Intensive home and community interventions
Elizabeth M.Z. Farmer, PhD*, Shannon Dorsey, PhD, Sarah A. Mustillo, PhD
Department of Psychiatry and Behavioral Sciences, Duke University School of Medicine, Box 3454, Durham, NC 27710-3454, USA

In the mid-1980s, Stroul and Friedman [1] articulated a set of guiding principles for a system of care for children’s mental health. These principles built on ongoing work that incorporated an ecologic framework [2–4] to emphasize the need for a continuum and a system of care. These principles were disseminated throughout the United States via the Child and Adolescent Service System Program [5,6], so that by the mid-1990s, system of care demonstration projects and infrastructure development were spread throughout the nation [7].

As these principles were disseminated, the field of children’s mental health services and treatment came increasingly to recognize that the traditionally offered services—inpatient hospitalization and clinic-based outpatient therapy—did not provide an adequate match or range of interventions to meet the often complex needs of children with mental health problems, particularly youth being served via the public mental health care system [7–11]. In this context, a range of innovative, comprehensive, community-based interventions were developed, implemented, and (sometimes) evaluated [12–17].

These community-based and intensive in-home approaches to intervention differ on many dimensions. However, they share a common set of principles and practices that unify them and distinguish them from other forms of treatment for youth. These principles include an explicit recognition of the importance of ecology and context, recognition of the multiple needs of youth and their families and multifaceted approaches to addressing these needs, a concerted focus on strengths and resources, individualized treatment planning and intervention based on these needs and strengths, and active involvement of the community and focus on building or maintaining community connections for the child and family. In

This work was supported in part by grants MH57448 and MH53419 from the National Institutes of Health.
* Corresponding author.
E-mail address: bfarmer@psych.mc.duke.edu (E.M.Z. Farmer).

1056-4993/04/$ – see front matter © 2004 Elsevier Inc. All rights reserved.
line with these core components, these intensive in-home and community-based
treatment approaches viewed outcomes as multidimensional and multiply influ-
enced [18]. They also recognized that treatment rests within the broader rubric
and constellation of the child and family’s life and community [5,19,20].

Such an individualized, multifaceted, community-based approach was well
matched with children’s and families’ needs, particularly for the most seriously
affected subset of youth: children with serious emotional disturbance (ie, children
with psychiatric disorders and substantial functional impairments). Previous work
showed that such youth were likely to be either unserved or served in overly
restrictive environments [8,11].

The design and delivery of these multifaceted, individualized, community-
based interventions were poorly suited for systematic evaluation or research,
however, particularly when using the long-standing model for conducting such
research within the medical and mental health field [21,22]. This standard
approach to evaluation requires a systematic progression of steps, from small
efficacy trials through larger “real world” effectiveness studies [23]. Such a
linear progression is difficult, and perhaps impossible, for these types of treat-
ment approaches [5,24]. This results from many factors, including the inability to
conduct these interventions in a laboratory setting, the impossibility of recruiting
simple or non-comorbid cases, the necessity of examining real world fit from the
outset, and the difficulty of disentangling dose of treatment for individualized
interventions [5].

Research from the past 15 years on these types of services has provided
reasons for optimism and causes for concern. Findings from various demonstra-
tion projects (eg, the Robert Wood Johnson Foundation’s mental health services
program for youth and center for mental health services system of care sites)
suggested that systems of care could be created. Child-serving agencies could
cooperate and coordinate around treatment and care for youth, and an enhanced
continuum of services could be developed [6]. Data from these projects also
suggested that access to services could be improved [25,26]. Early findings from
several types of intervention, including multisystemic therapy (MST) [16] and
treatment foster care (TFC) [14], also showed positive gains for difficult-to-treat
youth within these community-based interventions. Simultaneously, however,
findings from other interventions seemed to suggest that enhanced community-
based services may or may not affect child and family outcomes [12,27]. These
various findings led to extended discussions within the field of children’s mental
health services and research about explanations for the disparate findings [28,29].
They also fueled discussions about deficiencies in contemporary research and
evaluation and provided a foundation for a subsequent period of conceptuali-
tation and research to assess more adequately the effects of community-based
treatment for youth [24,29]. Such discussions have led to a renewed focus on
theories of treatment and change, specification of active ingredients, improved
attention to manualization and assessment of fidelity, and a recognition that
system change, although perhaps necessary, is likely to be insufficient to affect
individual-level outcomes [5,30].
Currently, the research base on community-based services has advanced considerably, and a great deal of work is currently underway to continue this expansion of knowledge. The evidence base is still limited, however. The current review and discussion draw from several sources and approaches. Our aim is to identify the best available community-based treatments for youth with psychiatric disorders, particularly for youth with a combination of psychiatric diagnosis and significant functional impairment (ie, serious emotional disturbance) [31]. In recent years, many reviews have focused on the evidence base for various child-oriented treatments [32–35]. These reviews have used criteria from several sources [36–38] to determine the level or quality of the evidence base. These approaches share common elements and provide frameworks for determining the quantity and quality of the scientific evidence for an intervention. For an intervention to be classified as the highest level of evidence (ie, well established), criteria require at least two well-designed studies with appropriate comparison groups (or more than nine well-conducted, single-case studies), replication (results from more than one team of investigators), and treatment manuals (so that the intervention can be distributed for replication). A designation of the next level of evidence, probably efficacious, generally requires at least two studies showing it to be more effective than a no-treatment control group (or several single-case studies).

Given the relatively limited research base for most of the community-based treatments for youth, reviews of such services often have used less stringent criteria (eg, any comparison group, use of established outcome measures) [33,39,40]. We follow this expanded approach in the current review. In line with Drake et al [41], we have focused on the best available scientific evidence for potential evidence-based interventions. We include a wide range of acceptable research designs rather than a narrower focus on randomized trials. This broader definition provides less detail about essential mechanisms but is sufficient for establishing effectiveness [36]. Given the complexity of many of these interventions and the need to fit into the broader environment, we also attempt to evaluate the intervention’s readiness for transportability or dissemination and applicability to real world settings [24,42].

In this issue, Kazdin [30] suggests that an exclusive emphasis on evidence-based versus not evidence-based provides a partial and potentially limiting view of effective treatments. Instead, he suggests a broader continuum of evidence that would include (1) not evaluated, (2) evaluated but unclear (no or possibly negative effects at this time), (3) promising (some evidence), (4) well established (parallel to well established in conventional schemes), and (5) better/best treatments (treatments shown to be more effective than other evidence-based treatments). We use this nomenclature to discuss the existing evidence base for community-based treatments.

The current review is parameterized from a system of care perspective. We include services that are traditionally viewed as elements of a system of care for youth with mental health problems and are implemented in the home or community. These services include community-based residential treatment, multimodal treatments that provide individualized services to children and families,
services that are designed to coordinate and integrate multisector interventions, and auxiliary and supportive types of services that are conventionally delivered in the community. We have not included traditional outpatient therapy or school-based services, although such services are frequently provided within a system of care structure and are likely to occur in conjunction with the types of modalities included herein [43] and are reviewed in other articles in this issue.

Recent reviews of the evidence base within the field were used to identify potential treatment approaches or modalities that should be included herein [33–35, 44,45]. Given the broader focus on the full range of interventions with varying levels of evidence, additional treatments that have been shown to be commonly used in systems of care also were identified [43,45]. Once candidate approaches and modalities were identified, we placed them within the four-category scheme (ie, residential, multimodal, coordinating and facilitating, auxiliary). This schemata was viewed as an ideal type because many identified approaches contained elements across categories. Approaches were clustered together based on their dominant features or treatment approach to provide a heuristic for assessing evidence within and among different types of treatment.

A review of the available evidence was then conducted to determine the level and extent of current evidence for the focal treatment. For the current discussion, we have limited eligibility to sources that have been published in peer-reviewed outlets. To identify potential pieces of evidence, we used electronic database searches, reference lists from identified articles, and a networking approach based on key words, authors, and related topic areas.

Because there have been a series of reviews of the evidence base in the relatively recent past, we approached this topic as an update. We read the previous reviews, conducted new searches on the previously covered years (to assess adequacy of the previous work), and performed a review of peer-refereed publications on each topic that have been published since the previous reviews were completed. We also used our knowledge of current work within the field to provide brief updates on current research directions. This article, therefore, provides a brief overview of the long-term evidence base, a focus on recent work, and, where possible, glimpses of current foci and research efforts.

Community-based residential treatment

This category includes treatment approaches that combine a community-based residential placement with a specific focus on treatment (rather than merely providing childcare or room/board). Two potential treatment modalities were identified in this category: TFC and therapeutic group homes.

Treatment foster care

TFC is considered to be the least restrictive treatment-based residential option for youth with mental health or antisocial behavior [46]. It combines implemen-
tation of structured therapeutic interventions with opportunities for development within a family setting [47]. As such, it provides a potentially valuable component for a continuum of care within a system of care [33,48].

TFC is distinguished from other community-based residential placements (eg, regular foster care) by its explicit focus on treatment and substantial training and supervision of trained treatment foster parents. It is distinguished from other treatment-based residential placements by its use of individual families’ homes, placement of few (usually only one) child per home, and lower costs than other treatment placements [49,50]. TFC’s role in a system of care is diverse: it can be used as a step-down from more restrictive placements, as a short-term placement, or as a long-term placement [51]. TFC is regarded favorably within the field of community-based children’s mental health treatment, mainly because of its applicability and flexibility within a system of care, its concordance with child and adolescent service system program-type principles (eg, providing intensive treatment within a community and family setting), its comparatively advanced evidence base, and its relatively low cost [33,52].

The evidence base for TFC comes almost exclusively from work by Chamberlain and colleagues at the Oregon Social Learning Center [14,49,53,54]. This model of TFC is based on a long tradition of social learning theory [55–59]. As such, it is built on a well-developed model of the development of problematic behavior, and it posits specific mechanisms that may be effective at reducing such behaviors (eg, parental discipline, supervision, peer relationships). TFC, as it is delivered in the Oregon model, includes significant treatment foster parent training, supervision of treatment foster parents by experienced case managers, careful monitoring of behavior and consequences, use of a points/levels system, and significant additional services for youth and families (eg, in-house therapists, skills builders, strong relationships with other child-serving agencies) [49]. The model emphasizes the importance of a proactive approach to behavior and discipline, consistency, and a team of adults working with the youth.

The published evidence base for TFC comes primarily from two randomized trials conducted by Chamberlain and colleagues. One study involved youth transferred from a state psychiatric hospital and the other focused on juvenile offenders. In these studies, results favored TFC over the alternative treatment (group home or hospital) [14,60,61]. Youth in TFC showed more rapid decreases in problematic behavior, increased community residence, and lower rates of recidivism, and these positive effects in favor of TFC were sustained after discharge throughout the longitudinal follow-up (up to 2 years) [49,60,62].

In addition to these overall promising findings, the Oregon version of TFC’s foundation in theory has provided substantial guidance on mechanisms that may influence outcomes. Findings to date have emphasized the importance of four key mediators of outcomes: (1) type and amount of supervision the youth receives, (2) consistency and perceived fairness of discipline, (3) presence and quality of a relationship with a mentoring adult, and (4) lack of association with deviant peers [49]. A randomized trial that compared youth in TFC with youth in group homes showed that these mechanisms differed between the two settings and that such
differences were associated with outcomes [63,64]. Findings also have pointed to potential differences in mechanisms and effects for boys and girls [65–67].

Research on TFC beyond Oregon has been sparse and mixed. Evans et al [68–70] used TFC as the comparison condition in a randomized trial of intensive case management. Over an 18-month follow-up period, the intervention group (ie, case management) showed more favorable gains in role performance, internalizing and externalizing behaviors, and functioning. These increased improvements in case management were achieved for approximately one-third the cost of TFC. Clark et al [71] used a randomized trial in Florida to compare TFC with standard foster care. Youth in TFC showed fewer placement changes, lower rates of delinquency, and improvements in externalizing behaviors compared with youth in regular foster care. These results from beyond the Oregon model suggest potential variability in results, based on the comparison condition. They also provide relatively fewer details on the implementation of TFC, so it is difficult to know how similar TFC was across these studies and whether the non-Oregon programs included many of the elements that are bundled into the Oregon model.

Current work in TFC focuses on several fronts. First, within the group of researchers at the Oregon Social Learning Center, there are ongoing efforts to develop a better understanding of the intervention with girls [72]. Considerable work is also being devoted to disseminating TFC from Oregon to other sites across the nation (Chamberlain P, Price J, unpublished data) [73] and modifying the Oregon model to meet the needs of younger children [74,75]. Current work by others [52] has shown that TFC, as widely practiced in other settings, differs substantially from the model implemented in Oregon. Additional ongoing work is evaluating a revised model of TFC to meet the needs of youth in long-term TFC served in disparate agencies and communities (Farmer E, unpublished data).

Currently, the evidence base for TFC seems to be promising or probably efficacious. Positive effects (compared with other usual care conditions) have been shown in two randomized trials. Findings from researchers beyond the core group have found inconsistent effects of TFC. Current efforts in dissemination and additional research by other investigators may provide the additional evidence required to move TFC into the “well-established” category in the relatively near future. In addition to the ongoing research, the initial developers and several of the ongoing projects are developing materials and manuals that may be used for training, disseminating, and assessing implementation. Current work on modifying the model (for use in other target populations and diverse settings), however, suggests that the Oregon model of TFC may be subject to substantial modifications in order to apply it to other target populations.

**Group homes**

Reviews of evidence-based interventions for youth with mental health problems frequently do not include group homes because the evidence base is so sparse for this type of treatment. Data on service use within systems of care
suggest that group homes are the most common community-based residential treatment placement for youth with such difficulties [51].

Probably the most fully articulated and most widely practiced model of group home care is that developed and disseminated as the teaching family model (which, coincidentally, also has been used in implementing TFC in settings across the country) [76,77]. This model focuses on a family-style environment for six to eight youths at a time, uses teaching parents as the front-line staff, and emphasizes a milieu approach to therapeutic intervention. In many ways, this model of group home care mimics many of the tenets of TFC (ie, trained “parents,” focus on structure and supervision, explicit recognition of the ecologic nature of their work). The two settings have an essential difference in their theory of change, however. Teaching family group homes emphasize self-government and peer interactions as key components of the therapeutic environment, whereas TFC places its emphasis on adult-mediated intervention [63]. Group home care also costs substantially more than TFC (usually two to three times more expensive).

The evidence base for TFC is promising but fairly limited. In comparison to the evidence base for group home care, however, it is voluminous. The description of group homes focused on the teaching family model, because this is the only type of group home care that has received any systematic research attention. Much of the research was conducted more than 20 years ago [77–80]. Early work showed that the original teaching family site (Achievement Place, University of Kansas) showed significantly more positive outcomes (on criminal behavior) than dissemination sites or group homes that were not using the teaching family model [80]. Subsequent work that compared youth in teaching family group homes to usual treatment youth has shown more positive outcomes on functioning and symptomatology, greater satisfaction, fewer feelings of isolation, and a greater sense of control for the group home youth [76,81].

Since 1990, little research on teaching family group homes has appeared in the literature. What has appeared has focused on issues of dissemination rather than outcomes [82,83]. A search of the literature since 2000 shows little research on group homes. What has appeared has focused primarily on processes within homes and assessing satisfaction and well-being within group homes [43,84–86] rather than on outcomes of group homes, per se. The focus of this research also primarily occurred within the child welfare literature rather than the children’s mental health literature.

Comparisons of the interventions in this category—TFC and group homes — are few but have favored TFC. An early comparison that used a matched-group design to compare youth in the two settings [87] showed equivalent gains in the two settings, but indicated that these gains were achieved at half the cost in TFC. A randomized trial of TFC versus group home care showed that TFC was associated with more positive behavioral changes in a shorter period of time, increased community tenure, and decreased arrests and incarcerations in the year after discharge [64]. Recent work is beginning to appear that will make it possible to conduct a direct comparison of processes and outcomes between these two settings [43,51,88].
The evidence base for group home treatment is thin. Findings in published work have suggested some potential for positive gains. Additional work has raised questions about potential iatrogenic effects of grouping youth with similar problems together, however [89]. No systematic research has examined the extent to which such concerns are justified, although there is some evidence of deterioration of behavior in at least some group homes [80]. In light of these concerns, and without ample evidence to dispel them, it seems that the current evidence base for group homes should be regarded as “evaluated but not clear.” Significant research is necessary on this commonly used treatment modality.

**Multimodal treatment**

This category includes interventions that are explicitly multimodal and incorporate various treatment approaches, foci, or sectors to intervene directly with youth. TFC, as currently implemented by the Oregon Social Learning Center, has been relabeled as multidimensional TFC to emphasize its multimodal focus. Despite this development, it remains classified as a community-based residential treatment because of its primary focus on providing a family-alternative residential treatment, which is supplemented and supported via additional services. One dominant approach was identified within this category: MST.

**Multisystemic therapy**

MST is regarded as among the strongest evidence-based interventions for youth [35,90]. MST’s appeal and support come from a number of fronts. First, it is built on a strong theoretical underpinning of ecologic theory and has carefully hypothesized and examined potential change mechanisms [91,92]. Given MST’s ecologic underpinnings, it focuses on the fit between youth and environment and concentrates on interventions and modifications that improve this fit with the goal of improving targeted behaviors. As with other community-based interventions, MST is individualized to meet the needs and strengths of participating families. Unlike many other community-based interventions, however, MST follows a clearly defined iterative analytical process for assessing fit, identifying goals, developing and implementing intervention, and assessing success and barriers [93]. As in many other community-based interventions, MST services are individualized, available 24/7 to families, and provided in the context of a family’s values and culture. MST is delivered via MST therapists (usually masters-level professionals) who work intensively with a few families at a time for a time-limited duration. MST has taken a lead in community-based services for youth with its careful attention to fidelity and manualization [94,95].

MST is a well-validated treatment model within community-based children’s mental health treatment [33,34,96]. An ongoing program of systematic and rigorous research has included eight randomized trials in various settings and with various target groups of youth. Initial research focused primarily on use of

---

MST with youth in the juvenile justice system [97–101]. Findings from these studies have shown consistently positive results compared with usual treatment, including reduced recidivism, fewer out-of-home placements, and lower rates of substance-related offenses.

More recent work has included a randomized trial for youth with psychiatric problems rather than juvenile delinquency. The study included youth who had been approved for an emergency psychiatric admission. Among youth who were randomized to MST (rather than hospital care), short-term findings indicated fewer hospitalizations, fewer days in the hospital, more days in mainstream school settings, and more substantial improvements in severity of symptoms [102,103]. These positive short-term findings, however, were not maintained across time. By approximately 12 months after enrollment, differences between MST and the comparison group had diminished or evaporated on nearly all examined dimensions.

Current work in MST revolves around two primary foci: refinement and reconceptualization of the MST model for youth with mental health problems (rather than primarily juvenile delinquency issues) [104] and issues in disseminating MST [42,105].

Classification of the evidence base for MST illustrates some of the complexities of such categorization. On one hand, MST probably has the strongest evidence base among community-based interventions. Its effectiveness (compared with various other usual care conditions) has been demonstrated in multiple randomized trials, and it has a well-developed treatment manual and means of assessing fidelity. On the other hand, nearly all of the existing research has been conducted by individuals who developed the approach, and recent results with mental health populations have not shown the strong and lasting effects that were found with juvenile delinquent populations. Despite widespread enthusiasm and support for MST as the gold standard for evidence in community-based treatment, it seems to qualify as promising (using Kazdin’s [30] scheme) or probably efficacious [36,38]. Current work on dissemination, replication by other groups, and continued refinement on approaches for mental health populations may propel it quickly into the well-established or even better/best treatments designation within the near future.

Coordination and facilitation

This category includes approaches that focus more exclusively on facilitating access and coordination of services than on actual provision of treatment. It includes case management and wraparound. In some reviews, these two types of intervention have been viewed as variations on a common theme [33]. As they have evolved, however, they have developed distinct (although not entirely disentangled) niches and literatures; they are reviewed separately herein. Case management and wraparound are internally heterogeneous in terms of the extent to which they focus exclusively on coordination and facilitation rather than direct services.
Case management

Case management is a commonly used strategy for increasing access to and coordination of services within systems of care. Definitions and implementation of case management vary widely [106–108], but all definitions recognize that case management mobilizes, coordinates, and maintains an array of services and resources to meet individuals’ needs [109]. Case management often is seen as the lynchpin of a system of care, because it provides the central function of bringing together the disparate interventions and practitioners into a coherent whole to meet children’s and families’ needs.

Case management includes various functions to meet these needs, including assessment, service planning and implementation, service coordination, monitoring and evaluation, and advocacy [109]. Case management can be organized in various ways and can be led by various players to fill these functions. Primary models of case management include the generalist or service broker, primary therapist, interdisciplinary team, comprehensive service center, family as case manager, supportive care, and volunteer as case manager [110,111].

As of 2002 (when the last published review of the case management literature was published), three studies with rigorous research designs (two randomized trials, one quasi-experimental) had been conducted on case management for youth with emotional and behavioral problems. One of these studies used a randomized trial to compare treatment and outcomes for youth who received case management from a full-time case manager (generalist/service broker model—intervention condition) with youth whose primary therapist acted as case manager (primary therapist model—control condition) [27]. Results showed considerable impact on retention in services, array of services, use of less restrictive community-based services, and greater satisfaction with services for youth in the intervention condition. There were few differences in individual- or family-level outcomes between the groups, however. Evans et al [68–70] examined differences (using a randomized design) to compare youth in intensive case management to youth in TFC. Results at 18 months showed significantly more positive outcomes on a range of individual-level factors for youth in intensive case management and at only one third the cost of TFC. Finally, Ruffolo (Ruffolo M, unpublished data) used a quasi-experimental design to compare youth enrolled in an expanded broker model of case management to an enhanced program that included case management plus a therapeutic intervention based on McFarlane’s [112] research on expressed emotions and multiple family groups. Youth in the enhanced condition showed more improvement across time on symptoms and problem behavior but no significant differences on other domains.

A literature search for the period since 2000 uncovered two additional studies to evaluate the effects of case management. In one study [113], youth who were being discharged from residential treatment for substance-related problems were randomly assigned to usual care or assertive continuing care (assignment to a case manager for 90 days after discharge). Results at 3 months after discharge showed that youth in the case management group were more likely to access and
continue using services, were more likely to abstain from marijuana, and had reduced use of alcohol, compared with youth in the usual care condition. The second recent study [114] continues Evans and colleagues’ work in New York. This study examined effects of three interventions (with a randomized design): home-based crisis intervention (based on homebuilder’s model of family preservation), home-based crisis intervention plus (homebuilder’s plus a cultural competence enhancement), and crisis case management (a scaled-down version of the intensive case management tested by this group previously). All three interventions led to improvements across time for youth and were successful at maintaining most youth in their communities. Crisis case management was associated with more significant improvements in internalizing symptoms but fewer positive changes in family cohesion.

Recent and current research in case management is building on the existing base and evaluating variations in service delivery. Substantial work also is being conducted in adjacent fields (eg, with drug-dependent mothers, HIV-infected youth) that may be relevant for understanding the processes and outcomes of case management [115,116].

With the most recent work, effects of case management have been examined in four randomized trials and an additional quasi-experimental study. Considerable work has examined processes of case management and ways that it fits into the broader system [117–119]. In general, case management has shown positive findings against various comparison groups. In several studies, it has shown findings that are comparable or superior to more intensive in-home or out-of-home interventions [68–70,114]. Results of the most common form of case management (the broker model) have suggested significant changes in service use, but the results on individual-level outcomes have been either neutral [27] or evaluated for short follow-up periods [113]. Given its current evidence base, case management is classified as a promising or potentially efficacious intervention. Additional work is needed to replicate the New York findings in other locales and more fully specify the necessary dose, functions, and intensity of effective case management. Additional work is also needed to assess fidelity, so that effects of case management can be evaluated systematically net of other interventions that the youth and family receive. If such work is successful, case management will be well positioned to move into the well-established or even better/best practices category.

**Wraparound**

Wraparound is an approach to treatment that developed as an attempt to overcome the fragmented, uncoordinated way in which services traditionally were provided to youth with multiple problems who received services from multiple child-serving agencies. Wraparound is identified as a definable planning process that involves the child and family and is designed to provide a unique set of individualized community services and natural supports based on a set of core principles and values [96,120,121]. There is a great deal of overlap between the process and goals of wraparound and case management. Whereas case manage-
ment focuses more specifically on coordinating and facilitating service delivery, however, wraparound provides more focused attention on the way in which service delivery is planned. These are, however, ideal types. For case management, the actual implementation of wraparound varies widely [121]. This variation and flexibility have made wraparound simultaneously a widely used approach (as of 2000, it was being used in 85% of the United States and territories) [96] and a difficult intervention to operationalize and study [121].

Wraparound developed as a grass-roots intervention in response to frustration over fragmented, restrictive, formal services for children with serious problems [13]. Its unique appeal lay in its relatively simple philosophy to identify the community services and supports (formal and informal) that a family needs and provide them for as long as they are needed [121]. To achieve this, wraparound focused on the process of planning services. According to wraparound principles and values, this planning process needed to involve the family as full and active partners, build on strengths, be individualized and flexible, be community based, use a team approach, balance formal and informal services and supports, address the full range of life domains, and include outcomes that are determined and measured for each of the child and family goals and program- and system-level goals [122].

As a philosophy, wraparound was appealing to professionals and families who were frustrated with the usual way of providing services. Its flexible, individualized, community-based, strength-based approach has made it difficult to operationalize and evaluate, however. Early research was descriptive, with an initial set of ten case studies based on the wraparound program in rural Alaska [13]. Although the study was small and lacked a comparison group, description of this approach and its apparent potential for difficult-to-treat youth in areas with few formal services sparked tremendous enthusiasm in the field and a flurry of additional implementation and research. To date, there have been 16 identified studies of wraparound [96,121]. Among these studies have been two randomized trials [69,71], three quasi-experimental designs [123–125], and nine pre-post designs [126–132]. This list, however, is longer than typically would be included in a review of the evidence base: six of the included studies have not been published in peer-reviewed outlets (they appear only as conference proceedings, book chapters, reports, or dissertations). Also, the peer-reviewed articles—with two exceptions [125,129]—have appeared in a single journal (Journal of Child and Family Studies).

Results from this set of studies have shown mostly positive effects of wraparound. Results from the most scientifically rigorous studies (randomized trials and quasi-experimental designs) have shown improvements, relative to the comparison group, in living environment permanency and level of restrictiveness, school attendance and adjustment, behavioral adjustment, family functioning, and delinquency [69,71,124,125]. One study showed significant differences in service use but fewer systematic differences on other individual-level outcomes between youth who received wraparound and youth who received treatment as usual [123].
Research on wraparound in the most recent years has continued the pattern of early work and has begun to focus on the issue of operationalization and fidelity. Much of the identified work continues to be program descriptions and other discussions of the approach’s application and principles [133–136]. Work by Epstein and colleagues [137,138] has focused on development and psychometric validation of an instrument (the wraparound observation form) to assess the degree to which the wraparound principles are adhered to in treatment team planning meetings. To date, no published data examine whether better conformity to this planning process is related to improved outcomes for youth or families. A recent publication showed that treatment integrity (measured as percentage of service hours prescribed versus received) was not related to outcomes, although it is unclear whether this measure is an adequate and valid indicator of wraparound [139].

Currently, the evidence base for wraparound seems to fall on the weak side of “promising.” What research exists shows positive gains. Other work, however, shows equal gains with usual care at an increased cost for wraparound [123]. The evidence to date is concentrated in weak study designs, however. Although various researchers and authors have been involved, the publication outlets for this work have been narrow (and frequently not peer reviewed). Current work on assessing conformity should be helpful in operationalizing this intervention approach and rigorously examining whether successful implementation is linked to positive outcomes for youth. A great deal of work remains to be completed on this widely used and popular approach for serving youth.

**Auxiliary and supportive services**

This category includes particular, identifiable services that may be provided individually or in conjunction with any of the previously mentioned interventions. Within a system of care, they usually would not be seen as a primary or sole service. Instead, they are viewed as important supplemental services that support and facilitate the broader range of interventions that youth receive. They fit within the ecologic perspective of a system of care and provide coverage for potential gaps in a continuum of care. In this area, we identified three community-based candidates: family education and support, mentoring, and respite services.

**Family education and support**

Family support and education programs fill a niche in a system of care by providing systematic efforts to enhance, strengthen, and empower families to promote healthy outcomes for children in the face of stresses and risks [140,141]. Family education and support programs share much common ground with other family-based interventions [142,143], but they occupy a unique niche in their focus on providing a range of supportive, educational opportunities to parents that, in turn, are hypothesized to improve outcomes for children. In short, the inter-
vention seeks to bolster parents’ resources (in terms of knowledge, support, and a sense of empowerment) to face more adequately the challenges they encounter in parenting. As such, family support and education is often viewed more as a preventive service than a treatment service [140]. It also has been used within systems of care for youth with mental health and behavioral problems, however [144].

Most of the research on family support and education programs has involved at-risk families (primarily those from impoverished, minority backgrounds). Because this is a population that is overrepresented among systems of care, findings from such studies may be directly relevant to this focal population.

Several reviews have been conducted on this type of intervention. Comer and Fraser [140] reviewed six programs that had been rigorously evaluated. Although each of the programs was unique and designed to meet the needs of particular locations and populations, the programs shared common intervention components, including home visiting, child development screening, parent training, and broad-reaching support for the parents. All programs were staffed by multidisciplinary teams [140]. Overall results were positive across the programs. Findings at 12 months showed gains in parent-child interaction, parental knowledge, and child health and development. Programs that collected longer-term data (up to 10 years after admission) generally showed sustained benefits of the programs, including cognitive development, school achievement, and various measures of family functioning. An additional review of three randomized studies of family education and support for parents of children with chronic health conditions showed that the interventions decreased maternal anxiety but did not affect other maternal mental health issues [145]. In contrast to these generally positive results, a recent long-term evaluation of the comprehensive child development program, a two-generation family support and education program, failed to show any significant differences across a wide range of outcomes for intervention and comparison youth [146].

The Vanderbilt Caregiver Empowerment Project was the only identified study that focused specifically on youth with mental health problems [144]. Results from this randomized study (which was conducted as a substudy within the Ft. Bragg evaluation) showed significant improvements in parents’ knowledge (eg, information about available services) and mental health self-efficacy (eg, encouraging active participation in decision making). Changes in these domains were maintained across the 12-month follow-up period; however, these improvements did not affect distal outcomes, such as actual involvement in treatment, service use, or child outcomes [144].

Currently, the evidence base for parent education and support is best characterized as “not examined.” Although there have been systematic studies of this type of intervention, they have focused on various at-risk populations rather than on families of children with serious mental health problems. The one case that focused on youth with such problems [144] provided a limited 11-week intervention without the types of ongoing supports that are common among such interventions. The focus on parents and families as active partners and collaborators and the emphasis on building and supporting parent/family strengths
suggest the need for interventions that increase knowledge, empowerment, and support for parents who are facing the challenges of raising youth with serious mental health problems. To date, however, the evidence on how to do this successfully is not available.

**Mentoring**

Volunteer mentoring programs have become increasingly widespread over the past decade [147]. Currently, Big Brothers/Big Sisters of America, the most well-known program, has more than 500 agencies throughout the United States, and the National Mentoring Database includes more than 1700 organizations that include mentoring programs [148]. The appeal of mentoring programs is based in part on findings from the social support and resiliency literatures that positive relationships with extrafamilial adults are related to positive outcomes for children and adolescents, particularly for youth categorized as at-risk [149,150]. Mentoring programs also are attractive to agencies because of their use of community volunteers as resources in promoting positive youth development [151]. Mentoring can be provided as a stand-alone program for at-risk youth, but it is often provided as an additional support within systems of care [43].

Despite the popularity and proliferation of mentoring programs, the evidence base for mentoring programs is relatively limited and somewhat inconsistent. Whereas some studies support mentoring as a viable option for improving outcomes for adolescents, others report no relationship or a negative relationship between mentoring and outcomes [152]. Potentially, these varied findings result from the heterogeneity within mentoring programs with regard to population served, program characteristics, and program goals. For instance, mentoring programs vary in the nature and extent of training provided to mentors, and although most mentoring programs target the general goal of positive development for adolescents, some address specific, instrumental goals, such as improving academic functioning or reducing delinquent behavior.

DuBois et al’s [153] recent meta-analysis of 55 mentoring programs provides the best synthesis of the literature to date. Overall, their findings suggest that participation in a mentoring program was associated with a modest benefit for youth (ie, average effect sizes of 0.14 and 0.18 were obtained under fixed- and random-effects analysis, respectively). Several factors were found to moderate mentoring programs’ effects, however. Moderators fell into four broad categories: program features, characteristics of youth, characteristics of relationships, and outcomes assessed. For individual program features, using mentors with backgrounds in helping professions, providing ongoing training for mentors (but not prerelationship training), ensuring availability of structured activities for mentors and youth, and including parent support or involvement were associated with larger effect sizes for adolescents. Programs with explicit expectations for frequency of mentor-mentee contact also had larger effect sizes; although only 12 of the 55 studies reported this information. DuBois et al [153] also examined the collective contribution of programs’ use of best practices by computing an
index of 11 program features that included characteristics, such as monitoring of implementation, screening of mentors, and training requirements. (For all 11 features, see DuBois et al [153]). Programs that included a larger number of best practices were associated with larger effects, with no one feature predominantly responsible for the relationship.

Characteristics of the youth involved also were related to the strength of outcomes. For youth characteristics that acted as moderators, the largest effect sizes were associated with youth who experienced either environmental stress alone or in conjunction with individual risk. For youth who experienced only individual risk factors, programs that used a majority of the best practices were related to positive effects of mentoring, whereas programs that did not engage in a majority of best practices were associated with smaller effects.

Currently, the evidence base for mentoring places it in the “promising” category. It seems that mentoring that conforms to best practices can encourage positive outcomes for youth. Findings on program and youth factors that moderate outcomes suggest the importance of good program implementation and raise questions about the expected effect for youth with serious mental health problems (eg, youth typically served in systems of care). There is a need to bolster the evidence base by expanding the number of studies focused on this target population, carefully assessing implementation, and designing studies that can assess the impact of mentoring in conjunction with or net of other concurrent interventions.

Respite services

Respite services are defined as “the provision of temporary care to persons with disabilities, with the primary purpose of providing relief to caregivers” [154]. Respite has been common in the fields of developmental and physical disabilities [155,156]. Systems of care bring together a philosophy and approach to services (eg, focus on families’ expressed needs, increased efforts to serve children in homes, recognition of the stresses and impact of caring for a child with mental health problems) that have emphasized the need for such relief services for families of youth with mental health problems.

Research on respite, for any type of disability, is severely limited. Only a few studies with minimally adequate methodology have been identified. Rimmerman [157] studied use of respite care by mothers of young children with mental retardation and found that it was associated with reduced parental stress. Sherman [158], in a study of children with chronic illness, found a trend toward lower rates of hospitalization for children in families that had access to respite services.

There was only one identified study of respite for youth with emotional and behavioral disorders [159]. This study used a quasi-experimental (wait-list control) design to assess effectiveness of respite care. Respite care was provided on a preplanned basis for an average of 22 hours/month (ie, less than 1 day). Overall, use of respite services was associated with lower caregiver strain, fewer out-of-home placements, increased caregiver optimism about the future, and
decreased children’s externalizing behaviors in the community. There seemed to be a dose effect so that families that received more hours of respite showed increased optimism, family functioning, and reduced perceived stress.

Currently, respite is viewed as an essential element of a system of care. Findings from the limited available data suggest that it may produce desired outcomes to meet the needs of families and, indirectly, positively impact children’s outcomes. Currently, however, the literature for youth with mental health problems is limited to one wait-list control study. Its evidence base must be regarded as a weak entry in the “evaluated but unclear” category.

Summary and discussion

This article has provided an overview of the state of the evidence base for community-based interventions for youth within systems of care. The article focused on approaches to treatment that are commonly provided within systems of care for youth with mental health problems. It built from recent reviews of the evidence base to examine the current status of a range of interventions. The following discussion provides a brief overview of the state-of-the-science and a discussion of what is needed to move the field forward.

The review was organized around four heuristic approaches to intervention: approaches that are primarily residential, multimodal, coordinating/facilitating, and auxiliary/supportive. Table 1 provides an overview of the current evidence base and status for each identified type.

Currently, there is a great deal of promise for community-based interventions, but a tremendous amount of work is needed to reach a well-established or better/best practices for the included intervention approaches. Despite this need for much additional research to establish the evidence base fully, the existing evidence is encouraging. For all of the examined interventions, there is at least some evidence that they produce positive changes in relevant domains. Such differences are not always superior to those found in control conditions and may not have been examined for the focal population of youth with serious emotional disturbance. The overall picture of results suggests that these interventions work, however. The challenge is in identifying key mechanisms and essential elements, operationalizing and describing interventions in sufficient detail that they can be replicated and studied, and examining which interventions—and under which conditions—work more effectively for which youth.

MST and TFC are often viewed as the two evidence-based interventions within this realm. Clearly, these two types of intervention have been evaluated via systematic, rigorous, and carefully controlled studies. Each type needs additional work to replicate findings, modify the intervention to meet the treatment needs of particular populations, and move the intervention into the disparate, heterogeneous, and resource-strapped communities and agencies. Each one seems poised to make the transition into this highest level of evidence within the foreseeable future.
Case management is not often viewed in the same realm as TFC and MST, in terms of its evidence. This article, however, suggests that the evidence base for case management is convincing. Recently there have been publications from four randomized trials and one quasi-experimental study. All of these studies have shown positive improvements across time. Studies that have not shown significant improvements (above comparison groups) for individual-level outcomes have shown intended shifts in service use (which are, arguably, the relevant outcomes for certain forms of case management).

The evidence base for the other types of interventions included here is much less advanced. There has been virtually no research on group homes in recent years and limited research on the effectiveness of this intervention. Current efforts seem to focus on dissemination and small-scale processes rather than on research that is likely to increase the evidence base. Wraparound has received a good deal of attention but little systematic or strong research. Recent efforts to more adequately assess conformity to wraparound principles and processes may spur an increase in high-quality research in this area. The evidence base for the
auxiliary and supportive services requires considerable work, particularly to examine effectiveness of these approaches within systems of care and for youth with serious mental health problems. Among these interventions, mentoring has the most promising research literature, but there is little evidence of its effectiveness for youth with the types of complex difficulties and risks that are served in systems of care.

In terms of envisioning next steps for these interventions, we use the framework provided by the clinic/community intervention development model [23,24]. This model modifies the traditional efficacy-effectiveness paradigm for developing the evidence base to take into account more fully the complexities of community-based interventions. The model conceptualizes eight steps in the development, testing, and dissemination of interventions:

- Step 1: Theoretically and clinically informed construction, refinement, and manualization
- Step 2: Initial efficacy trial to establish potential for benefit
- Step 3: Single-case applications in practice setting, with progressive adaptations
- Step 4: Initial effectiveness test, modest in scope and cost
- Step 5: Full test of effectiveness under everyday practice conditions
- Step 6: Effectiveness of treatment variations, effective ingredients, moderators, mediators, and costs
- Step 7: Assessment of goodness-of-fit within the host organization
- Step 8: Dissemination, quality, and long-term sustainability within new organizations

Current status of the community-based interventions discussed herein has not necessarily followed this set of steps. It is possible to array them to determine the next steps that would most systematically advance the current knowledge base and provide the greatest potential for moving forward.

MST and TFC have come closest to following these ideal-type steps. MST has completed steps 1 to 4. Currently, it is working on elements of steps 5 to 8. Findings for youth with mental health problems also suggest the potential need to retrace the steps and conduct smaller-scale evaluations (akin to steps 3 and 4) that focus on protocol modifications for this population. TFC also has completed the steps in a systematic fashion. Like MST, TFC has completed steps 1 to 4 and is currently engaged in a range of activities covered under steps 5 to 8. For each of these interventions, there seems to be a somewhat premature leap toward step 8, without adequate attention to issues of fit and effectiveness under everyday conditions that may be crucial for long-term effectiveness and use of these interventions.

Case management is a bit harder to characterize on this process. In many ways, the research base leaped from a theoretical handling of step 1 to randomized trials that would fall within step 4. Current efforts seem to be continuing within steps 4 and 5 (tests of effectiveness under everyday practice conditions).
The widespread use of case management, in the absence of a controlled development and dissemination plan, makes it difficult to retrospectively conduct the steps sequentially. Currently, it seems that case management is ready for research in step 6—effectiveness of treatment variations, effective ingredients, core potencies, moderators, mediators, and costs.

Wraparound also is somewhat complex. Its evaluation seems to have begun at step 3 (single-case applications), with iterative efforts at developing the theoretical underpinnings and manualization (step 1). Subsequent efforts have spanned the remaining steps, but without apparent coherent strategy. It seems that wraparound would benefit by using recent work in manualization and operationalization to conduct studies at step 5 (full test of effectiveness under everyday practice conditions).

The auxiliary and supportive services would benefit by starting fairly early in the process. Family education and support and mentoring have relatively strong theoretical foundations and evidence in adjacent population groups. Each would benefit from targeted work (probably at step 3 or 4—single-case application or initial effectiveness tests) within systems of care. Respite care has the least developed evidence base. It would benefit from initiation of a rigorous program of research, beginning with step 1.

Overall, the evidence base for community-based settings is promising and growing. Some interventions (ie, MST, TFC, case management) have relatively well-developed evidence. Some of the most widely used services (eg, group homes, wraparound) have underdeveloped evidence bases, however. The danger for all of these interventions seems to be a leap toward dissemination without adequate research on factors that will make such widespread application feasible and successful. The challenge for the field is to develop the evidence systematically while simultaneously responding to the challenges of service delivery, research, and the rapidly shifting landscape of policies and practices that impact provision of children’s mental health services.

References


[92] Huey S, Henggeler S, Brondino M, Pickrel S. Mechanisms of change in multisystemic therapy:


