Multisystemic Therapy Using Home-Based Services: A Clinically Effective and Cost Effective Strategy for Treating Serious Clinical Problems in Youth

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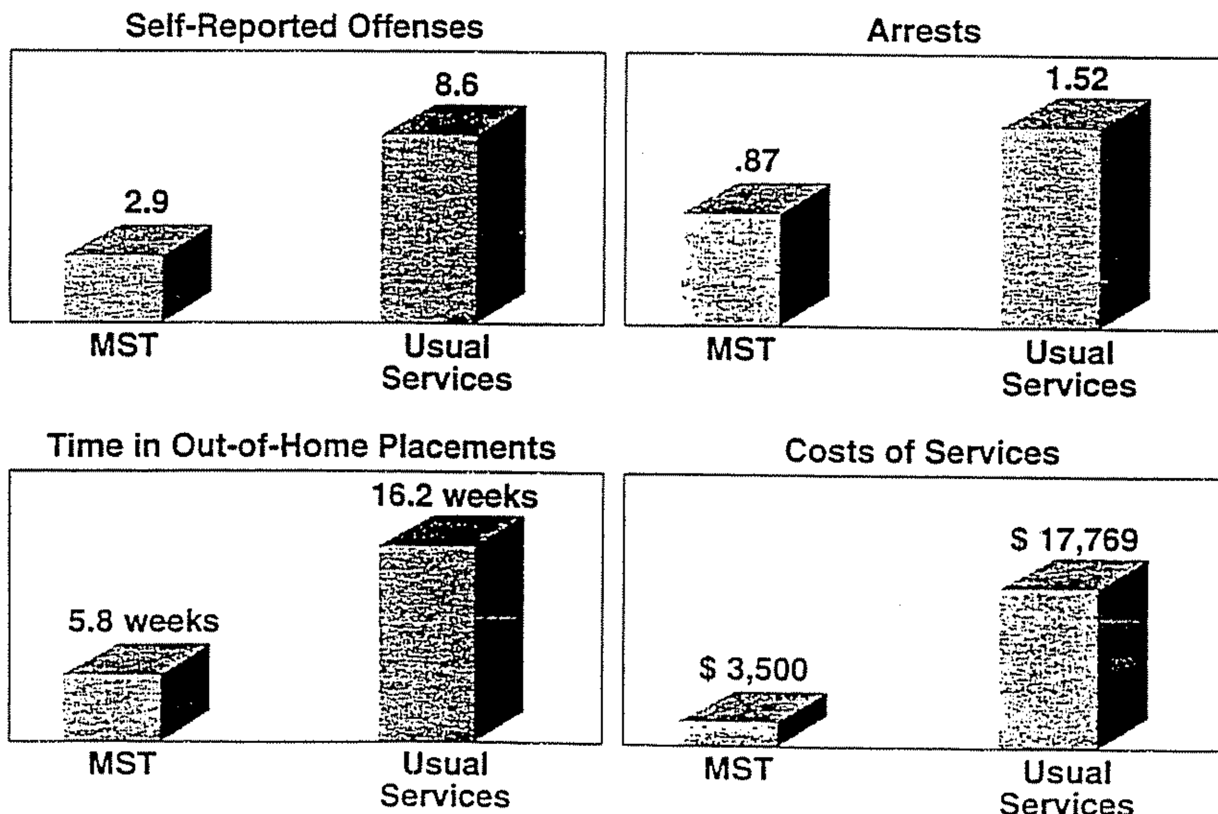
Multisystemic Therapy Using Home-Based Services: A Clinically Effective and Cost Effective Strategy for Treating Serious Antisocial Behavior in Youth

This brochure provides an overview of the multisystemic approach to treating serious antisocial behavior in adolescents and their multineed families. Historically, serious antisocial behavior in adolescents has been extremely difficult to change, with numerous reviewers concluding that "nothing works." Recently, however, a family- and home-based approach has emerged with demonstrated short-term and long-term effectiveness with families of different cultural backgrounds (i.e., African-American and Caucasian) and socioeconomic status. This "multisystemic" approach targets causative factors within offenders' family, peer, and school networks; and, importantly, its effectiveness has been supported by several controlled evaluations published in leading professional journals.

For example, a recent evaluation of multisystemic therapy (MST) using the family preservation model of service delivery was conducted in Simpsonville, South Carolina and funded by the National Institute of Mental Health (NIMH). Participants were 84 serious juvenile offenders (i.e.,

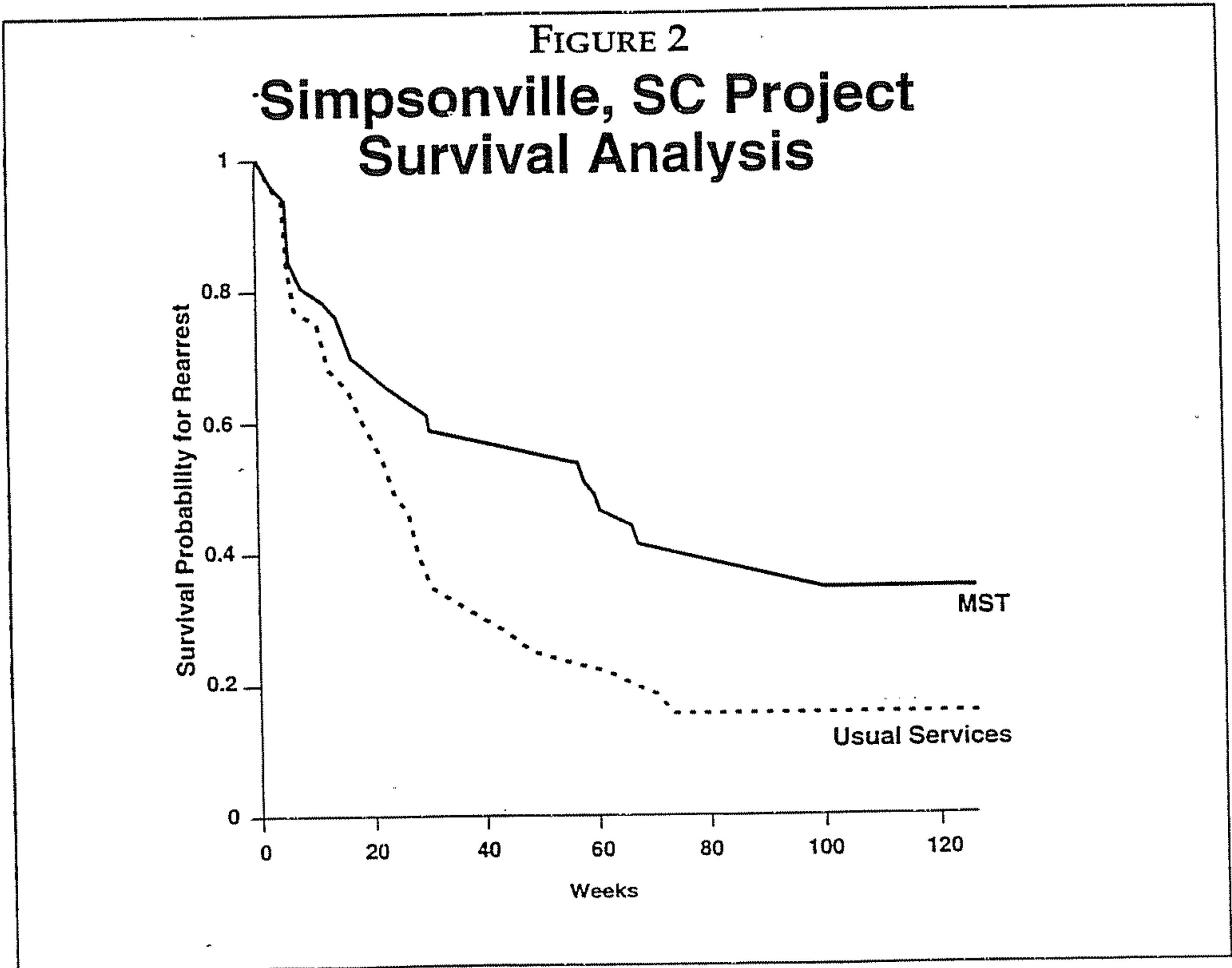
FIGURE 1, 59 WEEK FOLLOW-UP



violent offenders and chronic criminal offenders) at imminent risk of incarceration and their multineed families. In a rigorous, controlled evaluation, youths were randomly assigned to receive either MST or usual services from the Department of Youth Services (e.g., incarceration and/or referral for mental health, educational, or vocational services). Results at a 59-week follow-up are shown on **figure 1**, with numbers representing the average for each treatment condition. **Figure 2** shows positive results for MST were maintained to a 2.4 year follow-up. MST essentially doubled the percentage of youth not rearrested at the long-term follow-up.

Findings indicate not only that MST using family preservation was more effective than usual services at reducing long-term rates of criminal behavior, but also that it was considerably less expensive. Moreover, standardized evaluations conducted at pretreatment and posttreatment showed that families receiving multisystemic services, compared with offenders receiving usual services, reported increased family warmth and cohesion and decreased youth aggression with peers. In addition, youths receiving multisystemic services reported less criminal activity than their counterparts receiving usual services.

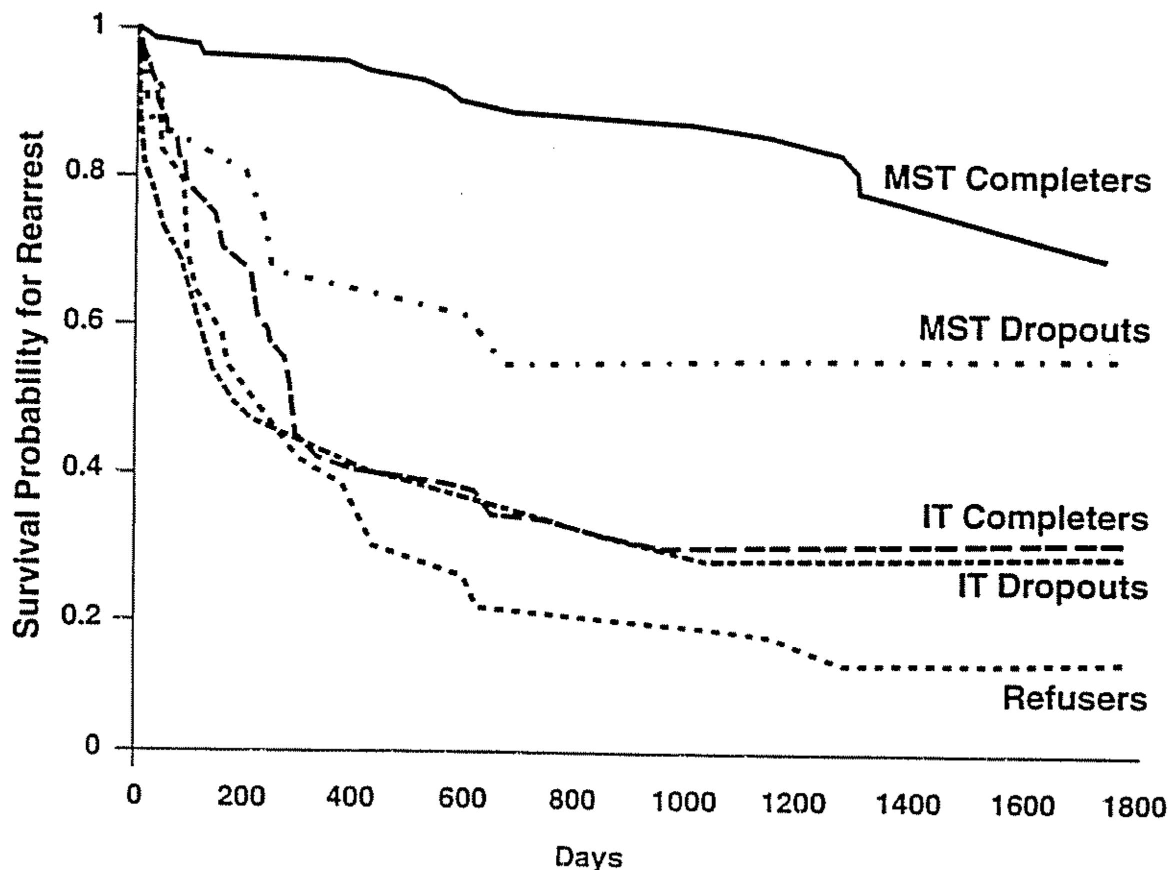
The findings of the Simpsonville project, combined with previous evaluations, strongly support the effectiveness of the multisystemic approach with types of behavior problems that traditionally are regarded as highly resistant to change. As described in the published controlled evaluations



presented later in this brochure, MST has proven effective with chronic juvenile offenders (See Figure 3, 4-year recidivism = 22% for multisystemic treatment and 72% for individual counseling) and adolescent sexual offenders in studies conducted in Missouri as well as abusive and neglectful families and inner-city delinquents in studies conducted in Memphis.

The success of this programmatic treatment research has led to major funding by NIMH (targeting violent and/or chronic juvenile offenders; and youth with serious emotional disturbance) and the National Institute on Drug Abuse (targeting substance abusing delinquents). In addition, several controlled evaluations of MST are currently under way at major universities.

FIGURE 3



CLINICAL OVERVIEW OF THE MULTISYSTEMIC APPROACH IN TREATING SERIOUS CLINICAL PROBLEMS

I. INTRODUCTION TO THE MULTISYSTEMIC TREATMENT (MST) APPROACH

A volume describes the multisystemic approach in detail (Henggeler & Borduin, 1990), and specific guidelines for implementing multisystemic treatment are presented in the Multisystemic Strategic Procedures Manual (Henggeler et al., 1994) developed by the Family Services Research Center, supported by the State of South Carolina. MST is based largely on family systems (e.g., Haley, 1976; Minuchin, 1974) and behavioral ecological (Munger 1993) conceptualizations of behavior and behavior change, although MST also includes substantive differences from more traditional family systems work. For example, the multisystemic approach views individuals as being nested within a complex of interconnected systems that encompass individual, family, and extrafamilial (peer, school) factors; and intervention may be necessary in any one or combination of these systems. MST also emphasizes the consideration of child development variables and often incorporates interventions that are not necessarily systemic (e.g., cognitive behavior therapies). Most significantly, the conceptual framework of the multisystemic approach f[illegible] closely with the findings from multidimension[illegible] causal models of delinquency and substance abuse.

II. TREATMENT APPROACH

A crucial aspect of MST is its emphasis on promoting behavior change in the youth's natural environment. Initial family sessions identify the strengths and weaknesses of the adolescent, the family, and their transactions with extrafamilial systems (e.g., peers, friends, school, parental workplace). Identified problems throughout the family are explicitly targeted for change, and the strengths of each system are used to facilitate such change. Although specific strengths and weaknesses can vary widely from family to family, several problem areas are typically identified for delinquent and substance abusing youth and their families.

A. Family. Parents and adolescents frequently display high rates of conflict and low levels of affection. Similarly, parents (or guardians) frequently disagree regarding discipline strategies; and their own personal problems often interfere with their ability to provide necessary parenting. Family interventions in MST often attempt to provide the parent(s) with the resources needed for effective parenting and for developing increased family structure and cohesion (e.g., see Henggeler & Borduin, 1990; Chapters 3 and 4). Such interventions might include introducing systematic reward and discipline systems, prompting parents to communicate effectively with each other about adolescent problems, and problem-solving day-to-day conflicts. Importantly, considerable attention is devoted to identifying and addressing barriers to effective parenting, such as potential drug abuse, high stress, and low social support.

B. Peers. A frequent goal of treatment is to decrease the youth's involvement with deviant peers and to increase his or her association with prosocial peers (e.g., through church youth groups, organized athletics). As delineated by Henggeler and Borduin (1990; Chapter 5), interventions fo[illegible] purpose are optimally conducted by t[illegible] parents, with the guidance of the c[illegible] might consist of active support and en[illegible] of associations with nonproblem peer[illegible] viding transportation and increased priv[illegible] substantive discouragement of associati[illegible] deviant peers (e.g., applying significant sa[illegible]

C. School. Under the guidance of the counselor, the parents develop strategies to monitor and promote the youth's school performance/vocational functioning (see Henggeler & Borduin, 1990; Chapter 6). Typically included in this domain are strategies for opening and maintaining positive communication lines with teachers and for restructuring afterschool hours to promote academic efforts.

D. Individual. Although the emphasis of treatment is on systemic change, there are also situations in which individual interventions can facilitate behavioral change in the adolescent or parents. Interventions in these situations generally focus on modifying the individual's social perspective-taking skills, belief system, motivational system, and encouraging the youth to deal assertively with negative peer pressures (see Henggeler & Borduin, 1990; Chapter 2).

E. Empowerment. An overriding goal of MST is to empower parents with the skills and resources needed to independently address the inevitable difficulties that arise in raising teenagers and to empower youths to cope with family, peer, school, and neighborhood problems. Although the counselor must be supportive and understanding of the family, the counselor's role as motivator and teacher is stressed. In cases where a family member does not have an adequate social support system, the counselor focuses on helping the family member to develop an enduring social support network in the natural environment (e.g., by reconciling differences with extended family, by participating in church activities). Thus, MST always stresses the importance of promoting "real life" behavior change in a manner that promotes long-term gains.

F. Coordination with Child-Serving Agencies: MST treatment staff meet with staff from child serving agencies (e.g., child welfare, mental health, juvenile justice, education, substance abuse) to communicate regarding a variety of issues. Families are encouraged to sign release of information agreements that allow such communication between treatment staff and other agencies. MST therapists coordinate (and sometimes help change) agency plans for a particular child and family with MST treatment goals and intervention strategies. To this end, staff work to understand the mandates, philosophies, and decisions that characterize various agencies, and to coordinate agency and MST activities in ways that will facilitate favorable long-term outcomes for the youth and his/her family. The establishment and maintenance of close working relations with individual staff members and with the administration of child serving agencies has been a hallmark of our treatment projects.

III. MODEL OF SERVICE DELIVERY

Family Preservation is a model of service delivery based on the philosophy that the most effective and ethical route to helping children and youth is through helping their families. Thus, families are seen as valuable resources, even when they are characterized by serious and multiple needs. Family preservation services are directed toward the variety of psychological, social, educational and material needs that face families in which a child is in imminent danger of out-of-home placement. While the particular treatment modalities used in family preservation programs vary, critical service delivery characteristics are shared by all of them. ese characteristics, summarized in Table 1, dis-guish treatment programs delivered in a family preservation model from traditional mental health and juvenile justice services.

A. Length of service. The average duration of treatment is approximately 60 hours of contact over 4 months, with the final 2-3 weeks involving less intensive contact to monitor the maintenance of therapeutic gains. Service duration ranges from 3 to 5 months, with longer duration provided to more difficult problems that are responding positively to treatment.

B. Caseload size. Caseload size has averaged from 4-6 families per counselor across several family preservation projects using MST.

C. Hours of service. Treatment ti efficiently. Sessions rarely last more tha utes and may last for as few as 15 minutes. ing on the stage of treatment and extant sessions may be held every day or as infreq

as once a week. Thus, treatment interventions in MST have the flexibility to be relatively intense, in terms of both time in treatment (e.g., multiple sessions per week) and task orientation of treatment sessions (e.g., explicit goal setting and extensive homework assignments). Moreover, following the family preservation model of service delivery, staff are available 24 hours per day, 7 days per week. However, in consideration of treatment efforts to empower families to solve their own problems and the attenuation of counselor burnout (and turnover), use of services at unusual times (e.g., 10 PM to 8 AM) is discouraged except in case of emergency. Nevertheless, counselors usually see families at the latter's convenience, resulting in many evening and weekend appointments.

D. Location of Services. MST is typically delivered in home and community settings to increase cooperation and enhance generalization (Henggeler & Borduin, in press). Sessions are u ally held in the family's home at a convenient ti although meetings in community locations (e school, recreation center, project office) are of needed. Moreover, the specific family memb who attend will vary with the nature of the parti lar problem that is being addressed (e.g., youths usually not included in sessions that address parental discipline, so as not to undermine parent's authority)

E. Staffing. Treatment teams typically con of three counselors. Counselors usually have m ters degrees in some area of mental health coun ing (e.g., social work, psychology, counseling), though highly qualified bachelors-level counsel are sometimes employed. Each treatment te provides services for about 50 families per yea

TABLE 1

DIFFERENCES BETWEEN TRADITIONAL MENTAL HEALTH SERVICES AND FAMILY PRESERVATION USING MULTISYSTEMIC THERAPY

Service Element	Traditional Services	Family Preservation
Treatment Sites	In the clinic (outpatient) In hospital, RTC* (inpatient)	In the field (home, school, neighborhood, community)
Treatment Modality	Individual Psychotherapy Group therapy Medication	Total Care
Provider	Individual clinician (outpatient) Multidisciplinary teams (inpatient)	Generalist team
Clinical Staff: Patients	1:60-100 (outpatient) Varies in inpatient settings	1:4-6
Staff Availability	Working Office hours (outpatient) Highly variable (inpatient)	Team available 24 hrs / 7 days / week
Frequency of Contact	Weekly or Biweekly (outpatient) Highly variable (inpatient)	Daily in most cases
Family Contact	Occasional	Daily in most cases
Treatment Outcome	Responsibility of patient and family	Responsibility of staff
Case Management	Broker of services	Services provider
Expectations of Outcome	Gradual change	Immediate, maximur. and family to attain gc

*RTC = *Residential Treatn*

IV. Training

Training in the MST model of family preservation is provided by the Family Services Research Center (FSRC) in three ways. First, five days of intensive training are provided for all staff who will engage in treatment and/or clinical supervision of MST cases. Second, one and one-half day "booster" sessions occur on a quarterly basis. Third, treatment teams and their supervisors receive weekly telephone consultation from trained Family Services Research Center faculty.

The objectives of the initial 5-day training program are: (1) to familiarize participants with the scope, correlates, and causes of the serious behavior problems addressed with MST; (2) to describe the theoretical and empirical underpinnings of MST; (3) to describe the family, peer, school, and individual intervention strategies used in MST; (4) to train participants to conceptualize cases and interventions in the terms of the principles of MST, and (5) to provide participants with practice in deliver- multisystemic interventions. The multi-media approach to training (i.e., videotaped sessions, slides, and overheads are used) includes didactic and experiential components. Participants are required to practice the MST approach through critical analysis of cases, problem-solving exercises and roleplays. It is expected that participants will have read the MST treatment manual prior to the initial training period.

Quarterly booster sessions are designed to provide training in special topics (e.g., marital therapy, treatment of parental depression in the context of MST, early childhood intervention) and to address issues that may arise for individuals and agencies using the approach (e.g., ensuring treatment integrity, individual and agency accountability for outcome, inter-agency collaboration, etc.). The booster sessions are also designed to allow for discussion of particularly difficult cases.

Weekly telephone consultation is provided via one-hour conference calls in which the treatment team and supervisor consult with a FSRC faculty member regarding case conceptualization, goals, i- vention strategies, and progress. The weekly consultation is designed to assist the team and supervisor in clearly articulating treatment priorities and obstacles to success, and to develop strategies aimed at successfully navigating those obstacles. In addition to the consultation, it is expected that on-site supervision will be provided by staff who have obtained an advanced degree in a clinical discipline (i.e., psychology, counseling, social work, psychiatry) and have had additional clinical experience with family-based services prior to the completion of MST training.

The Training Division provides training to both in-state and out-of-state providers. In South Carolina, the FSRC is under contract with the Department of Health and Human Services (DHHS) to provide MST training and consultation services to public and private providers of Medicaid-reimbursed home-based treatment services, clinical day programming, and therapeutic child care. Additionally, FSRC is responsible for conducting certification reviews of these providers to ensure compliance with Medicaid standards.

FSRC also provides training in MST using home-based services in about 10 states. Several training sites involve randomized trails, and state agency pilot projects. New training sites are added after in-depth discussions with the site and review by the FSRC faculty. The faculty considers whether MST is a good fit with the needs of the site, the commitment of the site to implement the MST model, the evaluation process, and available faculty time.

The Training Division has developed a *Trainer of Trainer's Curriculum* to facilitate the diffusion and replication of the model. After working with a site for one year, FSRC staff can train experienced clinicians to provide ongoing training and consultation for the site.

Because of the FSRC's initiative with the DHHS to adapt MST training for providers of day treatment and therapeutic child care, the Training Division also is developing MST training programs for other service delivery systems: emergency-crisis services, outpatient psychotherapy in managed c- environments, intensive therapeutic case m- ment, school-based services, home-basec with larger caseloads, and reunification ser youth who must be placed out-of-home.

SUMMARY OF OUTCOME STUDIES EVALUATING THE MULTISYSTEMIC APPROACH

1. Family Preservation Using Multisystemic Treatment, Simpsonville, South Carolina, 1992.

The Simpsonville project included 84 juvenile offenders who were at imminent risk for out-of-home placement due to their serious criminal activity (Henggeler, Melton, Smith, 1992). Each offender had at least one felony arrest (54% had been arrested for violent crimes), their mean number of arrests was 3.5, and they averaged 9.5 weeks of prior placement in correctional facilities. The average age of the youths was 15.2 years, 77% were male, the average Hollingshead (1975) social class score was 25 (i.e., semiskilled workers), 26% lived with neither biological parent, and 56% were African-American and the remainder were Caucasian.

Youths were assigned randomly to receive MST using family preservation (MST; n = 43) or usual services provided by the Department of Youth Services (n = 41). MST therapists were three masters level counselors with an average of 2 years experience and caseloads of four families each. The average duration of treatment was 13 weeks (M = 33 hours of direct therapeutic contact). Assessment batteries, comprised of standardized measurement instruments, were administered pretreatment and posttreatment.

Results showed that MST was effective at reducing rates of criminal activity and institutionalization. At the 59-week postreferral follow-up, youths receiving MST had significantly fewer rearrests (Ms = .87 vs. 1.52) and weeks incarcerated (Ms = 5.8 vs. 16.2) than did youths receiving usual services. At posttreatment, youths receiving MST reported a significantly greater reduction in criminal activity than did youths receiving usual services. Families receiving MST reported more cohesion, while reported family cohesion decreased in the usual services condition. In addition, families receiving MST reported decreased adolescent aggression with peers, while such aggression remained the same for youths receiving usual services. Importantly, the relative efficacy of MST was neither moderated by demographic characteristics (i.e., race, age, social class, gender, arrest and incarceration history) nor mediated by psychosocial variables (i.e., family relations, peer relations, social competence, behavior problems, parental symptomatology). Thus, MST was equally effective with youths and families of divergent backgrounds and with varying strengths and weaknesses.

In addition, as depicted in figure 2 on page 3, survival analysis supported the relative effectiveness of MST at a 2.4 year follow-up (Henggeler, Melton, Smith, Schoenwald, & Hanley, 1993). Thus the findings support the short-term and long-term efficacy of MST with serious juvenile offenders and their families. In addition, despite its intensity, MST was a relatively inexpensive intervention. With a client:therapist ratio of 4:1 and a course of treatment lasting three months, the cost per client for treatment in the MST group was about $3,500, which compares favorably with the average cost of institutional placement in South Carolina of $17,769 per offender.

Additional Controlled Outcome Studies Using MST

Several additional controlled outcome studies conducted by Henggeler and his colleagues provide further support for MST as a viable approach to the treatment of adolescents and multineed families that have been traditionally regarded as recalcitrant to treatment. The samples in each of these studies included both genders as well as high percentages of economically disadvantaged and minority families.

2. Multisystemic Treatment of Chronic Juvenile Offenders, Columbia, Missouri, 1995.

Borduin, Mann, Cone, Henggeler et al. (1995; also see Mann, Borduin, Henggeler, & Blaske, 1990) examined the long-term effects of multisystemic therapy (MST) versus individual therapy (IT) on the prevention of criminal behavior and violent offending among 176 juvenile offenders at high risk for committing additional serious crimes. Results from multiagent, multimethod assessment batteries conducted pretreatment and posttreatment showed that MST was more effective than IT in improving key family correlates of antisocial behavior and in ameliorating adjustment problems in individual family members. Moreover, results from a 4-year follow-up of rearrest data showed that MST was more effective than IT in preventing future criminal behavior, including violent offending. For example, 4-year recidivism was 22% for youths who received MST compared with 72% for youths who received individual counseling and 87% for youths who refused to participate in either treatment. (See Figure 3 on page 4).

3. The Effects of Multisystemic Treatment on Substance Use and Abuse in Juvenile Offenders, Simpsonville, South Carolina and Columbia, Missouri, 1991.

Henggeler et al. (1991) analyzed data from two independent evaluations of the efficacy of MST in ating serious juvenile offenders focusing specifically on reductions in substance use and abuse. Arrest data collected an average of 4 years post treatment (Borduin et al., 1995) showed that youths who participated in MST had a significantly lower rate of substance-related arrests than youths who participated in individual counseling (4% vs. 16%). Similarly, in the Simpsonville project (Henggeler, Melton, Smith, 1992), youths in the MST condition reported significantly less soft-drug use at post-treatment than did youths who received usual services.

4. Multisystemic Treatment of Adolescent Sexual Offenders, Columbia, Missouri, 1990.

Borduin, Henggeler, Blaske, and Stein (1990) conducted the first controlled outcome evaluation with adolescent sexual offenders to appear in the literature, comparing MST with individual outpatient counseling. Recidivism data approximately 3 years after treatment showed that significantly fewer participants in the MST condition had been rearrested for sexual crimes (12.5% versus 75%), and that the frequency of sexual rearrests was significantly lower in the MST condition (M = .12) than in the individual counseling condition (M = 1.62). Moreover, the frequency of rearrest for nonsexual crimes was greater for the adolescents who received individual counseling (M = 2.25) than for the adolescents who received MST (M = .62).

5. MST vs. Behavioral Parent Training in the Treatment of Child Abuse and Neglect, Memphis, Tennessee, 1987.

Brunk, Henggeler, and Whelan (1987) randomly assigned abusive families and neglectful families either to MST or behavioral parent training. At posttest, families who received either treatment showed decreased parental psychiatric symptomatology, reduced overall stress, and a reduction in the severity of identified problems. Analyses of sequential observational measures, however, showed that MST was more effective than parent training at restructuring parent-child relations those behavior patterns that differentiate m ing families from nonproblem familie MST, maltreating parents controlled t behavior more effectively, maltreated ch hibited less passive noncompliance, and n parents became more responsive to their behavior.

6. Multisystemic Approach with Inner-City Juvenile Offenders, Memphis, Tennessee, 1986.

Henggeler et al. (1986) evaluated the efficacy of MST compared with usual community treatment for inner-city juvenile offenders and their families. At posttest, the adolescents who received MST evidenced significant decreases in conduct problems, anxious-withdrawn behaviors, immaturity, and association with delinquent peers, based on maternal reports. Observational measures showed that the mother-adolescent and marital relations in these families were significantly warmer, mother-adolescent interactions were less aggressive, mothers' interactions were more supportive, and the adolescent was significantly more involved in family interaction. In contrast, families who received usual community treatment evidenced no positive change and showed deterioration in observed affective family relations.

CURRENT FEDERALLY-FUNDED PROJECTS EVALUATING THE EFFECTIVENESS OF MST

7. The Multisystemic Approach with Substance Abusing/Dependent Delinquents, Charleston, South Carolina (1992-1997).

This project, funded by the National Institute on Drug Abuse, is evaluating the effectiveness of MST with substance abusing/dependent delinquents and their families in comparison with usual community services. In its fourth year of funding, 118 substance abusing/dependent youth have been randomly assigned to treatment conditions, and preliminary findings are quite positive. Fully 98% of families assigned to the MST condition have completed a full course of treatment, whereas only 22% of usual services families received any substance abuse or mental health services during the first five months in the program. Importantly, data analyses show that, in comparison with delinquents/families receiving usual services, (a) youth in the MST condition evidenced decreased substance use, (b) youth in the MST condition had fewer rearrests and a 40% reduction in days incarcerated at an approximately 1-year follow-up, and (c) several additional findings suggest that youth and families in the MST condition have developed the resources and skills needed to promote psychosocial development and further attenuate youth antisocial behavior. Long-term follow-ups are currently be conducted to determine the stability of these positive treatment effects for MST.

8. Multisystemic Therapy using Family Preservation with Serious Juvenile Offenders Living in Rural Areas, Orangeburg and Spartanburg, South Carolina.

This multisite study, funded by NIMH, evaluates several important aspects of the effectiveness and diffusion of multisystemic family preservation with serious juvenile offenders in rural areas. (a) Comprehensive follow-up assessments of psychosocial functioning are being conducted to assess the stability of changes in family relations, peer relations etc. (b) Issues pertaining to the training of counselors and to the integrity of treatment delivery are being evaluated. (c) Treatment process is being studied in an attempt to assess the active ingredients in MST. (d) Issues pertaining to the diffusion of multisystemic family preservation to rural sites are being examined. Preliminary results are promising (Scherer, Brondino, Henggeler, Melton, & Hanley, 1994), and extensive data analyses will be conducted in 1995.

9. Multisystemic Therapy Using Family Preservation as an Alternative to the Hospitalization of Youth Presenting Psychiatric Emergencies, Charleston, South Carolina (1994-1999).

This NIMH-funded study evaluates a family-based alternative to the costly and clinically unproven practice of hospitalizing youth presenting psychiatric emergencies such as psychosis and threats of suicide and homicide. Community-based emergency psychiatric services are being ble[illegible] with MST to safely prevent hospitali[illegible] reduce the symptoms and enviror[illegible] precipitating the crisis. Analyses w[illegible] clinical- and cost-effectiveness of this

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