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## Chapter 9

# **Effectiveness of Treatment and Prevention in Mental Health and Other Settings, and Evaluating the Integration of Mental Health and Other Services**

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## INTRODUCTION

The effectiveness of various settings for children's mental health treatment is of interest to policy makers and was one of the reasons this background paper was requested. Mental health treatment settings vary considerably in intensiveness, restrictiveness, and cost. Therefore, it is valuable to have systematic information about the effectiveness of alternative settings to justify placement, reimbursement, and public policy decisions. Similarly, evidence about the effectiveness of prevention efforts and the integration of services across mental health and other systems is valuable.

Chapter 6 described the mental health settings in which disturbed children receive treatment. Such settings range from inpatient hospital settings to private mental health practices. For those settings that provide a therapeutic milieu or engage mentally disturbed children in treatment for substantial periods of time each week—e.g., hospitals, residential treatment centers (RTCs), and day treatment programs—the setting itself may have an important effect on treatment outcome. Available outcome research on the use of these settings for mental health treatment is reviewed in this chapter.

Chapter 7 described broad-based interventions to identify and treat children's mental health problems within the educational, general health care, child welfare, and juvenile justice systems; it also described efforts to prevent children's mental health problems and to integrate mental health and other services. Because of a lack of research, the effectiveness of treatment in most of the non-mental-health systems cannot be evaluated. Information on outcomes in the child welfare system (e.g., therapeutic foster homes or group homes), for example, is insufficient to be reviewed. There is some research on the effectiveness of interventions in the educational and juvenile justice systems, however, and that research is considered in this chapter. Also reviewed is some of the most rigorous research on prevention programs. There have been very few efforts to evaluate the integration of mental health and other services generally and no such efforts to date for children's mental health services. A planned evaluation of a new Federal effort to integrate services is described in this chapter.

## EFFECTIVENESS OF TREATMENT IN SELECTED MENTAL HEALTH TREATMENT SETTINGS

Understanding the respective roles of mental health treatment modalities and treatment settings in therapeutic outcome would be invaluable in designing mental health programs. Unfortunately, the current state of research on outcomes makes

it difficult to separate effects due to particular treatment modalities from effects due to the settings in which treatment occurs, or to no treatment. From a methodological perspective, the principal problem is that available research has

not used control groups to compare the effectiveness of alternate settings. Disturbed children with similar diagnoses and life circumstances have not been randomly assigned to either a hospital, an RTC, a community mental health center (CMHC), or other outpatient setting giving similar treatments and the children's treatment outcomes subsequently compared.

The effects of some treatment elements such as intensive individual therapy may be easier to disentangle from the settings in which treatment is given, but systematic research that attempts to do this has not been conducted. Consequently, it is difficult to assess the degree to which alternative treatments or alternative settings would have achieved similar or different therapeutic outcomes (580).

### **Effectiveness of Psychiatric Hospitalization**

The most intensive, as well as costly, form of mental health treatment involves inpatient care in a hospital. Although psychiatric hospitals are a type of residential treatment, the services they provide may differ from services provided in nonmedically focused settings such as RTCs. Consequently, a somewhat separate research literature on the effectiveness of psychiatric hospitalization for children has developed (61,245).

Blotcky, et al. (61), reviewed two dozen followup studies of mentally disturbed children under the age of 12 who had been treated in hospital inpatient and other residential psychiatric facilities. One-fifth of the studies were prospective. One-third included adolescents as well as children.

All of the followup studies that Blotcky and colleagues reviewed reported some positive treatment outcomes. The studies concluded, however, that treatment outcomes were primarily associated with the severity of disturbance. That is, they found that over half of the children described as neurotic or exhibiting personality disorders demonstrated long-term positive outcomes following inpatient treatment. More severely impaired children, diagnosed as psychotic (i.e., having disorders involving severely disturbed perceptions

of reality) or neurologically impaired, had somewhat fewer positive outcomes. Outcomes also appeared to be related to variables such as characteristics of the patient other than diagnosis (e.g., intelligence), family factors (parental psychopathology), and, to a lesser extent, treatment variables (e.g., length of stay, aftercare). However, treatment courses were so variable, and periods between discharge and followup so long in most studies reviewed, that inferences about effective elements of inpatient and other residential treatment cannot be made. In many cases, it was impossible to determine whether the treatment setting more resembled a hospital or an RTC.

According to Blotcky, et al., because controlled research has not been done and inpatient followup studies have not compared results of inpatient mental health treatment to either natural course or outpatient treatment, it is difficult to know the relationship between inpatient psychiatric treatment and outcomes.

Gossett, et al. (245), reviewed 22 followup studies of mentally disturbed adolescents who had received inpatient psychiatric treatment, and their conclusions about the effectiveness of such treatment were similar to those of Blotcky, et al. (61). The studies Gossett and colleagues reviewed indicated that the majority of nonpsychotic adolescents who had received inpatient treatment were functioning at an adaptive level several years after discharge. Of psychotic adolescents who had received inpatient treatment, only one-third were adjusted adequately at followup. In general, the less severe and chronic the adolescent patients' initial problems—including level of family psychopathology—the more positive their eventual outcomes, although Gossett, et al.'s review found that aftercare was associated with positive outcomes.

A primary goal of developing this background paper was to respond to questions about the effectiveness and appropriateness of psychiatric hospitalization for children and adolescents. The methodological limitations of available studies of inpatient psychiatric care make firm conclusions difficult. Available studies do not clearly show which components of hospital treatment contribute to successful outcomes. Neither do they allow conclusions about whether children treated

as hospital inpatients would have better, worse, or similar outcomes with nonhospital treatment. Because of the methodological limitations of available studies, it is unclear to what extent outcomes for mentally disturbed children treated in hospitals are a function of the children's level of disturbance. In many cases, hospital treatment is a "last resort" for children who have been unsuccessfully treated in other settings. Prospective research controlling for patient characteristics and family variables has not been conducted.

### Effectiveness of Residential Treatment Centers

There are many similarities between RTCs and children's psychiatric hospitals, and the findings about effectiveness of RTCs are similar to those for psychiatric hospitals. Several studies have investigated the effects of RTC treatment, chiefly on outcomes measured during or soon after treatment. Unfortunately, however, interpretation of these studies, like studies of inpatient treatment, is limited by the fact that most of the studies lacked control groups.

Whittaker and Pecora (706) reviewed eight studies of RTC treatment. Without exception, the

studies found that the majority of children made satisfactory adjustment while still in RTC treatment. Unlike the results for psychiatric hospitals, the evidence for a relationship between severity of a child's problems at admission (or other diagnostic variables) and posttreatment outcome was inconclusive. Following treatment, however, their level of adjustment depended on the quality of the posttreatment environment, the amount of stress or social support (especially family support), quality of parent-child relationships, and family stability. Greater involvement of the family with RTC treatment and with postdischarge planning was also associated with favorable outcomes.

Lewis, et al. (386), performed a followup study of 51 children who had received RTC treatment. Most of these children had been considered improved at the time of discharge, but were rated poorly adjusted at later followup by independent evaluators. The majority of poorly adjusted children had had more than two institutional placements following RTC treatment. Children who had been older at the time of admission to RTC treatment and who had exhibited both psychotic and organic symptoms also tended to have poorer outcomes as did children with disturbed parents, although Lewis, et al., point out that it is impossible to separate possible genetic contributions from environmental contributions to outcome. Lewis and his colleagues note that many of the children in the study completed RTC treatment just prior to adolescence and suggest that poor outcomes for these children might have resulted from the turmoil of adolescence combined with the difficulty of being released into a stressful environment.

Re-ED programs are a type of RTC that appears particularly promising (see ch. 6). In a study by Weinstein (686), data on one Re-ED program, Cumberland House, were gathered from parents, Re-ED teacher-counselors, teachers in the children's regular class, classroom peers, referring agency staff, and from the children themselves. Weinstein's study, considered one of the best of the Re-ED evaluations, found that children who had completed the program had more positive self-concepts, a greater sense of self-control, and better academic performance than a disturbed but untreated control group. The children who had



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This group home serves as an intermediate step for adolescent boys who still need supervised care and treatment before returning to their families.

completed the program were rated as improved by Re-ED staff, regular teachers, other professional staff, and parents, but, curiously, not by their peers. Despite their apparent improvement, however, Re-ED children were rated more poorly on most measures than a nontroubled control group.

Other evaluation and followup studies of Re-ED programs have found results such as improved academic achievement, increased prosocial behavior as measured by an antisocial behavior checklist, successful discharge of over 65 percent of residents, improved home and school relationships, and improved school enrollment following treatment, although some school problems continued (606). Since the researchers' assessment measures were sensitive to a wide range of outcomes, many in the community, Weinstein's study provides preliminary support for the Re-ED program model. However, only a few studies have evaluated Re-ED outcomes, so conclusions about the Re-ED program's effectiveness ought to be viewed with caution. Long-term followup data do not yet exist, and measurement of outcome by independent clinicians or other independent observers is lacking.

The outcome research on RTCs, though not extensive or methodologically rigorous, suggests that although most children treated at RTCs improve during treatment, their long-term outcomes may be less positive and depend on the involvement of the family in treatment, the amount of stress in the environment, and the availability of social support. The implication of available research is that the effectiveness of RTC treatment cannot be considered in isolation, but must be evaluated in conjunction with the quality of followup care. Another implication is that coordination between RTCs, community agencies, and the family is necessary. Although Lewis, et al. (386), suggest that the "undoing" of RTC treatment that can happen in the community implies the need for longer RTC treatment, no evidence is available to indicate that longer RTC treatment leads to better outcomes or that longer RTC treatment is superior to RTC treatment combined with adequate followup care.

## Effectiveness of Day Treatment

As noted in chapter 6, day treatment is intermediate in intensity between outpatient and 24-hour care, as in psychiatric hospitals or RTCs. As such, it is used both as a less restrictive alternative to inpatient treatment and as a transition from inpatient to outpatient care. Although data on the number of children in day treatment are not available, the number of day treatment centers for children has increased dramatically—concomitantly with the development of CMHCs—from 10 in 1961 to over 350 in 1980 (735). Research on the effectiveness of child day treatment has also increased in recent years, corresponding to the treatment's greater availability, but most of it has not been methodologically rigorous.

Zimet and Farley (735) reviewed six followup studies that evaluated day treatment outcomes for children. The day treatment programs evaluated in the six studies relied on a variety of theoretical orientations (behavioral, psychodynamic, etc.) or combinations of orientations. Zimet and Farley state that the studies they reviewed reported "satisfactory adjustments" in 76 to 90 percent of children receiving day treatment. "Satisfactory adjustments" included outcomes such as improved self-esteem, greater academic achievement, improved social relationships, and more appropriate behavior. Children in day treatment were less likely to be placed in inpatient settings. Younger children generally made greater gains than older children. Results on the effects of parental involvement with children in day treatment were mixed.

Friedman and Quick (208) reported a study in which two groups of children who did not complete a day treatment program (one group completed over 50 days of treatment) were compared to one group of children who did complete the program. Adolescents who had substantial involvement with the multimodality program that was studied had greater academic gains than those with minimal involvement. At followup, 2 years after discharge from treatment, greater involvement with the program appeared to be associated with a lower probability of being a runaway or being institutionalized. According to Friedman

and Quick, the group of children who dropped out of day treatment included many chronic run-aways and truants “whose behavior was very appropriate while attending, but for whom the program failed to secure consistently good attendance.”

Like most treatment outcome research in the field of children’s mental health, available studies

of day treatment lack methodological rigor. Definitive conclusions about the effectiveness of day treatment, therefore, must await further investigations. Nevertheless, the consistency with which positive outcomes following day treatment have been reported is encouraging.

## EFFECTIVENESS OF TREATMENT IN SELECTED NON-MENTAL-HEALTH SYSTEMS

As noted in chapter 7, mental health treatment is sometimes delivered in settings in the educational, health care, child welfare, and juvenile justice systems. A few such interventions that have been evaluated are discussed below. Because of the paucity of evaluation studies of such interventions, the discussion that follows is not comprehensive.

### Effectiveness of Treatment in the Educational System

A large investigation of mental health interventions in the school system of Newcastle-upon-Tyne in England was undertaken by Kelvin, et al. (362). Their aim was to compare the effectiveness of a range of different approaches to mental health intervention in a community setting. The investigators identified 574 disturbed children (265 7-year-olds and 309 11-year-olds) in 12 schools and randomly assigned them to a no-treatment control group or to one of four treatment conditions: 1) child group therapy, 2) behavior modification applied to entire classrooms (for older children only), 3) parent guidance, and 4) a non-specific “nurturance” intervention provided by teacher-aides in school (for younger children only). All the treatments except parent guidance (which took place in the home) were delivered at school. The investigators believed that the school setting allowed them a number of advantages over a clinic setting—a better grasp of the children’s social environment, the children’s greater familiarity with the setting, and more opportunity for involvement by teachers.

Disturbed children were identified from an index based on a combination of teacher, peer, and self ratings, along with reading scores and attendance records. A control group of nondisturbed children was used for comparison purposes. The experimental and control groups were not entirely comparable, however, because disturbed children had a lower socioeconomic status than nondisturbed children and also had a greater lifetime incidence of broken homes and health problems.

The children in the Newcastle-upon-Tyne study were treated for anywhere from two to five school terms, depending on the intervention condition. Outcome was assessed at the end of treatment, and then at 18 months and 3 years after treatment. All the treatments led to improvement on at least some measures. In general, the group therapy and nurturance approaches led to better results for the younger children, and the behavior modification and group therapy were most effective for the older children. Emotionally disordered children tended to improve more than behavior-disordered children. One important finding was that the effectiveness of the behavioral intervention tended to increase over time, suggesting a “sleeper” effect of treatment. The modality of treatment was a better predictor of success than the sheer duration of treatment.

### Effectiveness of Treatment in the Juvenile Justice System

A research program conducted by Massimo and Shore (419,604,605) examined the effect of a “vocationally-oriented psychotherapeutic pro-

gram” for adolescent delinquent boys. In line with the researchers’ understanding of the specific needs of delinquents, this program offered a comprehensive set of interventions that differed greatly from the traditional clinical approach. Job counseling and placement was the first component introduced, and psychotherapeutic contact was added later; the program also included help such as remedial education and aid in managing money.

Outcomes were measured during the 10-month treatment period, and at 2 to 3, 5, and 10 years later. Treated adolescents showed improved adjustment emotionally, academically, and voca-

tionally. Massimo and Shore’s work is often cited as a promising multi-intervention program that has shown some success with a difficult-to-treat population.

Studies of behavioral treatment for more severe conduct disorders often take place in juvenile justice settings. Reviews suggest that operant behavioral programs have led to improvement in a number of social, academic, and personal behaviors within the treatment setting (136,170). However, there is little evidence that these behavioral improvements carry over to behavior in natural, community environments (252).

## EFFECTIVENESS OF SELECTED PREVENTION EFFORTS

In recent decades, there has been increasing acceptance and support of the concept of services to prevent mental health problems. Preventive mental health efforts have burgeoned and received support on many levels (Federal, State, and community). A solid research base detailing the effectiveness of prevention strategies is just beginning to accumulate. Several fairly rigorous outcome studies have been done, but these studies examine only a minority of the prevention efforts that have been or could be undertaken. To some extent, the paucity of methodologically sound research on the effectiveness of prevention efforts parallels the paucity of rigorous research on the effectiveness of children’s mental health services in general. In addition, however, the amount of information currently available about the effectiveness of prevention is limited by difficulties that are specific to prevention outcome research (e.g., the low base rate of certain disorders in the population, the large cost and effort involved in long-term followup studies, and the wide range of target problems and interventions included in the concept of prevention) (281). Nonetheless, available research suggests that certain prevention strategies can be quite effective, both in terms of preventing the development of mental disorders and in promoting mental health and adaptation.

As is noted in chapter 7, prevention programs have taken a number of forms. Such programs have been aimed at almost all of the mental health

problems that fall into the standard diagnostic categories and at the problems associated with environmental risk factors. Moreover, they have occurred in a diverse array of settings (e.g., home, school, mental health centers) and have involved the participation of children and parents, as well as whole families, classrooms, and schools. The wide range of prevention programs which have been implemented and evaluated precludes an exhaustive review of the effectiveness of all types of prevention programs. A selected group of the more rigorous outcome studies is described below.

### Effectiveness of Selected Primary Prevention Efforts

As noted in chapter 7, primary prevention efforts are aimed at reducing the incidence of mental health problems in children. Some of these efforts are directed at parents and others at children.

#### Parent Training Programs

Interventions aimed at reducing the interactional and developmental difficulties often associated with preterm birth and adolescent parenting have been well researched. One research group that used random selection and assignment to treatment and control conditions found that bi-weekly intervention in the form of home visits designed to facilitate interaction between teenage mothers and their preterm infants improved the



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Studies have shown that programs to encourage healthy parent-child interaction can promote children's mental health.

infants' physical, cognitive, social, and temperamental outcomes (187).

### Teen Pregnancy Prevention Programs

Another well-researched prevention effort is "Project Redirection," a large-scale, multisite program aimed at preventing repeat pregnancies and fostering educational and vocational attainment in teenagers. Investigators in one study found significant beneficial effects 1 year after the intervention in terms of lower rates of subsequent pregnancy and higher rates of school enrollment and employment; however, 2 years after the intervention, many of the benefits were no longer apparent (522).

### Early Education and Child Development Programs

Among the most widely implemented and extensively researched prevention efforts are the early education intervention programs that originated with Head Start in the mid-1960s. As noted in chapter 7, although these programs were not specifically directed at preventing mental health problems, they have addressed the needs of children at risk for educational and adaptive failures, which have been shown to be associated with later mental health problems (127,514,546,675,699).

The history of evaluation of early education programs is essentially one of initial enthusiasm and excessive optimism, giving way to pessimism and a sense of failure, and ultimately arriving at a more balanced view of what these programs have and have not achieved (731,734). Early pronouncements of the failure of early education programs were, in part, the result of an evaluation known as the "Westinghouse Report," which concluded that Head Start programs produced no lasting gains in cognitive and affective development (113). The Westinghouse Report was widely publicized and generated questions both about the premises of the Head Start program and the validity of outcome measures.

One response to these questions was a general reassessment of the long-term effectiveness of early education programs by the Consortium for Longitudinal Studies (378). This study involved the pooling of original data from 12 investigators who had independently designed and implemented evaluations of early education programs for low-income children in the 1960s. Thus, this study was a joint evaluation of the early education programs' long-term effects. Although all of the early education programs had focused on economically disadvantaged preschool-aged children, they differed in terms of program length, mode of intervention, and program setting (home- or center-based). The evaluations of the programs varied in the extent to which they utilized random assignment to treatment and control conditions.

The study by the Consortium for Longitudinal Studies found that low-income children who had participated in early education programs were significantly more likely than controls to have met school requirements. Participants were less likely to have been assigned to special education classes or to have been retained in a grade. Participants also showed higher IQ and achievement test scores during the first 3 or 4 years following program participation, although differences in IQs of program and control children were not found after this time. Early education was found to have had a lasting effect on attitudes towards achievement—both among the children and their parents. Specifically, program children were found to have a more positive attitude towards achievement and school than controls and their mothers were found

to be more satisfied with their children's school performance and to have consistently higher occupational aspirations for them.

In a more recent study of the effects of preschool education through age 19, Berreuter-Clement, et al. (56), found, in addition to the effects on school and attitude found in earlier studies, that by age 19, the preschool group's employment experience was significantly better than the experience of a no-preschool control group.

In general, the studies by the Consortium for Longitudinal Studies and Berreuter-Clement and his colleagues suggest that early education has significant and lasting effects on children's functioning (378). Although the exact mechanisms by which the early education programs lead to positive outcomes are not known, it has been suggested that cognitive, social, and motivational factors were involved. Furthermore, the positive effects of early education programs have been attributed not only to changes produced in the children but, perhaps more importantly, to the effects programs had on parents (6,10,734) and others in the child's environment, including siblings (249) and other social institutions in communities served by the program (77,352,469,671). Such effects illustrate the importance of providing services in the context of children's lives.

The implementation and evaluation of early education intervention projects have important implications for the evaluation of prevention efforts in general. Zigler and Berman (731) emphasize the importance of avoiding the type of overpromising that accompanied Head Start in its early years. Although early intervention has been shown to result in benefits for children and families, it is an error to assume that an early education program alone can eliminate the often pervasive effects of social and economic disadvantage. Furthermore, these authors note, there are problems associated with overstressing change in IQ score as the major criterion of the effectiveness of early education efforts. Although measures of formal cognitive ability are important, benefits in other essential realms of functioning have resulted from these efforts. Zigler and Berman suggest broadly defined "social competence" as a more appropriate measure of outcome (733).

## Family Support Programs

Much less is known about the effectiveness of interventions directed at supporting effective functioning in high-risk families than is known about the effectiveness of early education and other programs designed to provide cognitive stimulation to children (594). As evaluations of early education increasingly make clear, however, the most effective interventions are often those that actively involve parents as well as children (77,250). This observation suggests that family support may be a central aspect of promoting children's mental health. Because family support programs are a fairly recent development, few outcome studies of such programs are available. Evaluations of two family support programs described in chapter 7—the Yale Child Welfare Research Program and the Family Support Center Program—are reviewed below.

The Yale Child Welfare Research Program (see ch. 7) is a program aimed at enhancing the functioning of high-risk families. Since its inception, the program has used a matched control group and has undergone several evaluations.

Initial evaluations of the Yale program found that program children (at 30 months of age) showed significantly better language development than the control children; however, control group families were more likely to be self-supporting and to include a father or father-surrogate in their home (516). Five years later, the program families were found to be living in improved socioeconomic circumstances, and program mothers were more likely than control group mothers to be employed and to have fewer total children (539,638). Moreover, at that time, the children in program families were found to have higher IQ scores, better school achievement, and better school attendance than a control sample (638).

The most recent evaluation of the Yale program (594) is a 10-year followup of original program participants and an equivalent control group of parents and children. This evaluation found that 10 years after participating in the Yale program, participating mothers were more likely than control group mothers to be self-supporting, to have achieved higher levels of education, and to have had fewer children. They were also more likely

to display self-initiated involvement in their children's schooling. The participating children, although they did not have significantly higher IQ scores than the control group children, had better school attendance, required fewer costly special services, and showed better social and school adjustment. In addition, the program was found to save money; in 1 year, the 15 control group families were found to require approximately \$40,000 worth of school services and extrafamilial support services that were not needed by the intervention families.

An evaluation of the Family Support Center Program (FSCP) (see ch. 7) compared FSCP families with a sample of normal families (25). It found that FSCP families had significantly fewer incidents of child abuse, were experiencing less stress, and had developed better parent-child interaction and child care conditions by the end of the program. Greater involvement in the program was correlated with better outcomes. The validity of the findings is limited by the lack of a control group and the fact that half of the FSCP families did not complete all three phases of the program. Also, many of the families participating in FSCP received additional services from other agencies during the course of the intervention.

### **Effectiveness of Selected Secondary Prevention Efforts**

The Primary Mental Health Program (PMHP) is an extensively implemented and evaluated secondary prevention program (126). Although used with children slightly older than the children in Head Start, PMHP is similarly focused on the prevention of educational failure and school maladjustment; PMHP also shares the premise that amelioration of early difficulties has important preventive implications for later mental health problems. Unlike Head Start, PMHP selects for the program children who are already beginning to experience problems.

Since the program's inception, outcome research has been a central component of PMHP. Several studies attest to PMHP's effectiveness in reducing problem behaviors and enhancing competence in high-risk groups (128,694). Attention has also been paid to the long-term effects of participation in PMHP; children have been found to maintain significant gains in adjustment for 1 to 5 years following PMHP intervention (107,394).

In a recent 2-to 5-year followup (107), PMHP children were compared with a "never seen" group (children judged to be well-adjusted at the time of initial screening) and a "least well-adjusted" group (non-PMHP children who were judged by their teachers to be functioning poorly). This study found that the PMHP children maintained, and in some cases solidified further, the gains in adjustment and problem reduction they had made 2 to 5 years earlier. In addition, although PMHP children were often found to be functioning less well than the "never seen" children, they consistently appeared to be better adjusted than the "least well-adjusted" children. This observation suggests that although PMHP did not completely eradicate early detected difficulties, it did significantly prevent the development of serious problems in a high-risk group. Finally, PMHP children were found to perform in the normal range on academic achievement measures at followup, suggesting a sustained and long-term benefit of the intervention.

### **Summary: Effectiveness of Prevention**

Research on the outcomes of prevention programs for specific mental disorders is very undeveloped. There are, however, some fairly rigorous studies on the outcomes of efforts to prevent more broadly defined maladjustment—e. g., PMHP and early education and child development programs. These studies suggest that prevention, or at least reduction, of an incipient mental health problem is a worthwhile and attainable goal.

## EVALUATING THE INTEGRATION OF MENTAL HEALTH AND OTHER SERVICES

As difficult as it is, evaluating specific programs is simple compared to evaluating the effects of integrating mental health and other services. In their review of methods for evaluating services integrated across systems, Morrissey, et al. (666), found little solid evidence to support the belief of some investigators (e.g., 262) that organization-level variables predict client-level outcomes. Evaluations of the effects of integrated services on client-level outcomes would require the integration of system, program, and client-level data; studies encompassing all three levels of data are relatively rare in the health and welfare field (666).

At present, there are no reviews of attempts at coordinating mental health and other service sys-

tems. The National Institute of Mental Health (NIMH) and grantees of NIMH's Child and Adolescent Service System Program (CASSP) are beginning to develop criteria for evaluating CASSP, a program intended to foster collaboration and integration among mental health and other service systems (see ch. 10). Outcome measures will include States' progress toward a "minimal service set"; the extent to which parents are used as advocates for children; declines in the number of children placed out of State; and other measures of services, leadership, advocacy, and training. However, actual child outcomes will not be part of the evaluation.

## CONCLUSION

Methodologically rigorous research comparing the effectiveness of treatment in psychiatric hospitals and other residential settings with similar treatment in outpatient settings is sorely lacking. Despite the limitations of available research, however, certain trends in the data are suggestive—and support particular policy choices. The long-term effectiveness of psychiatric hospitalization and other forms of RTC treatment, for example, appears to be related to the availability of social support mechanisms and mental health services in the posttreatment environment programs. The effectiveness of mental health treatment in non-mental-health settings may depend on pairing treatment with other interventions like vocational counseling or family support.

Existing models of prevention suggest that effective interventions can be offered through any of several existing systems—including the family, the schools, and health care programs. Not only have many prevention programs led to positive changes in social, emotional, and academic measures, but such programs appear capable of preventing later governmental expenditures through the justice and welfare systems.

What is clear, is that much greater emphasis needs to be placed on evaluations of mental health services offered in a variety of settings, including non-mental-health settings. Assessment of integrated treatment systems could help policymakers decide how to target resources.