CHAPTER 2

MST Principles and Process

Children with serious emotional disturbance and their families often present a multitude of interrelated problems. This chapter describes the criteria that MST therapists use to prioritize treatment goals, design interventions to meet those goals, and evaluate the success of those interventions. These criteria are operationalized in protocols that are flexible yet include significant structure and outcome monitoring to enhance therapist and family capacity to achieve treatment goals.

With each new referral to an MST program, the MST therapist has the opportunity of a lifetime: the lifetime of a youth and his or her family. An effective MST therapist helps a family to change the course of a child's life. The privileges, responsibilities, and challenges inherent in doing so are urgent and awesome. Urgent, because the youth in question is typically headed toward a life course of multiple disruptive out-of-home placements, educational and vocational failure, interpersonal problems, and deterioration in mental and physical health. Awesome because so little of what is available to youth and families in most communities can effectively alter that life course, and because many attempts made by the youth, his or her family, school, and mental health providers have already failed. The privileges and challenges presented with each new re-

ferral also vary in accordance with the particular strengths and needs of each youth, his or her family, and the family's context. Accordingly, the intervention strategies and techniques implemented by the MST therapist, family members, relatives, friends, or school personnel are individualized to the youth and his or her context.

The individualization of MST occurs within the parameters provided by nine treatment principles and a systematic and ongoing assessment and treatment process. That process brings the scientific method of hypothesis testing to the complexities of each referral. Referred to as the *Analytic Process* (a.k.a. the "Do-Loop"; see Figure 2.1), this method encourages clinicians to generate specific hypotheses about what combination of factors sustains a particular problem behavior, provide evidence to support the hypotheses, test the hypotheses by intervening, collect

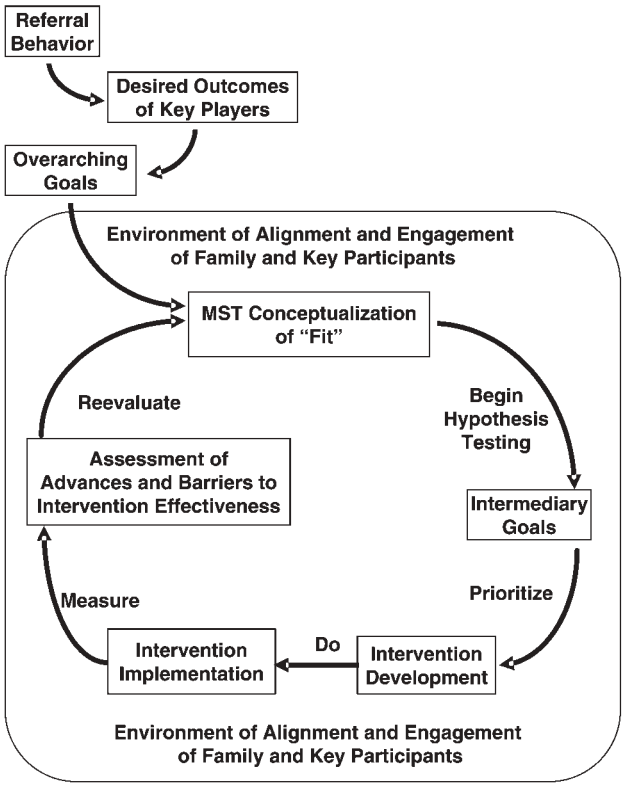

FIGURE 2.1. MST analytic process (a.k.a. Do-Loop).

data to assess the impact of the intervention, and use that data to begin the assessment process again. The sources of information from which hypotheses are drawn include: the knowledge base on the individual, family, peer, school, and neighborhood factors that contribute to serious clinical problems; and reports by the youth, family members, and key members of the social context and the therapist's observations of all these. Hypotheses are also informed by social-ecological and systems theories of human behavior. This chapter describes the MST treatment principles and analytic process, the advantages of delivering MST through a home-based model of service delivery, and the quality assurance processes designed to support the effective implementation of MST by providers in community-based sites.

MST TREATMENT PRINCIPLES

Treatment specification is the process used to translate ideas about what causes clinical problems into actions designed to solve or more effectively manage these problems. For treatments that have been validated in scientific studies, ideas about what causes problems are derived from well-established research findings and a theoretical framework that is consistent with those findings. As described in Chapter 1, the social-ecological framework that informs MST is consistent with decades of research demonstrating the multiple predictors of serious behavior problems in youth. Treatment specification identifies core intervention procedures to solve or manage those problems and the expected outcomes of those procedures.

Compared to other children's mental health services (e.g., intensive case management, other models of home-based services, "wraparound" services, residential treatment, and psychiatric hospitalization), MST is very well specified. Relative to psychotherapy models that focus primarily on one factor contributing to a behavior problem with specific and sequential intervention steps, MST is relatively loosely specified. In contrast with therapy approaches such as parent–child management or social problem-solving skills training, for example, step-by-step or session-by-session guides are not used to implement MST.

To address the needs of youths and families with multiple complex problems, the MST therapist must individualize strategies to capitalize on the strengths and limitations of the youth, his or her family, and the surrounding context. Consequently, the combination of intervention techniques applied, and the expected impact of intervention procedures, varies in accordance with the circumstances of each youth and family. Thus, to fully specify all procedures used in MST to address a broad

TABLE 2.1. MST Treatment Principles

Principle 1: The primary purpose of assessment is to understand the "fit" between the identified problems and their broader systemic context.

Principle 2: Therapeutic contacts should emphasize the positive and should use systemic strengths as levers for change.

Principle 3: Interventions should be designed to promote responsible behavior and decrease irresponsible behavior among family members.

Principle 4: Interventions should be present-focused and action-oriented, targeting specific and well-defined problems.

Principle 5: Interventions should target sequences of behavior within and between multiple systems that maintain the identified problems.

Principle 6: Interventions should be developmentally appropriate and fit the developmental needs of the youth.

Principle 7: Interventions should be designed to require daily or weekly effort by family members.

Principle 8: Intervention efficacy is evaluated continuously from multiple perspectives with providers assuming accountability for overcoming barriers to successful outcomes.

Principle 9: Interventions should be designed to promote treatment generalization and long-term maintenance of therapeutic change by empowering caregivers to address family members' needs across multiple systemic contexts.

range of youth, family, and contextual problems would be an unproductive way to delineate the treatment model. Such detailed specification would not allow the therapist and treatment team the flexibility they need to address a complex array of problems effectively.

To balance adequate specification of the model with responsiveness to the needs and strengths of each youth and family, principles are used to guide the MST assessment and intervention process (see Table 2.1). By virtue of the flexibility inherent in these principles, MST therapists—most of whom are seasoned professionals before joining an MST team—have the freedom to use their strengths in the service of the family. By virtue of their brevity (all nine principles fit on two sides of a business card), the principles can be readily referenced by therapists during clinical supervision and in the field. Moreover, therapist adherence to these principles can be readily assessed through caregiver reports (discussed in the quality assurance section of this chapter).

The first two MST principles focus assessment and intervention efforts on the multiple factors within the youth's ecology that can help

make sense of why problems are occurring (Principle 1) and on identifying strengths of the youth, family, and surrounding context that can be used to promote change (Principle 2). Principle 3 highlights the importance of interventions that increase responsible behavior. Principles 4 and 5 emphasize the clear and objective definition of problems targeted for change and the use of present-focused and action-oriented approaches to changing interactions that sustain these problems. Principle 6 draws attention to the developmental aspects of individualization of treatment. Principle 7 emphasizes the centrality of daily effort to change. The last two principles focus on the need for continuous evaluation of, and provider accountability for, the impact of interventions, and for the implementation of interventions that will be sustainable after treatment ends.

Importantly, the MST principles are consistent with key aspects of empirically based treatment approaches for youth and families (e.g., strategic, structural, and behavioral family systems approaches; behavioral parent training; cognitive-behavioral therapies). The principles embody the problem-focused, present-focused, and action-oriented emphases of behavioral and cognitive-behavioral treatment techniques; the contextual emphases of pragmatic family systems therapies; and the importance of client–clinician collaboration and treatment generalization emphasized in system of care and consumer philosophies. In MST, however, these evidence-based interventions, which have historically focused on a limited aspect of the youth's social ecology (e.g., the cognitions or problem-solving skills of the individual youth; the discipline strategies of a parent; family interactions, but not interactions between the family and other systems), are integrated into a social-ecological framework. Moreover, MST interventions are delivered where the problems and their potential solutions are found: at home, at school, and in the neighborhood rather than in a therapist's office.

MST interventions are tailored to the specific strengths and weaknesses of each youth's family, peer, school, and community contexts. In addition, and as described in subsequent chapters, biological contributors to identified problems are identified and psychopharmacological treatment is integrated with psychosocial treatment. In contrast to "combined" (e.g., Kazdin, 1996; Kazdin, Siegel, & Bass, 1992) and multicomponent approaches to treatment (e.g., Liddle, 1996), however, MST interventions are not delivered as separate elements or self-contained modules. Rather, throughout the 3–5 months of MST treatment, interventions are strategically selected and integrated in ways hypothesized to maximize their synergistic interaction. For example, parents with permissive parenting practices often need instrumental and emotional support from spouses, kin, and/or friends to change

their parenting practices in the face of significant protests from the youth. Thus, therapist and parent might work together to mend fences between the parent and an estranged relative before trying to implement new rules and consequences for a youth, so that the relative can actively support the parent when she first tries to implement new rules and consequences.

From Principles to Practice: A Brief Introduction

Subsequent chapters describe the application of MST principles to the treatment of youths with serious emotional disturbances and their families. The purpose of the following description of Jennifer is to provide a sampling of how the MST treatment principles are applied.

Jennifer Stone was a 15-year-old white female referred to the MST program jointly by the local child protection and juvenile justice agencies after domestic violence and incorrigibility charges were filed against her. The domestic violence charge stemmed from a fight in which Jennifer broke her 13-year-old half-sister's wrist and tried to hit her stepmother, Mary, with a pan when she tried to intervene. The incorrigibility charges stemmed from several runaway incidents also reported to authorities by Mary. Jennifer was frequently truant from school and had been suspended repeatedly for fighting with peers. During the previous school year, Jennifer had been hospitalized for a psychiatric evaluation following a school incident in which she physically threatened a teacher. At that time, Jennifer was diagnosed with depression and ADHD. Jennifer lived with her father, John, her stepmother, Mary, and her three half-siblings: Anna (13), Jacob (6), and Kate (3). John had obtained sole custody of Jennifer when she was 12; at that time, Jennifer's mother, Brenda, entered a court-ordered drug rehabilitation program. Following her release from that program, Brenda continued to have substance abuse problems that interfered with her ability to retain employment and stable housing. Brenda intermittently visited her daughter. Mary had a congenital heart problem that required frequent medical attention and compromised her physical stamina.

PRINCIPLE 1: FINDING THE FIT

Consistent with social-ecological theory and research on the multiple determinants of serious problems in youth, a fundamental premise of MST is that behavior makes sense in its context. Thus, the primary purpose of the ongoing MST assessment process is to understand the "fit" between the identified problems and their broader systemic context. For each youth referred to MST, the therapist attempts to determine the specific

combination of factors that sustain identified problems and thus can be used to help attenuate them.

As described in the MST analytic process section of this chapter, interview and observational methods are used to identify this combination of factors. The therapist interviews family members, relatives, neighbors, and friends in the family's social network, teachers and other school personnel (e.g., coaches, principals, lunch room attendants), and individuals involved in community activities attended by the youth and family (e.g., church, mosque, or synagogue; recreation center). The therapist observes interactions among family members and those involving the youth and pertinent family members in school and community settings.

In Jennifer's case, the therapist interviewed Jennifer's father, stepmother, mother, grandmother, and teachers, and observed interactions involving Jennifer in the home and at school. She also observed interactions between the adults in Jennifer's life when Jennifer was not present. These interviews and observations, which occurred within the first 2–3 days after Jennifer was referred for treatment, led the therapist to identify several factors associated with Jennifer's physical violence at home and school.

A graphic depiction of these fit factors appears in Figure 2.2. First, information from Jennifer's parents, grandmother, and teachers indicated that Jennifer had always had considerable difficulties sustaining attention and controlling impulses at school and at home. This information led the team to tentatively support the hypothesis that *ADHD* was a contributing factor. Furthermore, all observers confirmed that Jennifer did not take her medication (Ritalin). Information about possible depression was mixed, with Jennifer denying feelings of sadness, and parents and teachers reporting irritability and occasional behaviors (acting "spacey," slowed speech, inappropriate laughter) that might signal substance use rather than depression. Thus, second, the therapist added "*possible substance use*" to the list of contributing factors, and suspended opinion about the depression pending further observation and consultation with the psychiatrist working with the team. Third, Jennifer had begun to hang out with a couple of "*tough girls*" about a year after she moved in permanently with her father; one of the girls was well known for picking fights, stealing, and dating a known drug dealer. These girls also harbored Jennifer when she ran away from home. Fourth, Jennifer had nearly unlimited access to these peers because her father and stepmother rarely monitored her whereabouts. The *lack of monitoring*, in turn, was a product of long work hours and a permissive parenting style for John, lack of stamina and the demands associated with caring for the other children for Mary, and the conflicting parenting styles of John and Mary, who was more authoritative than John in

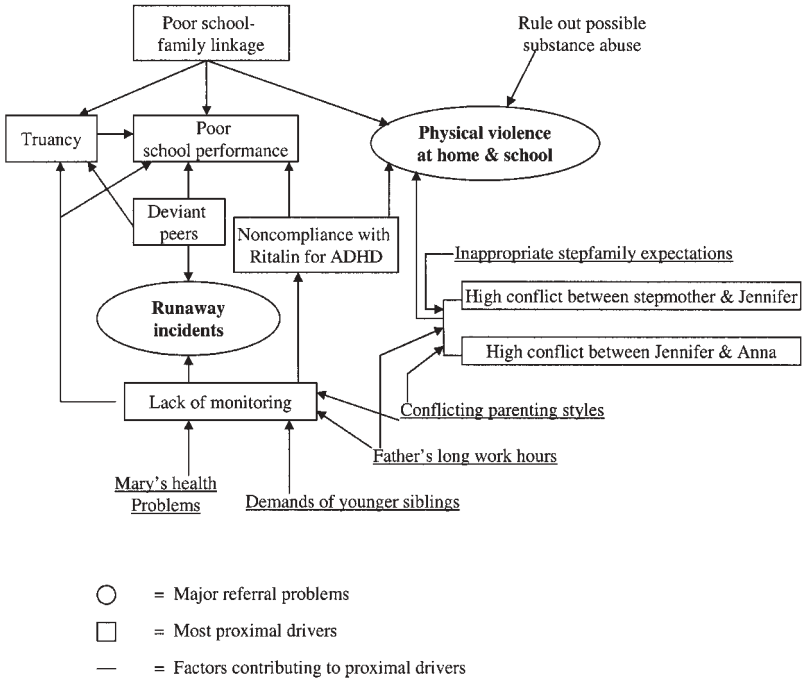

FIGURE 2.2. Initial conceptualization of "fit" for Jennifer.

her parenting practices. Fifth, *verbal conflict* in the family was high, particularly between Jennifer and Mary and between Jennifer and Anna. Other fit factors included *poor school performance*, which, in turn, was directly linked with Jennifer's ADHD, and indirectly linked with the truancy and aggression that resulted in repeated suspensions. The relationship between school personnel and family members was tense, at best: Jennifer's reputation among teachers was poor, and the teachers experienced John as inaccessible and Mary as unable to change Jennifer's behavior.

PRINCIPLE 2: STRENGTHS AS LEVERS FOR CHANGE

Although families of children with serious problems are faced with many challenges, they also possess many strengths. The former cannot be successfully addressed without harnessing the latter. Few individuals in any walk of life are eager to engage in relationships built primarily around the identification of their weaknesses. Unfortunately, mental health and

social service professionals and agencies often focus on deficits rather than strengths, thereby failing to engage families in the treatment process. MST therapist contacts with the youth, his or her family, and other key individuals in their ecology emphasize the positive, and therapeutic interventions use systemic and individual strengths as levers for change. Maintaining a strength-focused approach in the midst of complex and challenging situations requires that the entire team (e.g., other therapists, supervisor) share this strength-focused perspective.

Jennifer and her family possessed several strengths. At the *family* level, John loved his daughter, and Mary was concerned about Jennifer's well-being, though her concern about her own safety and that of her children sometimes superseded the concern about Jennifer. Although strained by the demands of work, children, Mary's health problem, and conflict about parenting styles, the marriage was relatively strong and long-standing (13 years). In addition, although Mary didn't have the affective bond needed to parent Jennifer effectively, her authoritative parenting style offered a credible model for John, who was permissive. Jennifer's maternal grandmother, with whom Jennifer had sometimes lived when her mother's housing was unstable, was willing to be helpful as long as Jennifer did not come to live with her again. At *school*, the school-based mental health counselor had a soft spot for Jennifer, and was willing to work with the MST therapist and teachers to develop alternatives to suspension for some of the behaviors that were inappropriate and irritating but not violent. With respect to *peers*, Jennifer had demonstrated some interest in electric guitar and studio music before hooking up with the tough crowd, and she occasionally contacted one relatively prosocial acquaintance that lived in her maternal grandmother's neighborhood. Thus, despite significant and challenging problems, Jennifer, her family, and their social context contained several significant strengths that could be used to facilitate change.

PRINCIPLE 3: INCREASING RESPONSIBLE BEHAVIOR

As with all serious or chronic health conditions, psychiatric, behavioral, and emotional problems can be managed more or less effectively. Effective management of such problems requires the youth and others in the social ecology to exercise additional responsibilities. MST therapists assist caregivers and other key players to help the youth behave responsibly, even when faced with limitations imposed by a psychiatric illness. As illustrated in Jennifer's case, effective management of such limitations is a shared responsibility of the youth, his or her family, and others in their environment. For example, to effectively manage Jennifer's symptoms of ADHD, medication adherence is required. Jennifer should be

attending school, performing to the best of her ability there, and handling the frustrations that might be associated with her ADHD. She should not be associating with friends who help get her into trouble. The father, stepmother, and school personnel should be responsible for facilitating medication management, sustaining school attendance, and monitoring Jennifer's peer connections. The responsibility to serve as primary parental authority, which resided with Mary for the children born to John and Mary, should be redirected to John when it comes to parenting Jennifer (because Mary and Jennifer had not established the affective bond needed for effective parenting). John and Mary, on the other hand, should share the responsibility for managing half-sibling conflict. Framed from the perspective of increasing such responsible behavior, none of these treatment goals seemed unrealistic.

PRINCIPLE 4: PRESENT FOCUSED, ACTION ORIENTED, WELL DEFINED

MST interventions are designed to change the everyday transactions and circumstances that sustain identified problems. The focus of each intervention should be clear and unambiguous. The intervention itself should be well specified, and whether the intervention achieves the desired effect should be equally clear—that is, observable. This present-focused action orientation contrasts with approaches that are primarily insight-oriented, past-focused, and of unlimited treatment length. Thus, although some of Jennifer's problem behaviors—such as impulsive behavior, physical aggression, irritability, and truancy—predated Jennifer's moving in with John and Mary, the therapist spent very little time talking about what life was like when Jennifer lived with her mother or grandmother. Instead, the therapist focused on the everyday events that enabled Jennifer to avoid taking medication for ADHD, engage in physical conflicts at home and at school, and stay connected with deviant peers. Intervention strategies focused initially on increasing the safety of family members by reducing family conflict, shifting parental authority for Jennifer from Mary to John, and increasing monitoring so that Jennifer would have less access to deviant peers and find it impossible to stay with them when she ran away from home.

PRINCIPLE 5: TARGETING SEQUENCES OF BEHAVIOR

MST interventions target repeated sequences of interactions within the family, school, peer group, neighborhood, and community that maintain the identified problems. Equally importantly, interventions target problematic interactions between these systems. In this family, the interaction

patterns immediately targeted for change were the conflicts between Jennifer and Anna and between Jennifer and Mary. These conflicts were related to one another. Common factors contributing to both were the inappropriate expectations both John and Mary held about blended families and their conflicting (permissive, authoritative) parenting styles. Therapy sessions and homework were directed toward establishing appropriate stepfamily expectations, resolving parenting inconsistencies, establishing John's role as the primary parental authority for Jennifer, and increasing positive affect between Mary and Jennifer. The conflict sequences also precipitated runaway incidents, but the willingness of peers and their parents to harbor Jennifer when she ran away extended the relevant sequences of behavior outside the family system. Thus, interventions were designed to help John and Mary work with these parents to prevent harboring.

PRINCIPLE 6: DEVELOPMENTALLY APPROPRIATE

Children and their caregivers have different needs at different times in their lives. Thus, MST intervention strategies are tailored to the physical, intellectual, social, and emotional needs of the children and their caregivers. For example, behavioral contingencies developed for 10-year-olds are different from those developed for 15-year-olds, new household rules may need to be posted in symbols rather than in words for a caregiver with a developmental disability. For Jennifer, age 15, such privileges as telephone time, taking the subway to see a friend in her grandmother's neighborhood, and earning money to buy items she valued were among contingencies developed by the therapist and parents to support medication compliance, school attendance and performance, and nonviolent responses to interpersonal problems. That is, when Jennifer took her medication as prescribed, attended school, and asked for schoolwork help from teachers and peers (all increases in responsible behavior on her part), the freedoms allowed her were in keeping with those afforded responsible age-mates.

PRINCIPLE 7: CONTINUOUS EFFORT

Given the assumptions subsumed in the other principles—namely, that everyday interactions and circumstances maintain and can help attenuate identified problems—then anything less than everyday effort is likely to slow treatment progress. Thus, MST interventions are designed to require everyone involved in the daily life of a youth to work together diligently—weekly, if not daily—to achieve agreed-upon outcomes. Designing interventions that require such frequent effort also enables

therapists and family members to quickly detect and alter ineffective interventions and assess progress toward treatment goals. In Jennifer's case, for example, compliance with ADHD medication was seen as critical to treatment success. Thus, a system of monitoring, rewards, and consequences that required daily checking was established. Efforts to shift some of the parenting responsibilities from Mary to John required daily practice, initially in the presence of the therapist, and daily tracking of his efforts to enforce rules and to provide appropriate rewards and consequences.

PRINCIPLE 8: EVALUATION AND ACCOUNTABILITY

The effects of MST interventions are evaluated from multiple perspectives throughout the treatment process. The purpose of this principle is to ensure that treatment progress and outcomes are objectively defined and closely monitored, and that MST providers take responsibility for identifying and overcoming barriers to treatment success. To assess treatment progress (or lack thereof) in Jennifer's case, John obtained information on Jennifer's attendance and behavior (including fighting) through daily checklist-type reports completed by teachers. The therapist obtained information on medication compliance, violent behavior, and peer activities from Mary, John, grandmother, and the probation and child protection workers assigned to the case. When progress was elusive, the team undertook the responsibility of identifying and overcoming barriers to change (see next section).

PRINCIPLE 9: GENERALIZATION

MST interventions are designed to promote the ability of individuals and systems in the youth's natural ecology to sustain treatment gains. Although a variety of individuals in the social ecology (e.g., peers, teachers, relatives, neighbors) affect a youth's well-being, the youth's caregivers are the executive officers of the social ecology. Thus, MST interventions are designed to empower caregivers to deal effectively with the inevitable challenges of raising children. To this end, interventions accentuate the strengths of caregivers, the youth, and other family members and build the capacity of the caregivers and naturally occurring social supports to effectively manage current and future problems.

For example, once John and Mary agreed to shift parenting roles, the therapist and family included the grandmother and Mary's sister (who lived in another city, but could be accessed by phone) in interventions that shifted parental authority from Mary to John. The purpose of extended family involvement was to support John when he began taking

the lead and to support Mary in backing off. The medication and school monitoring plans were also shared with the grandmother, who agreed to let Jennifer come to her home if she and Anna or she and Mary began to inch toward conflict before John came home from work. The therapist moved out of the school–home communications circle within the first 3 weeks of treatment, and instead coached John and Mary to work with the school mental health counselor and principal, both of whom would continue to work at the school long after MST ended.

MST ANALYTIC PROCESS

The MST treatment process entails interrelated steps that connect the ongoing assessment of the fit of identified problems with the development and implementation of interventions. The steps in this process are depicted in Figure 2.1, known as the "MST Do-Loop." Prior to supervision each week, clinicians summarize each case on a Weekly Progress Summary, which is organized in terms of the steps on the Do-Loop. Thus, therapists report on:

- Reasons for referral.
- Desired outcomes and overarching/primary goals of treatment.
- The fit of identified problems.
- The intermediary goals (i.e., goals that represent steps toward achieving the overarching goals).
- Interventions developed and how they were implemented.
- Barriers to meeting the intermediary goals.
- Fit of advances and barriers (i.e., factors that contribute to successful achievement of the goal, factors that contribute to identified barriers to goal attainment).
- New intermediary goals for the upcoming weeks that build upon treatment advances and address observed barriers to treatment progress.

Hypothesis testing occurs throughout this process, beginning with the initial conceptualization of the fit of referral problems.

Clarifying Reasons for Referral

As depicted in Figure 2.1, the ongoing MST assessment and intervention process begins with a clear understanding of the reasons for referral. To gain that understanding, MST therapists meet with family members and other key figures in the ecology (e.g., probation officers, teachers, etc.) to

identify the problem behaviors that led to the referral. Common examples of problems identified include suicide threats; depressed and irritable behavior at school and at home; explosive physical outbursts that disrupt classroom, peer, or family functioning; fighting with peers; poor school performance; truancy and defiance toward teachers; substance abuse; and running away.

Developing Overarching Goals

An overarching goal is an ultimate aim of treatment that:

- Eliminates or greatly reduces the frequency and intensity of a referral behavior (see above).
- Incorporates the desired outcomes of key participants (e.g., primary and secondary caregiver, teacher or principal, probation officer, judge, etc.).
- Can be measured directly.
- Is specified so that any outside observer would interpret the goal the same way and could determine whether the goal was met.

To establish such goals, clinicians should be able to pull from the desired outcomes of each key participant (caregiver, referral agencies, teachers, etc.) the common threads of an overarching goal. In the case of Jennifer, for example, the father, stepmother, and child welfare agency wanted physical fights at home to end, while school personnel focused on ending physical fights at school. Thus, an initial overarching goal was, "Stop physical fights at home and at school." Overarching goals often need to be prioritized. When a referred youth is both at imminent risk of harm to self and truant from school, ensuring safety from harm would be seen as more critical than ensuring regular school attendance in the early days of therapist involvement with the family. Overarching goals may be added or eliminated in accordance with information obtained as the clinician and family continue the assessment process. In the case of Jennifer, the sequences of interaction that supported fighting differed at home and at school, thus requiring separation of the original single goal into two goals that were met with different interventions.

Fit of Identified Problems

Next, therapists develop a preliminary multisystemic explication of the fit of identified problems that encompasses the strengths and the weaknesses observed in each of the systems in the youth's ecology. Known as a "fit analysis," this process is depicted using a visual tool known as a

"fit circle." A specific behavior problem or interaction pattern is identified in the center of the circle, with arrows from possible contributing factors pointing toward the circle. As Figure 2.2 shows, some factors may contribute to more than one problem. The fit analysis becomes more detailed as the clinician gathers information and makes observations about interactions within and between each system that directly and indirectly influence identified problems. A common combination of contributing factors to referral problems of youth with serious emotional disturbance (e.g., threatening harm to self or others, aggressive behavior at home or school, running away) includes chronic parent–child conflict; inconsistent parental discipline practices; poor parental monitoring due to parental employment demands, substance abuse, mental health problems, or lack of skill; peer reinforcement of irresponsible behavior; negative interactions between school personnel and family members; cognitive attribution biases of the youth; and biological contributors such as ADHD. A sampling of strengths includes parental concern about the youth's difficulties; strong emotional bond between parent and child; parental employment; youth's interest in prosocial activities; youth's ability to get along with classmates who do well in school; willingness of school personnel to work with a child or parent; and relatives or friends willing to support parental efforts to manage the youth's problems.

In Jennifer's case, for example, a fit circle would be developed for each of the proximal drivers identified in Figure 2.2. Thus, "lack of monitoring" would become the center of a fit circle, with Mary's health problems, demands of younger siblings, father's long work hours, and conflicting parenting styles identified initially as contributing factors. Similarly, a separate fit circle would be developed to identify the factors that contribute to "conflicting parenting styles" before interventions to reduce conflict are designed.

Hypothesis Development and Testing

Throughout the ongoing MST assessment and intervention process, clinicians are encouraged to apply the scientific process of hypothesis development and testing. *Hypotheses* are hunches or theories that can be expressed in terms that are concrete and measurable. Hypotheses are initially developed on the basis of therapist observations of interaction patterns and interviews with key participants in the youth's ecology. As indicated in Figure 2.1, hypothesis development and testing begins at the moment a clinician or family member uses a piece of information or an observation to generate an idea about what causes what. A clinician should be able to describe evidence from direct observations and inter-

view information that supports or refutes the hypothesis. For example, a clinician who suspects that parent–child conflict is a primary family-level factor contributing to an adolescent's suicidal thoughts should be able to describe concrete examples of parent–child conflict that precede the suicide threats. Similarly, the therapist should identify whether the youth's suicidal thoughts occur even when parent–child conflicts do not, and whether there are times when parent–child conflicts occur but suicidal threats do not. If parent–child conflicts are chronic, but suicidal threats are intermittent, then evidence that parent–child conflict is a primary driver of suicidal thoughts is relatively weak.

Initially, hypotheses should pertain to the most proximal causes of behavior. *Proximal causes* are interactions and events in everyday living that seem to be directly connected with the problem behavior. Among everyday interactions between caregivers and their children, teachers and students, peer groups, and so on, MST therapists identify particular sequences of interaction that seem to precede and follow the occurrence of a particular problem. For example, lack of monitoring is often one proximal cause of runaway behavior. As depicted in Figure 2.2, the factors that contribute to lack of monitoring vary from family to family. In one family, the factors may include the parents' long work hours, marital problems, and lack of knowledge about parenting. In another family, a single parent may have the necessary knowledge and skills to parent but suffers from depression and lacks the social support needed to parent effectively. In both families, the parent's discipline style is a direct and proximal cause of the runaway behavior. The work hours, marital problems, depression, and so on have an indirect or more distal effect on the youth's running away, but a direct or more proximal effect on the parent's monitoring practices.

Hypotheses are generally tested by evaluating the effects of interventions derived from a hypothesis. For example, if interventions designed to decrease the use of harsh punishment were implemented and measurable decreases in runaway incidents followed, the team would have some evidence to support the hypothesis that harsh discipline strategies were direct contributors to the child's running away. Similarly (see Figure 2.2), if interventions to address conflicting parenting styles enabled the parents to monitor their child more consistently, the team would have evidence that these more distal factors were directly related to the monitoring and indirectly related to the child's running away. Alternatively, if the parent's ineffective discipline practices did not change as conflicting parenting decreased and monitoring increased, then the therapist would identify other possible drivers of the ineffective discipline practices. Or, if the child continued to run away even after monitoring practices increased, the therapist would identify other proximal

drivers of runaway incidents. The process of developing hypotheses regarding factors that contribute to a particular problem (or treatment gain), gathering evidence to support or refute the hypotheses, designing and implementing interventions to test the hypotheses, and developing new hypotheses on the basis of the intervention outcomes is ongoing and recursive.

Intermediary Treatment Goals

Following the initial conceptualization of factors contributing to referral, the therapist and team identify intermediary treatment goals. Such goals should be achievable in the short term and reflect direct movement toward the achievement of overarching goals. Intermediary goals should (1) be logically linked to overarching goals, (2) address factors in the systemic context hypothesized to contribute to the referral problems, and (3) be achievable over a period of days or weeks. Often, several intermediary goals related to a single overarching goal are pursued simultaneously, as the systems and interactions they target reciprocally influence one another. At other times, intermediary goals may need to be pursued in sequential order.

With the intermediary goals defined, the treatment team next identifies the range of treatment modalities and techniques that might be effective toward meeting the intermediary goals and tailors these to the specific strengths and weaknesses of the targeted client system (e.g., marital, parent–child, family–school). Interventions are generally designed by the MST therapist in consultation with caregivers, and implemented primarily by the caregivers and other key figures in the youth's ecology (e.g., teachers, relatives, coaches, the parents of peers, etc.). Thus, at any point in treatment a therapist may be helping a mother to monitor her 15-year-old daughter's intake of antidepressant medication; soliciting help from parents of peers who harbor the daughter when she runs away from home; negotiating an arrangement with teachers to establish a daily attendance and behavior reporting mechanism; helping a stepfather, mother, and daughter reduce the verbal and physical aggression between the daughter and stepfather that precipitates runaway behavior; and soliciting relatives' help in enacting a safety plan when the daughter verbalizes suicidal thoughts.

Intervention Development and Implementation

MST intervention strategies are designed to address prioritized "fit factors," consistent with the nine MST principles, and drawn from empirically supported treatment approaches for youth and families identified

earlier in this chapter. Descriptions of family, peer, school, social support, individual, and crisis stabilization interventions used in MST are provided in subsequent chapters of this book. These descriptions illustrate how empirically supported treatment approaches are integrated to address the unique strengths and weaknesses in the social ecology of each youth and his or her family. Creativity on the part of intervention participants (e.g., caregivers, teachers, etc.), the clinician, and the clinical team is an important element of the process of tailoring an empirically supported intervention to these strengths and weaknesses.

To increase the likelihood of intervention success, interventions should be accurately targeted, well specified, and completely and correctly implemented. An *accurately targeted intervention* is one that addresses one or more prioritized fit factors. A *well-specified intervention* is one that makes clear what each pertinent participant in the social ecology will do, and when and how he or she will do it. In the case of Jennifer, for example, after progress was made addressing some proximal drivers of conflict between Jennifer and Mary, such as inappropriate stepfamily expectations and conflicting parenting styles, John suggested that conflict would be further reduced if Jennifer and Mary spent more "quality time" together. "Quality time" together was operationally defined as 30 minutes of shopping in the mall without any of the younger children or John present. To implement an intervention completely, participants must have the skills, practice, and contextual support to implement the intervention. To this end, MST clinicians routinely model an intervention, provide opportunities for participants to practice the intervention in role plays, and observe when the intervention is implemented for the first time and subsequently if it appears the intervention is not working. To arrange for a successful 30 minutes of shopping time at the mall, for example, Mary and Jennifer had to agree in advance on a day for the date, John or Jennifer's grandmother had to baby-sit for the younger children, and Jennifer had to be on her Ritalin.

As interventions are implemented and their success is monitored, barriers to favorable outcomes may become evident at several levels, as described next.

Identifying and Overcoming Barriers to Progress

In spite of significant efforts, interventions with children and families presenting serious clinical problems often fail. Clinicians and supervisors are encouraged to examine the reasons for failure (i.e., barriers to change). In light of information obtained about the barriers, aspects of interventions are changed. Common barriers to intervention success include:

- Faulty or incomplete conceptualizations of the fit of the problem targeted for a particular intervention.
- Intermediary goals that do not reflect the most powerful and proximal predictors of the target behavior, such that interventions designed to achieve these goals miss the mark.
- Appropriate intermediary goals, but interventions that do not follow logically from the goals.
- Failure of the clinician to implement the intervention correctly or completely, or to ensure that the individuals (e.g., parent, grandparent, teacher) who were to implement the intervention had sufficient understanding and competency to do so.

Each of these factors, in turn, may be influenced by a combination of case-specific, clinician-specific, and supervision-specific issues. That is, at any juncture of MST, it may be helpful—indeed necessary—to consider not only the details of the particular case, but the extent to which the clinician, the team, and the supervisor are engaging in the behaviors necessary to help families achieve their treatment goals. Thus, the MST treatment process is self-reflexive for clinicians and supervisors, who continuously consider their own behavior as factors that contribute to intervention success and failure.

DELIVERING MST: A HOME-BASED MODEL OF SERVICE DELIVERY

MST has been provided within a home-based model of service delivery in community-based clinical trials and community-initiated programs around the country. Intensive home-based services have increasingly been recommended as desirable alternatives to the use of restrictive and expensive placements for youth with serious behavioral and emotional problems. A basic assumption underlying most programs is that children are better off being raised in their natural families than in surrogate families or institutions (Nelson & Landsman, 1992). Thus, the family is seen as a source of strengths, even when serious and multiple needs are evident, and a common objective is to empower families to meet their needs in the future. To date, however, few home-based programs have delivered evidence-based treatments to youth and their families (Fraser, Nelson, & Rivard, 1997; Henegan, Horwitz, & Leventhal, 1997).

The intent of using a home-based model to deliver MST is to provide very intensive clinical interventions when and where they are needed to alter the youth's natural ecology in ways that will avert imminent and future out-of-home placements. A number of program prac-

tices described in the MST organizational manual (Strother, Swenson, & Schoenwald, 1998) are designed to support therapists and supervisors in meeting these objectives. Specifically, the following practices are recommended:

- MST therapists are full-time master's-level, or highly competent, clinically skilled, bachelor's-level, professionals assigned to the MST program solely.
- MST therapists operate in teams of no fewer than two and no more than four therapists, plus a supervisor.
- MST caseloads do not exceed six families per therapist, with the normal range being three or four "active" cases.
- Expected duration of treatment is 3–5 months.
- MST therapists are accessible at times that are convenient for their clients and, in times of crisis, very quickly.
- The MST program will have a 24-hour-per-day, 7-day-per-week on-call system to provide coverage when MST therapists are on vacation or taking personal time.

The home-based model of service delivery removes common barriers to service access such as transportation, inconvenient appointment times, and need for childcare. Removing such barriers to access often enhances the family's engagement in the treatment process. In addition, low caseloads and flexible hours allow therapists to expend intensive and sustained effort when such is needed.

The duration and frequency of treatment sessions vary in accordance with changing circumstances, needs, and treatment progress. Sessions generally occur less frequently when evidence indicates family members and others in the natural ecology are increasingly able to manage the youth's problems effectively. For example, a therapist may stay with a family from the end of the school day until bedtime every day when first helping a caregiver and adolescent decrease volatile parent–child conflicts that occur during that time. The therapist would decrease the frequency of visits and length of stay when evidence indicates the conflicts occur less frequently, are less intense, and can be managed by the parent, child, and other family members.

Moreover, the home-based model of service delivery enhances the ecological validity of assessment and intervention activities. Therapists observe and try to help change behaviors where they naturally occur rather than in an artificial setting such as a clinic. Thus, intervention strategies are tailored to the specific circumstances in which they are to be implemented by family members and others in the youth's social ecology, thereby increasing the likelihood that treatment gains will be maintained after MST ends.

CONCLUSION

The nine MST principles and the MST analytic process enable therapists to understand, prioritize, and address the complex realities facing children with serious emotional disturbance and their families. The MST principles are consistent with social-ecological theory and empirical evidence regarding the etiology and treatment of behavioral and emotional problems. The analytic process specifies steps for identifying the likely causes of problems, developing interventions to address them, evaluating the impact of the interventions, identifying barriers to intervention success, and adjusting intervention strategies accordingly. As such, the analytic process is designed to stimulate "scientific thinking"—hypothesis development and testing—about the causes of and solutions to problems among therapists, caregivers, and others in the youth's ecology who implement interventions. Random acts of intervention are therefore minimized, and the likelihood of rapid treatment progress and sustainability of treatment gains is increased.

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