostitution) in the United States (Federal Bureau of Investigation, 2014)
- The offense/arrest ratio for male juveniles is approximately 25:1 for sexual crimes (Elliott, 1995)
- Juveniles with histories of both sexual and nonsexual offenses are at high risk of becoming life-course-persistent offenders (Moffitt, 1993)
- Total costs of a lifetime of crime range from $1.3 to $1.5 million (Foster et al., 2006)

Juvenile Sexual Offender Treatment: Focus on the Individual Youth

- Safer Society (2009) identified 494 juvenile sexual offender programs that together treat 10,000+ youths/year in the US
- Most programs focus exclusively on altering youths' individual characteristics and are patterned after cognitive-behavioral interventions with adult sexual offenders
- Programs often use individual and group therapies and include sex-offender-specific modules (i.e., deviant arousal reduction, cognitive restructuring, empathy training, relapse prevention)
- These treatment programs usually last 12 to 24 months and are delivered in residential (44%) or outpatient settings (56%)

Juvenile Sexual Offender Treatment: Is it Clinically Effective?

- Studies (n = 4) examining sex-offender-specific cognitive-behavioral treatment for juveniles have failed to use randomized designs
- Even so, results from these studies are not encouraging & show only small between-groups differences in sexual recidivism & even worse outcomes for general recidivism (Hanson et al., 2002; Dopp, Borduin, & Brown, 2015)
- To date, individually oriented treatment approaches for juvenile sexual offenders have little empirical support yet continue to be widely used

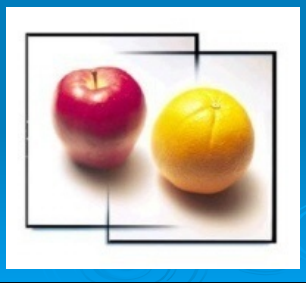
Juvenile Sexual Offender Treatment: Is it Cost Effective?

- Considerable financial resources are being devoted to individually oriented treatments (which have little evidence of clinical effectiveness) in both residential and outpatient settings
- For example, South Carolina Medicaid reimburses from $91,250 (at $250 per day per youth, minimum length of stay approximately 12 months) to $219,000 (24 months at $300 per day per youth) for residential treatment of juvenile sexual offenders

Juvenile Sexual Offender Treatment: Are There Other Reasons for Concern?

- Treatment seldom adheres to the principle of least restrictive setting and is not delivered with ecological validity
- Treatment seldom considers developmental differences between juvenile and adult sex offenders
- Usual treatment bears little resemblance to effective treatments for other serious antisocial behaviors
- Concerns about potential iatrogenic effects of usual treatment abound (Chaffin, 1998; Dodge et al., 2006)

Are Juvenile Sexual Offenders Different from Other Juvenile Offenders?



Correlates of Juvenile Sexual Offending

Most studies have methodological limitations, but findings suggest that multiple risk factors are linked with youth sexual offending:

- Individual youth characteristics (e.g., internalizing and externalizing problems, atypical sexual interests, sexual abuse history)
- Family relations (e.g., low warmth, high conflict, low monitoring)
- Caregiver functioning (e.g., spousal violence, substance abuse)
- Peer relations (e.g., immaturity, involvement with deviant peers)
- School performance (e.g., poor grades, school suspension, learning disabilities)
- Neighborhood characteristics (e.g., high environmental stress, criminal subculture)

Antisocial Behavior Trajectories of Juvenile Sexual Perpetrators (Ronis & Borduin, 2013)

- Examined development of antisocial behavior among youths with histories of sexual aggression
- 1,725 youths who participated in seven waves of the National Youth Survey (Elliott et al., 1983, 1989)
- Prospective longitudinal study, assessed antisocial behavior from adolescence through emerging adulthood (ages 11-17 to 18-27)
- 131 of the participants reported at least one sexually aggressive act (i.e., sexual perpetrators), 605 reported at least one serious nonsexual antisocial act (i.e., nonsexual perpetrators)
- Growth mixture modeling revealed:
  - Three antisocial behavior trajectories (i.e., low, moderate, and chronic)
  - Sexual perpetrators had same trajectories as nonsexual perpetrators
  - Each trajectory had similar proportions of sexual and nonsexual perpetrators
- Findings suggest problem sexual behaviors have similar development to other serious antisocial behaviors *Psychology of Violence*, 2013, *3*, 367-380.

Antisocial Behavior Trajectories of Juvenile Sexual Perpetrators (continued)

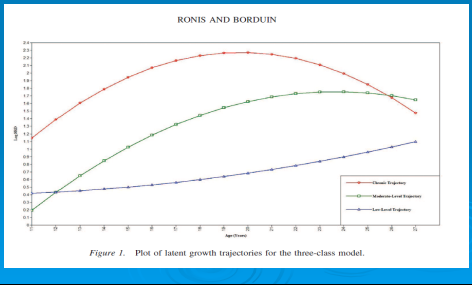


Figure 1. Plot of latent growth trajectories for the three-class model.

Implications of Research Findings for the Design of Effective Interventions

- Because the correlates and causes of juvenile sexual offending and those of other forms of juvenile offending may be more similar than dissimilar, effective treatments for delinquency (e.g., Multisystemic Therapy) hold promise in treating juvenile sexual offenders
- Prevailing treatment models (i.e., cognitive-behavioral approaches) address few of the correlates/causes of juvenile sexual offending and do little to promote youths' competencies in real world settings

International Assn for the Treatment of Sexual Offenders: Principles of Care for Juvenile Sexual Offenders (2006)

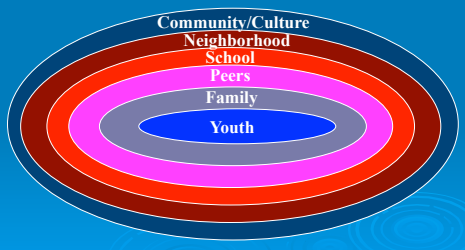
- Youth are best understood within their family and social contexts
- Assessment and treatment should be developmentally based
- Assessment and treatment should focus on the youth's strengths
- The development of sexual interest and orientation is dynamic
- Youth sex offenders are a diverse population and should not be treated with a "one size fits all" approach
- Treatment should be broad-based and comprehensive
- The youth and family should be treated with respect and dignity
- Sexual offender registries and community notification should not be applied to youths
- Effective interventions result from research guided by specialized clinical experience

Miner et al. (2006). *Sex Offender Treatment, 1,* 1-7.

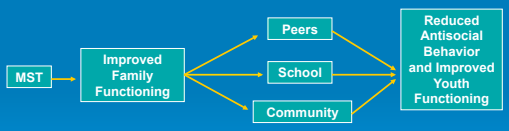
What is Multisystemic Therapy (MST)?

- An intensive family-based treatment aimed at decreasing youth problems and preventing costly out-of-home placements
- Addresses known causes of antisocial behavior comprehensively -- at youth, family, peer, school, and community levels
- Provides treatment where problems occur -- in homes, schools, and neighborhoods
- Integrates evidence-based interventions
- Views caregivers as central to achieving favorable outcomes for their youth -- resources are devoted to empowering caregivers to be more effective with their adolescents
- Uses an intensive quality assurance system to support MST program fidelity and youth outcomes

Ecological Model



MST Theory of Change



Findings from Randomized Efficacy and Effectiveness Studies of MST With Problem Sexual Behavior Youths (MST-PSB)

Study 1

Borduin, Henggeler, Blaske, and Stein (1990)

International Journal of Offender Therapy and Comparative Criminology, 34, 105-114.

Sample Characteristics

- 16 male sexual offenders and their families participated
- Most of the offenders had at least 2 arrests for sexual offenses (69% involving rape or sexual assault, 31% molestation) and all had been previously incarcerated
- Offenders averaged 4.1 arrests for sexual and other criminal offenses combined
- Mean age of youths was 14.2 years; 62.5% were White and 37.5% were African American; 69% lived with one parent

Design

Random assignment to:

- Multisystemic Therapy or
- Individual Therapy

Average length of treatment:

- Multisystemic Therapy = 37 hours
- Individual Therapy = 45 hours

Results of 3-Year Follow-Up

	Treatment	
	Multisystemic Therapy	Individual Therapy
Total Sexual Offenses	1 (12.5%)	13 (55%)
Total Other Offenses	5 (25%)	18 (50%)
Youths Incarcerated	0 of 8 (0%)	3 of 8 (37.5%)

Study 2

Borduin, Schaeffer, and Heiblum (2009)

Journal of Consulting and Clinical Psychology, 77, 26-37.

Sample Characteristics

- 48 sexual offenders and their families participated
  - 24 had one or more arrests for sexual offenses against peer or adult victims (i.e., sexual assault, rape)
  - 24 had one or more arrests for sexual offenses against younger (by 3 or more years) child victims (i.e., molestation)
- Youths averaged 4.3 arrests (all offenses)
- Mean age of youths was 14.0 years; 66.7% were White and 33.3% were African American; 70.8% lived with one parent

Method

Design:

- Pretest--posttest control group design
- Eligible youths were randomly assigned to MST-PSB or usual services (sex-offender-specific, cognitive-behavioral group and individual therapy)
- Average length of MST-PSB = 30.8 weeks
- Follow-up into early adulthood (*M* age = 23.4 years)

Multiagent, multimethod battery used to assess:

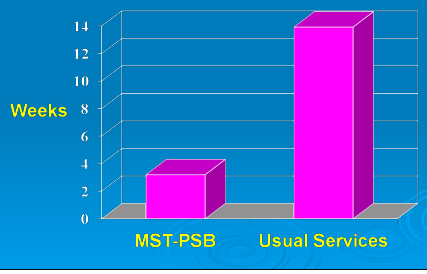
- Instrumental outcomes (youth, family, peer, school)
- Ultimate outcomes (criminal activity, incarceration)

Instrumental Outcomes at Posttreatment

MST-PSB was significantly more effective at:

- Decreasing youth behavior problems
- Decreasing youth criminal offending (self-reported)
- Decreasing parent and youth symptoms
- Increasing cohesion and adaptability in family relations
- Decreasing youth association with deviant peers
- Increasing youth emotional bonding and social maturity in relations with prosocial peers
- Decreasing youth aggression in relations with peers
- Improving youth grades in school

Time In Out-of-Home Placements One Year after Referral



Short-Term Costs: Out-of-Home Placements One Year After Referral

- Based on the Missouri Division of Youth Services (DYS) Secure-Care Program
- Program cost per day is $144.19

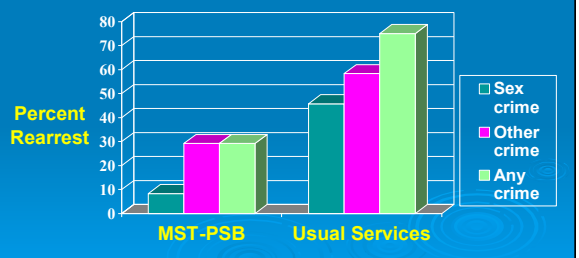
	Placement Cost (Per Youth)
-MST-PSB	$ 3,244.28
-Usual Services	$ 14,058.53

Arrest and Incarceration Outcomes at 8.9-Year Follow-Up

MST-PSB was significantly more effective at:

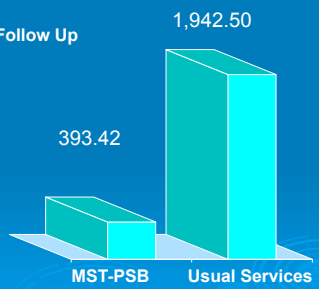
- Preventing sexual offending (recidivism was 8.3% for MST-PSB vs. 45.8% for usual services)
- Preventing other criminal offending (29.2% vs. 58.3%)
- Decreasing days incarcerated during adulthood (by 80%)

Recidivism Rates at 8.9-Year Follow-Up



Days Incarcerated

- 8.9-Year Follow Up



Does Clinically Effective = Cost Effective?

(Borduin & Dopp, 2015)

- Study examined cost-benefits to taxpayers and crime victims at 8.9-year follow-up of juvenile sexual offenders treated in Borduin et al. (2009) clinical trial
- Based on the Washington State Institute for Public Policy (Aos et al., 2001; Lee et al., 2012) Cost-Benefit Model
- This model was developed to identify ways to lower crime and lower total costs to taxpayers and crime victims
- Our estimates reflect Missouri costs to taxpayers and average national costs to crime victims

Journal of Family Psychology, 29, 687-696.

Estimating the Cost of One Criminal Offense

Taxpayer Costs:

- Police and sheriffs' offices
- Superior courts and county prosecutors
- Local adult jails and community supervision
- Local juvenile detention and supervision
- State juvenile rehabilitation administration
- State Department of Corrections

Crime Victim Costs:

- Monetary
- Quality of Life

Estimating the Cost of Treatment Programs

- Personnel
  - Therapists' salaries
  - Supervisor's salary
  - Support staff salaries
- Operating expenses
  - Rent
  - Utilities
  - Phone
  - Supplies
  - Therapist travel to homes, schools, etc.
- Converted to base year 2013 dollars

Average Expenses Per Offender at 8.9-Year Follow-Up

	MST-PSB	Usual Services
Taxpayer Expenses	$21,453	$125,002
Crime Victim Expenses	$68,636	$315,725
Total Expenses	$90,089	$440,727

MST-PSB Benefit-to-Cost Ratio at 8.9-Year Follow-Up

- The estimated benefit-to-cost ratio for MST-PSB ranges from:

$14.41 (Taxpayer Benefits Only) to **$48.81** (Taxpayer & Crime Victim Benefits)

That is, **$1.00** spent on MST-PSB today can be expected to return **$14.41** to **$48.81** to taxpayers and crime victims in the years ahead

22.0-Year Follow-Up

(Borduin, Quetsch, Johnides, & Dopp, 2016)

- We were able to locate 100% of the original participants (N = 48) who were randomly assigned to MST-PSB or usual services in the Borduin et al. (2009) clinical trial
- Average age at follow-up: 36.0 years old (SD = 1.9)
- Outcomes examined: criminal recidivism (felonies and misdemeanors), days incarcerated, and civil suits (family and financial)

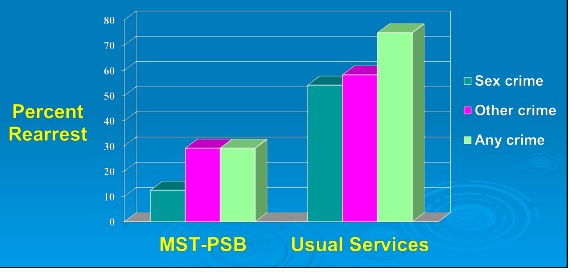
Manuscript submitted for publication.

Arrest and Incarceration Outcomes at 22.0-Year Follow-Up

MST-PSB was significantly more effective at:

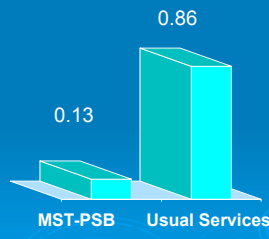
- Preventing sexual offending (recidivism was 12.5% for MST-PSB vs. 54.2% for usual services)
- Preventing other criminal offending (29.2% vs. 58.3%)
- Decreasing years incarcerated during adulthood (by 46%)

Recidivism Rates at 22.0-Year Follow-Up



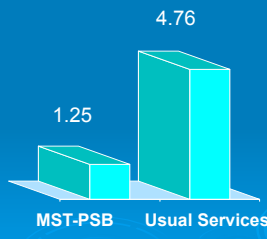
Arrests for Sexual Crimes

- 22.0-Year Follow Up



Arrests for Any Crimes

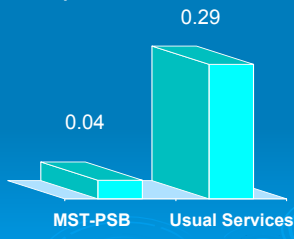
- 22.0-Year Follow Up



Civil Suits Reflecting Family Instability

(divorce, domestic abuse, paternity)

- 22.0-Year Follow Up



Odds of Arrest for Usual Services Participants Relative to MST-PSB Participants

Type of arrest	Odds Ratio
Any arrest	6.33**
Any sexual arrest	8.27**
Any nonsexual arrest	2.78*

* $p < .05$ ** $p < .01$

Study 3: MST-PSB Effectiveness Study with Juvenile Sex Offenders (Letourneau, Henggeler, Borduin et al., 2009)

- Examined effectiveness of MST-PSB in a usual practice setting and with a larger sample than in Study 2
- Chicago-based study with 127 juvenile sex offenders
- NIMH Funded
- Random assignment to MST-PSB or Usual Services

MST-PSB Effectiveness Study (continued)

- Usual Services involved sex-offender-specific outpatient group treatment provided by the Probation Department. Youth returning from detention and from residential treatment were also eligible.
- MST-PSB involved standard MST with additional training on adaptations specific to juvenile sexual offenders and their families.

Results of 1-Year Follow-Up

- Outcomes: Relative to Usual Services participants, MST-PSB participants evidenced:
  - Reduced delinquency
  - Reduced sexually inappropriate behavior
  - Reduced deviant sexual interests
  - Reduced alcohol and substance use
  - Reduced out-of-home placements
- Mechanisms: MST-PSB effects on youth antisocial behavior and deviant sexual interests/risk behaviors were mediated by caregiver follow-through on discipline practices as well as caregiver disapproval of and concern about the youth's deviant friends

Outcomes article (2009): *Journal of Family Psychology*
Mechanisms article (2009): *Journal of Consulting and Clinical Psychology*

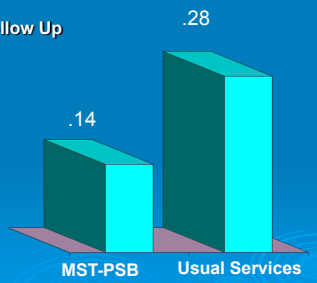
Results of 2-Year Follow-Up (2013)

- Outcomes: Relative to Usual Services participants, MST-PSB participants evidenced:
  - Reduced delinquency
  - Reduced sexually inappropriate behavior
  - Reduced deviant sexual interests
  - Reduced out-of-home placements

Letourneau et al. (2013): *Journal of Family Psychology, 27,* 978-985.

Out-of-Home Placements

- **2-Year Follow Up**



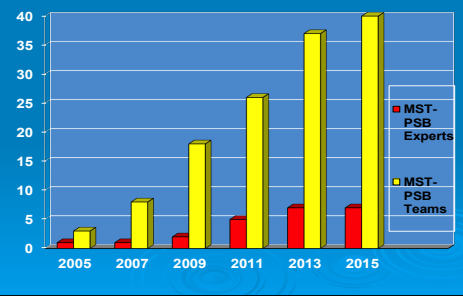
Some Likely Reasons for Positive Outcomes Across Three Studies

- MST-PSB targets known correlates of sexual offending in youths: individual factors, family relations, peer relations, school performance, community factors
- MST-PSB is family driven and occurs in the youth's natural environment
- MST-PSB providers are accountable for outcomes
- MST-PSB is manualized with substantial quality-assurance procedures

Transportability Pilots: First Steps in Dissemination

- To transport MST-PSB to community-based providers, we began pilot sites across the United States in 2006 and Europe in 2009 under close oversight by the adaptation developer
- We also evaluated whether we could train 2nd generation MST-PSB experts in the adaptation

Dissemination of MST-PSB



Community-Based Dissemination Efforts: MST-PSB

* Arizona, 2 teams
* Colorado, 3 teams
* Connecticut, 4 teams
* Maine, 8 teams
* Massachusetts, 1 team
* Michigan, 4 teams
* New Mexico, 4 teams
* North Carolina, 2 teams
* Ohio, 4 teams
* Pennsylvania, 2 teams
* Washington DC, 1 team
* England, 3 teams
* Netherlands, 2 teams

Dissemination of MST-PSB

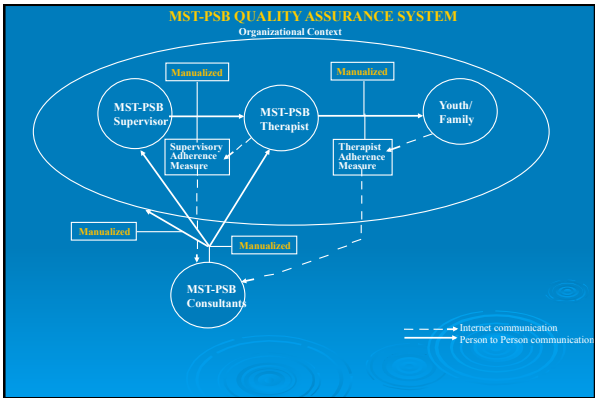
MST Associates: Organization focused on helping public and private agencies to achieve positive outcomes through identifying and removing barriers to effective implementation of the MST treatment model with problem sexual behavior youths (MST-PSB)

- Program structure, specification, and goals
- Site assessment and ongoing systems consultation
- Outcome measurement systems including tracking of treatment fidelity and adherence

Dissemination of MST-PSB

Quality Assurance: Achieve positive clinical outcomes through the implementation of training and supervision protocols used in the clinical trials of MST-PSB

- Specified MST and MST-PSB treatment protocols
- Specified supervisory and consultation protocols (weekly)
- 5-day orientation training in MST model plus 2-day MST-PSB orientation training
- Quarterly booster training



MST-PSB Ultimate Outcomes for Community-Based Providers Over 3-Year Period (2013 through 2015)

- Percent of PSB youths living at home: 90%
- Percent of PSB youths in school/working: 90%
- Percent of PSB youths with no new arrests: 93%

MST-PSB Recognition

- Blueprints for Healthy Youth Development: MST-PSB is one of 14 Blueprints Model Programs and is the only Model Program serving PSB youths
- SAMHSA - Substance Abuse and Mental Health Services Administration's National Registry of Evidence-Based Programs and Practices
- OJJDP - Office of Juvenile Justice and Delinquency Prevention Model Program
- California Evidence-Based Clearinghouse for Child Welfare
- Early Intervention Guidebook (United Kingdom)

MST-PSB Target Population

- Youths 10-17 years old who have sexually offended against other persons
- May be adjudicated or non-adjudicated
- May present with other delinquent behaviors
- No exclusions for severity of problem sexual behaviors, but sites may narrow population definition via Goals and Guidelines

MST-PSB Target Population (continued)

- Same exclusionary criteria as Standard MST
  - Except problem sexual behavior is a primary referral behavior, and
  - At least one custodial caregiver must acknowledge the problem sexual behavior and be willing to develop safety plans accordingly (any minimization or victim blaming would be a target for treatment)

Operational Comparison to Standard MST Program Features

	MST	MST-PSB
Treatment Length	3-5 months	5-7 months*
Caseloads	4-6 clients	3-5 clients*
Stage of Development	Proactive Dissemination	Mature Transport 2nd Generation

*Results in higher frequency and intensity of service

Operational Comparison to Standard MST Program Features (continued)

- Site Readiness Assessment often is more involved
  - Courts/jurisdictions frequently have unique requirements
    - Psychosexual risk assessments
    - Sex offender registration
    - Augmented community supervision
  - Additional Stakeholders
    - Psychosexual Evaluators
    - Specialized Probation Officers
    - Sexual Trauma Therapists

Clinical Adaptations of MST for Treating Youths With Problem Sexual Behaviors

- Requires knowledge base in adolescent & family sexuality
- Heavier utilization of structural & strategic family therapy than in standard MST
- Addresses sexual trauma impact within family
- Emphasizes development of social skills & friendships

Clinical Adaptations (continued)

- Addressing denial, minimization, and victim blaming (youth, parents, sometimes even victim)
- Thorough evaluation of any grooming process and/or cognitive variables that may contribute to offending
- Assessing the youth's own victimization
  - Trauma sensitive interventions
  - Sequencing of interventions

Clinical Adaptations (continued)

- Comprehensive Safety Planning
  - Caregivers hold ultimate responsibility for monitoring and managing the youth's behavior
  - Each plan is uniquely designed to fit the individual characteristics of the youth, his/her offense, family characteristics, and physical environment
  - Should include a built-in review process to adjust components accordingly (levels of monitoring, changes in ecology, discovery of new information), and ultimately be geared toward normative development
  - Should extend across the youth's ecology (home, neighborhood, school, larger community)

Clinical Adaptations (continued)

- Comprehensive Clarification Work Using a Family Systems Approach
  - Typically initiated in sessions involving caregivers and youth
  - Includes a sequencing process in which the youth provides a detailed account of his/her offending behavior, including both internal and external events
  - Strong emphasis placed on creating a family environment that will provide ultimate support for the victim
  - Sessions involving the victim occur only after the PSB youth and caregivers have completed clarification work. Such sessions ideally include the victim's therapist as an advocate and additional source of support for the victim

Lessons Learned and Some Policy Directions

1. Effective treatment for this population differs significantly (i.e., home- and family-based; 24/7 availability of therapists) from the status quo
2. Funding for the provision of evidence-based treatments must be competitive (because treatments of no or unknown effectiveness can be more profitable to providers)
3. Significant funding must be provided for training in evidence-based treatments and for ongoing quality assurance (funding and training without continuous quality improvement do not guarantee clinical outcomes)

Lessons and Policy Directions -- continued

4. Performance contracts can be used to promote accountability, outcomes, and use of evidence-based practices (clinicians and programs need to be rewarded for their success in achieving desired clinical outcomes)

5. The widespread transport of evidence-based treatments for this population will likely require collaboration among multiple levels of government and practice

MST With Problem Sexual Behavior Youths

(www.mstpsb.com)

Questions or More Information

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