For Violence Prevention

BOOK SIX
Multisystemic
Therapy

Blueprints for Violence Prevention

MULTISYSTEMIC THERAPY

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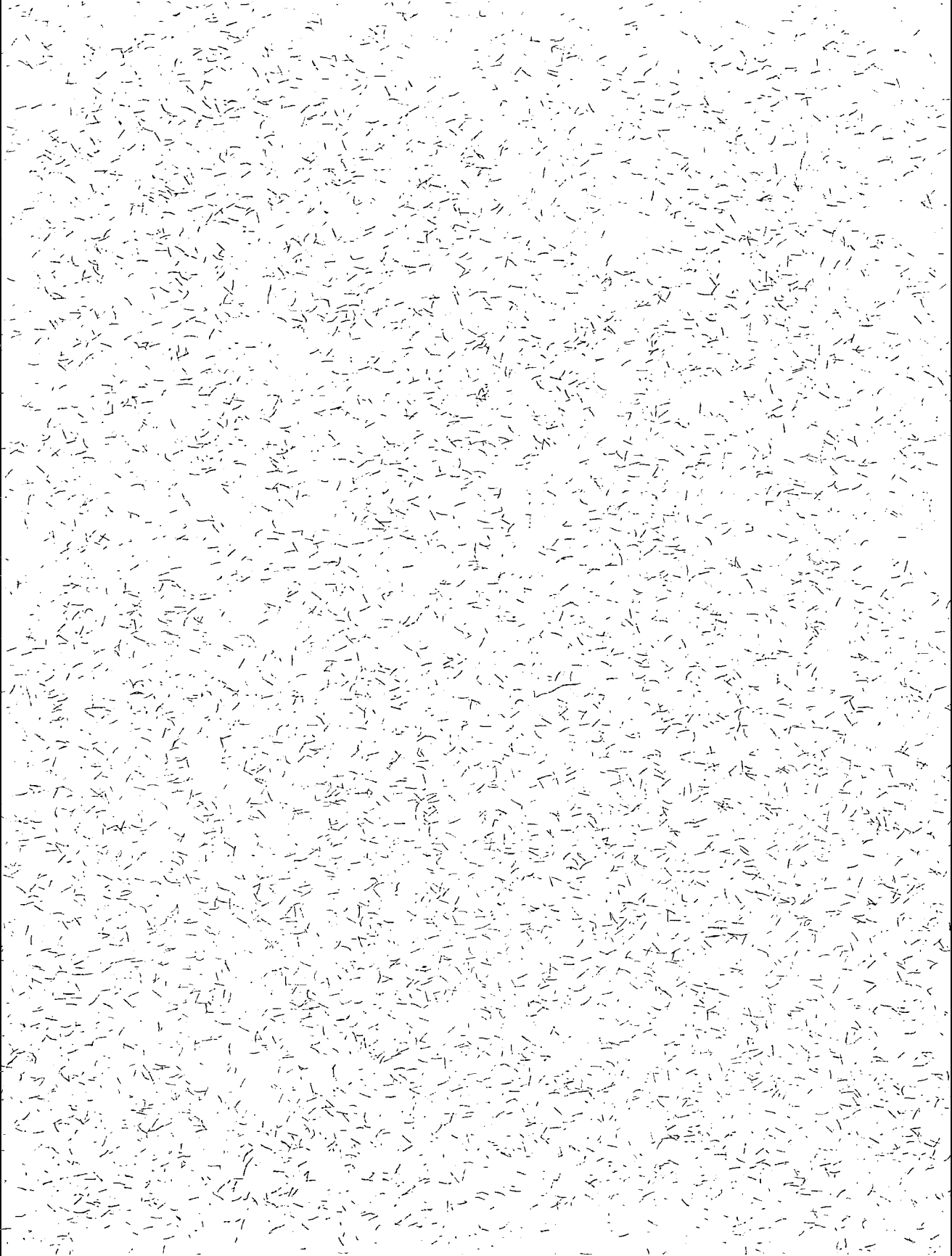

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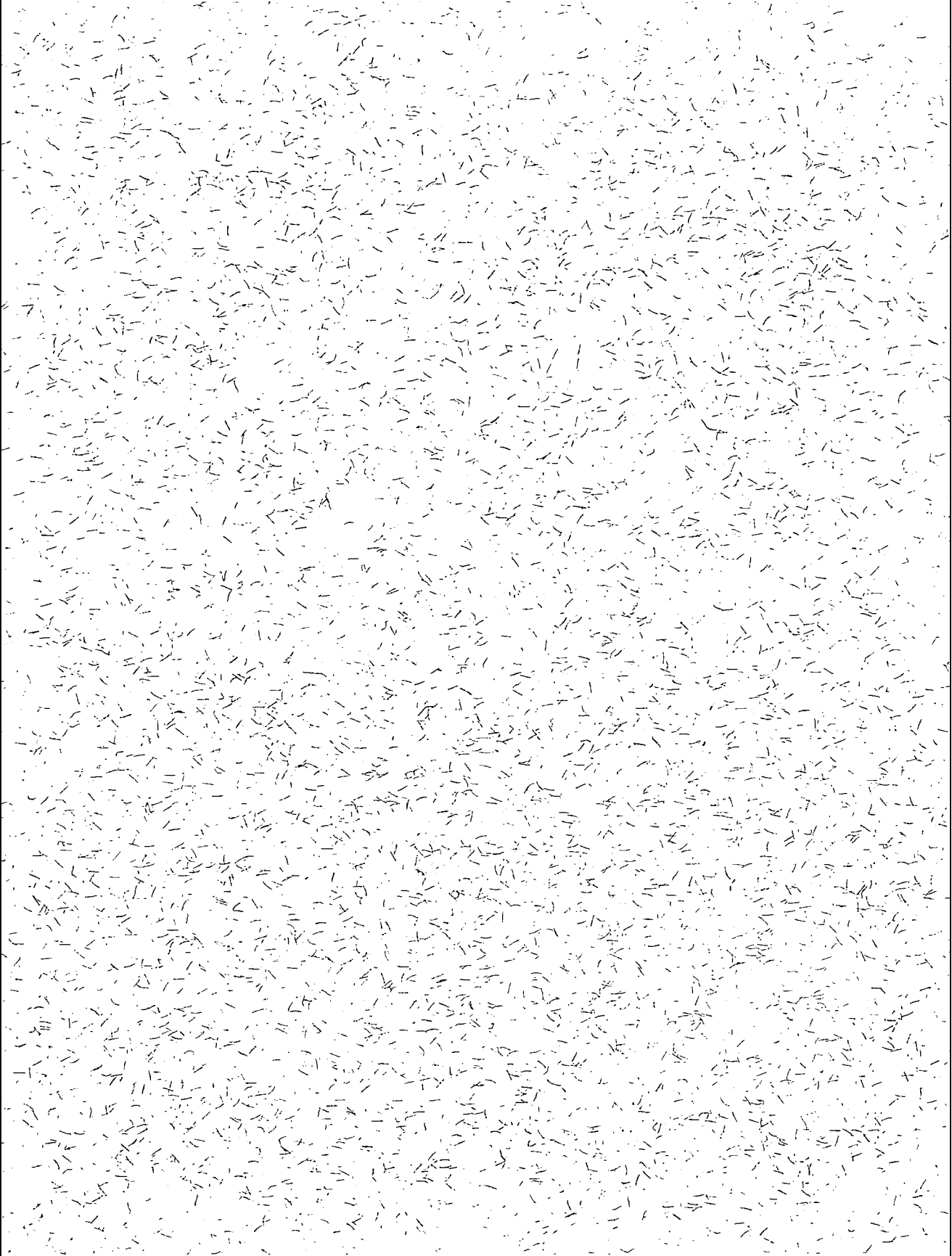

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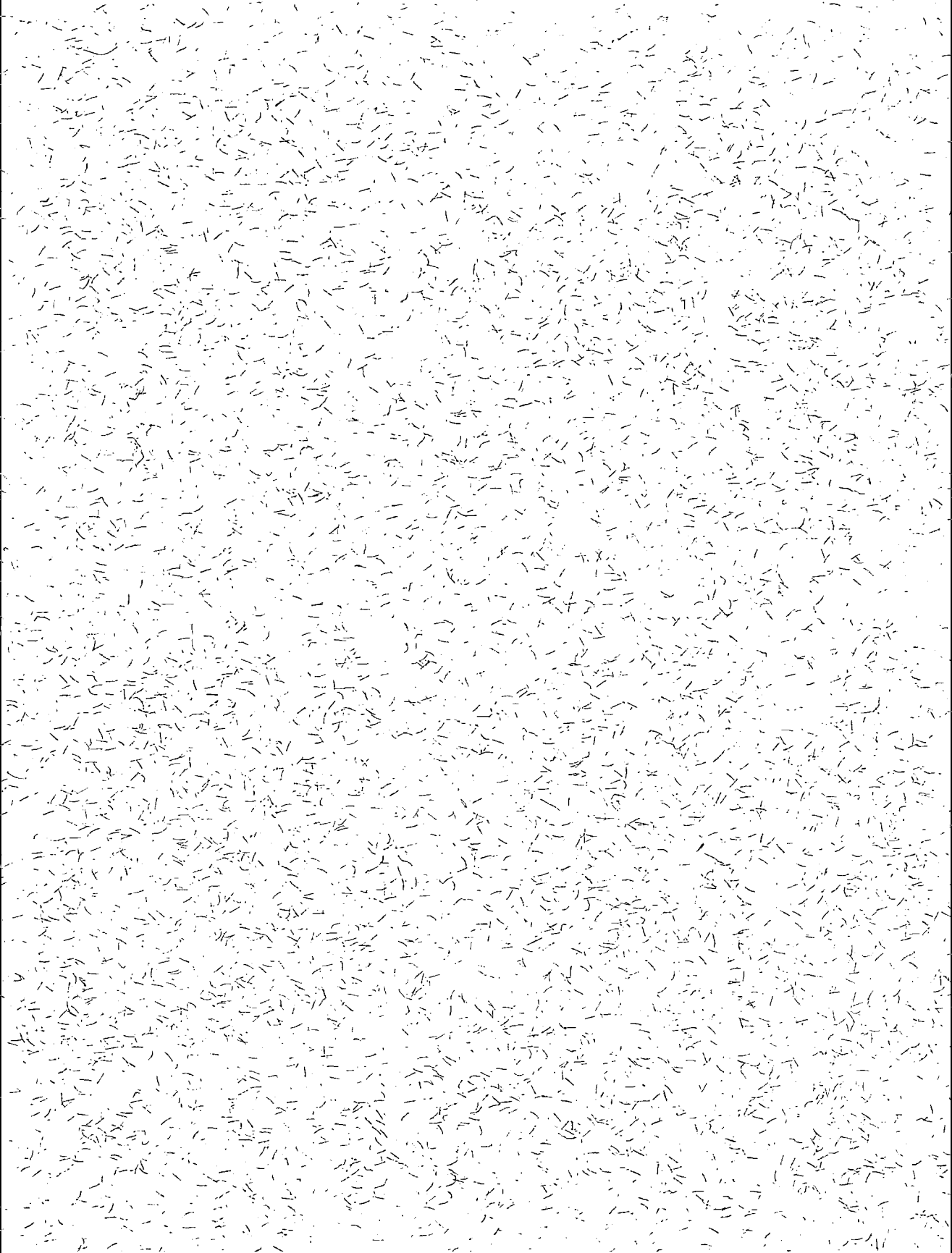


EDITOR'S INTRODUCTION

Introduction

The demand for effective violence and crime prevention programs has never been greater. As our communities struggle to deal with the violence epidemic of the 1990s in which we have seen the juvenile homicide rate double and arrests for serious violent crimes increase 50 percent between 1984 and 1994,[1] the search for some effective ways to prevent this carnage and self-destructiveness has become a top national priority. To date, most of the resources committed to the prevention and control of youth violence, at both the national and local levels, has been invested in untested programs based on questionable assumptions and delivered with little consistency or quality control. Further, the vast majority of these programs are not being evaluated. This means we will never know which (if any) of them have had some significant deterrent effect; we will learn nothing from our investment in these programs to improve our understanding of the causes of violence or to guide our future efforts to deter violence; and there will be no real accountability for the expenditures of scarce community resources. Worse yet, some of the most popular programs have actually been demonstrated in careful scientific studies to be *ineffective,* and yet we continue to invest huge sums of money in them for largely political reasons.

What accounts for this limited investment in the evaluation of our prevention programs? First, there is little political or even program support for evaluation. Federal and state violence prevention initiatives rarely allocate additional evaluation dollars for the programs they fund. Given that the investment in such programs is relatively low, it is argued that every dollar available should go to the delivery of program services, i.e., to helping youth avoid involvement in violent or criminal behavior. Further, the cost of conducting a careful outcome evaluation is prohibitive for most individual programs, exceeding their entire annual budget in many cases. Finally, many program developers believe they know *intuitively* that their programs work, and thus they do not think a rigorous evaluation is required to demonstrate this.

Unfortunately, this view and policy is very shortsighted. When rigorous evaluations have been conducted, they often reveal that such programs are ineffective and can even make matters worse.[2] Indeed, many programs fail to even address the underlying causes of violence, involve simplistic "silver bullet" assumptions (e.g., I once had a counselor tell me there wasn't a single delinquent youth he couldn't "turn around" with an hour of individual counseling), and allocate investments of time and resources that are far too small to counter the years of exposure to negative influences of the family, neighborhood, peer group, and the media. Violent behavior is a complex behavior pattern which involves both individual dispositions and social contexts in which violence is normative and rewarded. Most violence prevention programs focus only on the individual dispositions and fail to address the reinforcements for violence in the social contexts where youth live, with the result that positive changes in the individual's behavior achieved in the treatment setting are quickly lost when the youth returns home to his or her family, neighborhood, and old friends.

Progress in our ability to effectively prevent and control violence requires evaluation. A responsible accounting to the taxpayers, private foundations, or businesses funding these programs requires that we justify these expenditures with tangible results. No respectable business or corporation would invest millions of dollars in an enterprise without checking to see if it is profitable. No reputable

physician would subject a patient to a medical treatment for which there was no evidence of its effectiveness (i.e., no clinical trials to establish its potential positive and negative effects). Our failure to provide this type of evidence has seriously undermined the public confidence in crime prevention efforts generally, and is at least partly responsible for the current public support for building more prisons and incapacitating youth—the public knows they are receiving some protection for this expenditure, even if it is temporary.

The prospects for effective prevention programs and a national prevention initiative have improved greatly during the past decade. We now have a substantial body of research on the causes and correlates of crime and violence. There is general consensus within the research community about the specific individual dispositions, contextual (family, school, neighborhood, and peer group) conditions, and interaction dynamics which lead into and out of involvement in violent behavior. These characteristics, which have been linked to the onset, continuity, and termination of violence, are commonly referred to as "risk" and "protective" factors for violence. Risk factors are those personal attributes and contextual conditions which increase the likelihood of violence. Protective factors are those which reduce the likelihood of violence, either directly or by virtue of buffering the individual from the negative effects of risk factors.[3] Programs which can alter these conditions, reducing or eliminating risk factors and facilitating protective factors, offer the most promise as violence prevention programs.

While our evaluation of these programs is still quite limited, we have succeeded in demonstrating that some of these programs are effective in deterring crime and violence. This breakthrough in prevention programming has yet to be reflected in national or state funding decisions, and is admittedly but a beginning point for developing the comprehensive set of prevention programs necessary for developing a national prevention initiative. But we are no longer in the position of having to say that "nothing works."

Ten proven programs are described in this series of ***Blueprints for Violence Prevention***. These Blueprints (which will be described later in this Editor's Introduction) are designed to be practical documents which will allow interested persons, agencies, and communities to make an informed judgment about a proven program's appropriateness for their local situation, needs, and available resources. If adopted and implemented well, a community can be reasonably assured that these programs will reduce the risks of violence and crime for their children.

Background

The violence epidemic of the 1990s produced a dramatic shift in the public's perception of the seriousness of violence. In 1982, only three percent of adults identified crime and violence as the most important problem facing this country; by August of 1994, more than half thought crime and violence was the nation's most important problem. Throughout the '90s violence has been indicated as a more serious problem than the high cost of living, unemployment, poverty and homelessness, and health care. Again, in 1994, violence (together with a lack of discipline) was identified as the "biggest problem" facing the nation's public schools.[4] Among America's high school seniors, violence is the problem these young people worry about most frequently—more than drug abuse, economic problems, poverty, race relations, or nuclear war.[5]

The critical question is, *"How will we as a society deal with this violence problem?"* Government policies at all levels reflect a punitive, legalistic approach, an approach which does have broad

public support. At both the national and state levels, there have been four major policy and program initiatives introduced as violence prevention or control strategies in the 1990s: (1) the use of judicial waivers, transferring violent juvenile offenders as young as age ten into the adult justice system for trial, sentencing, and adult prison terms; (2) legislating new gun control policies (e.g., the Brady Handgun Violence Prevention Act, 1993); (3) the creation of "boot camps" or shock incarceration programs for young offenders, in order to instill discipline and respect for authority; and (4) community policing initiatives to create police-community partnerships aimed at more efficient community problem solving in dealing with crime, violence, and drug abuse.

Two of these initiatives are purely reactive: they involve ways of responding to violent acts after they occur; two are more preventive in nature, attempting to prevent the initial occurrence of violent behavior. The primary justification for judicial waivers and boot camps is a "just desserts" philosophy, wherein youthful offenders need to be punished more severely for serious violent offenses. But there is no research evidence to suggest either strategy has any increased deterrent effect over processing these juveniles in the juvenile justice system or in traditional correctional settings. In fact, although the evidence is limited, it suggests the use of waivers and adult prisons results in longer processing time and longer pretrial detention, racial bias in the decision about which youth to transfer into the adult system, a lower probability of treatment or remediation while in custody, and an increased risk of repeated offending when released.[6] The research evidence on the effectiveness of community policing and gun control legislation is very limited and inconclusive. We have yet to determine if these strategies are effective in preventing violent behavior.

There are some genuine prevention efforts sponsored by federal and state governments, by private foundations, and by private businesses. At the federal level, the major initiative involves the Safe and Drug-Free Schools and Communities Act (1994). This act provided $630 million in federal grants during 1995 to the states to implement violence (and drug) prevention programs in and around schools. State Departments of Education and local school districts are currently developing guidelines and searching for violence prevention programs demonstrated to be effective. But there is no readily available compendium of effective programs described in sufficient detail to allow for an informed judgment about their relevance and cost for a specific local application. Under pressure to do something, schools have implemented whatever programs were readily available. As a result, most of the violence prevention programs currently being employed in the schools, e.g., conflict resolution, peer mediation, individual counseling, metal detectors, and locker searches and sweeps have either not been evaluated or the evaluations have failed to establish any significant, sustained deterrent effects.[7]

Nationally, we are investing far more resources in building and maintaining prisons than in primary prevention programs.[8] We have put more emphasis on reacting to violent offenders after the fact and investing in prisons to remove these young people from our communities, than on preventing our children from becoming violent offenders in the first place and retaining them in our communities as responsible, productive citizens. Of course, if we have no effective prevention strategies or programs, there is no choice.

This is the central issue facing the nation in 1998: *Can we prevent the onset of serious violent behavior?* If we cannot, then we have no choice but to build, fill, and maintain more prisons. Yet if we know how to prevent the onset of violence, can we mount an efficient and effective prevention

initiative? There is, in fact, considerable public support for violence prevention programming for our children and adolescents.[9] *How can we develop, promote, and sustain a violence prevention initiative in this country?*

Violence Prevention Programs—What Works?

Fortunately, we are past the "nothing has been demonstrated to work" era of program evaluation.[10] During the past five years more than a dozen scholarly reviews of delinquency, drug, and violence prevention programs have been published, all of which claim to identify programs that have been successful in deterring crime and violence.[11]

However, a careful review of these reports suggests some caution and a danger of *overstating* this claim. First, very few of these recommended programs involve reductions in violent behavior as the outcome criteria. For the most part, reductions in delinquent behavior or drug use *in general* or arrests/revocations for *any offense* have been used as the outcome criteria. This is probably not a serious threat to the claim that we have identified effective violence prevention programs, as research has established that delinquent acts, violence, and substance use are interrelated, and involvement in any one is associated with involvement in the others. Further, they have a common set of causes, and serious forms of violence typically occur later in the developmental progression, suggesting that a program that is effective in reducing earlier forms of delinquency or drug use should be effective in deterring serious violent offending.[12] Still, some caution is required, given that very few studies have actually demonstrated a deterrent or marginal deterrent effect for serious violent behavior.

Second, the methodological standards vary greatly across these reviews. A few actually score each program evaluation reviewed on its methodological rigor,[13] but for most the standards are variable and seldom made explicit. If the judgment on effectiveness were restricted to individual program evaluations employing true experimental designs and demonstrating statistically significant deterrent (or marginal deterrent) effects, the number of recommended programs would be cut by two-thirds or more. An experimental (or good quasi-experimental) design and statistically significant results should be minimum criteria for recommending program effectiveness. Further, very few of the programs recommended have been replicated at multiple sites or demonstrated that their deterrent effect has been sustained for some period of time *after* leaving the program, two additional criteria that are important. In a word, the standard for the claims of program effectiveness in these reviews is very *low*. Building a national violence prevention initiative on this collective set of recommended programs would be risky.

Blueprints for Violence Prevention

In 1996, the Center for the Study and Prevention of Violence at the University of Colorado at Boulder, working with William Woodward, Director of the Colorado Division of Criminal Justice (CDCJ), who played the primary role in securing funding from the Colorado Division of Criminal Justice, the Centers for Disease Control and Prevention, and the Pennsylvania Commission on Crime and Delinquency, initiated a project to identify ten violence prevention programs that met a very high scientific standard of program effectiveness—*programs that could provide an initial nucleus for a national violence prevention initiative.* Our objective was to identify truly outstanding programs, and to describe these interventions in a series of "Blueprints." Each Blueprint describes the

theoretical rationale for the intervention, the core components of the program as implemented, the evaluation designs and findings, and the practical experiences the program staff encountered while implementing the program at multiple sites. The Blueprints are designed to be very practical descriptions of effective programs which allow states, communities, and individual agencies to: (1) determine the appropriateness of each intervention for their state, community, or agency; (2) provide a realistic cost estimate for each intervention; (3) provide an assessment of the organizational capacity required to ensure its successful start-up and operation over time; and (4) give some indication of the potential barriers and obstacles that might be encountered when attempting to implement each type of intervention. In 1997, additional funding was obtained from the Division of Criminal Justice, allowing for the development of the ten Blueprint programs.

Blueprint Program Selection Criteria

In consultation with a distinguished Advisory Board,[14] we established the following set of evaluation standards for the selection of Blueprint programs: (1) an experimental design, (2) evidence of a statistically significant deterrent (or marginal deterrent) effect, (3) replication at multiple sites with demonstrated effects, and (4) evidence that the deterrent effect was sustained for at least one year post-treatment. This set of selection criteria establishes a very high standard, one that proved difficult to meet. But it reflects the level of confidence necessary if we are going to recommend that communities replicate these programs with reasonable assurances that they will prevent violence. Given the high standards set for program selection, the burden for communities mounting an expensive outcome evaluation to demonstrate their effectiveness is removed; this claim can be made as long as the program is implemented well. Documenting that a program is implemented well is relatively inexpensive, but critical to the claim that a program is effective.

Each of the four evaluation standards is described in more detail as follows:

1. Strong Research Design

Experimental designs with random assignment provide the greatest level of confidence in evaluation findings, and this is the type of design required to fully meet this Blueprint standard. Two other design elements are also considered essential for the judgment that the evaluation employed a strong research design: low rates of participant attrition and adequate measurement. Attrition may be indicative of problems in program implementation; it can compromise the integrity of the randomization process and the claim of experimental-control group equivalence. Measurement issues include the reliability and validity of study measures, including the outcome measure, and the quality, consistency, and timing of their administration to program participants.

2. Evidence of Significant Deterrence Effects

This is an obvious minimal criterion for claiming program effectiveness. As noted, relatively few programs have demonstrated effectiveness in reducing the onset, prevalence, or individual offending rates of *violent behavior*. We have accepted evidence of deterrent effects for delinquency (including childhood aggression and conduct disorder), drug use, and/or violence as evidence of program effectiveness. We also accepted program evaluations using arrests as the outcome measure. Evidence for a deterrent effect on violent behavior is certainly preferable, and programs demonstrating this effect were given preference in selection, all other criteria being equal.

Both primary and secondary prevention effects, i.e., reductions in the *onset* of violence, delinquency, or drug use compared to control groups and pre-post reductions in these *offending rates,* could meet this criterion. Demonstrated changes in the targeted risk and protective factors, in the absence of any evidence of changes in delinquency, drug use, or violence, was not considered adequate to meet this criterion.

3. Multiple Site Replication

Replication is an important element in establishing program effectiveness. It establishes the robustness of the program and its prevention effects; its exportability to new sites. This criterion is particularly relevant for selecting Blueprint programs for a national prevention initiative where it is no longer possible for a single program designer to maintain personal control over the implementation of his or her program. Adequate procedures for monitoring the quality of implementation must be in place, and this can be established only through actual experience with replications.

4. Sustained Effects

Many programs have demonstrated initial success in deterring delinquency, drug use, and violence during the course of treatment or over the period during which the intervention was being delivered and reinforcements controlled. This selection criterion requires that these short-term effects be sustained beyond treatment or participation in the designed intervention. For example, if a preschool program designed to offset the negative effects of poverty on school performance (which in turn effects school bonding, present and future opportunities, and later peer group choice/selection, which in turn predicts delinquency) demonstrates its effectiveness when children start school, but these effects are quickly lost during the first two to three years of school, there is little reason to expect this program will prevent the onset of violence during the junior or senior high school years when the risk of onset is at its peak. Unfortunately, there is clear evidence that the deterrent effects of most prevention programs deteriorate quickly once youth leave the program and return to their original neighborhoods, families, and peer groups or gangs.

Other Criteria

In the selection of model programs, we considered several additional factors. We looked for evidence that change in the targeted risk or protective factor(s) mediated the change in violent behavior. This evidence clearly strengthens the claim that participation in the program was responsible for the change in violent behavior, and it contributes to our theoretical understanding of the causal processes involved. We were surprised to discover that many programs reporting significant deterrent effects (main effects) had not collected the necessary data to do this analysis or, if they had the necessary data, had not reported on this analysis.

We also looked for cost data for each program as this is a critical element in any decision to replicate one of these Blueprint programs, and we wanted to include this information in each Blueprint. Evaluation reports, particularly those found in the professional journals, rarely report program costs. Even when asked to provide this information, many programs are unable (or unwilling) to provide the data. In many cases program costs are difficult to separate from research and evaluation costs. Further, when these data are available, they typically involve conditions or circumstances unique to a particular site and are difficult to generalize. There are no standardized cost criteria, and it is very

difficult to compare costs across programs. It is even more difficult to obtain reliable cost-benefit estimates. A few programs did report both program costs and cost-benefit estimates. There have been two recent cost-benefit studies involving Blueprint programs which suggest that these programs are cost-effective, but this information is simply not available for most programs.[15]

Finally, we considered each program's willingness to work with the Center in developing a Blueprint for national dissemination and the program's organizational capacity to provide technical assistance and monitoring of program implementation on the scale that would be required if the program was selected as a Blueprint program and became part of a national violence prevention initiative.

Programs must be willing to work with the Center in the development of the Blueprint. This involves a rigorous review of program evaluations with questions about details not covered in the available publications; the preparation of a draft Blueprint document following a standardized outline; attending a conference with program staff, staff from replication sites, and Center staff to review the draft document; and making revisions to the document as requested by Center staff. Each Blueprint is further reviewed at a second conference in which potential users—community development groups, prevention program staffs, agency heads, legislators, and private foundations—"field test" the document. They read each Blueprint document carefully and report on any difficulties in understanding what the program requires, and on what additional information they would like to have if they were making a decision to replicate the program. Based on this second conference, final revisions are made to the Blueprint document and it is sent back to the Program designer for final approval.

In addition, the Center will be offering technical assistance to sites interested in replicating a Blueprint program and will be monitoring the quality of program implementation at these sites (see the "Technical Assistance and Monitoring of Blueprint Replications" section below). This requires that each selected program work with the Center in screening potential replication sites, certifying persons qualified to deliver technical assistance for their program, delivering high quality technical assistance, and cooperating with the Center's monitoring and evaluation of the technical assistance delivered and the quality of implementation achieved at each replication site. Some programs are already organized and equipped to do this, with formal written guidelines for implementation, training manuals, instruments for monitoring implementation quality, and a staff trained to provide technical assistance; others have few or none of these resources or capabilities. Participation in the Blueprint project clearly involves a substantial demand on the programs. All ten programs selected have agreed to participate as a Blueprint program.

Blueprint Programs: An Overview

We began our search for Blueprint programs by examining the set of programs recommended in scholarly reviews. We have since expanded our search to a much broader set of programs and continue to look for programs that meet the selection standards set forth previously. To date, we have reviewed more than 450 delinquency, drug, and violence prevention programs. As noted, ten programs have been selected thus far, based upon a review and recommendation of the Advisory Board. These programs are identified in Table A.

The standard we have set for program selection is very high. Not all of the ten programs selected meet all of the four individual standards, but as a group they come the closest to meeting these standards that we could find. As indicated in Table A, with one exception they have all demonstrated

Table A. Blueprint Programs

PROJECT	TARGET POPULATION	EVID. OF EFFECT*	MULTI-SITE	COST/ BENEFIT	SUSTAINED EFFECT	GENERA-LIZABLE	TYPE OF PROGRAM
Nurse Home Visitation (Dr. David Olds)	Pregnant women at risk of preterm delivery and low birthweight	X	X	X	through age 15	X	Prenatal and postpartum nurse home visitation
Bullying Prevention Program (Dr. Dan Olweus)	Primary and secondary school children (universal intervention)	X	England, Canada; South Carolina		2 years post-treatment	Generality to U.S. unk.; initial S.C. results positive	School-based program to reduce victim/bully problems
Promoting Alternative Thinking Strategies (Dr. M. Greenberg and Dr. C. Kusche)	Primary school children (universal intervention)	X	X		2 years post-treatment	X	School-based program to promote emotional competence
Big Brothers Big Sisters of America (Ms. Dagmar McGill)	Youth 6 to 18 years of age from single-parent homes	X	Multisite single design, 8 sites			X	Mentoring program
Quantum Opportunities (Mr. Ben Lattimore)	At-risk, disadvantaged, high school youth	X	Multisite single design, 5 sites; replic. by D.O.L.	X	through age 20		Educational incentives
Multisystemic Therapy (Dr. Scott Henggeler)	Serious, violent, or substance abusing juvenile offenders and their families	X	X	X	4 years post-treatment	X	Family ecological systems approach
Functional Family Therapy (Dr. Jim Alexander)	Youth at risk for institutionalization	X	X	X	30 months posttreatment	X	Behavioral systems family therapy
Midwestern Prevention Project (Dr. Mary Ann Pentz)	Middle/junior school (6th/7th grade)	X	X		Through high school	X	Drug use prevention (social resistance skills); with parent, media, and community components
Life Skills Training (Dr. Gilbert Botvin)	Middle/junior school (6th/7th grade)	X	X		Through high school	X	Drug use prevention (social skills and general life skills training)
Multidimensional Treatment Foster Care (Dr. Paricia Chamberlain)	Serious and chronic delinquents	X	X	X	1 year post-treatment		Foster care with treatment

significant deterrent effects with experimental designs using random assignment to experimental and control groups (the Bullying Prevention Program involved a quasi-experimental design). All involve multiple sites and thus have information on replications and implementation quality, but not all replication sites have been evaluated as independent sites (e.g., the Big Brothers Big Sisters mentoring program was implemented at eight sites, but the evaluation was a single evaluation involving all eight sites in a single aggregated analysis). Again, with one exception (Big Brothers Big Sisters), all the selected programs have demonstrated sustained effects for at least one year post-treatment.

The first two Blueprints were published and disseminated in the fall of 1997: the Big Brothers Big Sisters Program and the Midwestern Prevention Project. The other eight Blueprints will be published during 1998—four in the spring, two in the summer, and the final two in the fall.

Technical Assistance and Monitoring of Blueprint Replications[16]

The Blueprint project includes plans for a technical assistance and monitoring component to assist interested communities, agencies, and organizations in their efforts to implement one or more of the Blueprint programs. *Communities should not attempt to replicate a Blueprint program without technical assistance from the program designers.* If funded, technical assistance for replication and program monitoring will be available through the Center for the Study and Prevention of Violence at a very modest cost. Technical assistance can also be obtained directly from the Blueprint programs with costs for consulting fees, travel, and manuals negotiated directly with each program.

There are three common problems encountered by communities when attempting to develop and implement violence prevention interventions. First, there is a need to identify the specific risk and protective factors to be addressed by the intervention and the most appropriate points of intervention to address these conditions. In some instances, communities have already completed a risk assessment and know their communities' major risk factors and in which context to best initiate an intervention. In other cases this has not been done and the community may require some assistance in completing this task. We anticipate working with communities and agencies to help them evaluate their needs and resources in order to select an appropriate Blueprint program to implement. This may involve some initial on-site work assisting the community in completing some type of risk assessment as a preparatory step to selecting a specific Blueprint program for implementation.

Second, assuming the community has identified the risk and protective factors they want to address, a critical problem is in locating prevention interventions which are *appropriate* to address these risk factors and making an informed decision about which one(s) to implement. Communities often become lost in the maze of programs claiming they are effective in changing identified risk factors and deterring violence. More often, they are faced with particular interest groups pushing their own programs or an individual on their advisory board recommending a pet project, with no factual information or evidence available to provide some rational comparison of available options. Communities often need assistance in making an informed selection of programs to implement.

Third, there are increasingly strong pressures from funders, whether the U.S. Congress, state legislatures, federal or state agencies, or private foundations and businesses, for accountability. The current trend is toward requiring *all* programs to be monitored and evaluated. This places a tremendous burden on most programs which do not have the financial resources or expertise to conduct a

meaningful evaluation. A rigorous outcome evaluation typically would cost more than the annual operating budget of most prevention programs; the cumulative evaluations of our Blueprint programs, for example, average more than a million dollars each. The selection of a Blueprint program eliminates the need for an outcome evaluation, at least for an initial four or five years.[17] Because these programs have already been rigorously evaluated, the critical issue for a Blueprint program is the *quality of the implementation*; if the program is implemented well, we can assume it is effective. To ensure a quality implementation, technical assistance and monitoring of the implementation (a process evaluation) are essential.

Limitations

Blueprint programs are presented as complete programs as it is the *program* that has been evaluated and demonstrated to work. Ideally, we would like to be able to present specific intervention components, e.g., academic tutoring, mentoring of at-risk youth, conflict resolution training, work experience, parent effectiveness training, etc., as proven intervention strategies based upon evaluations of many different programs using these components. We do not yet have the research evidence to support a claim that specific components are effective for specific populations under some specific set of conditions. Most of the Blueprint programs (and prevention programs generally) involve multiple components, and their evaluations do not establish the independent effects of each separate component, but only the combination of components as a single "package." It is the "package" which has been demonstrated to work for specific populations under given conditions. The claim that one is using an intervention that has been demonstrated to work applies only if the entire Blueprint program, as designed, implemented, and evaluated, is being replicated; this claim is not warranted if only some specific subcomponent is being implemented or if a similar intervention strategy is being used, but with different staff training, or different populations of at-risk youth, or some different combination of components. It is for this reason that we recommend that communities desiring to replicate one of the Blueprint programs contact this program or the Center for the Study and Prevention of Violence for technical assistance.

Our knowledge about these programs and the specific conditions under which they are effective will certainly change over time. Already there are extensions and modifications to these programs which are being implemented and carefully evaluated. Over the next three to five years it may be necessary to revise our Blueprint of a selected program. Those modifications currently underway typically involve new at-risk populations, changes in the delivery systems, changes in staff selection criteria and training, and in the quantity or intensity of the intervention delivered. Many of these changes are designed to reduce costs and increase the inclusiveness and generality of the program. It is possible that additional evaluations may undermine the claim that a particular Blueprint program is effective, however it is far more likely they will improve our understanding of the range of conditions and circumstances under which these programs are effective. In any event, we will continue to monitor the evaluations of these programs and make necessary revisions to their Blueprints. Most of these evaluations are funded at the federal level and they will provide ongoing evidence of the effectiveness of Blueprint programs, supporting (or not) the continued use of these programs without the need for local outcome evaluations.

The cost-benefit data presented in the Blueprints are those estimated by the respective programs. We have not undertaken an independent validation of these estimates and are not certifying their

accuracy. Because they involve different comparison groups, different cost assumptions, and considerable local variation in costs for specific services, it is difficult to compare this aspect of one Blueprint program with another. Potential users should evaluate these claims carefully. We believe these cost-benefit estimates are useful, but they are not the most important consideration in selecting a violence prevention program or intervention.

It is important to note that the *size* of the deterrent effects of these Blueprint programs is modest. There are no "silver bullets," no programs that prevent the onset of violence for all youth participating in the intervention. Good prevention programs reduce the rates of violence by 30-40 percent.[18] We have included a section in each Blueprint presenting the evaluation results so that potential users can have some idea of how strong the program effect is likely to be and can prepare their communities for a realistic set of expectations. It is important that we not oversell violence prevention programs; it is also the case that programs with a 30 percent reduction in violence can have a fairly dramatic effect if sustained over a long period of time.

Finally, we are not recommending that communities invest all of their available resources in Blueprint programs. We need to develop and evaluate new programs to expand our knowledge of what works and to build an extensive repertoire of programs that work if we are ever to mount a comprehensive prevention initiative in this country. At the same time, given the costs of evaluating programs, it makes sense for communities to build their portfolio of programs around interventions that have been demonstrated to work, and to limit their investment in new programs to those they can evaluate carefully. Our Blueprint series is designed to help communities adopt this strategy.

Summary

As we approach the 21st Century, the nation is at a critical crossroad: Will we continue to react to youth violence after the fact, becoming increasingly punitive and locking more and more of our children in adult prisons? Or will we bring a more healthy balance to our justice system by designing and implementing an effective violence prevention initiative as a part of our overall approach to the violence problem? We do have a choice.

To mount an effective national violence prevention initiative in this country, we need to find and/or create effective violence prevention programs and implement them with integrity so that significant reductions in violent offending can be realized. We have identified a core set of programs that meet very high scientific standards for being effective prevention programs. These programs could constitute a core set of programs in a national violence prevention initiative. What remains is to ensure that communities know about these programs and, should they desire to replicate them, have assistance in implementing them as designed. That is our objective in presenting this series of *Blueprints for Violence Prevention*. They constitute a complete package of both programs and technical assistance made available to states, communities, schools, and local agencies attempting to address the problems of violence, crime, and substance abuse in their communities.

Delbert S. Elliot
Series Editor

ENDNOTES

1. Cook and Laub, 1997; Fox, 1996; and Snyder and Sickmund, 1995 for an analysis of trends in juvenile arrests for violent crimes.

2. Lipsey, 1992, 1997; Sherman et al., 1997; and Tolan and Guerra, 1994.

3. The technical definition of a protective factor is an attribute or condition that buffers one from the expected effect of one or more risk factors, but many use the term more generally to refer to anything that reduces the likelihood of violence, whether that effect is direct or indirect.

4. Maguire and Pastore, 1996.

5. Johnston et al., 1996.

6. Fagan, 1996; Frazier, Bishop and Lanza-Kaduce, 1997; Lipsey, 1997; MacKenzie et al., 1992; Podkopaz and Feld, 1996; and Shaw and McKenzie, 1992.

7. Gottfredson, 1997; Lipsey, 1992; Sherman et al., 1997; Tolan and Guerra, 1994; and Webster, 1993.

8. Gottfredson, 1997.

9. Gallop, 1994.

10. Lipton, Martinson, and Wilks, 1975; Martinson, 1974; Sechrest et al., 1979; and Wright and Dixon, 1977.

11. Davis and Tolan, 1993; Dusenbury and Falco, 1995; Farrington, 1994; Greenwood et al., 1996; Hawkins, Catalano and Miller, 1992; Howell, 1995; Howell et al., 1995; Krisberg and Onek, 1994; Lipsey and Wilson, 1997; Loeber and Farrington, 1997; McGuire, 1995; National Research Council, 1993; Office of Juvenile Justice and Delinquency Prevention, 1995; Powell and Hawkins, 1996; Sherman et al., 1997; and Tolan and Guerra, 1994.

12. Elliott, 1993, 1994; Jessor and Jessor, 1977; Kandel et al., 1986; Osgood et al., 1988; and White et al., 1985.

13. Gottfredson, 1997; Lipsey, 1992; Osgood et al., 1988; and Sherman et al., 1997.

14. Advisory Board members included: Denise Gottfredson, University of Maryland; Mark Lipsey, Vanderbilt University; Hope Hill, Howard University; Peter Greenwood, the Rand Corporation; and Patrick Tolan, University of Illinois.

15. Greenwood, Model, Rydell, and Chiesa, 1996; Washington State Institute for Public Policy, 1998.

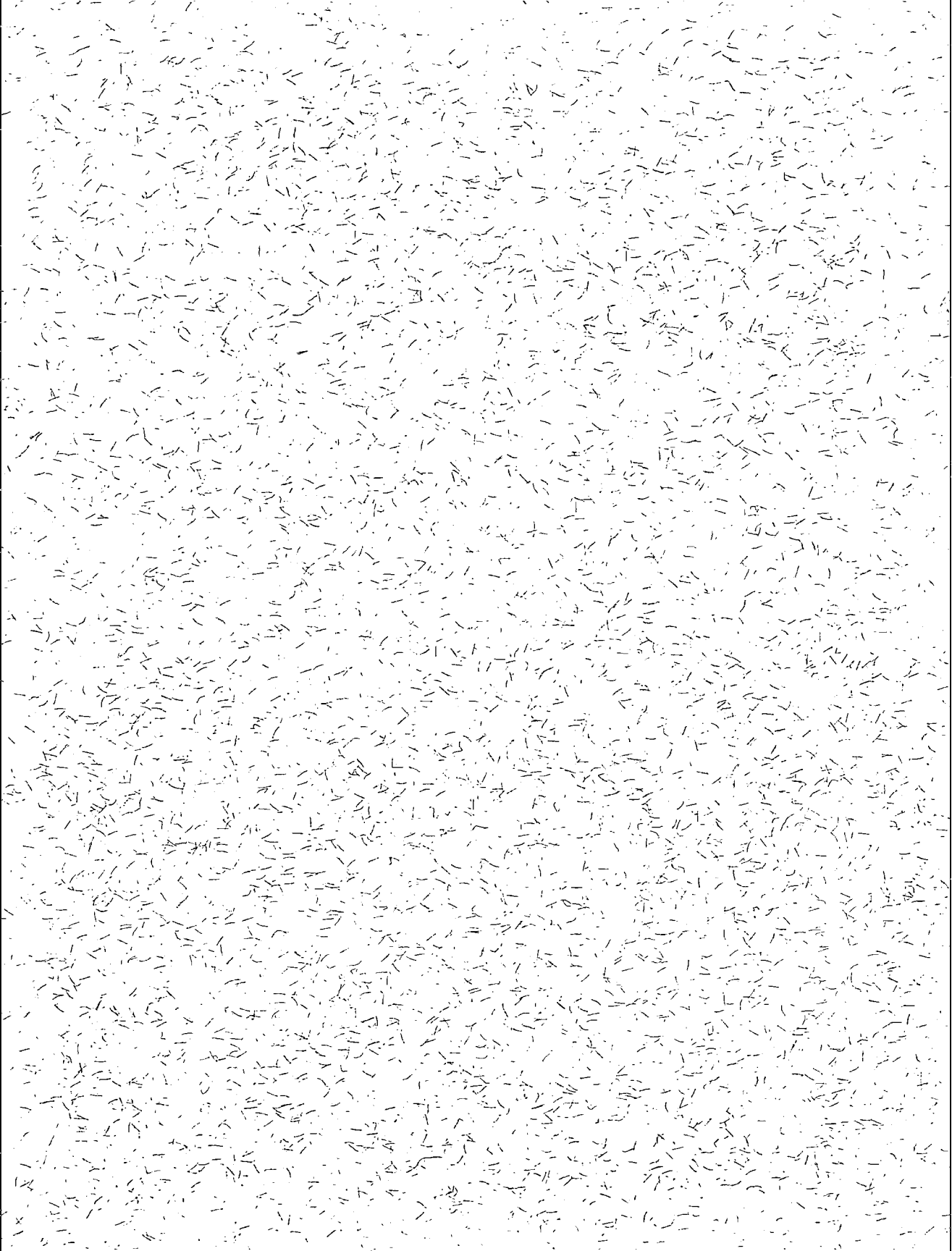
16. The Center has submitted a proposal to the Office of Juvenile Justice and Delinquency Prevention that would provide technical assistance and evaluation of program implementation for 50 replications of Blueprint programs.

17. At some point it will be necessary to reassess each Blueprint program to ensure that it continues to demonstrate deterrent effects and to test its generalizability to other populations and community conditions. In many cases, this will be done at the national level with federal support for large scale evaluations. For example, the U.S. Department of Labor and the Ford Foundation are currently funding seven Quantum Opportunity Programs with outcome evaluations; and the Office of Juvenile Justice and Delinquency Prevention is funding several Big Brothers Big Sisters Programs with evaluations. Local agencies replicating these Blueprint programs may never have to conduct rigorous outcome evaluations, but some continuing outcome evaluations at some level (national or local) is essential.

18. See Lipsey, 1992, 1997, for a review of issues and problems in estimating effect sizes and the range of effect sizes observed for delinquency prevention programs.

Blueprints

Model Program Descriptions



MODEL PROGRAM DESCRIPTIONS

Prenatal and Infancy Home Visitation by Nurses

Nurse home visitation is a program that sends nurses to the homes of pregnant women who are predisposed to infant health and developmental problems (i.e., at risk of preterm delivery and low-birth weight children). The goal of the program is to improve parent and child outcomes. Home visiting promotes the physical, cognitive, and social-emotional development of the children, and provides general support as well as instructive parenting skills to the parents. Treatment begins during pregnancy, with an average of eight visits for about 1 hour and 15 minutes, and continues to 24 months postpartum with visits diminishing in frequency to approximately every six weeks. Screenings and transportation to local clinics and offices are also offered as a part of treatment. Nurse home visiting has had some positive outcomes on obstetrical health, psychosocial functioning, and other health-related behaviors (especially reductions in smoking). Child abuse and neglect was lower and the developmental quotients of children at 12 and 24 months were higher in the treatment group than in the control group for poor, unmarried teens. Follow-up at 15-years postpartum showed significant enduring effects on child abuse and neglect, completed family size, welfare dependence, behavior problems due to substance abuse, and criminal behavior on the part of low income, unmarried mothers. Positive program effects through the child's second birthday have been replicated in a major urban area.

Bullying Prevention Program

The anti-bullying program has as its major goal the reduction of victim/bully problems among primary and secondary school children. It aims to increase awareness of the problem and knowledge about it, to achieve active involvement on the part of teachers and parents, to develop clear rules against bullying behavior, and to provide support and protection for the victims of bullying. Intervention occurs at the school level, class level, and individual level. In Bergen, Norway, the frequency of bully/victim problems decreased by 50 percent or more in the two years following the campaign. These results applied to both boys and girls and to students across all grades studied. In addition, school climate improved, and antisocial behavior in general such as theft, vandalism, and truancy showed a drop during these years.

Promoting Alternative Thinking Strategies

Promoting Alternative Thinking Strategies (PATHS) is a school-based intervention designed to promote emotional competence, including the expression, understanding, and regulation of emotions. The PATHS program is a universal intervention, implemented by teachers (after a three-day training workshop) with entire classrooms of children from kindergarten through fifth grades. The curriculum includes a feelings unit (with a self-control and initial problem-solving skills program within that unit) and an interpersonal cognitive problem solving unit. The generalization of those learned skills to children's everyday lives is a component of each major unit. An additional unit on self-control and readiness is provided for special needs classrooms. Studies have compared classrooms receiving the intervention to matched controls using populations of normally-adjusted students, behaviorally at-risk students, and deaf students. Program effects included teacher-, child sociometric-, and child self-report ratings of behavior change on such constructs as hyperactivity, peer aggression, and conduct problems.

Big Brothers Big Sisters of America

Big Brothers Big Sisters of America (BBBSA) is the oldest and best known mentoring program in the United States. Local programs are autonomously funded affiliates of BBBSA, with the national office in Philadelphia. The more than 500 affiliates maintain over 100,000 one-to-one relationships between a volunteer adult and a youth. Matches are carefully made using established procedures and criteria. The program serves children 6 to 18 years of age, with the largest portion being those 10 to 14 years of age. A significant number of the children are from disadvantaged single-parent households. A mentor meets with his/her youth partner at least three times a month for three to five hours. The visits encourage the development of a caring relationship between the matched pair. An 18 month study of eight BBBS affiliates found that the youth in the mentoring program, compared to a control group who were on a waiting list for a match, were less likely to start using drugs and alcohol, less likely to hit someone, had improved school attendance, attitudes and performance, and had improved peer and family relationships.

Quantum Opportunities

The Quantum Opportunities Program (QOP) provides education, development, and service activities, coupled with a sustained relationship with a peer group and a caring adult, over the four years of high school for small groups of disadvantaged teens. The goal of the program is to help high risk youth from poor families and neighborhoods to graduate from high school and attend college. The program includes (1) 250 hours per year of self-paced and competency-based basic skills, taught outside of regular school hours; (2) 250 hours per year of development opportunities, including cultural enrichment and personal development; and (3) 250 hours per year of service opportunities to their communities to help develop the prerequisite work skills. Financial incentives are offered to increase participation, completion, and long range planning. Results from the pilot test of this program indicated that QOP participants, compared to the control group, were less likely to be arrested during the juvenile years, were more likely to have graduated from high school, to be enrolled in higher education or training, planning to complete four years of college, and less likely to become a teen parent.

Multisystemic Therapy

Multisystemic Therapy (MST) views individuals as being nested within a complex of interconnected systems that encompass individual, family, and extrafamilial (peer, school, neighborhood) factors. Behavior problems can be maintained by problematic transactions within or between any one or a combination of these systems. MST targets the specific factors in each youth's and family's ecology (family, peer, school, neighborhood, support network) that are contributing to antisocial behavior. MST interventions are pragmatic, goal oriented, and emphasize the development of family strengths. The overriding purpose of MST is to help parents to deal effectively with their youth's behavior problems, including disengagement from deviant peers and poor school performance. To accomplish the goal of family empowerment, MST also addresses identified barriers to effective parenting (e.g., parental drug abuse, parental mental health problems) and helps family members to build an indigenous social support network (e.g., with friends, extended family, neighborhoods, church members). To increase family collaboration and treatment generalization, MST is typically provided in the home, school, and other community locations by master's level counselors with low caseloads and 24 hours/day, seven days/week availability. The average duration of treatment is about four months, which includes approximately 50 hours of face-to-face

therapist-family contact. MST has been demonstrated as an effective treatment for decreasing the antisocial behavior of violent and chronic juvenile offenders at a cost savings—that is, reducing long-term rates of rearrest and out-of-home placement. Moreover, families receiving MST have shown extensive improvements in family functioning.

Functional Family Therapy

Functional Family Therapy (FFT) is a short term, easily trainable, well documented program which has been applied successfully to a wide range of problem youth and their families in various contexts (e.g., rural, urban, multicultural, international) and treatment systems (e.g., clinics, home-based programs, juvenile courts, independent providers, federally funded clinical trials). Success has been demonstrated and replicated for over 25 years with a wide range of interventionists, including paraprofessionals and trainees representing the various professional degrees (e.g., B.S.W., M.S.W., Ph.D., M.D., R.N., M.F.T.). The program involves specific phases and techniques designed to engage and motivate youth and families, and especially deal with the intense negative affect (hopelessness, anger) that prevents change. Additional phases and techniques then change youth and family communication, interaction, and problem solving, then help families better deal with and utilize outside system resources. Controlled comparison studies with follow-up periods of one, three, and even five years have demonstrated significant and long-term reductions in youth re-offending and sibling entry into high-risk behaviors. Comparative cost figures demonstrate very large reductions in daily program costs compared to other treatment programs.

Midwestern Prevention Project

The Midwestern Prevention Project is a comprehensive population-based drug abuse (cigarettes, alcohol, and marijuana) prevention program that has operated in two major Midwestern SMSAs, Kansas City and Indianapolis, where it has been known locally as Project STAR (Students Taught Awareness and Resistance) and I-STAR, respectively. The goal of the program is to decrease the rates of onset and prevalence of drug use in young adolescents (ages 10-15), and to decrease drug use among parents and other residents of the two communities. The program consists of five intervention strategies designed to combat the community influences on drug use: mass media, school, parent, community organization, and health policy change. The components focus on promoting drug use resistance and counteraction skills by adolescents (direct skills training), prevention practices and support of adolescent prevention practices by parents and other adults (indirect skills training), and dissemination and support of non-drug use social norms and expectations in the community (environmental support). This program has been effective at reducing alcohol, cigarette, and marijuana use among young adolescents, with some effects maintained up to age 23.

Life Skills Training

Life Skills Training is a drug use primary prevention program (cigarettes, alcohol, and marijuana), which provides general life skills training and social resistance skills training to junior high/middle (6th or 7th grade) school students. The curriculum includes 15 sessions taught in school by regular classroom teachers with booster sessions provided in year two (10 class sessions) and year three (five class sessions). The three basic components of the program include: (1) Personal Self-Management Skills (e.g., decision-making and problem-solving, self-control skills for coping with anxiety, and self-improvement skills); (2)

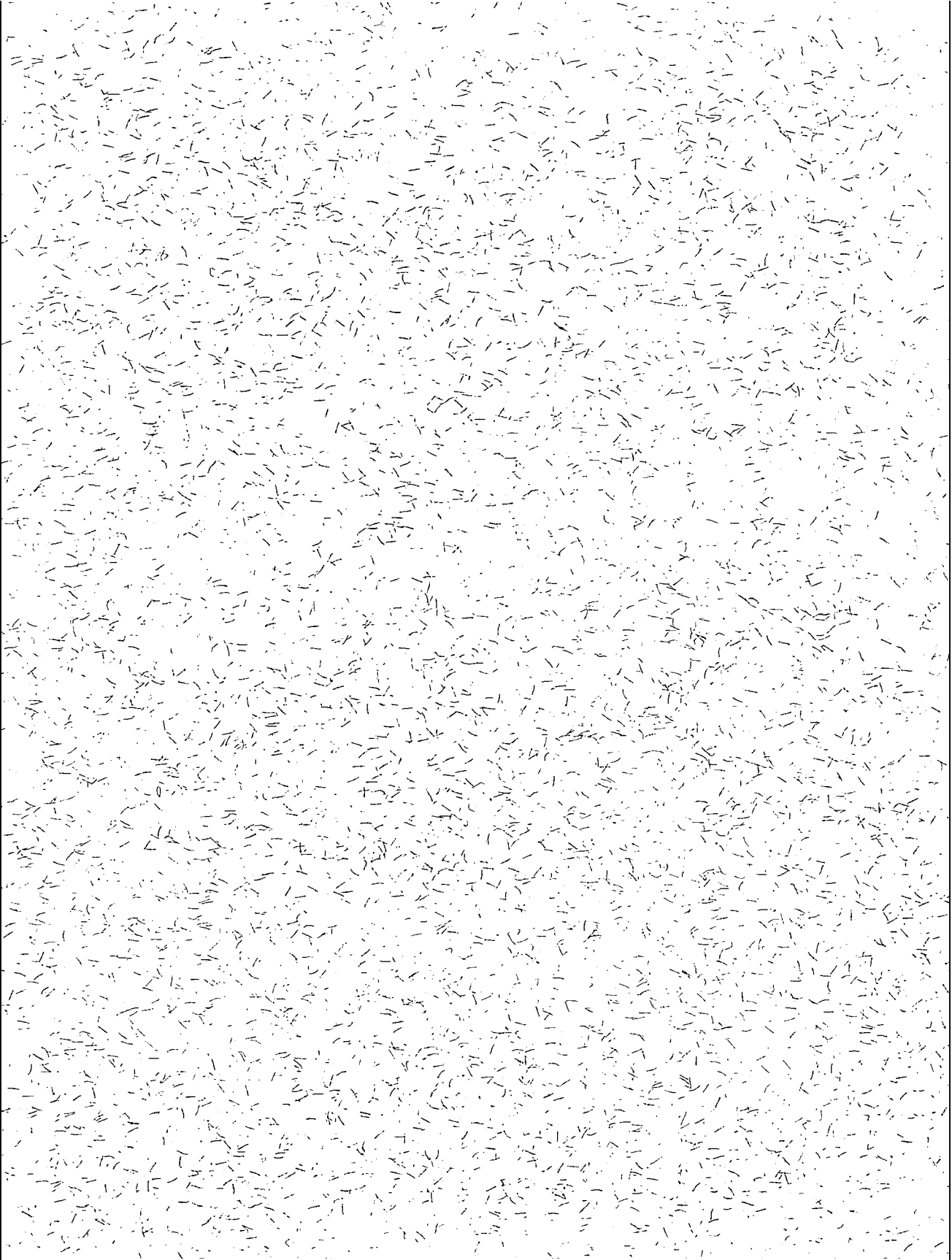
Social Skills (e.g. communication and general social skills); and (3) Drug-Related Information and Skills designed to impact on knowledge and attitudes concerning drug use, normative expectations, and skills for resisting drug use influences from the media and peers. Life Skills Training has been effective at reducing alcohol, cigarette, and marijuana use among young adolescents. The effects for tobacco and heavy alcohol use have been sustained through the end of high school.

Multidimensional Treatment Foster Care

Social learning-based Multidimensional Treatment Foster Care (MTFC) is a cost effective alternative to residential treatment for adolescents who have problems with chronic delinquency and antisocial behavior. Community families are recruited, trained, and closely supervised to provide MTFC placements, treatment, and supervision to participating adolescents. MTFC parent training emphasizes behavior management methods to provide youth with a structured and therapeutic living environment. After completing a preservice training, MTFC parents attend a weekly group meeting run by a program case manager where ongoing supervision is provided. Supervision and support is also given to MTFC parents during daily telephone calls to check on youths' progress. Family therapy is provided for the youths' biological (or adoptive) families. The parents are taught to use the structured system that is being used in the MTFC home. The effectiveness of the MTFC model has been evaluated, and MTFC youth had significantly fewer arrests during a 12-month follow-up than a control group of youth who participated in residential group care programs. The MTFC model has also been shown to be effective for children and adolescents leaving state mental hospital settings.

Blueprints

Program Overview



MULTISYSTEMIC THERAPY

Program Overview

Multisystemic Therapy (MST) is an intensive family- and community-based treatment that addresses the multiple determinants of serious antisocial behavior in juvenile offenders. The multisystemic approach views individuals as being nested within a complex network of interconnected systems that encompass individual, family, and extrafamilial (peer, school, neighborhood) factors. Intervention may be necessary in any one or a combination of these systems.

Program Targets:

MST targets chronic, violent, or substance abusing male or female juvenile offenders, ages 12 to 17, at high risk of out-of-home placement, and the offenders' families.

Program Content:

MST addresses the multiple factors known to be related to delinquency across the key settings, or systems, within which youth are embedded. MST strives to promote behavior change in the youth's natural environment, using the strengths of each system (e.g., family, peers, school, neighborhood, indigenous support network) to facilitate change.

The major goal of MST is to empower parents with the skills and resources needed to independently address the difficulties that arise in raising teenagers and to empower youth to cope with family, peer, school, and neighborhood problems. Within a context of support and skill building, the therapist places developmentally appropriate demands on the adolescent and family for responsible behavior. Intervention strategies are integrated into a social ecological context and include strategic family therapy, structural family therapy, behavioral parent training, and cognitive behavior therapies.

MST is provided using a home-based model of services delivery. This model helps to overcome barriers to service access, increases family retention in treatment, allows for the provision of intensive services (i.e., therapists have low caseloads), and enhances the maintenance of treatment gains. The usual duration of MST treatment is approximately 60 hours of contact over four months, but frequency and duration of sessions are determined by family need.

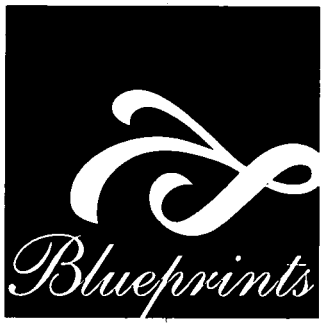
Program Outcomes

Evaluations of MST have demonstrated for serious juvenile offenders:

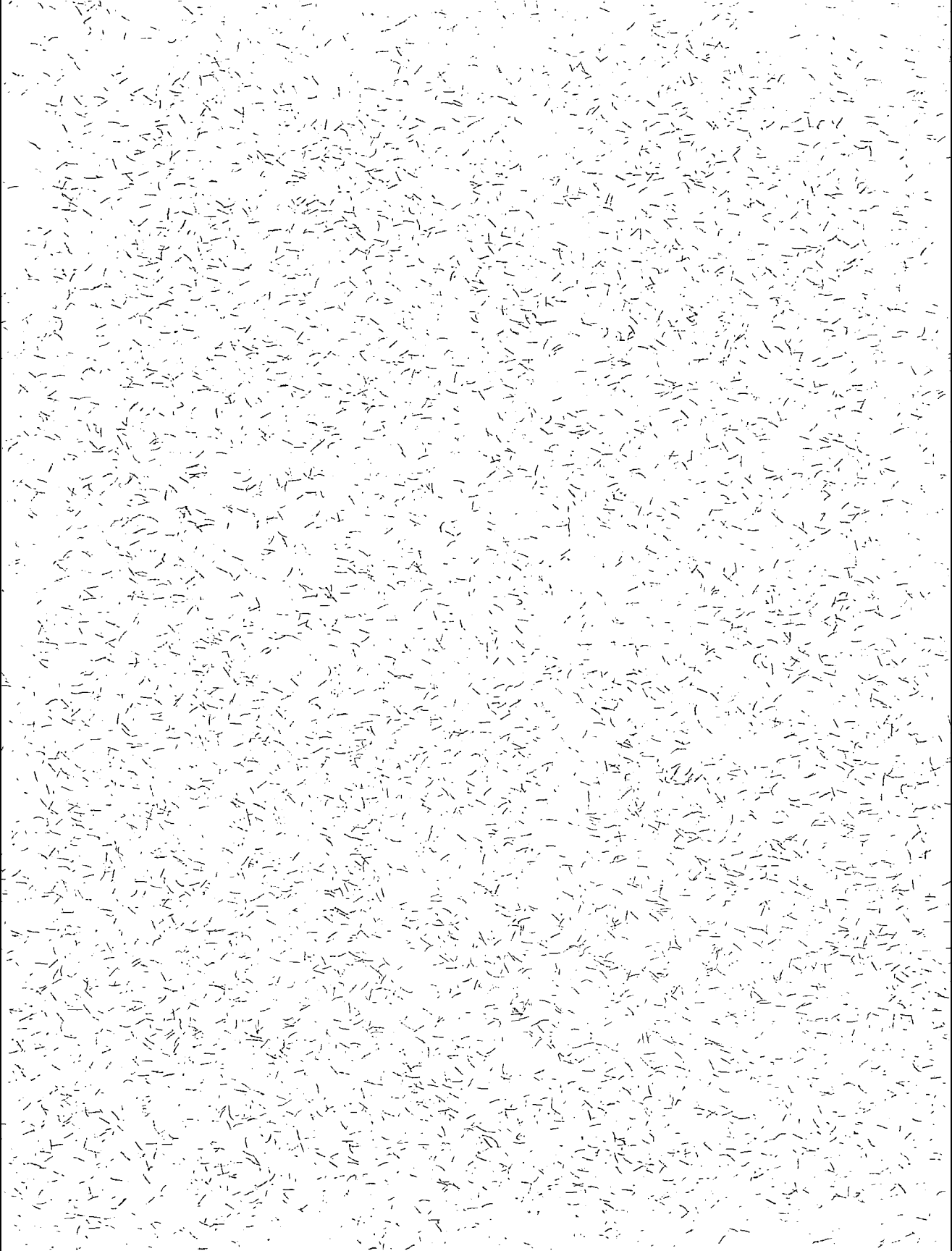
- reductions of 25-70% in long-term rates of rearrest;
- reductions of 47-64% in out-of-home placements;
- extensive improvements in family functioning; and
- decreased mental health problems for serious juvenile offenders.

Program Costs:

MST has achieved favorable outcomes at cost savings in comparison with usual mental health and juvenile justice services, such as incarceration and residential treatment. At an average cost of $4,500 per youth, a recent policy report concluded that MST was the most cost-effective of a wide range of intervention programs aimed at serious juvenile offenders.



CHAPTER ONE
Executive Summary



EXECUTIVE SUMMARY

Background

Multisystemic Therapy (MST) was developed in the late 1970s. It addresses several limitations of existing mental health services for serious juvenile offenders which include minimal effectiveness, low accountability of service providers for outcomes, and high cost.

Treatment efforts, in general, have failed to address the complexity of youth needs, being individually-oriented, narrowly focused, and delivered in settings that bear little relation to the problems being addressed (e.g., residential treatment centers, outpatient clinics). Given overwhelming empirical evidence that serious antisocial behavior is determined by the interplay of individual, family, peer, school, and neighborhood factors, it is not surprising that treatments of serious antisocial behavior have been largely ineffective. Restrictive out-of-home placements, such as residential treatment, psychiatric hospitalization, and incarceration, fail to address the known determinants of serious antisocial behavior and fail to alter the natural ecology to which the youth will eventually return. Furthermore, mental health and juvenile justice authorities have had virtually no accountability for outcome, a situation that does not enhance performance. The ineffectiveness of out-of-home placement, coupled with extremely high costs, have led many youth advocates to search for viable alternatives. MST is one treatment model that has a well-documented capacity to address the aforementioned difficulties in providing effective services for juvenile offenders.

Theoretical Rationale/Conceptual Framework

Consistent with social-ecological models of behavior and findings from causal modeling studies of delinquency and drug use, MST posits that youth antisocial behavior is multidetermined and linked with characteristics of the individual youth and his or her family, peer group, school, and community contexts. As such, MST interventions aim to attenuate risk factors by building youth and family strengths (protective factors) on a highly individualized and comprehensive basis. The provision of home-based services circumvents barriers to service access that often characterize families of serious juvenile offenders. An emphasis on parental empowerment to modify the natural social network of their children facilitates the maintenance and generalization of treatment gains.

Brief Description of Intervention

MST is a pragmatic and goal-oriented treatment that specifically targets those factors in each youth's social network that are contributing to his or her antisocial behavior. Thus, MST interventions typically aim to:

- improve caregiver discipline practices;
- enhance family affective relations;
- decrease youth association with deviant peers;
- increase youth association with prosocial peers;
- improve youth school or vocational performance;
- engage youth in prosocial recreational outlets; and
- develop an indigenous support network of extended family, neighbors, and friends to help caregivers achieve and maintain such changes.

The ultimate goal of MST is to empower families to build an environment, through the mobilization of indigenous child, family, and community resources, that promotes health.

Specific treatment techniques used to facilitate these gains are integrated from those therapies that have the most empirical support, including cognitive behavioral, behavioral, and the pragmatic family therapies.

MST services are delivered in the natural environment (e.g., home, school, and community). The treatment plan is designed in collaboration with family members and is, therefore, family driven rather than therapist driven. The ultimate goal of MST is to empower families to build an environment, through the mobilization of indigenous child, family, and community resources, that promotes health. The typical duration of home-based MST services is approximately four months, with multiple therapist-family contacts occurring each week, determined by family need.

Although MST is a family-based treatment model that has similarities with other family therapy approaches, several substantive differences are evident:

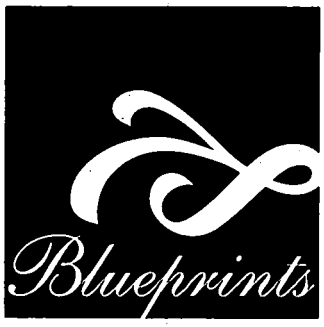
1. MST places considerable attention on factors in the adolescent and family's social networks that are linked with antisocial behavior. Hence, for example, MST priorities include removing offenders from deviant peer groups, enhancing school or vocational performance, and developing an indigenous support network for the family to maintain therapeutic gains.
2. MST programs have an extremely strong commitment to removing barriers to service access (e.g., the home-based model of service delivery).
3. MST services are more intensive than traditional family therapies (e.g., several hours of treatment per week vs. 50 minutes).
4. Most importantly, MST has well-documented long-term outcomes with adolescents presenting serious antisocial behavior and the adolescents' families.

MST has demonstrated decreased criminal activity and incarceration in studies with violent and chronic juvenile offenders.

The strongest and most consistent support for the effectiveness of MST comes from controlled studies that focused on violent and chronic juvenile offenders. Importantly, results from these studies showed that MST outcomes were similar for youth across the adolescent age range (i.e., 12-17 years), for males and females, and for African American as well as White youth and families.

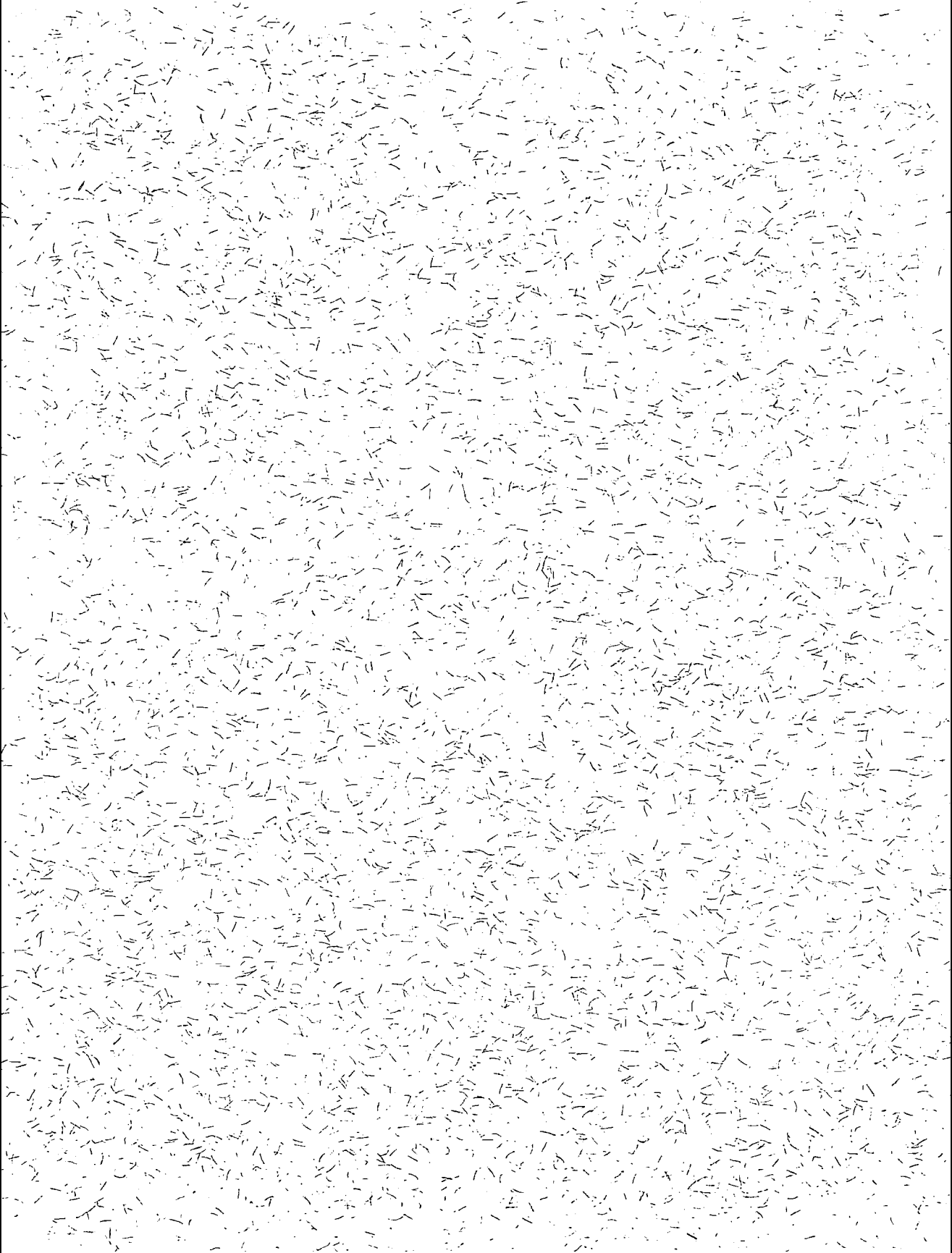
Evidence of Program Effectiveness

The first controlled study of MST with juvenile offenders was published in 1986, and three randomized clinical trials with violent and chronic juvenile offenders have been conducted since then. In these trials, MST has demonstrated long-term reductions in criminal activity, drug-related arrests, violent offenses, and incarceration. This success has led to several randomized trials and quasi-experimental studies aimed at extending the effectiveness of MST to other populations of youth presenting serious clinical problems and their families.



CHAPTER TWO

Program As Designed And Implemented



PROGRAM AS DESIGNED AND IMPLEMENTED

Goals and Measurable Objectives

The primary goals of MST are to:

- reduce youth criminal activity;
- reduce other types of antisocial behavior such as drug abuse; and
- achieve these outcomes at a cost savings by decreasing rates of incarceration and out-of-home placements.

MST aims to achieve these goals through a treatment that addresses risk factors in an individualized, comprehensive, and integrated fashion; and that empowers families to enhance protective factors.

Targeted Risk and Protective Factors and Population

Targeted Risk and Protective Factors

The empirical literature strongly supports a social-ecological view (Bronfenbrenner, 1979) of antisocial behavior in children and adolescents. The central tenet of this view is that behavior is multidetermined through the reciprocal interplay of the child and his or her social ecology, including the family, peers, school, neighborhood, and other community settings. Consistent with this perspective, associations have been observed between various forms of antisocial behavior and key characteristics (i.e., risk and protective factors) of individual youth and the social systems in which they are embedded (i.e., family, peer, school, neighborhood). In general, these risk and protective factors are relatively consistent, whether the examined antisocial behavior is conduct disorder, delinquency, or substance abuse. A generic list of identified risk and protective factors is provided in Table 1.

In light of the multiple known determinants of antisocial behavior, at least twenty research groups have conducted sophisticated causal modeling studies in an attempt to describe the interrelations among these correlates. Findings from the fields of delinquency and substance abuse have been relatively clear and consistent. First, association with deviant peers is virtually always a powerful direct predictor of antisocial behavior. Second, family relations either predict antisocial behavior directly or indirectly (through predicting association with deviant peers). Third, school difficulties predict association with deviant peers. Fourth, neighborhood and community support characteristics have a direct or indirect role in predicting antisocial behavior. Across studies, and in spite of considerable variation in research methods and measurement, investigators have shown that youth antisocial behavior is linked directly or indirectly with key risk and protective factors of youth and of the systems in which they interact.

Implications of Risk Factors and Protective Factors for Treatment

The clinical implications of these findings seem relatively straightforward. If the primary goal of treatment is to optimize the probability of decreasing rates of antisocial behavior, then treatment approaches must have the flexibility to attenuate the multiple known determinants of antisocial behavior (i.e., risk factors), while enhancing protective factors. That is, effective treatment must have the capacity to intervene comprehensively at individual, family, peer, school, and possibly even neighborhood levels.

Table 1. Risk and Protective Factors

CONTEXT	RISK FACTORS	PROTECTIVE FACTORS
Individual	. low verbal skills . favorable attitudes toward antisocial behavior . psychiatric symtomatology . cognitive bias to attribute hostile intentions to others	. intelligence . being firstborn . easy temperament . conventional attitudes . problem solving skills
Family	. lack of monitoring . ineffective discipline . low warmth . high conflict . parental difficulties, e.g., drug abuse, psychiatric conditions, criminality	. attachment to parents . supportive family environment . marital harmony
Peer	. association with deviant peers . poor relationship skills . low association with prosocial peers	. bonding with prosocial peers
School	. low achievement . dropout . low commitment to education . aspects of the schools, such as weak structure and chaotic environment	. commitment to schooling
Neighborhood & Community	. high mobility . low community support (neighbors, church, etc.) . high disorganization . criminal subculture	. ongoing involvement in church activities . strong indigenous support network

With regard to MST in particular, interventions are designed to address those risk factors and protective factors that are closest to identified treatment goals. Thus, in any one case, MST will address an individualized subset of risk and protective factors. Because of the broad variety of potentially important risk and protective factors, however, MST must have the capacity to address a broad and comprehensive range of pertinent variables. Consequently, the identification of the key variables in a particular case is the major task of assessment in MST.

Targeted Population

MST has been implemented in four randomized clinical trials with over 300 serious, chronic, violent, or substance abusing juvenile offenders and their families. Reflecting the demographics of youth in the juvenile justice system, the majority of youth receiving MST have been males and members of single-parent households that were characterized by economic disadvantage (see Table 2).

With the exception of one of these projects listed in Table 2, African American youth have outnumbered White offenders. In addition, controlled evaluations and dissemination projects using MST are currently underway in twelve states and Canada with other populations of youth presenting serious clinical problems (e.g., MST as an alternative to the emergency hospitalization of children presenting psychiatric emergencies; maltreating families). Each of these projects focuses on youth (and their families) who either have been approved for out-of-home placement or are at high risk for such placement. Thus, the aims of the projects are to obtain favorable clinical outcomes at cost savings relative to usual services.

Table 2. Participant Characterisitics in MST Randomized Trials with Serious Juvenile Offenders

Study Features	Columbia, MO[a]	Simsonville, SC[b]	Multisite, SC[c]	Charleston, SC[d]
Participant Characteristics:				
Mean Age (years)	14.8	15.2	15.2	15.7
Age Range (years)	12-17	12-17	10.4-17.6	12-17
% Male	67.5	77	82	79
% Caucasian	70	42	19	47
% African American	30	56	81	50
% Single Parent Families	47	-[f]	50	50
Mean Number of Previous Arrests	4.2	3.5	3.1	2.9
% With At Least One Violent Arrest	19	54	40	-
% With Previous Incarceration for at Least 3 Weeks	63	71	59	-
Eligibility Criteria:				
Violent or Chronic Offender	No[e]	Yes	Yes	No
Imminent Risk of Out-of-Home Placement	No	Yes	Yes	No
Diagnosed Substance Abuse or Dependence	No	No	No	Yes
At Least One Parent Figure in Home	Yes	Yes	Yes	Yes

[a]Borduin et al. (1995)
[b]Henggeler et al. (1992, 1993)
[c]Henggeler, Melton, et al. (1997)
[d]Henggeler et al. (1997)
[e]Referrals had to have at least two arrests
[f]26% lived with neither biological parent

Developmental and Cultural Appropriateness

The cultural and/or developmental appropriateness of MST is supported in several ways. First and most important, findings from randomized trials of MST with violent and chronic juvenile offenders showed that the favorable effects of MST were not moderated by youth ethnicity (African American vs. White) or age. Thus, MST has been equally effective with African American families as with White families, and with younger adolescents as with older adolescents. These outcomes constitute empirical evidence of the cultural and developmental appropriateness of MST.

Second, therapists view family members as full collaborators in the treatment planning and delivery process, with treatment goals driven primarily by parents. Such collaboration decreases the likelihood that treatment goals are driven by biases of the dominant culture, and increases the probability that interventions are appropriate to the family's cultural values.

Third, MST emphasizes the development of extended family and informal support networks for the family. By definition, the building of indigenous family and informal support networks (in potential contrast with formal supports obtained from public agencies) reflects the culture of the youth and family.

MST has been equally effective with:

African American families and White families,

and

younger adolescents and older adolescents

Fourth, MST treatment teams usually reflect the ethnic make-up of the population that is being served. Multicultural team composition provides a framework in which culturally appropriate and inappropriate practices can be identified and discussed among like-minded colleagues whose overarching purpose is to facilitate the attainment of favorable clinical outcomes among program participants.

Fifth, through using the family preservation model of service delivery, barriers to service access are removed. Thus, MST is responsive to the work schedules of economically disadvantaged families, the social stigma of office-based "mental health" treatment is removed to some extent, and family members feel more comfortable discussing treatment related issues on their own turf.

Sixth, in addition to program aspects contributing to cultural appropriateness noted above, one of the nine MST treatment principles pertains expressly to the developmental appropriateness of interventions. MST treatment integrity is evaluated by parental ratings of adherence to these principles, supervisory ratings of adherence, and, as described later in this paper, multiple procedures are used to promote and maintain treatment fidelity (i.e., adherence to the MST treatment principles). Thus, developmental and cultural appropriateness are specifically targeted for ongoing and continuing evaluation and feedback.

Program as Designed

Treatment Theory

The "treatment theory" underlying MST draws upon causal modeling studies of serious antisocial behavior and social-ecological and family systems theories of behavior. The social-ecological model depicts the process of human development as a reciprocal interchange between the individual and "nested concentric structures" that mutually influence one another. Extrafamilial systems, such as school, work, peers, and even community and cultural institutions are seen as interconnected with the individual and his or her family. Importantly, this ecological view that behavior is multidetermined is strongly supported by causal modeling studies, mentioned earlier. To recap, these studies indicate that a combination of individual (attributional bias, antisocial attitudes), family (low warmth, high conflict, harsh and/or inconsistent discipline, low monitoring of youth whereabouts, parental problems, low social support), peer (association with deviant peers), school (low family-school bonding, problems with academic and social performance), and neighborhood (transiency, disorganization, criminal subculture) factors are linked with serious antisocial behavior in adolescents. Problem behavior may be a function of difficulty within any of these systems and/or difficulties that characterize the interfaces between these systems (e.g., family-school relations, family-neighborhood relations). Thus, consistent with both the empirically established determinants of serious antisocial behavior and with social-ecological theory, the scope of MST interventions is not limited to the individual adolescent or the family system, but includes difficulties between other systems such as the family-school and family-peer mesosystems.

Treatment Specification and Clinical Procedures

Specific guidelines for implementing MST for serious problems in youth are presented in the Multisystemic Strategic Procedures Manual (Henggeler et al., 1994), and a treatment manual specifically focusing on antisocial behavior in youth will be published in 1998 by Guilford Press (Henggeler, Schoenwald, et al., in press). All other training materials and manuals are only available through the training program.

A central feature of the MST treatment model is its integration of empirically-based treatment approaches, which have historically focused on a limited aspect of the youth's social ecology (e.g., the individual youth, the family), into a broad-based ecological framework that addresses a range of pertinent factors across family, peer, school, and community contexts. The choice of modality used to address a particular problem is based largely on the empirical literature concerning its efficacy. As such, MST interventions are usually adapted and integrated from pragmatic, problem-focused treatments that have at least some empirical support. These include strategic family therapy, structural family therapy, behavioral parent training, and cognitive behavior therapies. In addition, and as appropriate, biological contributors to identified problems are identified and psychopharmacological treatment is integrated with psychosocial treatment.

The 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 youth to cope with family, peer, school, and neighborhood problems.

A crucial aspect of MST is its emphasis on promoting behavior change in the youth's natural environment. As such, the 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 youth to cope with family, peer, school, and neighborhood problems. Parent, and family, is broadly defined to include the adult who serves as the youth's primary parent figure or guardian. Within a context of support and skill building, the therapist places developmentally appropriate demands on the adolescent and family for responsible behavior.

Initial therapy sessions identify the strengths and weaknesses of the adolescent, the family, and their transactions with extrafamilial systems (e.g., peers, friends, school, parental workplace). Problems identified conjointly by family members and the therapist 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 serious juvenile offenders and their families.

At the family level, 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 (e.g., substance abuse, depression) 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. Such interventions might include introducing systematic monitoring, reward, and discipline

Family Interventions in MST:

- ***At the family level,*** attempt to provide the parent(s) with the resources needed for effective parenting and for developing increased family structure and cohesion.
- ***At the peer level,*** a frequent goal of treatment is to increase the youth's involvement with delinquent and drug using peers and to increase his or her association with prosocial peers.
- ***At the school level,*** emphasis is placed on developing a collaborative relationship between the parents and school personnel, and for promoting academic efforts.

systems; prompting parents to communicate effectively with each other about adolescent problems; problem solving day-to-day conflicts; and developing indigenous social support networks with friends, extended family, church members, and so forth.

At the peer level, a frequent goal of treatment is to decrease the youth's involvement with delinquent and drug using peers and to increase his or her association with prosocial peers (e.g., through church youth groups, organized athletics, after school activities). Interventions for this purpose are optimally conducted by the youth's parents, with the guidance of the therapist, and might consist of active support and encouragement of associations with non-problem peers (e.g., providing transportation and increased privileges) and substantive discouragement of associations with deviant peers (e.g., applying significant sanctions).

Likewise, under the guidance of the therapist, the parents develop strategies to monitor and promote the youth's school performance and/or vocational functioning. Typically included in this domain are strategies for opening and maintaining positive communication lines with teachers and for restructuring after school hours to promote academic efforts. Emphasis is placed on developing a collaborative relationship between the parents and school personnel.

Finally, 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 using cognitive behavior therapy to modify the individual's social perspective-taking skills, belief system, or motivational system, and encouraging the youth to deal assertively with negative peer pressures.

Core Program Elements vs. Adaptive Features

As noted above, MST interventions are directed toward individuals, family relations, peer relations, school performance, and other social systems that are involved in the identified problems. The design and implementation of MST interventions are based on nine core principles of MST. These principles serve to operationalize MST, and evaluations of treatment fidelity are based on participants' (i.e., parent, youth, therapist) ratings of therapists' adherence to these principles. Indeed, we have recently shown that high adherence to the MST principles predicts favorable long-term outcomes for violent and chronic juvenile offenders, whereas poor adherence predicts high rates of rearrest and incarceration. In light of these findings and years of anecdotal evidence (i.e., suggesting high adherence is linked with favorable outcomes and low adherence with poor outcomes), considerable training, supervisory, and consultative resources are devoted to maximizing therapist adher-

ence to the following MST treatment principles.

Brief summaries of the nine MST principles follow, and extensive explication is provided in Henggeler, Schoenwald et al. (in press). The principles are first noted and then described via a clinical case example (this example and subsequent description of the principles on pages 19 through 24 originally appeared in the Journal of Adolescence, Henggeler, Cunningham, Pickrel Schoenwald, & Brondino, 1996).

MST Treatment Principles

1. The primary purpose of assessment is to understand the fit between the identified problems and their broader systemic context.
2. Therapeutic contacts emphasize the positive and use systemic strengths as levers for change.
3. Interventions are designed to promote responsible behavior and decrease irresponsible behavior among family members.
4. Interventions are present-focused and action-oriented, targeting specific and well-defined problems.
5. Interventions target sequences of behavior within and between multiple systems that maintain identified problems.
6. Interventions are developmentally appropriate and fit the developmental needs of the youth.
7. Interventions are designed to require daily or weekly effort by family members.
8. Intervention effectiveness is evaluated continuously from multiple perspectives, with providers assuming accountability for overcoming barriers to successful outcomes.
9. Interventions are designed to promote treatment generalization and long-term maintenance of therapeutic change by empowering caregivers to address family members' needs across multiple systemic contexts.

Homer is a 15-year old White male with an extensive history of delinquent behavior including assault and battery with intent to kill, simple assault and battery, malicious destruction of real property, trespassing, petty larceny, contempt of court, and resisting arrest. In school, Homer had a reputation for fighting and bullying his peers and had been expelled in the seventh grade for assaulting a classmate and cursing at his teachers. Homer was in a gang of juvenile delinquents who affectionately called themselves "Death Row." Aside from his criminal record and association with deviant peers, Homer had an extensive history of abusing inhalants, marijuana, and alcohol. At the time of referral Homer had recently been released from a 45-day juvenile justice evaluation facility. He resides alone with his mother, who is employed full-time and has a history of alcohol abuse. Homer also has a 17-year old sister with a history of crack cocaine dependence. She was recently released from a state-supported treatment facility, and at time of referral was living with her boyfriend and his family. A maternal uncle also lived in the community, though he refused to have contact with Homer due to his antisocial behavior. Homer's treatment was provided by a master's-level therapist who adhered to the following MST treatment principles.

Principle 1: The Primary Purpose of Assessment is to Understand the Fit Between the Identified Problems and Their Broader Systemic Context

The goal of MST assessment is to understand how identified problems "make sense" in light of the youth's social ecological context. Hence, the therapist integrates information obtained from family members, teachers, referral sources, and so forth to determine the factors (individual, family, peer, school, neighborhood) that are contributing to the problems, singularly or in combination. The targets of interventions are then derived from the hypotheses formulated from the assessment data. These hypotheses are subsequently confirmed or refuted through the outcomes of interventions. When hypotheses are refuted by the ineffectiveness of an intervention, the therapist seeks new information or incorporates lessons learned from the failed intervention to formulate new hypotheses and corresponding interventions. Thus, MST assessment is a reiterative process that proceeds until treatment goals are met.

Homer's antisocial behavior and substance abuse "made sense" in light of his ecological context. First, Homer was deeply committed to a group of deviant peers who were older, more "street wise," and from families with significant antisocial histories. For example, one of Homer's friends sold drugs for his drug-addicted father (who also sold guns) and was arrested recently for robbing a store at gun point. Second, Homer refused to go to school and spent most school days at home getting high with his peers. His mother reported that she often found the house trashed with beer cans strewn about when she returned from work. Third, Homer exhibited attributional biases in the form of attributing hostile intentions to others. For example, he often attributed peer and family members' failure to comply with his requests as "dissing" him (i.e., disrespectful) which was grounds to be aggressive. Fourth, Homer and his family lived in a neighborhood best described as crime-ridden and drug-infested. Fifth, Homer's antisocial behavior and substance abuse were maintained by his mother's failure to monitor and consequate his behavior. For example, Homer was allowed to stay out as long as he wanted and did pretty much as he pleased.

The mother's parenting style fit her systemic context as well. For example, she had a very busy work schedule, lacked adequate parenting skills, and had minimal social support. Low social support was linked with the death of her husband three years previously, her mother's recent death, and her estrangement from extended family. Also, the mother felt inadequate, hopeless, and fearful in dealing with a large and threatening substance-abusing adolescent without the help of an adult male.

Principle 2: Therapeutic Contacts Emphasize the Positive and Use Systemic Strengths as Levers for Change

Therapists must have the capacity to focus on the positive or families will not collaborate with treatment. Without significant family collaboration, treatment gains will be very difficult to achieve. Focusing on family strengths has numerous advantages, including: decreasing negative affect, building feelings of hope and positive expectations, identifying protective factors, decreasing frustration by emphasizing problem solving, and enhancing the caregiver's confidence. Thus, MST therapists are taught where to look for strengths and how to develop and maintain a strength-based focus.

Although a number of factors contributed to Homer's antisocial behavior, several strengths were identified. First, Homer's mother was emotionally attached to her son and willing to learn new skills (initially she was quite reluctant and fearful). Second, the family had adequate funds for adjunctive and recreational activities. Third, Homer had several individual skills. Until the age of

12 (the age at which he found his father dying of a stroke), Homer enjoyed sports and excelled in many. Although Homer had numerous school suspensions and several expulsions, he was intelligent and could be quite personable. Finally, both Homer and his mother wanted him to attend high school rather than continue in the seventh grade (Homer only wanted to attend to play football). As described subsequently, these strengths were used to facilitate the attainment of treatment goals.

Principle 3: Interventions are Designed to Promote Responsible Behavior and Decrease Irresponsible Behavior among Family Members

The overriding goals of MST are to help parents and youth behave more responsibly. Parental responsibilities include providing structure and discipline, expressing love and nurturance, and meeting basic physical needs. For youth, responsible behavior includes extending effort in school, not harming others, and helping around the home. Such pragmatic conceptualizations of overriding treatment goals can be accepted by stakeholders and family members alike—which help to demystify and concretize the treatment process. Moreover, the emphasis on enhancing responsible behavior is a counterpoint to the usual pathology (e.g., conduct disorder, borderline personality disorder) focus of mental health providers and helps to engender hope for change.

Both the mother and Homer exhibited irresponsible behaviors that were targeted for change. The mother had a history of "covering up" for Homer when he got into trouble in the community, thus undermining natural consequences. For example, she refused to call the police when she found drugs in the home or when Homer ran away, and she failed to provide meaningful consequences for his misbehavior or to require age-appropriate responsibilities (i.e., he did not have household chores). Homer's irresponsible behavior included failure to comply with his mother's requests, school refusal, association with deviant peers, and substance use and abuse. In addition, Homer often stayed out all night.

The mother's parenting skills and lack of social supports were initially targeted for intervention. As therapy progressed, the mother was able to see that to "save" Homer (a child she loved very much) required that she consistently monitor his whereabouts, consequate his misbehavior, and allow him to experience natural consequences. This was accomplished by the therapist aligning with the mother, developing mutual goals, and providing the mother with assistance and support. Thus, for example, when he ran away she signed an order with the Probate Court for him to be "picked up." Similarly, the mother established developmentally appropriate chores for Homer to complete daily and weekly, and provided appropriate rewards and consequences contingent upon completion. Moreover, the mother demanded that Homer comply with family rules, particularly meeting curfew, completing school assignments, and disassociating with deviant peers. Toward this end, the mother took Homer's door key and refused to allow him in the house after curfew, and actually "put him out of the house" when he continued to associate with drug-using peers (and after less aversive consequences failed). The therapist was readily accessible for the mother (via daily contact in person, by telephone, or pager) as she implemented these new strategies.

Principle 4: Interventions are Present-Focused and Action-Oriented, Targeting Specific and Well-Defined Problems

The purpose of this treatment principle is to encourage family transactions that are facilitating clinical progress toward unambiguous outcomes. This principle enables all treatment participants to be fully aware of the direction of treatment and the criteria used to measure success. Similarly, the

expectation is that family members will work actively toward meeting the goals by focusing on present-oriented solutions (versus gaining insight or focusing on the past). Clear goals also allow the therapist and family members to delineate criteria for treatment termination.

In collaboration with the mother, teachers, coaches, and probation staff, several specific problems were targeted for change. These included: (1) separating from antisocial peers, (2) eliminating drug and alcohol use, (3) following curfew, (4) attending school and completing assignments, and (5) completing household chores. Likewise, the mother, with the support of the therapist, would: (1) closely monitor Homer's whereabouts, peer associations, and school performance, and (2) provide consequences for inappropriate behavior and rewards for appropriate behavior.

Principle 5: Interventions Target Sequences of Behavior within and between Multiple Systems that Maintain Identified Problems

This principle emphasizes that treatment is aimed at (a) changing family interactions in ways that promote responsible behavior and (b) promoting the family's connections with indigenous prosocial support systems including, for example, the school, competent neighbors and friends, and the church. Consistent with family systems theories of behavior, MST views changing interpersonal transactions within the child's natural environment as the key to ameliorating behavior problems (versus an emphasis on cognitive or attitudinal factors as a mechanism for behavioral change).

As noted above, several interventions focused on the mother's capacity to interact effectively with her son. Importantly, the mother's social network was enhanced to provide the ongoing support needed to deal effectively with her son. Specifically, with the support of the therapist, the mother became actively involved in church activities and elicited her brother's help and support. In addition, after establishing working relationships with school personnel, the mother communicated weekly concerning her son's school performance and behavior.

Principle 6: Interventions are Developmentally Appropriate and Fit the Developmental Needs of the Youth

The nature of interventions should vary with developmental level of the youth and family. For example, in families with young adolescents who are presenting serious antisocial behavior, interventions will usually focus on developing appropriate and effective parental discipline strategies. For youth who are nearing 18 years of age, however, interventions may more appropriately focus on developing the individual youth's capacity for independence. Similarly, a developmental emphasis stresses the importance of building adolescents' competencies in peer relations and developing academic and vocational skills that will promote a successful transition to adulthood.

Homer was 15 years of age and still required considerable family support and encouragement. In light of his age, large physical size, and the fact that he was still in the seventh grade, the mother and therapist convinced school personnel to allow Homer to advance into the ninth grade so that he could play football. Homer's athletic prowess, interest in sports, and intelligence increased the probability that this intervention would succeed. It was felt by the therapist and the treatment team that re-entry into school and admittance to the ninth grade would serve to: (1) structure Homer's afterschool hours, (2) increase his school bonding, and (3) increase his association with prosocial peers.

The school, however, needed to be convinced that Homer would improve his academic and behavioral performance if allowed to participate in sports. This was no small accomplishment as the high school principal wrote an assistant superintendent of the school district a letter seeking to block Homer's admittance due to his past failure and assaultive behavior. Clearly, the school needed reassurance that students and staff would be "safe" with Homer attending. Consequently, the mother and therapist assured the principal and assistant superintendent that in the event Homer had difficulties, one or both "would come to the school on a moment's notice," and such difficulties would be firmly addressed.

Principle 7: Interventions are Designed to Require Daily or Weekly Effort by Family Members

Families referred for MST usually have extensive histories of serious problems, and our assumption is that family members and therapists must work very intensively to ameliorate these problems. In addition, the design of interventions that require ongoing efforts from multiple participants affords several therapeutic advantages. These include more rapid problem resolution than obtained using less intensive interventions; timely identification of treatment non-adherence; continuous evaluation of outcomes, which enables opportunities for corrective interventions; frequent opportunities for family members to experience success and receive positive feedback; and support of family empowerment as members are orchestrating their own changes.

Homer provided his mother with ample opportunities to practice her new parenting skills. As mentioned above, the mother assigned chores and monitored their completion daily, and if completed, provided rewards. Homer was required to report daily his whereabouts to his mother by leaving notes or calling home. In addition, the mother or the therapist routinely called Homer's teachers to check on behavior and academic progress. Initially, the therapist called the mother daily to offer encouragement and to monitor her progress in completing assignments. In the event the mother did not follow through or failed in her efforts, the therapist reframed failure as "an opportunity to practice," and reinforced successive approximations to the desired behavior.

Principle 8: Intervention Effectiveness is Evaluated Continuously from Multiple Perspectives, with Providers Assuming Accountability for Overcoming Barriers to Successful Outcomes

The accuracy of hypotheses concerning "fit," the efforts of family members, and the viability of interventions are evaluated based on progress toward desired outcomes. Thus, ongoing evaluation of intervention effectiveness is essential to provide timely feedback regarding these three factors (i.e., fit, effort, interventions). When interventions are producing desired results, the therapist can reasonably assume that hypotheses are accurate, family members are working, and the interventions are appropriate. On the other hand, when interventions are not producing desired results, the therapist must critically examine each of the three factors (two of which depend on the therapist's skills) and take corrective actions.

All aspects of the aforementioned treatment tasks were evaluated from multiple perspectives (i.e., Homer, his mother, school personnel, coaches). The therapist did not rely solely on positive verbal reports from Homer and his mother, but obtained reports from school personnel as well as probation staff. In addition, the therapist observed periodically Homer's classroom behavior and interactions during football practice.

Principle 9: Interventions are Designed to Promote Treatment Generalization and Long-Term Maintenance of Therapeutic Change by Empowering Caregivers to Address Family Members' Needs across Multiple Systemic Contexts

Ensuring that treatment gains will generalize and be maintained when treatment ends is a critical and continuous thrust of MST interventions. To facilitate these outcomes, MST aims to empower families to address current and future problems with the support of an indigenous social network of friends, neighbors, and extended family. Thus, therapists avoid "doing for" the families and stress skill building in the youth and family's natural ecology. In contrast with most mental health interventions, changes are made primarily by family members with therapists acting as consultants, advisors, and advocates.

The mother's decision to provide Homer with natural consequences, monitor his whereabouts and school behavior, enroll him in the ninth grade and high school football, provide age-appropriate expectations, and enhance her own social support network (i.e., rapprochement with extended family members and school personnel) provided an ecological context in which Homer was on a path of positive psychosocial development. He is now enrolled in high school and has been making A and B grades. He has become one of the star junior varsity football players and plans to play basketball and baseball during the upcoming year. These sports activities have provided Homer with a predominantly prosocial peer group and have given him substantial opportunities to obtain social approval from his mother and school personnel. Consequently, he has no expressed interest in seeing his former gang members nor does he "feel the urge to hurt someone when I feel bad." He has gained a new sense of self-worth from the positive feedback he gets from his mother and fellow students.

Concomitantly, as the mother has been successful in "gaining control of my house," she too has evinced a greater sense of empowerment. Her affect is much brighter, and she has developed a closer relationship with her well-adjusted brother who has begun to spend time with Homer. In addition, Homer's home and school environments are now more nurturing and less adversarial, and hence his aggressive and violent acting-out has been eliminated. Also, when problems arise in school or at home they can be addressed quickly as the mother has established personal relations with Homer's teachers and principal (who has now taken a special interest in him).

In summary, MST interventions have given Homer an opportunity to become a responsible citizen whereas his previous behavior and academic failure were almost assuring him a life of crime, violence, addiction, and minimal subsistence. Successful outcome was accomplished by applying a multifaceted approach to assessment and treatment, addressing the unique factors surrounding Homer's antisocial behavior, empowering Homer and his mother, and providing treatment directly in their social ecology.

Although these are the core treatment principles, MST is a dynamic treatment model that will always be in active refinement. For example, through randomized and quasi-experimental studies conducted by the Family Services Research Center at the Medical University of South Carolina, potential enhancements of MST are being investigated as well as modifications of MST to meet the needs of different populations (e.g., children with serious emotional disturbance, maltreated children) and service delivery models (e.g., outpatient, continuum of care). Dissemination efforts, however, will not include substantive modification of MST until such modifications have demonstrated improved outcomes.

Planning and Implementation

Needs Assessment

MST programs are most appropriate in those communities in which stakeholders (i.e., juvenile justice, mental health, family court, the schools, social welfare) and funders are concerned with decreasing rates of out-of-home placement, that is, seeking alternatives to incarceration and residential treatment. Motivations for seeking alternatives can range from the cost savings of MST versus out-of-home placement to the value of preserving family integrity. In addition, MST programs are more likely to be effective in communities where stakeholders are more interested in rehabilitating adolescents presenting high rates of criminal activity than in punishing them.

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Interagency Linkages and Collaboration

To develop effective community-based mental health services for serious juvenile offenders, it is necessary to have the support of those individuals and agencies that have legal mandate for these youth or are involved in their lives. Typically, the key agency stakeholders include juvenile justice, social welfare, mental health, the schools, and family court. Failure to attain the support of any one of these stakeholders can severely limit the viability of an MST project. Thus, prior to the development of an MST program, substantial energies must be devoted to obtaining community support and to laying the groundwork needed for successful implementation.

Funding

Tremendous amounts of financial resources are devoted to services for serious juvenile offenders. Unfortunately, however, those resources are generally allocated to services that are expensive and have no demonstrated effectiveness. Thus, an important goal in the development of more effective mental health and juvenile justice services is to shift the emphasis of funding from incarceration and other out-of-home placements to community-based programs. As such, several mechanisms for funding have been used in MST projects at different sites across the nation. These include:

- Medicaid reimbursement under family preservation or rehabilitation standards;
- shifting state children's services moneys allocated for residential treatment programs or other out-of-home placements (e.g., foster care) to the MST program; and
- making home-based MST a component of the continuum of care provided by a managed care organization that treats youth with serious emotional disturbance under a capitated rate from the state.

The cost savings demonstrated in randomized trials of MST are described in the Program Replication section.

Resources Necessary

Because MST services are provided in community settings (e.g., homes, schools), relatively little facility space is needed. Therapists, however, require transportation and cellular phones. As described next, personnel resources and intense training are crucial to the success of MST programs.

Organizational Context for Administration

In general, MST programs are housed within public mental health settings or private provider organizations that deliver mental health services. Such settings are more likely to have a culture (i.e., providing rehabilitative services for disadvantaged families vs. being punishment oriented) and infrastructure (e.g., case record keeping system, staff knowledgeable about issues such as confidentiality, relations with formal community resources) that support the provision of community-based mental health services. A caveat, however, is that a percentage of such organizations will have a philosophy (e.g., children are best treated in out-of-home placements) or theoretical framework (e.g., psychodynamic) that will impede the goals of MST programs (i.e., providing clinically effective, family-based services with high levels of provider accountability for outcome). Thus, the functional mission of the home agency must be examined for compatibility with the MST treatment approach, and MST Services, Inc., extends considerable efforts toward examining such compatibility during initial site assessments. The ideal organizational context is one in which the provider administers a range of family- and community-based services that vary in restrictiveness—from outpatient, to home-based, to therapeutic foster care, with even a small short-term residential component, for example.

Staffing and Supervision

MST is conducted by master's-level therapists (and sometimes highly competent bachelor's-level professionals) who receive on-site supervision from doctoral level mental health professionals. Therapists are selected on the basis of their motivation, flexibility, common sense, and "street smarts," the master's degree being viewed more as a sign of motivation than as evidence of a particular type or level of clinical expertise. Each MST treatment team consists of three to four therapists, with each therapist carrying a caseload of four to six families. Each treatment team provides services for about 50 families per year.

Weekly supervision is provided during scheduled times and as needed. Like MST interventions, supervision is pragmatic and goal-oriented. Therapists are expected to conceptualize cases in multisystemic terms, and supervision is directed toward articulating treatment priorities, obstacles to success, and designing interventions to successfully navigate those obstacles. As members of therapist teams, therapists consult one another informally and during formal supervision. In addition and as described next, MST integrity is further supported and reinforced through weekly consultation with an MST expert. Thus, a high level of clinical support is provided to therapists—from team members, supervisors, and MST consultants.

Training of Staff

Training in MST is provided on-site by Multisystemic Therapy Services, Inc. (MST Services, Inc., P. O. Box 21269, Charleston, SC, 29413-1269; phone 803-853-8300; fax 803-853-8303), using essentially

the same protocol that has been used in successful clinical trials of MST with violent and chronic juvenile offenders. Therapists and supervisors receive training in MST in three ways. First, five days of intensive training are provided. Second, 1.5 day "booster" sessions occur on a quarterly basis. Third, treatment teams and their supervisors receive weekly telephone consultation from MST experts.

The objectives of the initial five-day training program are to:

- familiarize participants with the scope, correlates, and causes of the serious behavior problems addressed by MST;
- describe the theoretical and empirical underpinnings of MST;
- describe the family, peer, school, and individual intervention strategies used in MST;
- train participants to conceptualize cases and interventions in terms of the principles of MST; and
- provide participants with practice in delivering MST interventions.

Training procedures include slide presentations, structured discussion, role-play, and interactive formats. The training is attended by all agency staff who will have clinical or supervisory responsibility in the MST program. In addition, administrators and stakeholders from collaborating agencies often attend the first day of training to become oriented to program rationale, goals, procedures, and so forth.

Quarterly booster training is provided on-site by an MST consultant. These sessions are designed to provide the therapists and supervisors training in special topics (e.g., parental substance abuse) and to address issues that may arise for individuals and agencies using MST (e.g., agency accountability for outcome, interagency collaboration). The booster sessions are also designed to allow for discussion of particularly difficult cases. In general, the issues addressed in the booster sessions are based on the individualized needs of the training site—that is, the agendas of the booster sessions are primarily site-driven.

Weekly phone consultation is provided for each treatment team (therapists and supervisor) by the MST consultant. Consultation sessions focus on promoting adherence to MST treatment principles, developing solutions to difficult clinical problems, and designing plans to overcome any barriers to obtaining strong treatment adherence and favorable outcomes for youth and families. As noted earlier, high treatment adherence is critical to obtaining favorable long-term outcomes for serious juvenile offenders, and, as such, the central goal of the training and consultation process is to maximize adherence to the MST principles. Further information regarding training, including cost estimates, can be obtained from MST Services, Inc.

In addition to the elements of clinical training (the five-day introduction to MST, quarterly booster trainings, and the weekly telephone consultations), this package of services includes a pre-training site assessment, assistance with program specification and design, and ongoing assistance with overcoming barriers to achieving successful clinical outcomes.

Examples of the assistance provided with regard to program specification and design include the review of RFP (Request for Proposal) documents and/or responses, review of MST related job descriptions, review of hiring advertisements, recommendations regarding clinical record keeping practices, specification of program discharge criteria, and evaluations of outcome measurement concepts. Ongoing assistance overcoming barriers to achieving successful clinical outcomes may include: tracking treatment fidelity and adherence; promotion of the MST program within the broader service community; and developing program-level interventions designed to increase referrals, reduce staff attrition, or restructure program funding mechanisms.

The cost of this program support and training package is based on an all-inclusive annual per team fee, where an MST team is defined as two to four clinicians and a clinical supervisor. The all-inclusive annual program support fee ranges from $15,000 to $18,000 per team, plus travel expenses (airfare to and from Charleston plus hotel and per diem for two trainers), based upon the nature and size of the program. Based upon an average annual service capacity of 50 youth (families) per team per year, the total cost of the program support and training (including travel expenses) is usually in the range of $400 to $550 per youth served.

When there is staff turnover, new staff need to receive the five-day initial training in MST prior to joining the MST team and accepting cases. After they receive the five-day initial training, new staff will join the rest of the existing team in weekly MST consultation and 1.5 day quarterly booster trainings. With regard to the initial five-day training, organizations can access the training in one of two ways. New staff can come to Charleston, South Carolina, and participate in one of the quarterly open-enrollment trainings provided by MST Services, Inc. The course fee for these Charleston-based initial five-day trainings is $750 per person, travel and lodging not included. Alternatively, providers can elect to have MST Services, Inc., conduct an additional five-day initial training at their site at a cost of $8,000 per training plus travel expenses to and from Charleston for two trainers.

Selection of Target Population

Potential dissemination sites usually select the target population for an MST project based on three factors: (a) previously documented success of MST with that population, (b) significant clinical challenges posed by the population, and (c) high cost of providing current services (usually out-of-home placements) to the population. Thus, the typical MST project is providing family- and community-based services as alternatives to out-of-home placement for youth (and their families) who are presenting serious clinical problems.

Retention Strategies

MST is particularly effective at engaging and retaining families in treatment. In early MST projects, treatment completion rates for families of serious juvenile offenders were in the 80-90% range. More recently, however, MST treatment completion rates have been even higher. For example, in a recently completed clinical trial of MST with substance abusing or dependent juvenile offenders, 98 percent of the families in the MST condition completed a full course of treatment, which lasted an average of 130 days. Similarly, in a current study of MST as an alternative to the hospitalization of youth presenting psychiatric emergencies, 59 of 60 families referred to the MST condition completed treatment (98% retention). The success of MST in minimizing treatment dropout is most

likely due to its comprehensive use of multiple strategies that have been linked with treatment retention by previous investigators:

- Therapists are available 24 hours a day, seven days a week. Thus, services are often provided on weekends, during evening hours, and at other times convenient to the family. Moreover, therapists are prepared to quickly address crises that may threaten the attainment of treatment goals.
- Services are provided in families' homes and other community locations, which greatly reduces missed appointments and largely eliminates other barriers to service access.
- The MST project team assumes responsibility for treatment engagement and the achievement of clinical outcomes. Thus, considerable team, supervisory, and consultation resources are devoted to developing strategies to "hook" families that are not yet cooperating with treatment.
- Treatment is strength-focused with goals set primarily by family members. This promotes the development of the therapeutic alliance and the relevance of treatment to the actual needs of the family.
- Services are individualized to meet the multiple and changing needs of youth and their families. Thus, clinical interventions will adjust to changing clinical circumstances and will be viewed as pertinent to the current needs of family members.

MST is particularly effective at engaging and retaining families in treatment, with retention rates ranging from 80-98 percent.

Although in most MST projects families have been court-mandated to participate, such court involvement generally has little impact. At best, when dealing with multiproblem families with extensive histories of involvement in state service systems, legal mandates help the therapist to get his or her foot in the door. Such mandates do not, however, lead parents to work on difficult issues several hours a day for several months to address their problems. Rather, parents must be convinced of the benefit of such work for themselves and their children. Convincing parents of such is the initial and central task of the MST therapist, and treatment cannot progress until the parents are "on-board."

Sequence of Intervention Activities

For each case, assessment of family, peer, school, and social support systems is conducted rapidly (typically within one week to ten days). The primary purpose of assessment is to understand the "fit" between the identified problems and their broader systemic context—that is, assessment delineates how these problems "make sense" in light of the youth, his or her family, and their social network. In conducting the assessment, the therapist interviews family members and others connected with the youth and family (e.g., friends, teachers, extended family, neighbors) to obtain multiple and independent views on the determinants of the identified problems and the strengths of the youth and family. With the exception of academic-intellectual testing, standard psychological assessment in-

struments are not used in MST. Upon completion of the assessment, when the "fit" of problems has been specified satisfactorily, treatment goals are delineated conjointly by family members and the therapist. These goals are operationally defined in ways that enable the family and the therapist to monitor progress in concrete terms.

Treatment sessions focus on facilitating the attitudinal and behavior changes that are needed to attain the goals. The therapist addresses treatment goals one at a time or in some logical combination. As progress is made toward meeting one goal, treatment sessions incorporate additional goals. At the conclusion of each session, family members are given explicit tasks designed to facilitate the attainment of identified goals. The first item on the agenda of the next session is the family members' performance of the tasks, and ameliorative plans are developed if tasks have not been completed.

The frequency and duration of sessions is determined by family need. Thus, sessions are held as often as every day early in treatment or when clinical progress is not being made. During the middle of treatment, the therapist may hold two to three sessions per week and call several times. As treatment termination nears, sessions may be held as infrequently as once a week. In addition, efficient use of therapist time is emphasized, with sessions ranging in length from 15 to 75 minutes. Thus, MST interventions 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).

Service Delivery

MST is consistent with the family preservation model of service delivery, and the use of such a home-based service delivery model has been crucial to the high engagement and low dropout rates obtained in our studies. Family preservation is 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. The particular treatment modalities used in family preservation programs can vary, but critical service delivery characteristics are shared and include:

- low caseloads (four to six families per clinician) that allow intense services to be provided to each family (two to fifteen hours per week);
- delivery of services in community settings (e.g., home, school, neighborhood center);
- time-limited duration of treatment (three to five months);
- 24 hour a day and seven day a week availability of therapists; and
- provision of comprehensive services.

Monitoring Implementation and Treatment Integrity

Consistent with our long-standing clinical impressions, recent research has demonstrated that youth outcomes are closely linked with therapist adherence to the MST treatment protocol. In a study with

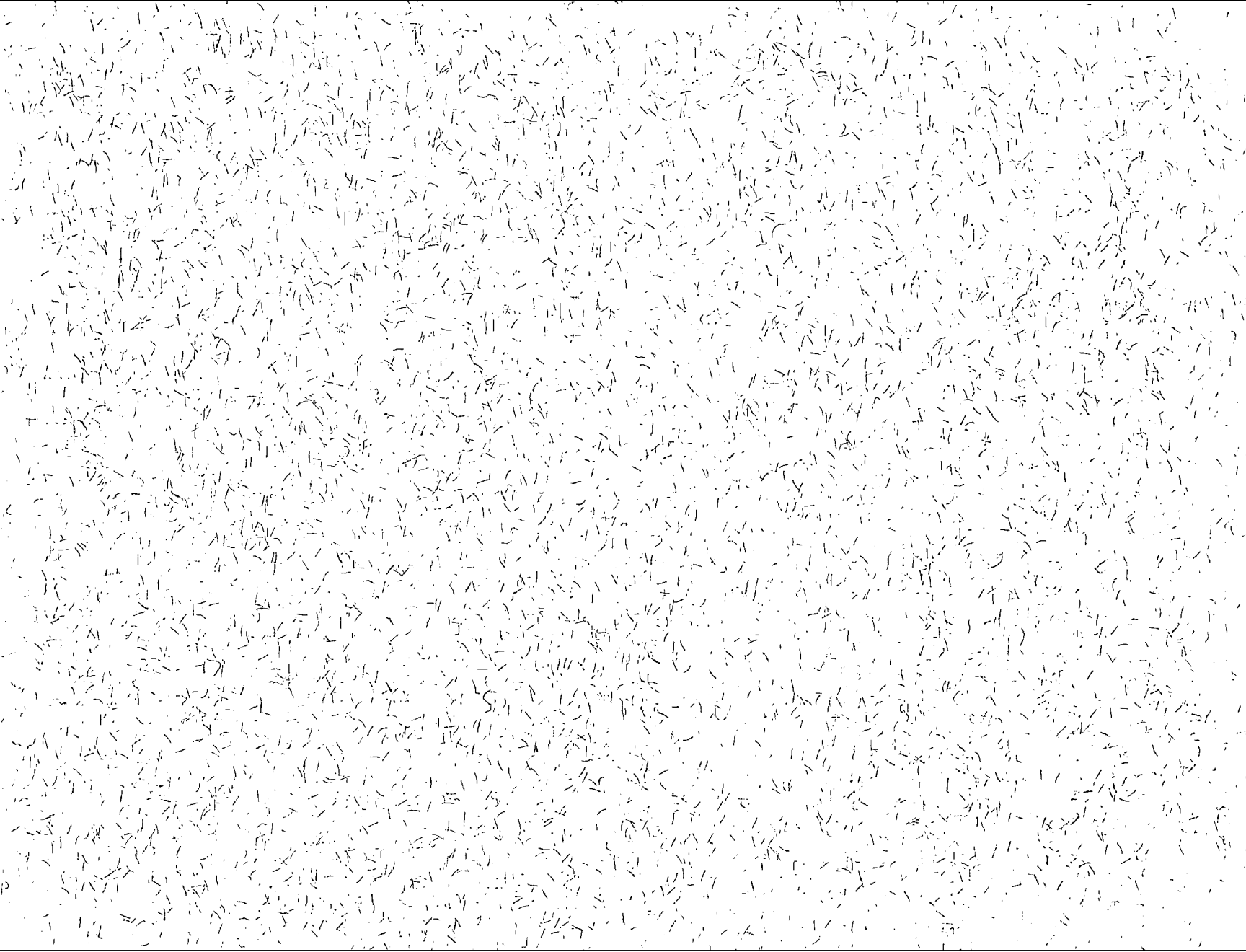
violent and chronic juvenile offenders, adherence to the MST treatment principles was an important predictor for key outcomes pertaining to the adolescents' future criminal activity and rearrest. Moreover, MST adherence was associated with changes in adolescent and parental psychiatric symptomatology. Adherence was measured with a standardized MST Adherence Questionnaire administered to parents, youths, and therapists at random intervals during the course of treatment (Appendix B). Interestingly, the parents' responses to the adherence questionnaire were the strongest predictors of youth outcomes.

These findings further reinforce our commitment to the rigorous and ongoing training, supervision, and consultation protocol described previously. Indeed, Multisystemic Therapy Services, Inc., is in the process of designing an adherence assessment protocol that examines treatment fidelity from multiple perspectives including parent, therapist, supervisor, and consultant views. In our clinical trials, treatment adherence is also measured through therapist logs that are completed after each client contact and by expert ratings of audio-recorded treatment sessions. We are in the process of integrating cost-effective versions of these research-validated methods of monitoring program implementation and treatment fidelity into MST treatment programs. Ultimately, we plan to have a management information system that can provide continuous feedback regarding treatment integrity and youth outcome for each MST team at each site.

Program Documents and Record Keeping

MST programs are housed within state (mental health, juvenile justice, social welfare) or private provider organizations that have their own record keeping requirements and procedures. On an individualized basis, however, efficiency is increased if the paperwork needs of MST providers (e.g., systems oriented treatment logs, MST consultation forms) can be dovetailed with organizational requirements to reduce duplication, etc. Thus, during the development stage of each new project, staff of MST Services, Inc., meet with agency staff to review and reduce required paperwork, if at all possible.

CHAPTER THREE
Evaluation



EVALUATION

Three early clinical trials and one preliminary report established the promise of MST with difficult to treat clinical populations. First, Henggeler et al. (1986) evaluated the effectiveness of MST compared with usual community treatment for inner-city juvenile offenders and their families. At post-treatment, families that received MST showed extensive improvements in family relations, and their youth evidenced decreased behavior problems. Second, in a study contrasting MST versus behavioral parent training with abusive and neglectful families (Brunk, Henggeler, & Whelan, 1987), MST was significantly more effective at restructuring problematic parent-child relations. This study remains one of the few randomized trials of family-based treatment in the child maltreatment field (Becker et al., 1995). Third, Borduin, Henggeler, Blaske, and Stein (1990), in the first controlled study of adolescent sexual offenders to appear in the literature, showed that MST reduced three-year recidivism for both sexual offenses and criminal offenses when compared with individual outpatient counseling. Fourth, preliminary findings from the two studies discussed subsequently (i.e., Borduin et al., 1995; Henggeler et al., 1992) showed that MST reduced drug use and abuse in samples of serious juvenile offenders (Henggeler et al., 1991).

The success of these early trials has been followed by more extensive clinical trials with serious juvenile offenders and substance abusing juvenile offenders conducted in South Carolina and Missouri. Participant characteristics of four studies focusing on violent/chronic or substance abusing/dependent juvenile offenders are presented in Table 2, and key outcomes for these studies are presented in Table 3.

1. The Simpsonville, South Carolina, Study

The NIMH-funded Simpsonville study (Henggeler et al., 1992, 1993) was a collaborative project between the South Carolina Department of Mental Health (DMH) and the South Carolina Department of Juvenile Justice (DJJ) that examined MST as an alternative to the incarceration of violent and/or chronic juvenile offenders. As such, inclusion criteria for the juvenile offenders were (a) arrest for a violent offense or at least three criminal arrests including at least one felony arrest, (b) prediction by DJJ staff that the youth was likely to be incarcerated for his or her recent arrest, and (c) the presence of at least one parent figure in the youth's life. The primary goals of the project were to decrease criminal activity, out-of-home placements, and cost of services.

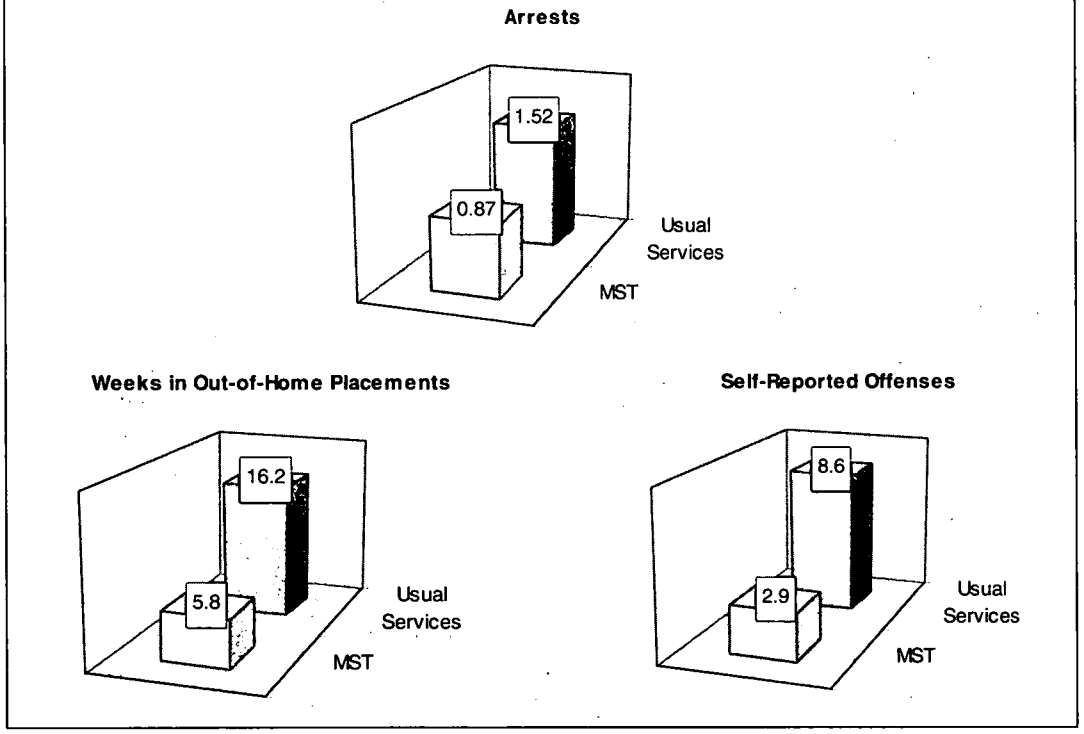
The Simpsonville project included 84 violent and chronic juvenile offenders, of whom 54 percent had been arrested for violent crimes (half the remainder self-reported that they had committed at least one violent crime during the previous six months); their mean number of arrests was 3.5; and they averaged 9.5 weeks of prior placement in correctional facilities. The average age of the youth was 15.2 years, 77 percent were male, the average Hollingshead (1975) social class score was 25 (i.e., semiskilled workers), 26 percent lived with neither biological parent, and 56 percent were African American and the remainder were White.

Youth were assigned randomly to receive MST using the family preservation model of service delivery (MST; n = 43) or usual services (e.g., court ordered curfew, school attendance, referral to other community agencies) provided by DJJ (n = 41). MST therapists were three master's-level counselors employed by the DMH with an average of two year's experience and caseloads of four families each. The average duration of treatment was thirteen weeks (Mean = 33 hours of direct therapeutic

contact). Assessment batteries, comprised of standardized measurement instruments, were administered pre-treatment and post-treatment.

Results showed that MST was effective at reducing rates of criminal activity and institutionalization. At the 59-week post-referral follow-up, youth receiving MST had significantly fewer rearrests (Means = .87 vs. 1.52) and weeks incarcerated (Means = 5.8 vs.16.2) than did youth receiving usual services. At post-treatment, youth receiving MST reported a significantly greater reduction in criminal activity than did youth receiving usual services. Results at the 59-week post-referral follow-up are shown in Figure 1, with numbers representing the average for each treatment condition.

Figure 1. MST versus Usual Services

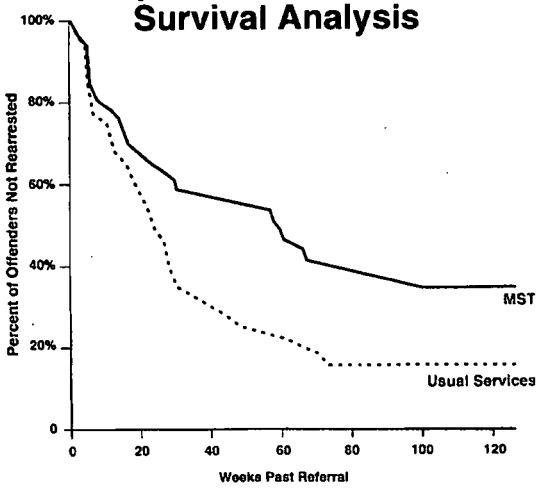


Families receiving MST reported more cohesion, whereas reported family cohesion decreased in the usual services condition. In addition, families receiving MST reported decreased adolescent aggression with peers, while such aggression remained the same for youth receiving usual services. Importantly, the relative effectiveness of MST was not moderated by demographic characteristics (i.e., race, age, social class, gender, arrest and incarceration history)—differential outcomes were not observed based on race, arrest history, etc. Similarly, preexisting problems in family relations, peer relations, social competence, behavior problems, or parental symptomatology were not differentially predictive of outcomes. Thus, MST was equally effective with youth and families of divergent backgrounds and with varying strengths and weaknesses.

Moreover, a 2.4 year follow-up (Henggeler, Melton, Smith, Schoenwald, & Hanley, 1993) showed that MST doubled the percentage of youth not rearrested, in comparison with usual services (see Figure 2). Thus, this study demonstrated that an intensive home- and family-based service could reduce the criminal activity of violent/chronic juvenile offenders while maintaining these youth in the community.

Figure 2

Simpsonville, SC Project
Survival Analysis



2. The Columbia, Missouri, Project

In the most comprehensive and extensive completed evaluation of MST to date (Borduin et al., 1995), the effectiveness of MST was compared with individual therapy (IT). Participants were 200 twelve- to seventeen-year old juvenile offenders and their families referred from the local DJJ office and randomly assigned to receive either MST (n = 92) or IT (n = 84). Twenty-four families refused services. MST therapists were six doctoral students in clinical psychology who provided home-based services, whereas IT therapists were six master's-level therapists who provided outpatient mental health services. The juvenile offenders were involved in extensive criminal activity as evidenced by their average of 4.2 previous arrests (Standard Deviation = 1.3) and the fact that 63 percent had been previously incarcerated. The youths' average age was 14.8 years (Standard Deviation = 1.6); 67 percent were male; 70 percent White, and 30 percent African American; 65 percent were from families characterized by low socioeconomic class; and 53 percent lived with two parental figures.

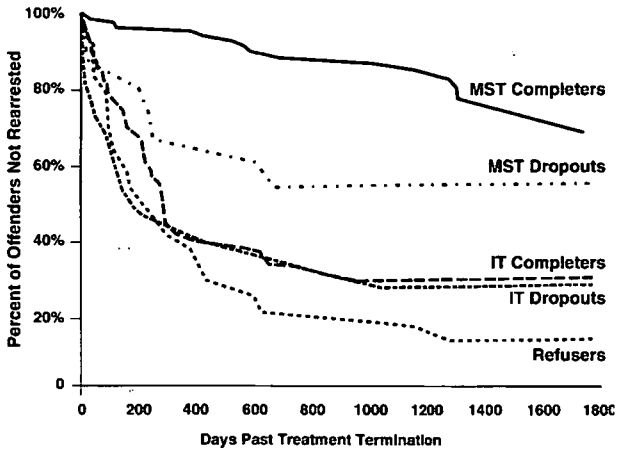
Standardized assessment batteries were conducted at pre-treatment and post-treatment. At post-treatment, families receiving MST reported and evidenced more positive changes in their dyadic family interactions than did IT families. For example, MST families reported increased cohesion and adaptability and showed increased supportiveness and decreased conflict-hostility during family discussions as compared with IT families. Of note, parents in the MST group showed greater reductions in psychiatric symptomatology than did parents in the IT condition.

Most importantly, results from a four-year follow-up of recidivism showed that youth who received MST were significantly less likely to be rearrested than youth who received individual therapy (see Figure 3).

Specifically, MST completers (n = 77) had lower recidivism rates (22.1 percent) than MST dropouts (46.6 percent; n = 15), IT completers (71.4 percent; n = 63), IT dropouts (71.4 percent; n = 21), and treatment refusers (87.5 percent; n = 24). Moreover, MST dropouts were at lower risk of rearrest

than IT completers, IT dropouts, and refusers. Examination of recidivists from each group revealed that MST youth arrested during follow-up were arrested less often and for less serious offenses than IT youth arrested during follow-up. Follow-up data also revealed that MST youth had a significantly lower rate of substance-related arrests than IT youth (4 percent vs. 16 percent) (Henggeler et al., 1991). Significantly, MST youth were less likely to be arrested for violent crimes (e.g., rape, attempted rape, sexual assault, aggravated assault, assault/battery) following treatment than were IT youth. The effectiveness of MST was not moderated by adolescent age, race, social class, gender, or pretreatment arrest history.

Figure 3
Missouri Delinquency Project: Survival Analysis



3. Multisite, South Carolina, Study

A recently published multisite (two public sector mental health sites in South Carolina) randomized trial (Henggeler, Melton, et al., 1997; n = 155), funded by the National Institute of Mental Health (NIMH), has evaluated the role of treatment fidelity in the successful dissemination of MST with violent and chronic juvenile offenders and their families. To be included in this study, adolescents had to (a) be between 11 and 17 years of age, (b) have committed a serious criminal offense or have at least three prior criminal offenses other than status offenses, and (c) be at imminent risk of being placed outside the home because of serious criminal involvement. At the time of referral, the average age of participants was 15 years; 82 percent were male, 81 percent were African American, and 19 percent were White. The adolescents averaged 3.07 prior arrests, 40 percent had at least one prior arrest for a violent crime, and 59 percent had at least one previous incarceration. Youth assigned to treatment as usual were placed on probation for a minimum of six months and, depending on the nature of the adolescent's offenses, were often further instructed by the courts to make restitution.

Therapist adherence to the MST treatment protocol, based on parent, adolescent, and therapist reports on a standardized MST adherence questionnaire, were significantly associated with decreased rates of rearrest and incarceration during the 1.7 year follow-up. High adherence predicted favorable outcomes, and low adherence predicted poor outcomes. When treatment fidelity was not taken into account, MST produced a 26 percent reduction in rearrest (not statistically significant), a 47 percent reduction in days incarcerated, and a significant improvement in adolescent psychiatric symptomatol-

ogy. As described earlier, these findings highlight the importance of maintaining treatment fidelity when disseminating complex family-based services to community settings.

4. Charleston, South Carolina, Study

In Charleston, South Carolina, a well-implemented, randomized clinical trial (Henggeler, Pickrel, & Brondino, 1997) funded by the National Institute of Drug Abuse (NIDA) is examining the effectiveness of MST vs. usual community services with 118 juvenile offenders meeting DSM-III-R criteria for substance abuse or dependence and their families. At this point in the project, based on self-report measures, MST reduced soft-drug and hard-drug use at post-treatment, and such reductions were maintained for soft-drug use at six-month post-treatment follow-up for males. Consistent with findings of the aforementioned randomized trials of MST with violent and chronic juvenile offenders, MST reduced incarceration by 46 percent and total days in out-of-home placement by 50 percent. Reductions in rearrests (25 percent), however, were not as extensive as have been obtained previously. In addition, an extremely favorable rate of treatment completion (98 percent) was demonstrated for the MST condition (Henggeler et al., 1996).

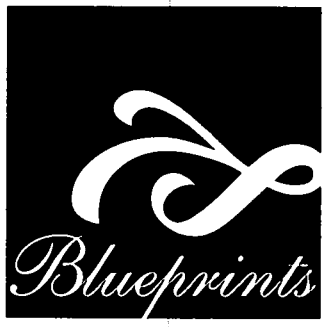
In summary, findings from these randomized studies of MST provide strong evidence that MST can produce short- and long-term reductions in criminal behavior and out-of-home placements in serious juvenile offenders.

Table 3. Evaluation results for MST in Randomized Trials with Serious Juvenile Offenders

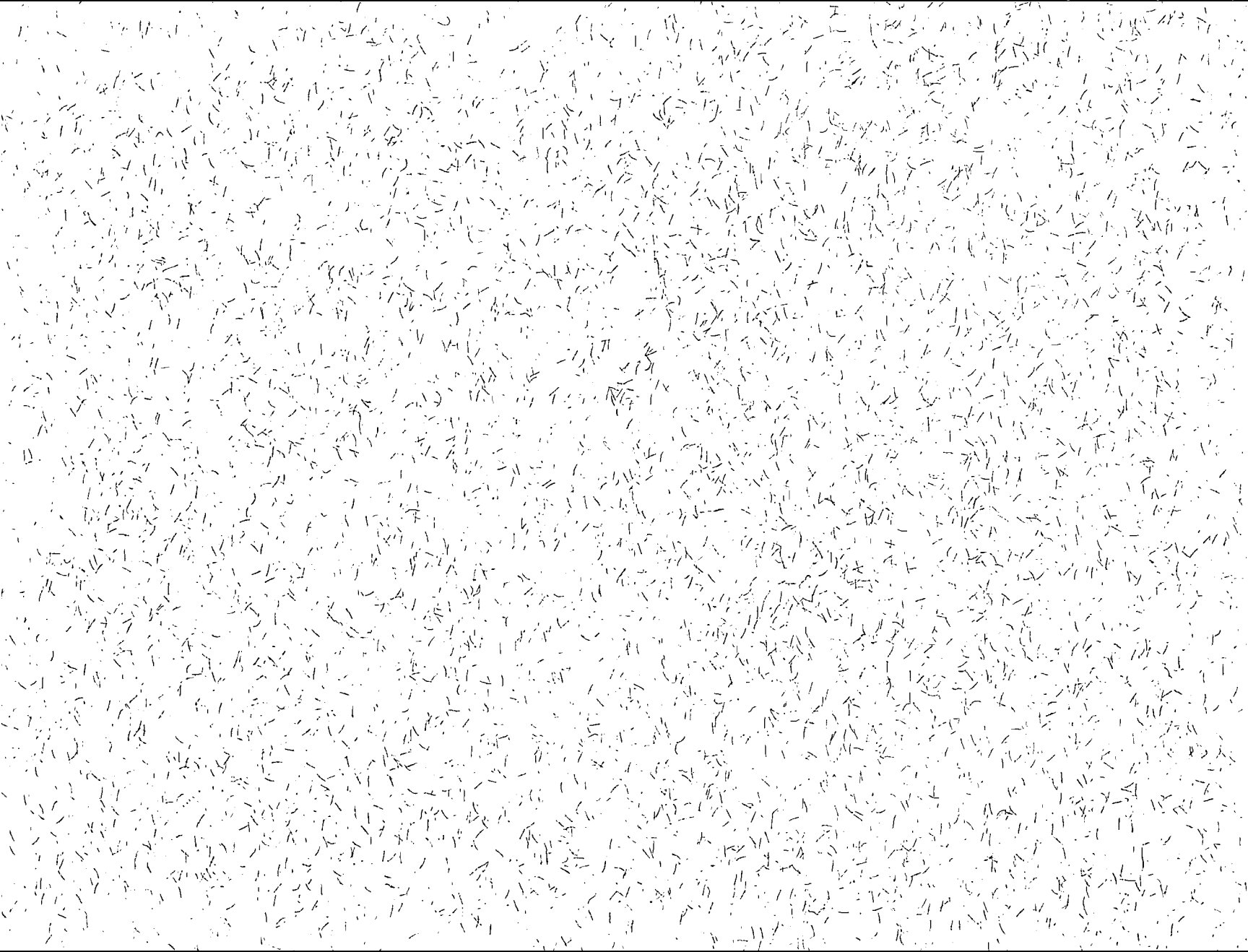
Outcome	Columbia, MO[a]	Simpsonville, SC[b]	Multisite, SC[c]	Charleston, SC[d]
Reductions in Rearrest Relative to Comparisons	70%	43%	26% (nd)	25% (nd)
Self-reported Offending	na	Decreased Criminal Activity	nd	nd
Out-of-Home Placement	na	64% reduction	47% reduction	50% reduction
Youth Psychiatric Symptomatology	nd	na	Decreased Symptoms	na
Drug Use	Decreased drug-related arrests	Decreased drug use	na	Decreased drug use
Family Relations	Improved family relations	Improved cohesion	nd	na
Peer Relations	nd	Decreased aggression	nd	na

[a]Borduin et al. (1995)
[b]Henggeler et al. (1992, 1993)
[c]Henggeler, Melton et al. (1997)
[d]Henggeler et al. (1997)

na=not available
nd=no significant between-groups differences



CHAPTER FOUR
Program Replication



PROGRAM REPLICATION

Dissemination of MST

Prior to 1996, the Family Services Research Center (FSRC), Medical University of South Carolina, was the lead organization involved in both MST research and dissemination efforts. Since that time, research and dissemination missions have been separated. The mission of the FSRC is to develop and validate clinically effective and cost effective family-based services for youth (and their families) presenting serious clinical problems. As such, MST research efforts are housed within the FSRC, and approximately 35 full-time individuals are working on various MST-related research projects. Dissemination of MST, however, is now the responsibility of MST Services, Inc. The mission of this organization is to disseminate MST with high integrity. The university-based FSRC and the private MST Services, Inc., have formal collaborative agreements, such that the strengths of each organization can complement the other.

Current Randomized and Quasi-experimental Evaluations of MST Extensions

The success of the aforementioned randomized trials of MST, especially the Simpsonville and Missouri Projects, has led to several studies conducted by the FSRC that are attempting to adapt and extend the MST approach to other populations presenting serious clinical problems. These include, for example, youth presenting psychiatric emergencies such as suicidal behavior and substance-abusing parents of young children. Populations with different demographic characteristics (e.g., Hispanic American gang members, violent juvenile offenders residing in rural areas) have also been targeted. MST is also being adapted to use as alternatives to out-of-home placements other than incarceration (e.g., psychiatric hospitalization, residential treatment centers).

A major clinical trial funded by NIMH is evaluating MST as an alternative to the psychiatric hospitalization of youth presenting psychiatric emergencies (Henggeler, Rowland, et al., 1997) in Charleston. This is the first randomized trial in the area of children's mental health services to be conducted with psychiatric hospitalization as one of the treatment conditions. Currently, 125 youth have been recruited for the study (out of 127 eligible), and preliminary findings regarding the prevention of out-of-home placements are impressive.

In collaboration with state authorities in Wilmington, Delaware, the FSRC is providing the clinical training and technical assistance needed to evaluate home-based MST as an alternative to out-of-state residential treatment for serious juvenile offenders. As such, random assignment to conditions (MST vs. out-of-state residential placement) is being made by juvenile justice after a family court judge has decided that the youth should be placed out of state.

Randomized trials of MST with serious juvenile offenders have also been funded in two other states and Canada. In Galveston, Texas (Dr. Christopher Thomas, Principal Investigator), MST has been evaluated as a treatment for a population which includes Hispanic gang members, and data analyses are currently being conducted. Extensive evaluations of MST have recently begun in Ohio (Dr. Jane Timmons-Mitchell, Principal Investigator), and Ontario, Canada (Dr. Alan Leschied, Principal Investigator). See Appendix C for a detailed description of several of these replications.

In collaboration with state substance abuse and mental health authorities in South Carolina and funded by the Center for Mental Health Services, SAMHSA, the FSRC is conducting a quasi-experimental

evaluation of an innovative treatment and service delivery model (blending MST and the Community Reinforcement Approach; Higgins & Budney, 1993). Program targets are substance abusing parent figures of young children. An evaluation is also being conducted in Sumter, South Carolina, in collaboration with the Sumter School District 17, and funded by the Head Start Bureau of the DHHS Administration for Children, Youth, and Families. The FSRC is conducting a qualitative and quantitative evaluation of a program of integrated substance abuse, mental health, primary care, and educational/vocational services for pregnant adolescents and adolescent parents.

The Diffusion of MST to Public and Private Providers

Several community-based initiatives within and outside the state of South Carolina are providing opportunities to examine factors associated with the apparent transportability of MST using a home-based model of service delivery. First, initiated by the South Carolina Health and Human Services Finance Commission, MST has been disseminated across the state to community-based public and private agencies that provide services to Medicaid-eligible families. Second, MST training and monitoring of treatment integrity is being provided to child serving agencies in several states. These include Tennessee (Nashville to Memphis), Delaware (randomized trial), Louisiana (a state mental health authority), Maryland (the state juvenile justice authority), Ventura County, California (the county child serving authority), Florida (the state juvenile justice authority), Michigan (human services), Minnesota (multiple county child serving agencies), and Texas (randomized trial). Third, funded by the Annie E. Casey Foundation, the FSRC is in the beginning stages of designing and evaluating an MST-based continuum of care aimed at returning children in out-of-home placements to their families and communities.

In summary, rigorous evaluation has been a hallmark of the development and dissemination of MST. Historically, the early success of innovative treatment models has rarely been replicated in dissemination efforts. The FSRC is committed to determining the conditions needed for successful replication of MST, and Multisystemic Therapy Services, Inc., is committed to assuring that those conditions are met at replication sites.

Issues Related to the Transferability of MST to Other Settings and Populations

We believe that the success of MST is based largely on several aspects of MST that have strong empirical underpinnings, but that differ from the practices of most mental health and juvenile justice service systems. First, MST addresses the empirically-derived determinants of serious clinical problems in a comprehensive (i.e., addressing youth, family, peer, school, and community variables), yet individualized protocol. Second, MST services are provided in the natural environment of the youth and their families, thereby increasing access to services and enhancing treatment generalization. Third, for successful outcome, therapists must be well trained and supported, and therapist adherence to the treatment model must be monitored. Fourth, substantial effort must be directed toward the development and maintenance of positive interagency relationships. Thus, favorable outcome is predicated on suppositions of MST that represent substantive clinical-level and system-level change from prevailing mental health and juvenile justice practices.

Although accomplishing these clinical-level and system-level changes has presented numerous challenges, overcoming barriers to such change is critical to the successful development and imple-

mentation of MST programs. These barriers pertain to qualities of the clinicians and supervisors hired to provide MST, characteristics of the provider organization, the community and interorganizational context of the program, and the interface between the MST consultant organization and the provider organization.

1. Therapist Characteristics

Based on experience in training more than 100 therapists during the past three years, we believe that several personal and experiential characteristics are positively associated with therapists' capacity to implement MST successfully. Personal qualities of successful therapists include intelligence, flexibility, creativity, and common sense. In addition, therapists who have backgrounds in the empirical bases of child and family development and who have used empirically based treatment models show relatively strong adherence to the MST treatment principles. It also helps if therapists have volunteered for MST training, are receptive to peer supervision, and feel accountable for client outcome. On the other hand, therapists who have practiced autonomously for several years, prefer to work with children individually, believe in non-empirically based theories of child psychopathology and therapy, and have been conscripted to MST training tend to have difficulty adapting to the MST approach.

2. Provider Organization

The successful integration of an MST program into a provider organization requires a match between the MST conceptual, philosophical, and empirical framework and the corresponding values of the provider organization. Moreover, the key administrators, supervisors, and clinicians in the organization must be on the same wavelength. The MST program should have distinct, dedicated staff (i.e., 100 percent time MST therapists) and include a clinical supervisor trained in MST who has credible authority regarding clinical activities. All staff who can influence treatment decisions should be trained in MST and support the mission of the MST program, and concrete support should be evident from the hierarchy of the provider organization (e.g., highly competitive salaries, flex time, incentives). Appendix D provides "Minimally Acceptable Procedures and Standards" for MST programs and a checklist used by MST Services, Inc. to help assess organizational climate within provider organizations interested in developing an MST program.

3. Community and Interorganizational Context

It may seem obvious, but an MST program cannot be successful without a sufficient referral base and concomitant funding. Unfortunately, the funding mechanisms in many communities include disincentives for public agencies to use community-based services. For example, a public sector referral source may be required to pay for the costs of family preservation, but not for incarceration or treatment in a residential facility. Similarly, a provider organization may be reimbursed at a considerably higher rate for providing restrictive services than for providing community-based services. In addition, as noted earlier, it is critical that the MST program maintain active and cooperative relations with the key stakeholders in the community.

4. Provider Organization and MST Consultant Organization

There should be clear agreement regarding the objectives of training and consultation, the roles and responsibilities of the respective organizations in meeting these objectives, and the nature of what is negotiable should the provider organization change objectives, policies, or target populations served.

Moreover, the provider organization should be clearly committed to and engaged in the full and continuing training and consultation experience and view these experiences from a "continuous quality improvement" perspective.

Program Benefits and Cost Savings

Outcomes regarding decreased criminal activity, decreased rates of out-of-home placements, and improved family functioning have been described previously. In addition, evidence is emerging of considerable benefits regarding cost savings associated with MST. First, in the Simpsonville study with serious juvenile offenders, the cost of MST was approximately $4,500 per youth converted to 1996 dollars, which compares favorably to the respective cost of incarceration in the usual services condition of approximately $12,000 per youth (due to the high rates of incarceration in the usual services condition). Second, in a sample of substance abusing and dependent juvenile offenders who were not, a priori, at imminent risk of out-of-home placement, a cost analysis (Schoenwald, Ward, Henggeler, Pickrel, & Patel, 1996) showed that the incremental costs of MST were nearly offset by the savings incurred during the first year post-referral due to reductions in days of out-of-home placement. Third, preliminary findings from our current study evaluating MST as an alternative to psychiatric hospitalization (Henggeler, Rowland, et al., 1997) show an 85 percent reduction in days hospitalized, which should translate to considerable cost savings when the formal cost analyses are conducted for this project. Fourth, a recent report from the Washington State Institute for Public Policy (1998) showed that MST was the most cost-effective of a wide variety of treatments to reduce serious criminal activity by adolescents. Indeed, the average net gain for MST in comparison with boot camps was $29,000 per case in decreased program and victim costs. Finally, these cost savings are especially noteworthy when the superior clinical outcomes and reductions in criminal activity demonstrated by MST are considered.

Future Directions

In addition to the aforementioned and ongoing clinical trials that are testing MST with other youth and family populations presenting serious clinical problems (e.g., youth presenting psychiatric emergencies; substance abusing parents of young children), the FSRC has recently been funded to test other extensions of MST. Each of these extensions addresses the needs of an extremely challenging population.

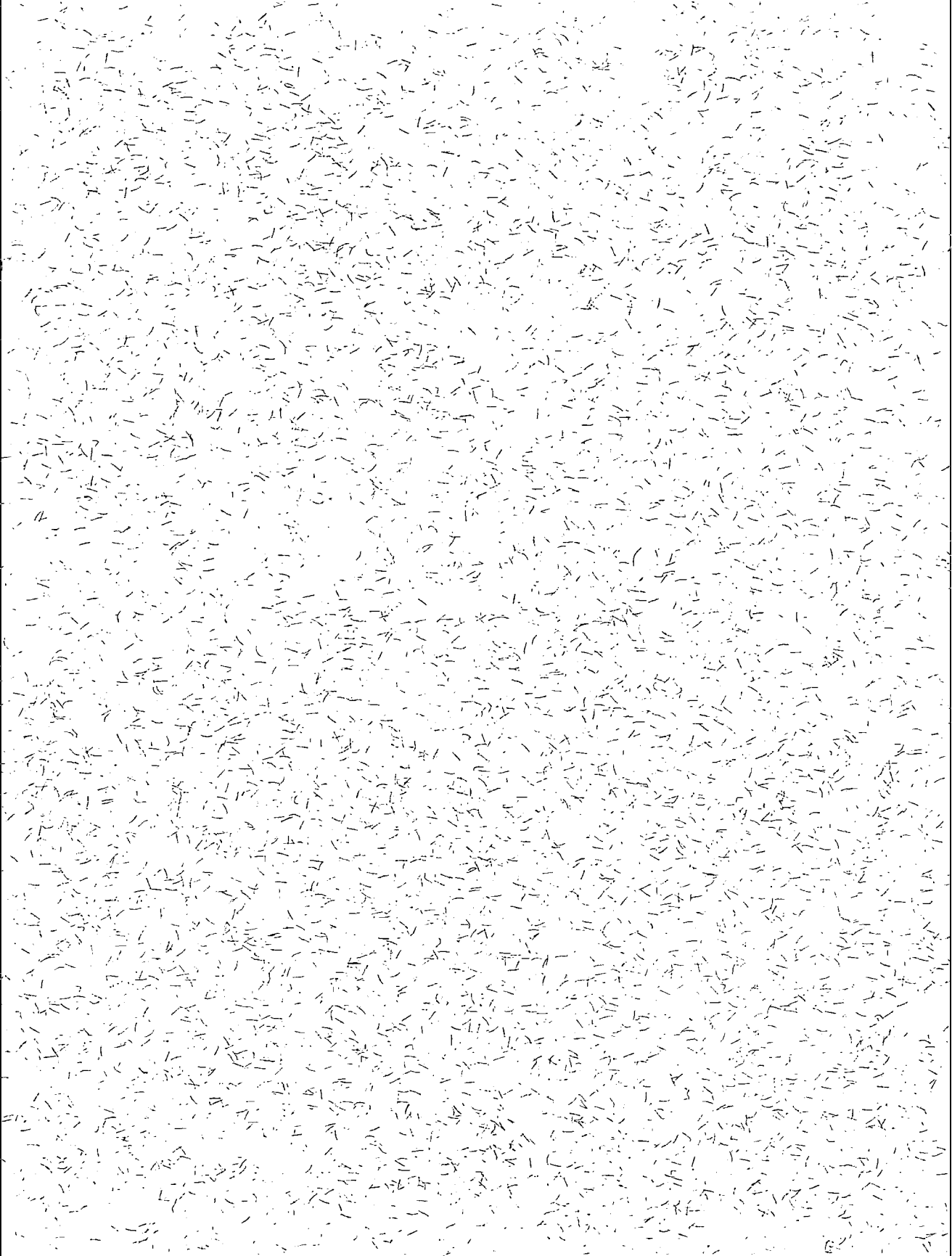
One project will develop an MST-based continuum of care (i.e., MST-outpatient, MST home-based, MST friendly therapeutic foster care network, and an MST friendly short-term secure setting) in collaboration with neighborhood residents and agency stakeholders. This continuum will provide the needed mental health and substance abuse services for a sample of youth who are currently in out-of-home placement. The youth will be brought back to the community, and the MST-based continuum of care (similar in concept to a managed care entity) will assume responsibility for all treatment needs throughout the duration of the project. The evaluation will focus on clinical outcomes and cost savings.

A second project identifies the neighborhood that has the highest rates of infant mortality, arrest, and out-of-home placements for youth in the state. A partnership will be formed with neighborhood residents and stakeholders, and key problems will be identified conjointly. The FSRC, with community collaboration, will design and implement empirically-based services to address the identified

problems. Outcomes in the quasi-experimental study will focus on cost savings and reductions in the identified problems.

Third, an MST team and prevention interventionists (primary and secondary) will be placed in an inner-city middle school that has a high rate of violence, drug use, and dropout. The MST team will provide intensive family-based services for youth who have been expelled or have perpetrated crimes in school, while the other professionals will implement empirically-based violence and drug-use prevention programs and provide consultation to teachers. A quasi-experimental design is being used to examine cost-related issues and ultimate outcomes.

Appendices



APPENDIX A

References by Document Section

Full citations are located at the end of the document.

EXECUTIVE SUMMARY

None

PROGRAM AS DESIGNED AND IMPLEMENTED

Borduin et al., 1995
Brondino et al., 1997
Bronfenbrenner, 1979
Elliott, 1994
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APPENDIX B

MST Adherence Measure

Adherence measures reflect therapist adherence to the nine treatment principles. The Adherence Measure is completed by adolescents, parents, and/or therapists.

1. The session was lively and energetic.
2. The therapist tried to understand how the family's problems all fit together.
3. The family and therapist worked together effectively.
4. The family knew exactly which problems were being worked on.
5. The therapist recommended that family members do specific things to solve their problems.
6. The therapist's recommendations required family members to work on their problems almost every day.
7. The family and therapist had similar ideas about ways to solve problems.
8. The therapist tried to change some ways that family members interact with each other.
9. The therapist tried to change some ways that family members interact with people outside the family.
10. The family and therapist seemed honest and straightforward with each other.
11. The therapist's recommendations should help the children to mature.
12. Family members and the therapist agreed upon the goals of the session.
13. The family and therapist talked about how well the family followed her/his recommendations from the previous session.
14. The family and therapist talked about the success or lack of success of her/his recommendations from the previous session.
15. The therapy session included a lot of irrelevant small talk (chit-chat).
16. Not much was accomplished during the therapy session.
17. Family members were engaged in power struggles with the therapist.
18. The therapist's recommendations required the family to do almost all the work.
19. The therapy session was boring.
20. The family was not sure about the direction of treatment.
21. The therapist understood what is good about the family.
22. The therapist's recommendations made good use of the family's strengths.
23. The family accepted that part of the therapist's job is to help change certain things about the family.
24. During the session, the family and therapist talked about some experiences that occurred in previous sessions.
25. The therapist's recommendations should help family members to become more responsible.
26. There were awkward silences and pauses during the session.

THERAPIST LOG OF DIRECT FAMILY / ADOLESCENT CONTACT

FAMILY ID: _____ **TODAY'S DATE:** _____

THERAPIST ID: _____ **CONTACT (D OR I):** _____

Instructions: In the spaces below, enter the code describing the location of the contact and the beginning and ending times of the contact. If the individual did not show up for the appointment or was not present, enter a 0 in the did not show column.

LOCATION OF CONTACT CODES:
0 = N/A 1 = Home 2 = School 3 = Agency (specify) 4 = Office 5 = Phone 6 = Other (specify)
NO SHOW CODES: 0 = N/A 1 = No show 2 = Present at session

LOCATION OF CONTACT		**DURATION OF CONTACT**		
Code	Specify	From	To	Did Not Show
1. _____	_____	_____	_____	_____

Instructions: Next indicate what individuals were present at the session, whether they had completed homework assigned from the previous session, whether new homework was assigned, and their degree of participation.

Homework completed (HW):

0 = N/A 1 = None
2 = Partial 3 = Complete

Homework assigned (HW):

0 = N/A 1 = Yes 2 = No

Codes for Relationship to Client

1. Client	9. Uncle	17. Psychiatrist
2. Mother	10. Foster Mother	18. Social Worker
3. Father	11. Foster Father	19. Probation Officer
4. Grandmother	12. Step-Mother	20. Research Assistant
5. Grandfather	13. Stepfather	21. Therapist
6. Sibling	14. Teacher	22. Crisis Care Worker
7. Daughter/Son	15. Tutor/Coach	23. Other (specify)
8. Aunt	16. Guidance Counselor	

Degree of participation:

0 = No show 1 = Highly resistant 2 = Moderately resistant 3 = Mildly resistant
4 = Neutral 5 = Mildly cooperative 6 = Moderately cooperative 7 = Highly cooperative

Individuals Present	**Relationship to Child**	**HW Completed From Last Session**	**HW Assigned This Session**	**Degree of Participation**
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____

Instructions: Rate the change since the previous session regarding each system/subsystem and area addressed.

0 = N/A 1 = Deterioration
2 = No change 3 = Positive gain

SYSTEM/SUBSYSTEM	AREAS ADDRESSED		
FAMILY RELATIONSHIPS			
8. Mother - Adolescent	Affect _____	Control _____	Instrumental _____
9. Father - Adolescent	Affect _____	Control _____	Instrumental _____
10. Marital	Affect _____	Control _____	Instrumental _____
11. Sibling	Affect _____	Control _____	Instrumental _____
12. Extended Family	Affect _____	Control _____	Instrumental _____
13. Overall Family	Affect _____	Control _____	Instrumental _____

INDIVIDUAL (1 = YES 0 = NO)

14. Adolescent	_____Cognitive	_____Emotional	_____Social	_____Medical Concerns
15. Mother	_____Cognitive	_____Emotional	_____Social	_____Medical Concerns
16. Father	_____Cognitive	_____Emotional	_____Social	_____Medical Concerns
17. Other Family Member	_____Cognitive	_____Emotional	_____Social	_____Medical Concerns

*Describe Medical Concerns

_____

(Attach medical concerns sheet if necessary).

Instructions: Rate the change since the previous session regarding each system/subsystem or area addressed.

0 = N/A 1 = Deterioration 2 = No change 3 = Positive gain

SYSTEM/SUBSYSTEM	AREAS ADDRESSED	
PEERS		
18. Adolescent's peers	Disengage from deviant peers	_____
	Coping with deviant peers	_____
	Engage with prosocial peers	_____
19. Parental social network	Disengage from deviant friends	_____
	Engage with prosocial friends	_____
SCHOOL/WORK/AGENCY RELATIONS		
20. Adolescent's school	Academics	_____
	Behavior problems	_____
	Prosocial interactions	_____
21. Adolescent's employment	Gaining job	_____
	Keeping job	_____
22. Parental employment	Gaining job	_____
	Keeping job	_____
23. Parent - agency relations	Gaining service	_____
	Improving service	_____

APPENDIX C

Multisystemic Therapy Replication
Galveston, Texas

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Background

Island Youth Programs is a unique and innovative project to reduce youth violence in the City of Galveston. It was developed in 1994 by the Island Youth Programs Advisory Board, a group of community leaders that represent city government, law enforcement, juvenile justice, public recreation, public schools, the Boys and Girls Club, the University of Texas Medical Branch, and local families concerned about youth violence. The Board identified poor individual social skills, lack of positive relationships and activities, and dysfunctional families as important risk factors contributing to violent behavior in our youth. Promising programs were reviewed by the Board with selected site visits to other communities. The Board designed a comprehensive approach to target these risk factors at critical stages of development, integrating prevention and intervention efforts. Five community-based programs were developed serving youth, between the ages of 5 and 17, and their families, that emphasized coordination and collaboration between the involved agencies. Further information on the Island Youth Programs is on the Internet at http://psy.utmb.edu/research/island/island.htm.

Second Chance was the program developed by the Board to work with serious delinquents and their families. It was based on Multisystemic Therapy as developed by Scott Henggeler, Ph.D., and associates at the Family Services Research Center. While not previously used in a community with a significant youth gang presence like Galveston, it focused on the identified community risk factors.

Changes or Modifications in Program

Setting

Various arrangements were considered for the placement and administration of the program, including juvenile justice, mental health service, and family services. In view of the non-traditional approach to working with families, the Board decided not to place the counselors as part of a conventional clinic. In addition, the administration of the counselors was separate from the evaluation of the program. Second Chance counselors were hired as employees of the Boys and Girls Club, with evaluation and clinical supervision by the University of Texas Medical Branch, and training by the Family Services Research Center.

Sample

Multisystemic Therapy focuses on work with serious delinquents and their families. The home-based, family preservation features of this intervention require a youth living with a parent or guardian. The definition of serious delinquents in our implementation were youth referred to Juvenile Probation following conviction for either (1) any violent offense, or (2) any other offense and record of at least two other arrests. Our community differed from previous sites with the presence of youth gangs. This required special attention in training and treatment methods (see Treatment and Training), but did not require changes in basic treatment principles. Our community also differed from other sites with a large Hispanic population in addition to African American and White populations. Some families required bilingual counselors (see Staffing). Previous evaluations indicated the cultural competence of Multisystemic Therapy for African American and White families. We sought to demonstrate the same for Hispanic families (see Evaluative Design).

Differences in the juvenile justice system from other sites resulted in changes in when and how participants were identified and referred. The juvenile court, probation department and district attorney offered to make the program mandatory. While this feature was supported by some Board members, it was decided to make the program voluntary in order to allow a randomly assigned, control group comparison evaluation. Eligible delinquents and families were identified by juvenile probation and seen by the evaluation team, usually after their first visit with the probation officer. During the course of recruitment, 73 percent of all families contacted agreed to participate. If the family was assigned to receive Second Chance services they were contacted by a counselor within 24 hours to arrange the first session.

Treatment

Multisystemic treatment lasts about three to four months. Second Chance treatment length did not vary from other sites. Counselors did think that more intensive work with parents and stronger individual consequences were necessary with gang delinquents. Only one family withdrew from participation after beginning treatment.

Staffing

Based on juvenile probation records for the year prior to the start of the program, approximately 100 delinquents would have been eligible for Second Chance. Based on the estimate that a counselor would handle about 15 to 18 families per year, six counselors would be needed if all families were served. In addition to the counselors, a coordinator was hired by the Boys and Girls Club to handle administration of the counselors and work in conjunction with Juvenile Probation, the University of Texas Medical Branch, and Family Services Research Center. The nontraditional approach of the intervention and the target population required that counselors have experience with the community and family work. All had a master's degree in a social science or a bachelor's degree with several years of clinical work experience. The start-up period for hiring counselors and establishing procedures was five months. This did not include training of the counselors. Over the course of the program, three to four counselors provided services and two were bilingual.

Training

Training was by the Family Services Research Center under a contract arranged by the University of Texas Medical Branch. An initial week long on site training workshop was followed by weekly training supervision by the staff of the Family Services Research Center. In addition, two day long follow up training sessions were conducted on site. Counselors also received training oriented to the community. They rode along with officers on patrol to learn the neighborhoods and develop liaison with local police. Seminars were also given on special topics including youth gangs in Galveston. This information was vital in working with youth involved with local gangs and gang rivalries. Ongoing weekly clinical supervision was provided by the University of Texas Medical Branch in coordination with training supervision. Close attention was given to training and supervision to ensure accurate implementation of the intervention.

Implementation Problems

During the course of recruitment, there was a smaller number of referrals than anticipated. Possible reasons included a declining number of juvenile arrests and offenders, and the juvenile court sending more delinquents to placement for offenses that previously resulted in probation. This resulted in concern about training since the counselors were carrying fewer cases than expected. It was decided and approved by the Board to include referrals to juvenile probation from outside the City of Galveston.

Over time, several other agencies approached the program suggesting referral of youth and families with various problems, but none of the youth were involved with juvenile probation. Since the focus of Second Chance was intervention with serious delinquents facing placement out of home, these other youth were beyond the scope of funding.

A Federal Certificate of Confidentiality was obtained by the evaluation team. Sharing of appropriate information between law enforcement, juvenile justice, probation officers, counselors and the evaluation team about youth and families required careful ongoing attention. The different groups with the most frequent contacts resulted in the most questions about confidentiality of treatment and evaluation information. The previous experience between outside therapist and probation officers in court ordered treatment provided the best guide to these issues.

Assignment to Second Chance did not preclude referral to other services by the probation officer. The director of a community program that provided court ordered treatment under contract to the juvenile probation department questioned possible conflict for youth referred to her program and involved with Second Chance. Services provided by her program were traditional, office based, weekly counseling, usually individual, with the youth. These differences did not represent a duplication of services nor a necessary conflict in treatment goals. It did require contact between Second Chance counselors and other therapists involved with the family. A meeting to discuss these issues was held by the probation office, the court ordered treatment program director, administrator for Second Chance, and Island Youth Programs Director. It was learned that in most cases, court ordered treatment did not usually start until Second Chance was well under way. Procedures were clarified for notifying therapists and counselors, and means for addressing any potential conflicts on individual cases were arranged. It was very important that all services for youth were coordinated.

Second Chance counselors were instructed to work with the family in coordination with other providers. No cases of conflict were identified or further concerns raised by other providers during the course of Second Chance.

In the second year of the program, the State of Texas implemented new legislation reorganizing services for convicted delinquents in graduated levels based on seriousness of their offense. This did not directly affect Second Chance as it fit neatly in one level of service created but demonstrated the importance of changes in the juvenile justice system on existing programs and procedures.

Dividing administrative, training, and evaluation of Second Chance between the three agencies, one of them out of state, created the potential for confusion of roles and responsibilities in working with the counselors. The direct involvement of the Boys and Girls Club, the Family Services Research Center, and the University of Texas Medical Branch required a high level of coordination. Problems regarding job evaluation of the counselors or handling cases between training and clinical supervision needed to be identified and addressed quickly. The excellent relationship between the three directors contributed to dealing with these issues.

A final problem that has not been resolved was the unexpected halt to funding for treatment before alternative support could be arranged. While cost effective in comparison to alternative services typically used with serious delinquents, it represents a substantial investment in each youth and family. The program requires competitive salaries for the counselors, training, supervision and infrastructure.

Evaluation

Evaluative Design. The program was organized to allow a control comparison between usual probation services with and without Multisystemic Therapy. Evaluation includes official records from juvenile probation, schools, and law enforcement for youth that agreed to participate in the study. Interviews are conducted with the youth and identified parent or guardian prior to assignment, 4 months, 10 months and 16 months. Rating scales are requested from teachers at the same time as interviews if the youth is attending school. Information also is obtained from the counselors and treatment records.

Outcome Measures. Official statistics included arrests, legal proceedings and school behavior records. Interviews included questions on demographics and ethnicity, standardized scales of youth behavior, family interaction and parental problems, and measures of program involvement. The report from teachers was a standardized scale of youth behavior. Standardized measures are used whenever possible. Several specific scales were developed when there was no suitable existing measure or for specialized needs, such as questions regarding gang involvement and gang activities.

Short and Long Term Effects. Preliminary analysis is underway.

Multisystemic Therapy Replication
Memphis, Tennessee

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Background

Youth Villages is a private, non-profit organization, based in Memphis, Tennessee, which provides mental health treatment to seriously troubled youth and their families. Youth Villages provides a continuum of services, including residential treatment, therapeutic foster care, and in-home, family-based treatment. Populations served include chronic, violent juvenile offenders, juvenile sex offenders, youth diagnosed as both emotionally disturbed and mentally retarded, and youth who have been abused or neglected.

Needs Assessment

In 1993, Youth Villages conducted a needs assessment, interviewing more than 126 people involved in the children's services system in Tennessee. Participants included juvenile court judges, foster care workers, mental health center professionals, special education officials, and others. The study also considered data on the placements of youth in the children's services system in Tennessee, as compared to the officials' expressed needs for services. The study concluded that the state's greatest need was for intensive long-term services in the home for troubled youth and their families. Officials stated that families were generally the root of the problems with troubled youth, but they also identified these families as the key to resolving the problems with these youth.

Replication of MST Model

As a result of the study's findings, Youth Villages visited the National Resource Center on Family Based Services at the University of Iowa and conducted research to identify a model for in-home, family-based treatment. Subsequently we adopted the Multisystemic Therapy (MST) treatment model and initiated a contractual relationship with the Family Services Research Center (FSRC), Medical University of South Carolina. The FSRC had developed a specific approach for dissemination of the MST model that included an initial five-day training for each therapist, followed by quarterly booster trainings, and weekly clinical case consultation.

In January, 1994, Youth Villages initiated the Intercept program, which replicated the MST model, as defined in the MST treatment manual developed by Dr. Henggeler, Dr. Schoenwald, and the staff at FSRC. Over the next 20 months, Intercept expanded from three counselors in Memphis to 12 counselors and three supervisors who were providing MST in Memphis, Jackson, Dyersburg, Nashville, Clarksville, and Cookeville, Tennessee. In addition to the State, private insurance companies began to fund treatment in Intercept as an alternative to inpatient and other treatment services.

Incorporation of MST Model into a Continuum of Services

In October, 1995, the State of Tennessee reconstructed its contracts with treatment providers across the state. Rather than contracting for specific types of treatment, such as residential treatment or therapeutic foster care, the state developed Continuum contracts. Under the Continuum model, the state is now contracting for treatment outcomes, regardless of the method of service delivery. Thus, when a child is referred for treatment, the child may receive any combination of residential treatment, therapeutic foster care, in-home family-based treatment or other services. The state is measuring treatment outcomes based on the percentage of youth remaining in the home, nine months after discharge. The state also measures the number of youth served, encouraging treatment providers to strive for both positive treatment outcomes and a reduced length of stay per child. The reduced length of stay allows providers to serve more youth annually. To meet the needs of the Continuum, by mid-1996 the Intercept staff had expanded to nearly 80 MST therapists and supervisors.

Expansion to Mississippi and Arkansas

In July, 1996, the State of Mississippi contracted with Youth Villages to provide MST to juvenile offenders and abused and neglected youth and their families in the Mississippi Delta region. In October, Youth Villages expanded its services to the Jackson, Mississippi, metropolitan area. Youth Villages also began to add counselors in communities in Mississippi and Arkansas to provide in-home treatment to families of youth placed in our residential programs in Tennessee.

Barriers to Replication of MST

Financing

Once Youth Villages had decided to develop the Intercept program by replicating the MST model, the next challenge was finding funding for Intercept. Most treatment for troubled youth in Tennessee in 1994 was funded by state contracts with residential treatment centers and therapeutic foster care programs. There was no precedent for the state to fund in-home, family-based treatment other than short-term crisis intervention services. The state was not willing to contract for a treatment model such as MST which was unknown in Tennessee at the time. However, the state had issued "flex funds" to each regional state agency across Tennessee, which could be spent on prevention and reunification services for youth and families.

Youth Villages was able to convince these regional agencies to purchase Intercept services, because we were willing to take almost all the financial risk. Youth Villages had financed the cost of a major needs assessment and had then responded to the expressed needs of children's services officials by developing a home-based treatment program. Youth Villages hired counselors with no contract and no guarantee of receiving referrals. The regional state agencies were willing to purchase Intercept services only on a case by case basis. Once they began to see the value of the service, they began to increase the number of referrals, thereby allowing for the addition of more counselors. The start-up costs from hiring staff and developing offices across the state were supported by a grant from a private foundation.

Another funding barrier involved the length of the treatment. Because we were charging a per diem rate, the referral agencies were often tempted to request discharges from treatment after only two months or

less. We were able to minimize this problem by explaining to customers that the MST clinical trials indicated that three to four months were usually required to achieve treatment outcomes. We also kept the customers closely informed of treatment progress and individualized our communication processes to meet the needs of each customer. We gained their trust over time by demonstrating a level of flexibility and commitment to treatment outcomes not demonstrated by other providers.

Treatment Mindset

When Youth Villages developed Intercept, we established it as a freestanding program separate from our residential treatment and therapeutic foster care programs. Most staff in the residential treatment and foster care programs practiced psychodynamic child-focused therapy which is not congruent with MST. Due to MST's substantially different treatment approach, it was important for us to help our staff make the transition to MST and to fully embrace the MST philosophy. Several of the staff who were initially hired had worked in our residential programs for several years but had not completed their Master's degrees and had not been in positions that required them to conduct individual therapy with children. This proved to be an advantage from the outset in that they were able to readily make the transition to MST and to quickly become effective home-based therapists.

While we were able to develop our own staff's treatment philosophy, educating our customers was more difficult. Most social workers, counselors, psychologists, and other mental health professionals in Tennessee believed in providing treatment by placing youth in residential treatment centers. Once the child had internalized the belief systems and insight provided by the treatment center, the child would then be moved to a group home or foster home, as a transition to the community. Eventually, if the family cooperated, the child might return home. This treatment philosophy was often adopted by parents who preferred to place their child out of home when their child would not behave appropriately.

The out-of-home, child-focused treatment philosophy of many social workers often supported parents' lack of motivation to keep their child in the home. Social workers were often looking for out-of-home placements before the child was ever referred to Intercept. Thus, on numerous occasions, the child would be removed from Intercept and placed out of the home when a bed became available in a treatment center. In other cases, the child would be removed when he or she began testing increased structure in the home, cited by social workers as evidence that in-home treatment was not working. Sometimes workers would become impatient with our attempts over several weeks or months to engage parents in treatment, concluding that the parents would never improve and that the child should be removed permanently. The workers were often skeptical of MST and resisted our attempts to work with families whom social workers had long ago deemed unsalvageable.

To address the difference in treatment philosophies between our program and many of our customers, Youth Villages engaged in hundreds of meetings across Tennessee with judges, social workers, probation officers, foster care workers, and other mental health professionals. To improve ongoing relationships with these professionals, we developed regional plans to regularly communicate with both direct care and management staff. Over time, professionals across the state began to gradually shift their perspective towards a community and family based treatment approach.

Customer Relations

Because many professionals are unfamiliar with MST, from the beginning of Intercept, we had to focus heavily on educating our customers about the MST treatment philosophy along with MST's demonstrated benefits—positive long-term outcomes and lower costs than out-of-home treatment. Because the MST approach was so different from the other treatment programs in the state, we were often asking referral sources to change their belief systems about treatment. This often resulted in a conflictual relationship with the very people from whom we needed referrals. Our counselors had to be not only therapists, but also marketers who could be flexible enough to meet the customer's individual needs while simultaneously trying to change their belief systems about treatment. In doing so, the Intercept staff to this day conduct meetings with referral sources, counselors, social workers, and case managers almost daily, to continually explain MST.

We have found that while many professionals agree with MST superficially, they do not always agree when problems develop on specific cases. In particular, when parents continually complain about problems with their child in the home, many people resort to placement in a residential treatment program. Their reasoning is often to have the child experience a consequence for their actions and internalize the significance of their misbehavior. In other cases, professionals cast blame on parents who appear to have little motivation or ability to parent their child. Thus, they want to remove the child from the home before gaining a full understanding of the parent's circumstances. Under either scenario, staff must be highly skilled at explaining MST and preventing the child's removal from the home. Simultaneously, they must keep the customer satisfied. These negotiation and educational skills have been as important as the clinical skills needed for the cases themselves.

Recruiting and Staff Retention

The MST manual lists specific characteristics which typify successful MST therapists. We also looked for these characteristics in hiring counselors. However, even with a highly selective interviewing process, our counselors are almost always surprised by the intensity and stamina required of MST therapists. Consequently, maintaining staff motivation became a barrier from the outset. We identified anecdotally over time that the single most important factor in keeping counselors motivated is their relationship with their supervisor.

Intercept started with three counselors with no experience in MST. With the training and consultation contract with Scott Henggeler's staff, we were able to achieve success on our initial cases. To ensure MST adherence and quality assurance, we developed a system of three formal case supervisions per week, ensuring that each case was closely monitored. We also developed a documentation format that required counselors to address every system identified in MST as a contributor to outcomes.

We found that the more structure, support, and supervision provided, the more motivated the counselors are. The extremely high level of flexibility and accountability afforded to MST therapists requires a close-knit structure to support the therapist who is often alone in the community.

Despite our close supervision of counselors, anecdotal evidence has shown that counselors generally require at least six to nine months to become confident and effective MST therapists. In Intercept's

first year, this was less of a barrier. However, in 1996, when we expanded Intercept from 12 counselors to nearly 50 in less than a year, the lack of experienced counselors became a barrier. The expansion required us to promote supervisors who had some MST experience but who were not always fully prepared to supervise other MST therapists.

During the expansion, the turnover rate of counselors increased, with many staff leaving within only a few months. Thus, we had to continually hire more new counselors with no MST experience. Over time, the turnover dropped substantially. We began a process for developing our own staff to become MST trainers and consultants, recognizing that our South Carolina consultants could not provide the amount of training and consultation that our program required. The training of our supervisors in providing MST supervision in 1997 proved to be one of the most useful and effective trainings since the development of our program.

Current Objectives

In 1994, we began a treatment program which involved a simple replication of the MST model. In 1995, we began the process of integrating the MST principles into our existing residential treatment and therapeutic foster care programs. We continue to improve our efforts toward a seamless approach to treatment, in which in-home, family-based services are provided whenever possible and out-of-home placements are minimized. We have reconstructed our residential and foster care programs to reflect MST's community and family orientation as well as its focus on current, measurable behaviors. In doing so, we have begun to train our residential and foster care therapists in the MST philosophy.

Youth Villages now assigns an MST therapist to each family whose child is placed out of the home, unless reunification is not an option. The MST therapist, who lives in the family's community, works in conjunction with the child's individual therapist in the residential and foster care program. Because youth are often referred from communities several hours from the residential centers and foster homes, we continue to streamline our efforts to coordinate the work of the two therapists until the child's return home. We have developed an information system which will allow documentation and chart access from anywhere in a three state area. This information system, along with continued training and supervision initiatives, will help to maximize MST adherence and replication throughout our Continuum of services.

Multisystemic Therapy Replication
Cuyahoga and Lorain Counties, Ohio

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Background

Multisystemic Therapy (MST) was introduced in Ohio in April, 1996, with funding from the Ohio Department of Youth Services (ODYS). A project entitled "Enhancing Treatment for Juvenile Justice Youth" was underway in the ODYS institutions in conjunction with the Department of Psychiatry, Case Western Reserve University School of Medicine. The aim was to bridge the treatment gap between institutional interventions, which were shown to be somewhat effective in institutional settings but not generalizeable to community settings.

MST, as originated by Scott Henggeler, Ph.D., was introduced as part of the project to provide a transition back to the community for institutionalized youth in order to prevent revocation. MST was selected based on its favorable track record in clinical trials and on statements by reputable experts who hailed MST as the only effective treatment for violent juvenile offenders.

In Cuyahoga County, a county of about one and a half million people including the city of Cleveland and surroundings, MST is being applied to domestically violent juvenile offenders and their families. In Lorain County, which is a large, semi-rural county of about 270,000 people, MST is being compared with Wrap Around services. Additional demographic data on Cuyahoga and Lorain Counties reveals that about one-fourth of the population of both counties is comprised of children under the age of 18. Racial composition differs. Cuyahoga County includes about one-fourth African Americans and two percent Hispanics/Latinos, while Lorain County is largely White, with about eight percent African Americans and six percent Hispanics/Latinos in the population.

Adherence to MST Model

A goal of the MST replication project in Ohio is to adhere to the model as closely as possible. Training conducted by the FSRC and MST Services, Inc., facilitates fidelity of replication, as does the weekly clinical telephone consultation provided by the trainers. Selection of staff using the guidelines provided by FSRC was attempted. In only one major respect, the conscription of staff, did selection deviate from the guidelines. Most staff hold master's degrees in mental health fields; however, some staff have clinical experience and other attributes, such as intelligence, commitment, and flexibility, which facilitate their participation as MST team members.

Implementation Problems

The major barriers to implementation include funding and administrative support from the implementing agency. MST training is expensive, and outside funding to support the training should be secured. This is not always easy.

The implementing agency for the MST teams in Northeast Ohio is Applewood Centers, Inc., an agency formed on January 1, 1997, from the merger of The Guidance Centers and Children's Services, Inc. The agency is supported largely from contracts with the mental health boards and United Way and generates a good deal of its income from Medicaid and Title XX billings. Medicaid standards in Ohio continue to emphasize productivity requirements as opposed to demonstrated clinical outcome. The interaction of case finding and contract development with productivity requirements in a start-up phase results in predictable tension. MST recommends spending no more time with a family than is needed to accomplish a targeted goal; however, this conflicts with a productivity standard. Therapists may choose to spend two more hours with the family in order to meet productivity, instead of concluding a productive interaction efficiently. A similar issue involves the integration of MST procedures with agency procedures, and of MST paperwork with agency paperwork.

Financial constraints from an implementing agency are especially apparent during a start-up phase. Issues such as providing adequate equipment, including cellular phones and beepers, for all MST staff should be resolved prior to training. Likewise, while office needs are minimal, mechanisms for support staff services such as word processing should be established prior to teams beginning service.

Evaluation

Evaluation efforts are being pursued in two primary ways. In Cuyahoga County, Office of Juvenile Justice and Delinquency Prevention (OJJDP) funds and Ohio Department of Mental Health Office of Program Evaluation and Research (ODMH-OPER) funds are being used to conduct a randomized clinical trial of MST compared with usual court services for domestically violent youth. In Lorain County, Mental Health Board funds and ODMH-OPER funds are being secured to conduct a randomized clinical trial of MST compared with Wrap Around services as it is operationalized in the county.

The specific program outcomes for both projects include: number of days in the community; number of days in school; number of new offenses; functional assessment of youth; behavioral assessment of youth; and, for the OJJDP project, assessment of peers, family, and self-reported delinquency of youth. No outcome data from the clinical trials is available yet.

APPENDIX D

MST Services

Minimally Acceptable Procedures and Standards

The purpose of this procedure is to identify the minimal actions required at the organizational level to successfully implement and sustain an MST program.

Strongly recommended/"required" program practices and characteristics:

- MST therapists must be full-time employees assigned to the MST program solely.
- MST therapists must be accessible at times that are convenient to their clients and in times of crisis, very quickly. Issues to be addressed in the area include the dedicated nature of the MST therapist role, the use of flex-time/comp-time, policies regarding the use of personal vehicles, and the use of pagers and cellular phones.
- MST therapists must operate in teams of no fewer than two and no more than four therapists (plus the clinical supervisor) and use the Family Preservation model of service delivery.
- MST clinical supervisors must be assigned to the MST program a minimum of 25 percent time per MST team to conduct weekly team clinical supervision, facilitate the weekly MST telephone consultation, and be available for individual clinical supervision for crisis cases.
- MST caseloads must not exceed six families per therapist with a normal range being four to six families per therapist. The excepted duration of treatment is three to five months.
- In order to achieve outcomes through consistent adherence to the MST model, MST therapists must track progress and outcomes on each case weekly by completing case paperwork, and participating in team clinical supervision and MST consultation.
- The MST program must have a 24 hour/day, seven day/week on-call system to provide coverage when MST therapists are on vacation or taking personal time. This system must be staffed by professionals who know the details of each MST case and understand MST.
- With the buy-in of other organizations and agencies, MST therapists must be able to "take the lead" for clinical decision making on each case. The organization sponsoring the MST program has responsibility for initiating collaborative relationships with these organizations and agencies. Each MST therapist sustains these relationships through ongoing, case-specific collaboration.
- Inappropriate referrals to the MST program include youth referred for primarily psychiatric behaviors (i.e., actively suicidal, actively homicidal, actively psychotic), and youth referred for sex offenses.
- MST program discharge criteria must be outcome-based and ameliorate the referral problem/behavior.

Additional recommended program practices and characteristics:

- MST therapists should be Master's-level professionals.
- MST clinical supervisors should be Ph.D.-level professionals.
- MST clinical supervisors should have both clinical authority and administrative authority over the MST therapists they supervise.

- Funding for MST cases should be in the form of case rates or annual program support funding in lieu of billing mechanisms that track contact hours, "productivity", etc.
- MST programs should have formal outcome tracking systems in place.
- MST programs should use outcome-focused personnel evaluation methods.
- Planning for cases after they are discharged from the MST program should be carefully managed and limited to after-care referrals that target specific, well-defined problems. The assumption is that most MST cases should need minimal "formal" after-care services.

MST SERVICES

Site Assessment Checklist

Customer: _____ Prepared by: _____
Site: _____ Training Dates: _____

The written Site Assessment Report should, as a minimum, cover the following areas:

- Overview of the community context
  - Identify organizations and agencies affected by the MST program (i.e., schools, social services, juvenile justice, etc.) that need to be "on board" to ensure the successful implementation of the MST program. Who will attend the "MST Overview" presentation from these organizations?
  - Identify referral sources, referral procedures, and anticipated availability of referrals.
  - Confirm that the provider organization will be able to take the "lead" for clinical decision making regarding cases with the buy-in of other organizations and agencies.
  - Include copies of any memoranda of agreement regarding the support of the MST program in terms of collaboration, referrals, or reimbursement.

- Overview of sponsoring and/or provider organization or agency
  - Include the provider organization's statement of mission and service philosophy.
  - Describe the factors contributing to the interest in MST (e.g., significant public sector policies or initiatives, federal or state level funding for training, third party payer and/or managed care's impact on the service environment, etc.).
  - Describe the administrative structure of the organization, including lines of authority for the MST program, and include copies of all available organizational charts.
  - Identify individuals inside or outside the organization who can affect treatment plans and who must be "on board" for the successful implementation of the MST program (consulting professionals, psychologists, psychiatrists, etc.). Confirm that these individuals will attend the entire five-day introductory training.
  - Identify other individuals inside the organization who should be "on board" for successful implementation of the MST program (consulting professionals, caseworkers, administrative personnel). Confirm that these individuals will, as a minimum, attend the "MST Overview" presentation.

- Overview of MST program
  - Confirm that the MST program is a separate and distinct program within the organization with dedicated, full-time clinicians.
  - Confirm that there is an organizational understanding that accountability for outcomes begins with the clinicians but clearly lies with the entire organization, including the team, supervisor, and administration—provide any available evidence of this understanding in the form of policy statements, supervisor evaluation criteria, etc.
  - Confirm that there are clear, written, measurable goals for the MST program.

- How will program level outcomes be measured? Discuss how the organization will track case outcomes and adherence by the clinicians to the treatment model.
- Describe the referral criteria for the program including target population, diagnostic/problem profiles, etc.
- Clinical team overview
  - Confirm that the clinical supervisor has credible authority over the MST clinicians. Describe the clinical and administrative lines of authority.
  - For established teams, describe the existing "culture" including work settings and schedules, duties, responsibilities, etc.
  - Include staff resumes (brief summary of education, experience, etc.).
- Confirm that caseload will not exceed six families per clinician.
- Confirm that the following operating practices/policies are in place: Clients have access to services seven days/24 hours; flex-time policies in place; on-call system designed or in place; transportation policies in place that allow for the use of personal vehicles (insurance issues addressed); and communications issues/needs have been addressed (potential need for beepers and cell-phones).
- Describe the team's physical accommodations (team office), and confirm that resources are available for weekly phone consultation (speaker phone and ability to make long distance calls).

- Funding
  - Describe the sponsoring organization's overall funding sources.
  - Describe the specific funding sources for the MST program.
  - Confirm that there are not financial disincentives for referral sources to use the MST program (e.g., referral source must pay for MST but not for incarcerating the youth).

- Personnel policies
  - Include copies of job descriptions for the MST program personnel.
  - Does the sponsoring organization have outcome focused personnel evaluation policies? If not, is it possible to change the existing personnel evaluation policies?

- Clinical practices
  - Confirm that supervision practices will conform to the following format: weekly MST group consultation, weekly group clinical supervision, and individual supervision only as needed due to case crises.
  - Confirm that clinical record keeping practices forms include the following elements:
    - comprehensive, strength-based ecological assessment;
    - overarching MST treatment goal established by the family and MST clinician;
    - weekly treatment goals;
    - weekly intervention plans;
    - weekly accounting of advances toward, and barriers to, goal attainment; and
    - discharge summaries clearly documenting attainment, and/or progress toward attainment of MST treatment goals, and evidence of systemic changes that will support the long-term maintenance of treatment gains.

- Describe the program's referral process including the acceptance/rejection process, the feedback process to referral source, informed consent recommendations, and a "no wait list" philosophy.
- Discharge process.
- Confirm that discharge criteria will be outcome based.
- Confirm that after-care referrals, when made, will be targeted and tailored to specific needs with the objective of minimizing the use of after-care referrals.
- Follow-up process: describe the program's data collection and tracking processes.

- Training
  - Discuss the administration's expectations for the training program and, if possible, outline specific objectives for the training program.

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