MST for Child Abuse and Neglect (MST-CAN)

An Update

By: Cynthia Cupit Swenson, Ph.D.

The MST-CAN model, specified in a manual (Swenson, Penman, Henggeler, & Rowland, 2009) follows Standard MST (Henggeler et al., 2009) on clinical intervention and service delivery characteristics. MST-CAN clinicians work on a clinical team of 3 therapists and a full-time supervisor. Each therapist carries a caseload of roughly 4 families. Services are provided in the family's home or other places convenient to them and at times convenient to the family. Services are intensive, with intervention sessions being conducted from three times per week to daily. A weekly structured group supervision process is standard. Interventions are developed along an analytical model that guides the therapist to assess factors that are driving clinical problems and then interventions are applied to the driving factors or "fit factors". All interventions are those that are evidence-based or evidence-informed.

Given that the physical abuse population differs from the population for which MST was designed (i.e., antisocial youth), several adaptations have been made to the Standard MST model. First, a psychiatrist is a standard part of the team to provide assessment and treatment for parents and youth. Second, a close working relationship is fostered with CPS, the main professional system involved. Third, treatment is provided to multiple children in the family and one or both parents, with a greater emphasis on parent treatment than standard MST. Finally, empirically-based treatments have been selected as standard practice when problems that call for these interventions are present:

Child safety risk. With maltreating families, the child's safety is paramount. The first strategy applied in treatment of all families is developing a family safety plan, which is written out as a safety contract and signed by all involved. The family safety plan determines: (a) actions that the caregiver or child will take if risk for physical discipline increases; and, (b) individuals within their ecology who can provide assistance.

Functional analysis of abuse incident. The functional analysis is used to evaluate the circumstances leading up to the abuse incident (sometimes as distally as the day before), what occurred at the time of the abuse, and what consequences followed the incident. A functional analysis is completed throughout the treatment process when family conflict occurs (Kolko & Swenson, 2002).

Treatment of caregiver posttraumatic stress disorder (PTSD) symptomatology. Caregiver PTSD symptoms appear to have a strong impact on one's abilities to effectively parent. Empirically supported cognitive behavioral strategies (Foa & Rothbaum, 1998) are used for managing PTSD symptoms.

Treatment for anger management. Many caregivers and children who are affected by physical abuse have difficulties managing anger. Using a cognitive-behavioral approach to treatment (Feindler, Ecton, Kingsley, & Dubey, 1986; Novaco, 1994), therapists assess for anger management deficits in both caregivers and youth and provide cognitive behavioral intervention when necessary.

Treatment for caregiver substance abuse. Contingency management approaches that include elements of Reinforcement-Based Therapy (RBT) and a Community Reinforcement Approach (CRA) are the evidence-based treatments for addressing parental substance abuse. These approaches combines cognitive-behavioral techniques

and an incentive program (Budney & Higgins, 1998; Jones, Wong, Tuten, & Stitzer, 2005).

Family communication training. This training (Robin, Bedway, & Gilroy, 1994) focuses on intervening at the cognitive and behavioral level of caregiver-adolescent interactions during problematic scenarios. The protocol helps the family learn skills to sense when a situation may turn conflictual and to respond in a proactive, solution focused problem-solving manner to avoid the use of aggression.

Clarification of the abuse. Caregivers who physically abuse their children and blame the child for the abuse are at increased risk for reabuse. Conducting a clarification is a method for helping the caregiver address cognitions about the incident, accept responsibility for the abuse and apologize to the child and family (Lipovsky, Swenson, Ralston, & Saunders, 1998). The clarification is conducted through writing a letter. This exercise spans several sessions and several drafts and gives the therapist an opportunity to understand and correct the caregiver's attributions of responsibility. The process culminates with a family meeting where the responsibility is clarified (Kolko & Swenson, 2002; Lipovsky, Swenson, Ralston, & Saunders, 1998).

Research Outcomes

MST for Child Abuse and Neglect has been evaluated through 2 randomized controlled trials. First, standard MST (Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998) was applied to an abuse and neglect population in a small randomized controlled trial (Brunk, Henggeler and Whelan, 1987). Standard MST and parent training (the comparison group) were effective in reducing parents' psychiatric symptoms and stress and in improving family problems. However parents

who received MST controlled their children's behavior more effectively and the children exhibited less passive noncompliance than those whose parents received office-based parent training. Parent training was superior to MST in decreasing parents' reports of problems with their social system. Though the study was the first randomized controlled trial of MST for abuse and neglect, placement rates for children and reabuse rates were not evaluated. In addition, no follow-up post –treatment was conducted. Furthermore, the study was an efficacy trial and effectiveness in a real world setting remained unknown.

The second trial was the first randomized controlled effectiveness trial of MST-CAN and the overall aim was to evaluate the effectiveness of MST-CAN relative to Enhanced Outpatient Treatment (EOT) with families who have serious and multiple clinical needs and who come under the guidance of CPS due to physical abuse (Swenson et al., 2009). The study sought to close the gap left in prior treatment studies for physically abused children in the following ways: a) the age range of interest was adolescents ages 10-to-17 years; b) the treatment involved children and their entire family; c) the study measured placement, days in placement, placement changes, and reabuse; and, d) the study was conducted in a real world setting of an agency rather than a university. Of notable importance, this study has the longest post-randomization assessment period in history measuring mental health functioning and placement among treated physically abused children and their families. Finally, the present study advanced MST forward as it featured adaptations to the model that focused on empirically validated treatments that targeted common problems found among families where physical abuse is present and risk factors that might potentiate the likelihood of reabuse.

Participants were 86 youth and their caregivers who were under the guidance of CPS due to a report of physical abuse. Among participating families, 82% had prior cases of abuse or neglect with child protection; 14% had more than one prior report. Twenty six percent of children were in out-of-home placements at the time of referral and 28% were in state protective custody. The mean age of the youths was 13.88 (range = 10.02-17.44 years, SD = 2.07) and the mean age of caregivers was 41.79 years (range = 24-75 years, SD = 10.49 years); 56% of the youth were female; 22% (n = 19) of the youth were Caucasian and 78% (n = 67) were ethnic minorities (primarily African American; 69% of total population). Across both groups, the reported annual family income showed a large range ($3000 to $100,000) with a low mean income ($24,936). The median ($18,456) and mode ($9,000) of the distribution, however, suggest the majority of participants were living in disadvantaged conditions. All but one family randomized to the MST condition completed treatment (98%), whereas 83% of caregivers randomized to EOT completed treatment (83%), exceptionally high by outpatient clinic standards.

Across 16 months, youth in the MST-CAN condition showed significantly greater reductions in internalizing problems such as anxiety, dissociation, and PTSD symptoms. There were significantly fewer youth in out-of-home placements and significantly fewer changes in placement. Caregivers in the MST-CAN condition evidenced significantly greater reductions in psychological distress, neglectful parenting, minor and severe assault of the child, psychological aggression, and significantly less decrease in non-violent discipline, and significantly greater increases in natural social supports. MST-CAN parents endorsed greater treatment satisfaction as well.

Transporting MST-CAN

Given the success of the efficacy and effectiveness trials, the state of Connecticut requested that MST-CAN be implemented through an area child protection office but with all substance-abusing families. To meet the needs of parents who were experiencing serious substance misuse with alcohol, heroin, marijuana, and cocaine primarily, The Family Services Research Center joined with investigators at Johns Hopkins University to integrate Reinforcement Based Therapy (RBT; Jones, Wong, Tuten, & Stitzer, 2005) into MST-CAN. This pilot, called Building Stronger Families (BSF) has been running in Connecticut for 5 years and has been highly successful (Swenson, Schaeffer et al, in press). The program has enjoyed an 87% program recruitment rate and a 93% treatment retention rate. Although this rate is consistent with that in MST clinical trials, it far surpasses the treatment completion rates for children who have experienced intra-familial violence (64%; Koverola, Murtaugh, Connors, Reeves, & Papas, 2007) and adults in substance abuse treatment (55% to 65%; Dutra et al., 2008). Thus, the evidence clearly supports the capacity of BSF to recruit and retain these multi-problem families in treatment. Preliminary outcomes indicate that 86% of families have discharged successfully from BSF.

A transportability pilot was recently completed in Denver, Colorado. The purpose of this pilot was to determine feasibility of MST-CAN outside the community where the clinical trial was run. The pilot has been highly successful, while working out the challenges of a different child protection system. In February, the Denver team moved from pilot status to program status and the outcomes of families in the program were consisted with those on the clinical trial on similar measures. At this juncture there have

been no repeat occurrences of child physical abuse or neglect in any families who completed MST-CAN and the model has performed particularly well with substance misusing parents.

International Transportability Pilots

The first international transportability pilot was conducted for three years in Brisbane, Queensland, Australia and the grant ended in 2008. Many challenges were faced in transporting an American treatment system to Eastern Australia and the primary issue was finding, hiring, and retaining staff that was not accustomed to home-based models. Nonetheless, families with very serious clinical needs, some with serious substance abuse issues were treated with a full dose of MST-CAN and excellent relations were formed with the Child Safety Office. The results of the pilot are in process.

A second international transportability pilot has begun in Cambridgeshire, England. At least 1 year of start-up work has been done to work out cultural and systems differences such as the way drug screens are collected (oral vs. urine) and psychiatrist time. These issues have been successfully resolved and the hiring process for the team has been completed.

Summary

In summary, standard MST has been evaluated in an efficacy trial and found to attain greater outcomes for abusive and neglectful families than behavioral parent training. Then model adaptations were made and the adapted model called MST-CAN was evaluated and found successful in a randomized effectiveness trial. Since the effectiveness trial was completed, there have been 5 years of piloting 3 different teams in the United States and one team in Eastern Australia. A new international pilot has begun

in England. The model has been shown to be successful with families who have physically abused and/or neglected their child/children and in cases of co-occurring maltreatment and parental substance abuse. The model has successfully been transported to other communities away from the site of the clinical trial. Full-scale dissemination is currently in process in the United States.

References

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by design and nature.* Cambridge, MA: Harvard University Press.

Brunk, M., Henggeler, S. W., & Whelan, J. P. (1987). Comparison of Multisystemic Therapy and parent training in the brief treatment of child abuse and neglect. Journal of *Consulting and Clinical Psychology, 55,* 171-178.

Budney, A. J., & Higgins, S. T. (1998). A *community reinforcement plus vouchers approach: Treating cocaine addiction.* U.S. Department of Health and Human Services, National Institutes of Health, National Institute on Drug Abuse. Rockville, Maryland.

Dutra, L., Stathopoulou, G., Basden, S. L., Leyro, T. M., Powers, M. B., & Otto, M. W. (2008). A meta-analytic review of psychosocial interventions for substance use disorders. *American Journal of Psychiatry, 165,* 179-187.

Elliott, D. S. (1998). *Blueprints for violence prevention* (Series Ed.). University of Colorado, Center for the Study and Prevention of Violence. Boulder, CO: Blueprints Publications.

Feindler, E. L., Ecton, R. B., Kingsley, D., & Dubey, D. R. (1986). Group anger-control training for institutionalized psychiatric male adolescents. *Behavior Therapy, 17,* 109–123.

Foa, E.B., and Rothbaum, B.O. (1998). *Treating the trauma of rape: Cognitive behavioral therapy for PTSD.* New York: Guilford Press.

Henggeler, S. W., Schoenwald, S. K., Borduin, C. M., Rowland, M. D., & Cunningham, P. B. (2009). *Multisystemic therapy for antisocial behavior in children and*

adolescents. New York: Guilford Press.

Huey, S. J., Jr., Henggeler, S. W., Brondino, M. J., & Pickrel, S. G. (2000). Mechanisms of change in multisystemic therapy: Reducing delinquent behavior through therapist adherence and improved family and peer functioning. *Journal of Consulting and Clinical Psychology, 68,* 451-467.

Jones, H. E., Wong, C. J., Tuten, M., & Stitzer, M. L. (2005). Reinforcement-based therapy: 12-month evaluation of an outpatient drug-free treatment for heroin abusers. *Drug and Alcohol Dependence, 79,* 119-128.

Kolko, D.J. & Swenson, C.C. (2002). Assessing and treating physically abused children and their families: A cognitive-behavioral approach. Thousand Oaks, CA: Sage Publications.

Koverola, C., Murtaugh, C. A., Connors, K. M., Reeves, G., & Papas, M. A. (2007). Children exposed to intra-familial violence: Predictors of attrition and retention in treatment. *Journal of Aggression, Maltreatment & Trauma, 14*(4), 19-42.

Lipovsky, J. A., Swenson, C. C., Ralston, M. E., & Saunders, B. E. (1998). The abuse clarification process in the treatment of intrafamilial child abuse. *Child Abuse and Neglect, 22,* 729-741.

Novaco, R. W. (1994). Clinical problems of anger and its assessment and regulation through a stress coping skills approach. In W. O'Donohue & L. Krasner (Eds.), *Handbook of psychological skills training: Clinical techniques and applications,* (pp. 320-338). Boston: Allyn and Bacon.

Robin, A.L., Bedway, M., & Gilroy, M. (1994). *Problem solving communication training.* In C.W. LeCroy (Ed.), Handbook of child and adolescent treatment

manuals (pp. 92-125). New York: Lexington Books.

Swenson, C.C., Penman, J., Henggeler, S.W., & Rowland, M.D. (2009). *Multisystemic Therapy for child abuse and neglect: Revised manual.* Unpublished treatment manual, Medical University of South Carolina.

Swenson, C. C., Schaeffer, C. M., Henggeler, S. W., Faldowski, R., Saldana, L., & Mayhew, A. (2009). *Multisystemic Therapy for Child Abuse and Neglect: A Randomized Controlled Effectiveness Trial.* Manuscript under review.

Swenson, C.C., Schaeffer, C.M., Tuerk, E., Henggeler, S.W., Tuten, M., Panzarella, P., Foley, T., Lau, C., Remmele, L., Cannata, E., & Guillorn, A. (2009). Adapting Multisystemic Therapy for co-occurring child maltreatment and parental substance abuse: The Building Stronger Families Project. *Emotional and Behavioral Disorders*, Winter, 3-8.

U.S. Public Health Service. (2001). *Youth violence: A report of the Surgeon General.* Washington, DC: Author.