



THE COMPREHENSIVE COMMUNITY MENTAL
HEALTH SERVICES FOR CHILDREN AND
THEIR FAMILIES PROGRAM

EVALUATION FINDINGS



Annual Report to Congress

2002–2003

**Center for Mental Health Services
Substance Abuse and Mental Health Services Administration
U.S. Department of Health and Human Services**

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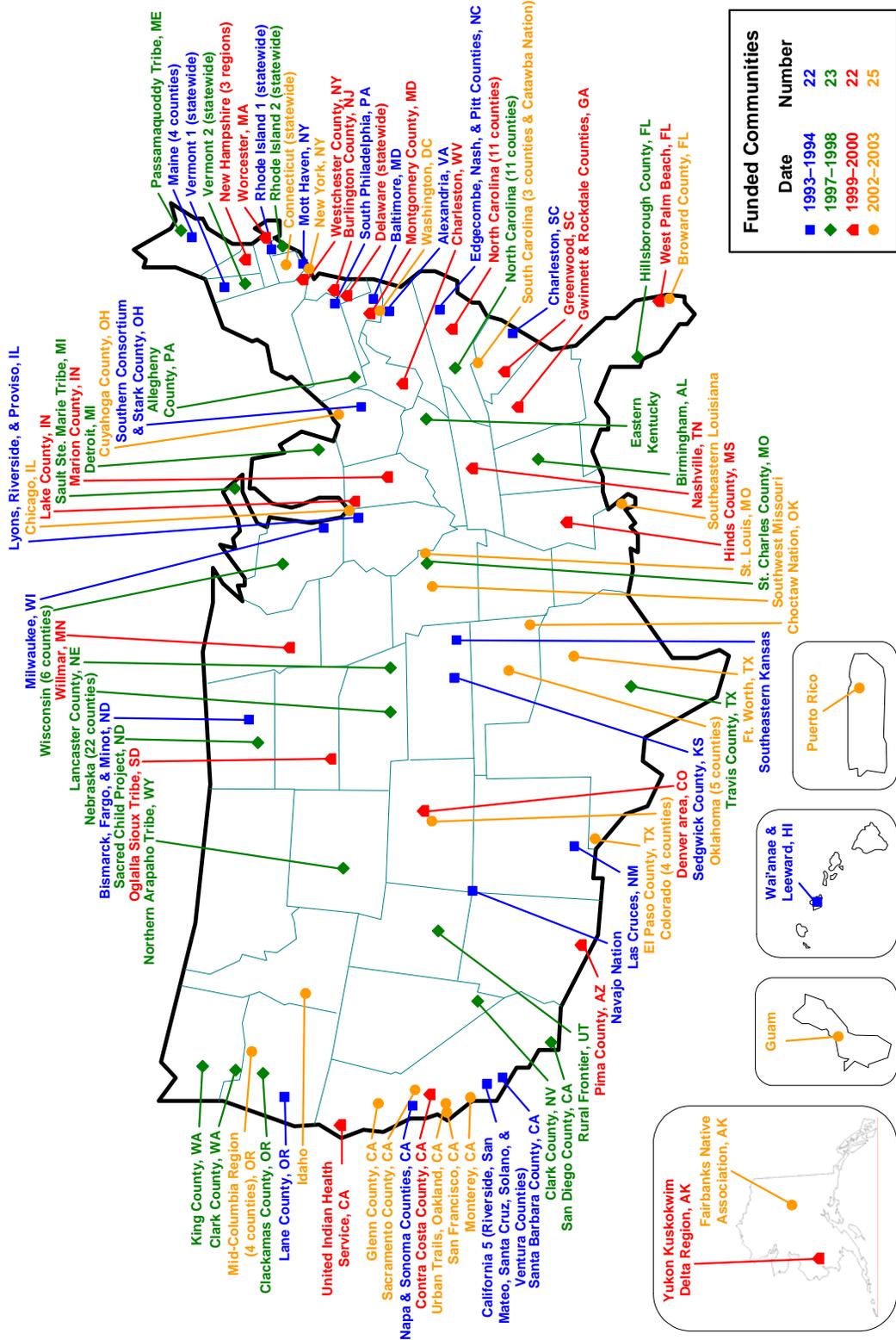
CONTENTS

Summary of Program Highlights	1
Introduction	3
Characteristics of Children in the Program	10
Characteristics of Children and Families Served in Grant Communities Funded in 1997, 1998, 1999, and 2000	11
Clinical and Program Outcomes	20
Child Clinical Outcomes	21
Child Functional Outcomes	24
Family Outcomes	29
System-Level Outcomes	32
Services, Costs, and Financing	36
Program Effectiveness	40
Satisfaction With System of Care Services	45
GPRA Indicators for Program for FY 02 and FY 03	47
Summary	48
Appendices	
A. System of Care Communities Funded Through the Comprehensive Community Mental Health Services for Children and Their Families Program (1993–2000)	53
B. References	58
C. Evaluation Methodology	60
D. Measures	70
E. Study Enrollment and Program Interview Completion as of April 2003	76

SUMMARY OF PROGRAM HIGHLIGHTS

- Significant program findings:
 - Children's behavioral and emotional strengths increased
 - Law enforcement contacts decreased
 - Individualized service delivery significantly contributed to improved child functioning
 - Improvement in school performance was related to improvements in behavioral and emotional problems
 - Youth with substance abuse comorbidity experienced significantly greater improvement in their overall functioning
 - Most children received services in community settings and did not need restrictive placements.
 - Caregivers in system of care communities reported positive experiences with case management
- Accessible services resulted in improvements in:
 - Children's behavioral and emotional problems
 - Children's internalizing problems
 - Living arrangement stability
- Program funding issues:
 - Services were financed through multiple funding sources, and community-based services accounted for the largest part of total costs
 - Flexible funds were used to improve children's living environments and provide needed resources to their families
- Grant communities vs. matched comparison communities:
 - Grant communities scored higher than non-system of care comparison communities in applying system of care principles
 - Clinically significant change from intake to 12 months was greater in a sample system of care community than in the matched comparison community
 - Services were more family-focused in a sample system of care community than in the matched comparison community
- Satisfaction findings:
 - Caregivers and youth were satisfied with services over time

System of Care Communities of the Comprehensive Community Mental Health Services for Children and Their Families Program



INTRODUCTION

The Surgeon General has characterized mental illness among children and youth as a public health crisis (U.S. Public Health Service [USPHS], 2000). It is likely that many of the estimated 4.5 to 6.3 million children (Friedman, Katz-Leavy, Manderscheid, & Sondheimer, 1999) who are in need go undetected.

Over the past several years, national attention to children's mental health has gained momentum. In 1999, the White House held a Conference on Mental Health, and the Surgeon General issued a *Call to Action to Prevent Suicide in Youth* (USPHS, 1999) and published *Mental Health: A Report of the Surgeon General* (DHHS, 1999). In 2000, the White House sponsored a meeting on the need to improve diagnosis and treatment of children with emotional and behavioral challenges. In the same year, the National Institute of Mental Health (NIMH) in collaboration with the Food and Drug Administration (FDA) convened a meeting focusing on research needed to develop psychopharmaceuticals for young children, and the Surgeon General convened another meeting, the Surgeon General's Conference on Children's Mental Health: Developing a National Action Agenda.

The President's New Freedom Commission on Mental Health, created in 2001, established the Subcommittee on Children and Family, charged with developing a vision for children's mental health. That vision is one in which "our communities, states, and nation provide access to comprehensive, home and community-based, family-centered services and supports for children with mental health disorders and their families, while at the same time creating conditions that promote positive mental health and emotional well-being and prevent the onset of emotional problems in all children."

This vision is in alignment with that of the Comprehensive Community Mental Health Services for Children and Their Families Program (Children's Mental Health Initiative, or CMHI). Similarly, the values explicit within the subcommittee's vision are in sync with the values of systems of care, which provide the philosophical underpinning for the CMHI. In addition, the policy options identified by the subcommittee are the same strategies currently implemented through the CMHI.

Consistent with SAMHSA's vision of "A Life in the Community for Everyone" and mission "Building Resilience & Facilitating Recovery," the CMHI clearly supports the Agency's priorities and has the full support of the Administration and SAMHSA's leadership.

Program Administration

The CMHI is administered by the Child, Adolescent and Family Branch within the Substance Abuse and Mental Health Services Administration's (SAMHSA) Center for Mental Health Services (CMHS), U.S. Department of Health and Human Services. It is built on a strong base of Federal, foundation, and State-level initiatives beginning with the Child and Adolescent Service System Program (CASSP) in 1984.

As can be seen in other reports to Congress and the literature, this program has demonstrated very positive program outcomes. Improvements in program outcomes on Government Performance and Results Act (GPRA) indicators such as increased cross-agency treatment planning, increased school attendance, decreased law enforcement contacts, and decreased use of inpatient hospitalization across program years demonstrate program achievements. Program refinements and improvements have been driven by evaluation data, and, based on the data, program innovations have been incorporated.

The CMHS program funded four communities in 1993. By 2003, the initial investment of \$5 million had grown to \$98 million per year. This makes a total investment of just over \$749 million, the largest Federal investment ever in community-based mental health services for children and their families. As of September 30, 2003, 67 grants and 25 cooperative agreements have been awarded, each for a period of at least 5 years. Cooperative agreements from 2002 forward are for a period of 6 years (see Map, page 2, and list of funded communities, appendix A).

Purpose of Program

The CMHI is the most comprehensive effort ever to promote the development of systems of care to improve the lives of children with serious emotional disturbance and their families. Over the program's 10-year span, the 92 awardees received funding from CMHS to establish a comprehensive spectrum of mental health and other necessary services organized into a coordinated network to meet the multiple and changing needs of these children and their families (Stroul & Friedman, 1986). This funding has resulted in approximately 62,341 children with serious emotional disturbance and their families receiving mental health services and supports as of September 2003.

The extensive network of system of care communities created by the CMHI provides a foundation on which to develop and refine emerging strategies for improving the lives of children with serious emotional disturbances and their families. These communities provide an opportunity to examine evidence-based interventions in diverse populations and community-based settings and approaches to addressing racial, ethnic, and socioeconomic disparities. They also provide opportunities for learning about strategies for training providers, integrating mental health into the broader service system, and sustaining systems of care. Finally, these communities have become a resource for identifying unique and creative service practices.

System of Care Philosophy

The system of care approach provides a theoretical underpinning for the program and calls for a comprehensive spectrum of mental health services and other support services that are guided by a set of principles. These principles specify that services and supports should be *individualized*, *family focused*, and *culturally competent*. They should be *community based* and *accessible*, provided in the *least restrictive* environment possible, and provided through a *collaborative* and *coordinated interagency* network. These eight core system of care principles are defined as follows:

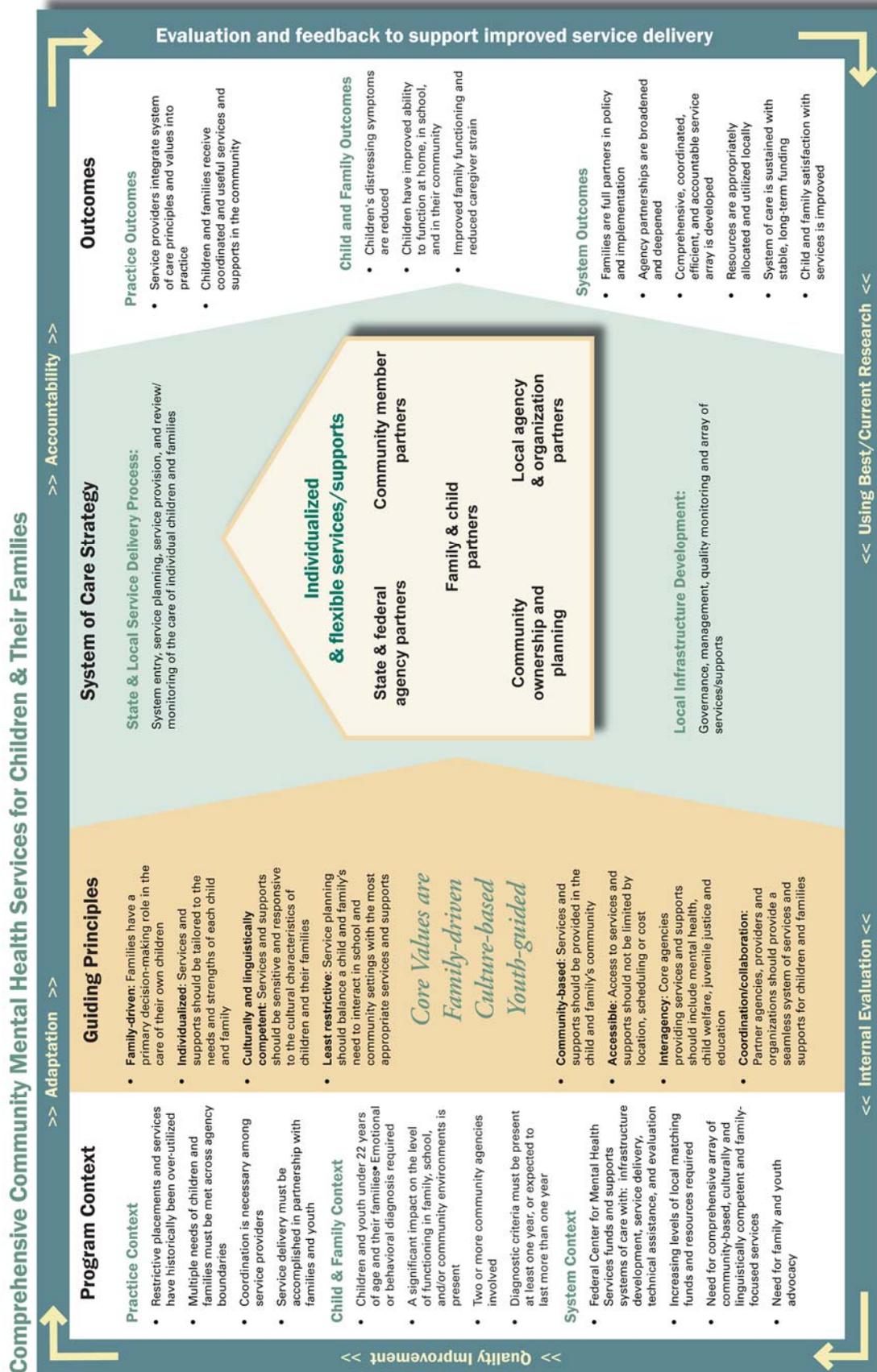
- **Family focused:** The recognition that (a) the ecological context of the family is central to the care of all children; (b) families are important contributors to, and equal partners in, any effort to serve children; and (c) all system and service processes should be planned to maximize family involvement.
- **Individualized:** Provision of care that is expressly child centered, addresses child-specific needs and recognizes and incorporates child-specific strengths.
- **Culturally competent:** Sensitivity and responsiveness to, and acknowledgment of, the inherent value of differences related to race, religion, language, national origin, gender, socioeconomic background, and community-specific characteristics.
- **Interagency:** The involvement and partnership of core agencies in multiple child-serving sectors, including child welfare, health, juvenile justice, education, and mental health.
- **Collaborative/coordinated:** Professionals working together in a complementary manner to avoid duplication of services, eliminate gaps in care, and facilitate child and family movement through the service system.
- **Accessible:** The minimizing of barriers to services in terms of physical location, convenience of scheduling, and financial constraints.
- **Community based:** The provision of services within close geographical proximity to the targeted community.
- **Least restrictive:** The provision of services in settings that maximize freedom of choice and movement, and that present opportunities to interact in normative environments (e.g., school and family).

Program Theory Model

Figure 1 depicts a ***theory-based framework*** to describe the program that was developed with input from stakeholders across the country. The framework articulates the underlying assumptions that guide a service delivery strategy and are believed to be critical to producing change and improvement in children and families. The framework has four core elements—program context, guiding principles, strategies, and outcomes—as well as an evaluation-and-feedback cycle.

The program context is defined based on the program guidance. The guiding principles provide a foundation upon which system of care strategies are built. These strategies are grounded in a community ownership and planning process that engages the multiple partners. As depicted in the far right of the framework, the outcomes are organized into practice, child and family, and system categories. Finally, the framework is not static or linear, and it includes an evaluation-and-feedback cycle that uses the best and most current research and incorporates concepts of internal evaluation, quality improvement, adaptation, and accountability.

Figure 1
System of Care Theory-Based Framework
System of Care Theory-Based Framework
System of Care Theory-Based Framework



Target Population and Program Eligibility Requirements

The target population for the Comprehensive Community Mental Health Services for Children and Their Families Program is children and adolescents with a serious emotional disturbance and their families. This population is defined by five main parameters:

- Age
- Diagnosis
- Disability
- Multi-agency need
- Duration and level of intensity of the disorder

To be eligible for the program, children must

- be under the age of 22 years;
- have a diagnosable emotional, behavioral, or mental disorder as defined by the *Diagnostic and Statistical Manual for Mental Disorders, Fourth Edition (DSM-IV*; American Psychiatric Association [APA], 1994) that is present for at least 1-year, or have the potential for lasting more than 1-year;
- display poor functioning in the contexts of the home, school and/or community; and
- have multi-agency involvement from the core public child-serving agencies (e.g., mental health, juvenile justice, education, child welfare or public health).

These criteria are required for service receipt by the CMHI as stated in the program Guidance for Applicants. Grant communities use these criteria to establish eligibility for the grant program.

Congressional Mandate for Evaluation

Evaluation has been an integral component of the CMHI since its inception and was called for by the program's authorizing legislation (Public Law 102–321, Section 565 of the Public Health Service Act). Besides responding to the legislation, the evaluation serves as a laboratory for addressing many critical issues in children's mental health identified through various national efforts. The evaluation includes multiple cohorts of communities funded over the period 1993 to 2002 and several core components¹ designed to address the critical questions described above and mandated by the legislation:

- System of care assessment study
- Cross-sectional descriptive study
- Child and family outcomes study
- Longitudinal comparison study
- Services and costs study

¹Descriptions of these study components can be found in appendix C.

In addition to the core components, other studies have been added to the evaluation as additional questions about effectiveness of various program dimensions have emerged. Four special studies are underway that address areas outside the original scope of the national evaluation:

- The family-driven research study is led by families and examines families' engagement in systems of care.
- The evidenced-based treatment effectiveness study is determining the additional effects of evidence-based treatments—Parent Child Interaction Therapy and Common Sense Parenting—on child and family outcomes within systems of care.
- An evaluation of wraparound services is examining the service delivery practices and outcomes associated with wraparound.
- The sustainability study is gathering information from earlier grantees regarding their success at sustaining their systems of care beyond the Federal funding period, in order to inform newer grantees as they consider how best to approach the issue of sustainability.

Report Overview and Major Sections

This report describes the development of systems of care, characteristics and service needs of children and families served by systems of care, service experience, service use and outcomes of children and families who have received system of care services, and service costs. The report presents FY 2002 and FY 2003 evaluation findings from the cohorts of communities funded in 1997, 1998, 1999, and 2000. The findings are based on the data collected through April 2003.² The number of individuals represented in the results included in the report vary based on the study component in which the data were collected, the amount of attrition or loss to follow-up (for longitudinal results), and because some analyses were conducted using subsets of the original sample.

Analyses examining the characteristics of children who remain in the evaluation versus those who do not remain indicate several statistically significant differences. Those who remain in the evaluation at 18 months are younger, more likely to be male, more likely to be White, have a greater number of family risk factors, and have more behavioral and emotional problems. Therefore, results found for long-term outcomes are more able to be generalized to children who have these characteristics. Children with more risk factors and greater behavioral and emotional problems are the children targeted by the program.

Program evaluation data sources include:

- Descriptive data (e.g., demographic information, diagnostic status, functional characteristics, and referral sources) obtained at the time children entered system of care services.
- Outcomes data based on project site evaluations of a selected group of children assessed at intake, 6 months, 12 months, and 18 months, who will continue to be

²Findings from the evaluation of the cohorts of grant communities funded in 1993 and 1994 have been presented in previous Annual Reports to Congress (CMHS, 1996, 1997, 1998, 1999, 2000, 2001).

evaluated for up to 36 months. Outcomes measures applied in the evaluation included—but were not limited to—an assessment of the child’s clinical and social functioning, strengths, educational performance, stability of living arrangements, delinquent activities and engagement with law enforcement, and substance use, as well as assessment of family functioning, family resources, and strains experienced by caregivers of children with serious emotional disturbance.

- Service experience data of services received and child and family ratings of satisfaction with services provided assessed at 6 months following entry into services and then every 6 months up to 36 months, and cost data from agency electronic records.
- Service system assessment data collected every 12–18 months during multiple years through system-wide and family assessments of service delivery in system of care communities.
- Child and family outcomes data as well as service system assessment and service experience data obtained in communities with system of care grants and communities without these grants. Comparison communities were carefully selected for similar community characteristics and service system differences. Children selected for the study in comparison communities were matched according to demographic and clinical characteristics to enrollees in systems of care.

Instruments typically used in the field of children’s mental health, including the Child Behavior Checklist (CBCL; Achenbach, 1991), the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1990), and the Behavioral and Emotional Rating Scale (BERS; Epstein & Sharma, 1998), were used to collect data on children’s clinical and functional characteristics (see appendix D for more information).

This Report includes the following sections:

- **Characteristics of Children in the Program**
 - Child and Family Demographics
 - Referral Sources
 - Child and Family Risk Factors
 - Diagnostic Characteristics
 - Educational Status
 - Juvenile Justice Status
 - Substance Use Status
- **Clinical and Program Outcomes**
 - Child Clinical Outcomes
 - Child Functional Outcomes
 - Family Outcomes
 - System-Level Outcomes
 - Services and Costs Outcomes
 - Program Effectiveness
 - Satisfaction with Services
 - Program Government Performance and Results Act (GPRA) Indicators

CHARACTERISTICS OF CHILDREN IN THE PROGRAM

- Characteristics of children and families served in grant communities funded in 1997, 1998, 1999, and 2000
- Referral sources
- Child and family risk factors
- Diagnostic characteristics
- Education status
- Juvenile justice status
- Substance use status

CHARACTERISTICS OF CHILDREN AND FAMILIES SERVED IN GRANT COMMUNITIES FUNDED IN 1997, 1998, 1999, AND 2000

System of Care Programs Serve Children in the Public Sector and in Ethnically and Geographically Diverse Communities

The system of care program targets children served in the public sector and provides grants and cooperative agreements to ethnically and geographically diverse communities.

- **More than two-thirds of children with serious emotional disturbance served were boys.**
 - About 67–68 percent of the children were boys and 32–33 percent were girls ($n = 11, 814$).³
- **Nearly half of the children were in early adolescence.**
 - The children's average age was 12.3 years ($n = 11, 746$).
- **A diverse racial–ethnic population was served.**
 - Nearly half of children served were non-White. Over 26 percent were African-Americans, over 11 percent were of Hispanic ethnicity, nearly 10 percent were American Indian or Alaska Native, and about 20 percent were identified as other race or biracial ($n = 11, 445$).
- **The majority of families were poor.**
 - About 65 percent of children came from families living at or below poverty ($n = 8,952$), taking into account family income and household size based on the 2002 U.S. Department of Health and Human Services (HHS) poverty guidelines (HHS, 2002).

These demographic characteristics of children served in systems of care provide a brief profile of the children reached by programs supported by the CMHI. Boys are more often identified for services for a serious emotional disturbance, although there are indications that girls may be under-referred to treatment because their symptoms may be more likely to go unnoticed (Walrath et al., 2004). The percentages of ethnic minority children and of poor families served by systems of care are disproportionately higher than population estimates. This reflects program goals to reach under-served populations and the delivery of services through public-sector mental health agencies.

³For information on variation in sample sizes, see appendix C.

Children Were Mostly Poor, Male, and Frequently Cared for by Single Parents

Table 1
Child and Family Demographic Characteristics: Overall Sample

Gender	(N 11,814)
Male	67.5%
Female	32.5%
Age	(N 11,746)
Mean	12.3 years
0–5 years	5.2%
6–11 years	29.9%
12–15 years	44.8%
16 years or older	20.0%
Race and Ethnicity^a	(N 11,445)
African-American	26.4%
American Indian	9.8%
Asian	0.9%
Hispanic Ethnicity	11.3%
Native Hawaiian or Pacific Islander	0.6%
White	57.0%
Other	11.3%
Biracial	7.5%
Custody	(N 11,057)
Two parents	24.6%
Mother only	44.2%
Father only	4.4%
Adoptive parent(s)	4.3%
Foster parent(s) OR Ward of State	9.8%
Grandparents	6.5%
Other	6.2%
Poverty Level^b	(N 8,952)
Below Poverty	55.7%
At Poverty	9.5%
Above Poverty	34.8%
^a Because individuals may claim more than one ethnic background, the race and ethnicity variable may add to more than 100%.	
^b Poverty categories take into account both family income and household size and are based on the 2002 U.S. Department of Health and Human Services poverty guidelines. According to these guidelines, a family of four is living in poverty if their income is below \$18,100.	

Referral Sources

Multiple Referral Sources Indicate Cross-Agency Partnership

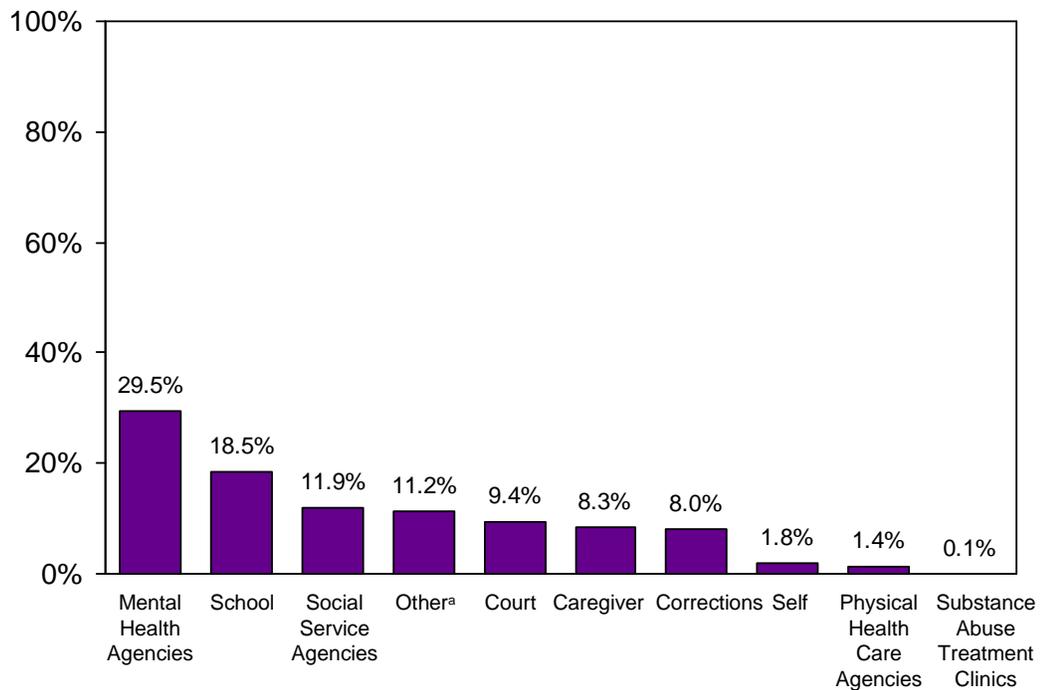
Children with serious emotional disturbance and their families have multiple needs that should be addressed by multiple service sectors in an organized and efficient manner.

The system of care program encourages communities to collaborate among major child-serving agencies in order to improve system and functional outcomes for children with serious emotional disturbance.

Referrals to program services from multiple child serving agencies is one indicator of interagency collaboration in communities. Referrals to system of care services came from mental health, schools, courts and corrections, and social service agencies.

Figure 2 indicates that, indeed, referral to the system of care program came through multiple child-serving agencies.

Figure 2
Percentage of Children by Type of Referral Source



Number of children = 10,639

^a Other includes friends, residential programs, and other site-specific programs.

Child and Family Risk Factors

A child's social environment has a major impact on both emotional and behavioral development. Child risk factors (e.g., physical abuse, sexual abuse, history of suicide attempts) and family risk factors (e.g., family violence, family history of mental illness, violence, or drug–alcohol abuse) can increase the likelihood that children will have emotional and behavioral problems.

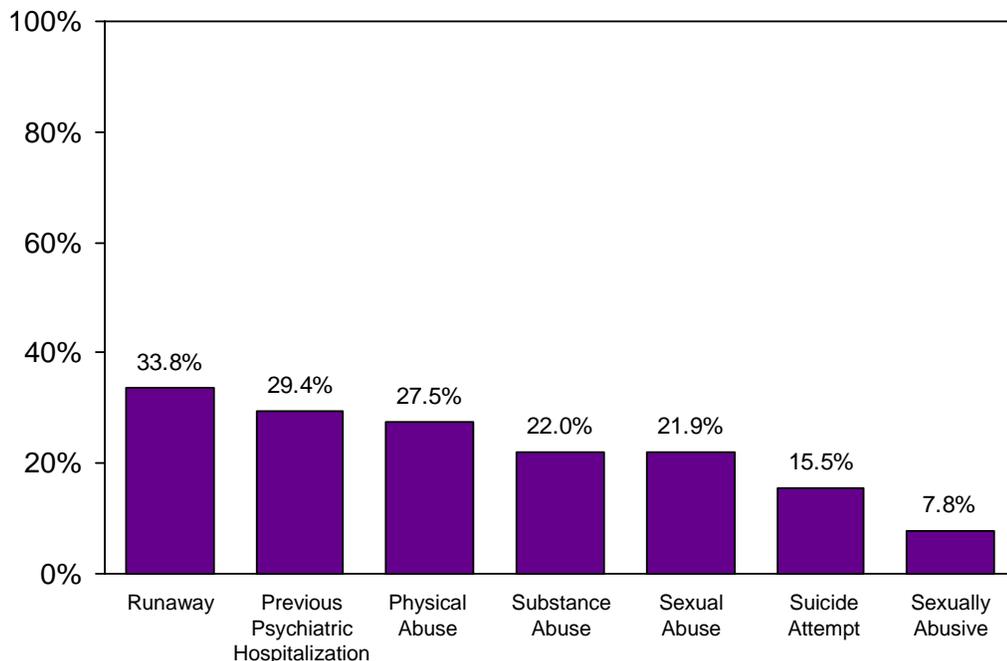
Figures 3 and 4 provide insight into the factors associated with children participating in the program. Caregiver reports indicate that family risk factors were more common than child risk factors.

Child Risk Factors

Seven in Ten Children Entered Services With at Least One Child Risk Factor

- Over 70 percent ($n = 11,513$) of families reported their child had one or more child risk factors for serious emotional disturbance.
- The most frequently reported type of child risk factors included *history of running away* (33.8 percent), *previous psychiatric hospitalization* (29.4 percent), *physical abuse* (27.5 percent), *substance abuse* (22 percent), and *sexual abuse* (21.9 percent).

Figure 3
Percentage of Children by Type of Child Risk Factor



Number of children varied from 10,429 to 10,941.

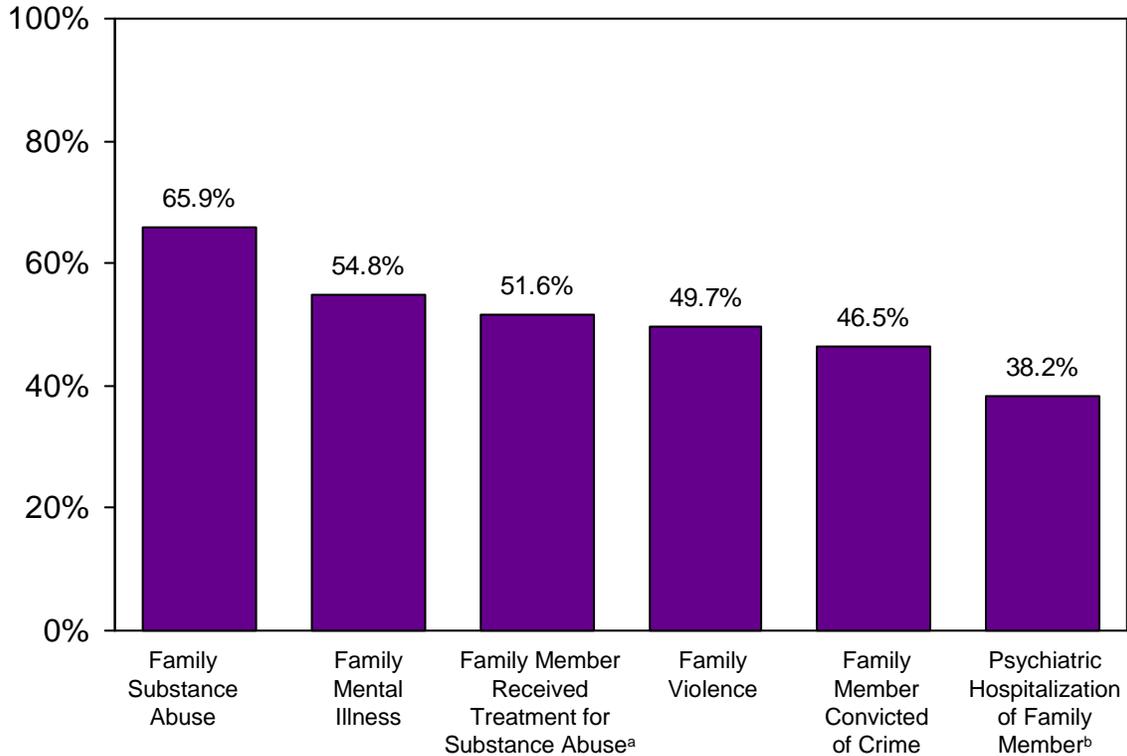
Risk factors in this evaluation were determined as lifetime risk and were assessed independent of each other, so percentages do not total to 100%.

Family Risk Factors

Nine in Ten Families Experienced at Least One Family Risk Factor

Over 90 percent ($n = 10,645$) of caregivers reported one or more family risk factors. The highest reported risk factors were *history of substance abuse* (65.9 percent), *history of mental illness* (54.8 percent), and *history of family members receiving treatment for substance abuse* (51.6 percent).

Figure 4
Percentage of Children by Type of Family Risk Factor



Number of children varied from 5,351 to 10,645.

Risk factors in this evaluation were determined as lifetime risk and were assessed independent of each other, so percentages do not total to 100%.

^a Caregivers were only asked about receiving treatment for substance abuse if they reported a history of substance abuse.

^b Caregivers were only asked about psychiatric hospitalization if they reported a history of mental illness in the biological family.

Diagnostic Characteristics

Children Entered Services With a Range of Behavioral and Emotional Problems

The *Diagnostic and Statistical Manual for Mental Disorders, Fourth Edition (DSM–IV)* is used to determine the diagnosis at entry into services.

Children participating in the program were diagnosed with a wide range of major primary DSM diagnoses, including

- disruptive behavior disorders (including conduct disorder, oppositional defiant disorder, and attention-deficit/hyperactivity disorder), and
- depressive and adjustment disorders.

Primary diagnoses such as anxiety and psychosis were less common.

Table 2
Percentage of Children by Primary DSM–IV Diagnosis

DSM IV Diagnosis	Percentage (%) of Total (N 8,809)
Attention-Deficit/Hyperactivity Disorder (ADHD)	36.5
Mood Disorder	31.8
Oppositional Defiant Disorder	26.6
Adjustment Disorder	12.9
Conduct Disorder	11.7
Post-Traumatic Stress Disorder	8.6
Substance Use	7.6
V-Code ^a	5.7
Disruptive Behavior Disorder	5.3
Learning and Related Disorder	5.2
Impulse Control Disorder	5.0
Anxiety Disorder	4.2
Mental Retardation	3.7
Psychosis	2.2
Autism and Related Disorder	1.9
Other	8.8

^a V-Codes are codes assigned when there is “insufficient information [at the time of diagnosis] to know whether or not a presenting problem is attributable to a mental disorder, e.g., academic problems, adult antisocial behavior” (APA, 1994).

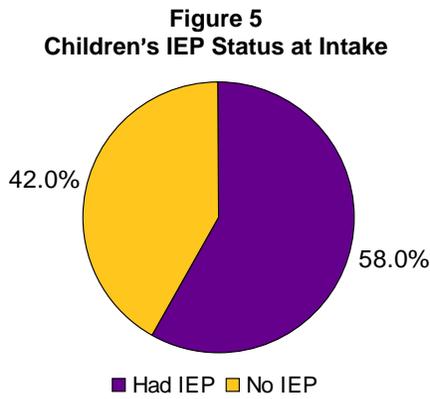
Education Status

More Than Half of Children in School Had an Individualized Education Plan

Caregiver reports on their children's individualized education plan and educational placement when they enter system of care services indicate that:

- the majority of children (77.5 percent of 4,618 children) were placed in regular classrooms
- 17.4 percent of children were placed in an alternative/special day school; almost 9 percent were in school in a restrictive setting

Over half of the school-aged children (58 percent) had an Individualized Education Plan (IEP) at entry into system of care services (see Figure 5). An IEP is a written plan developed by the student's parents and the school's special education team that specifies the student's academic goals and the method to obtain these goals. IEPs for students served in systems of care indicate coordination across the education and mental health service sectors. The majority of children had IEPs related to *behavioral and emotional disturbance problems* (78.9 percent), *learning disabilities* (51.6 percent), and *developmental disabilities* (10.1 percent) (see Table 3).



Number of children = 5,112.

Table 3
Reasons for IEP Status at Intake

Reasons for IEP	Percentage (%) of Total for Phase II (N = 2,855)
Behavioral/Emotional Problems	78.9
Learning Disability	51.6
Developmental Disability/Mental Retardation	10.1
Speech Impairment	9.4
Vision or Hearing Impairment	3.4
Physical Disability	2.9
Other Reason	4.7

Juvenile Justice Status

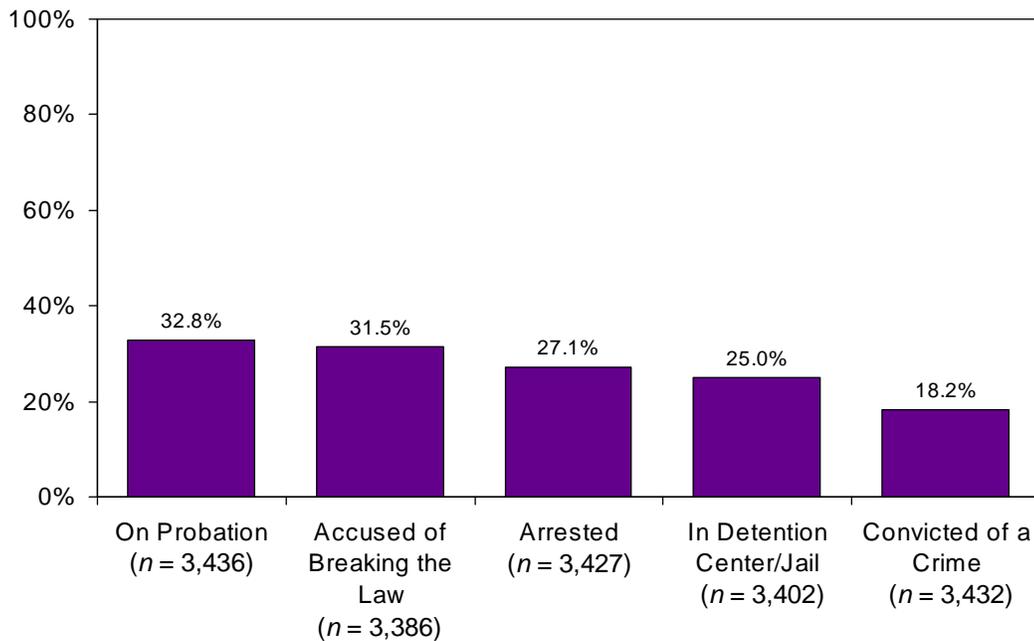
Most Children Entered Services With at Least One Risk Factor

At entry into system of care services, youth aged 11 and older were asked about their contact with the law during the past 6 months.

Among all youth entering systems of care, youth most frequently reported that during the past 6 months they had been:

- on probation (32.8 percent)
- accused by a legal authority of breaking the law (31.5 percent)
- arrested (27.1 percent)

Figure 6
Percentage of Youth Reporting That They Were on Probation, Accused of Breaking the Law, Arrested, In a Detention Center or Jail, or Convicted of a Crime in the 6 Months Before Entering Systems of Care



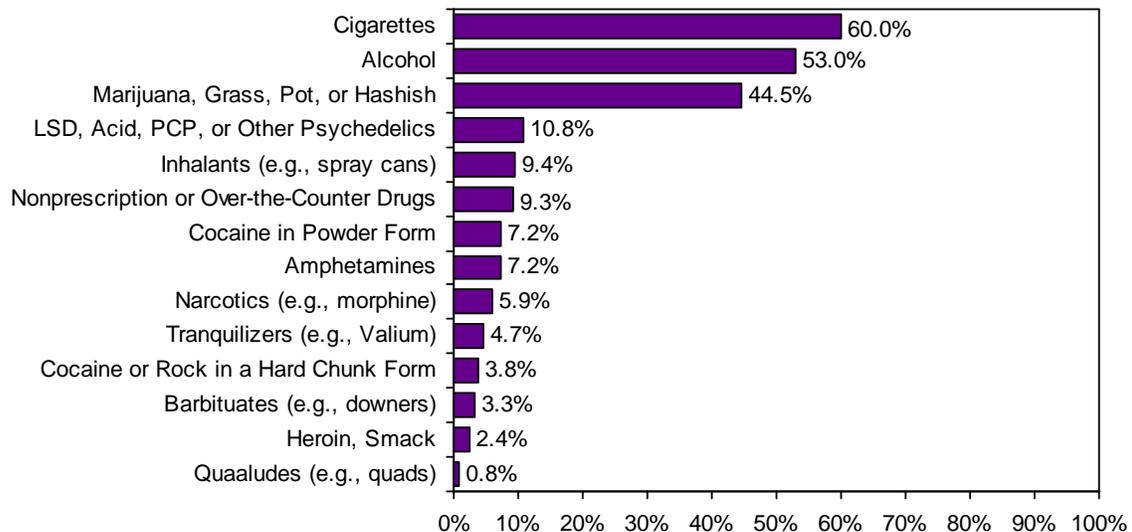
All youth entering systems of care reported independently on each type of law enforcement contact. Therefore, each bar in Figure 6 represents the percentage of the total number of youth in systems of care who participated in the national evaluation who responded to specific questions about their history of probation, accusal, arrest, detention/jail, or conviction of a crime.

Substance Use Status

At entry into services, youth 11 years of age or older were asked about *lifetime* and *recent* substance use.

Among all youth entering systems of care, youth reports on *lifetime* substance use indicate that the most frequently used substances were cigarettes, alcohol, and marijuana.

Figure 7
Percentage of Youth Reporting That They Had Ever Used Cigarettes, Alcohol, Marijuana, or Other Substances



Number of children varied from 3,379 to 3,406.

Substance Use information was based on self-reports from youth aged 11 years or older.

All youth entering systems of care who participated in the national evaluation reported independently on their use of specific substances at any time in their lives and during the past 6 months.

Self-reported *recent* use of substances at entry into system of care services revealed that 40.4 percent of all youth entering services had used cigarettes, 30.4 percent had used alcohol, and 24.5 percent had used marijuana in the 6 months prior to entry into services.

CLINICAL AND PROGRAM OUTCOMES

- › Child Clinical Outcomes
- › Child Functional Outcomes
- › Family Outcomes
- › System-Level Outcomes
- › Services and Costs Outcomes
- › Program Effectiveness
- › Satisfaction with Services
- › Program Government Performance and Results Act (GPRA) Indicators

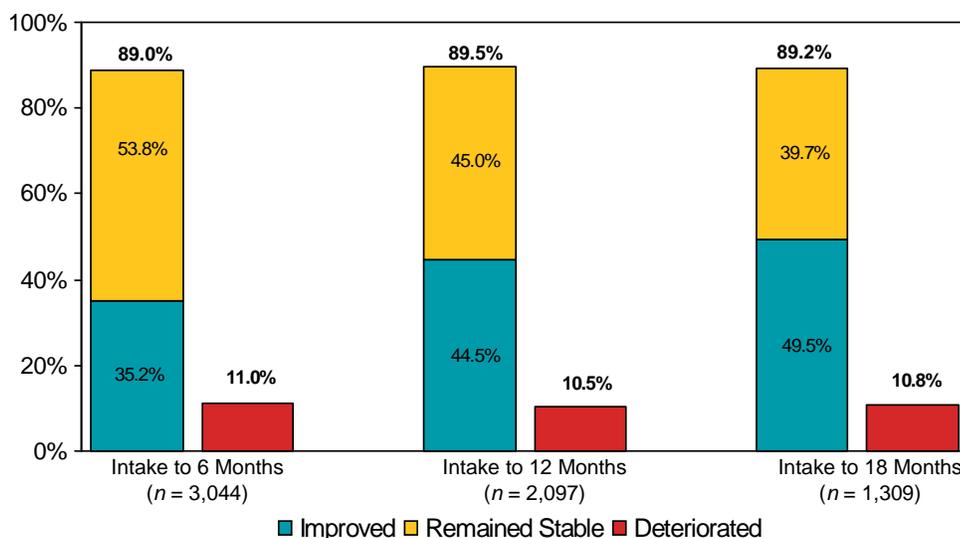
CHILD CLINICAL OUTCOMES

Children's Behavioral and Emotional Problems Decreased

Almost 90 percent of children in systems of care showed improvement or maintained stability in their symptomatology. The percentage of children whose behavioral and emotional problems improved at levels recognized as clinically significant increased from intake to 6 months, intake to 12 months, and intake to 18 months.⁴

An important finding is that about 35 percent of children improved from intake into system of care services to 6 months, 44.5 percent improved from intake to 12 months, and 49.5 percent improved from intake to 18 months.

Figure 8
Change in Children's Overall Behavioral and Emotional Problems From Intake to 6 Months, Intake to 12 Months, and Intake to 18 Months



Behavioral and emotional problems were measured using the total problems score on the Child Behavior Checklist (CBCL). The CBCL (Achenbach, 1991) is designed to provide a standardized measure of symptoms and behavioral and emotional problems among children aged 4 through 18 years. The CBCL has been widely used in children's mental health services research and for clinical purposes to assess social competence, behaviors, and feelings.

⁴Because numeric change may vary in magnitude and implications for actual behavioral change are often difficult to interpret, we provide a quantitative indicator of clinical change for clinical outcome measures. The reliable change index (RCI; Jacobson, Roberts, Berns, & McGlinchey, 1999; Jacobson & Truax, 1991; Speer & Greenbaum, 1995) is used to assess whether individual behavioral and emotional change over time was clinically significant. This statistic compares a child's scores at two different points in time adjusting for the reliability of the measure and indicates whether a change in scores shows clinically significant improvement, stability, or deterioration. Improvement and deterioration are defined as a difference in outcome scores, adjusted for measurement error of the outcome, which exceeds the 95 percent confidence bounds around a change score of zero. In other words, a difference of that magnitude would not be expected simply due to the unreliability of the measure.

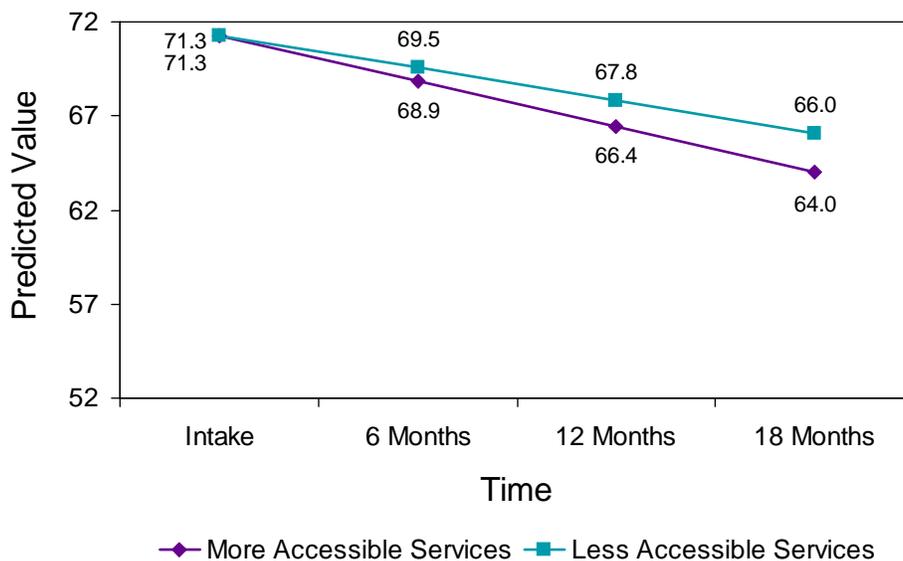
***Children’s Behavioral and Emotional Problems Improved Faster
in Communities With Highly Accessible Services***

Accessible services minimize barriers to services in terms of physical location, convenience of scheduling, and financial constraints.

The accessibility of services for children with serious emotional disturbance and their families within the community contributed significantly to improvements in children’s behavioral and emotional problems. Children receiving services in communities where services were rated “*highly accessible*” improved at a faster rate than children in communities where services were “*less accessible*” (the difference in change rates was statistically significant).

Children’s behavioral and emotional problems were measured using the CBCL.⁵ High CBCL scores mean more problems and lower scores mean fewer problems. A decrease in CBCL scores indicates a reduction in children’s behavioral and emotional problems. Downward sloping lines in Figure 9 indicate that children decreased their behavioral and emotional problems and showed improvement in their clinical conditions.

Figure 9
Reduction in Total Behavioral and Emotional Problems by Degree of Accessibility of Services



Note: CBCL = Child Behavior Checklist.

Data points presented are predicted values based on service use information for 1,962 children and system of care assessment scores across 39 grant communities.

To represent the influence of the continuous variable of accessibility, values at the 25th and 75th percentiles of the distribution of ratings were selected for calculating predicted values for the graph. High Accessibility = High accessibility scores (i.e., predicted values using accessibility scores at the 75th percentile). Low Accessibility = Low accessibility scores (i.e., predicted values using accessibility scores at the 25th percentile).

Coefficient = -2.28, standard error = 1.06, $t(39) = -2.15$, $p < 0.05$.

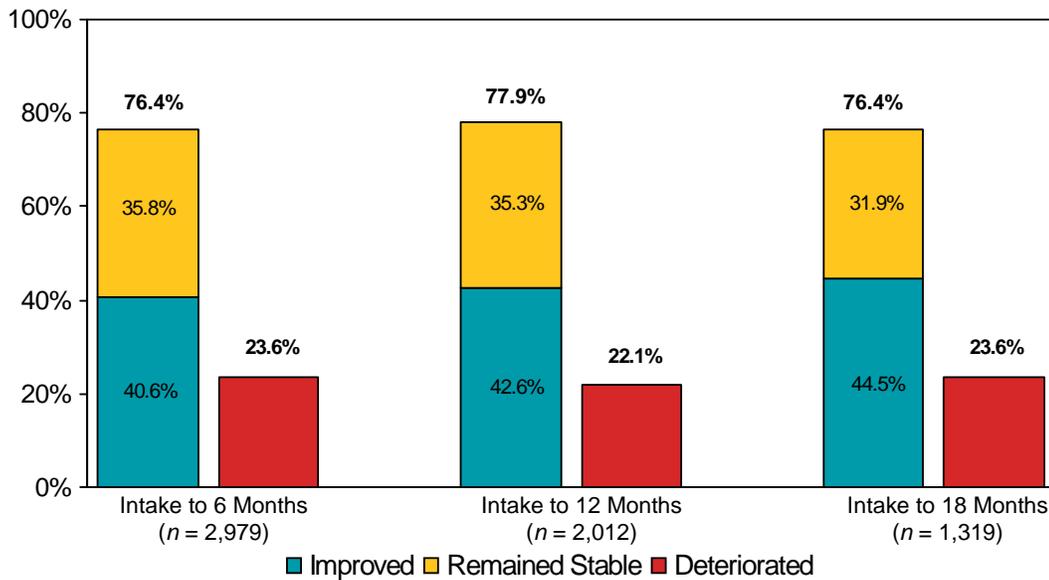
⁵Child Behavior Checklist. For a description of this measure, see previous page.

Children’s Behavioral and Emotional Strengths Increased

A focus on child strengths is an important tenet of systems of care. Most children in systems of care improved or maintained their strengths from intake to 6 months, intake to 12 months and intake to 18 months.⁶

- Almost 41 percent improved their overall behavioral and emotional strengths at levels considered to indicate clinically significant progress from intake into system of care services to 6 months.
- At 12 months after service intake, 42.6 percent of children improved in their behavioral and emotional strengths; at 18 months, nearly 45 percent had improved their strengths.

Figure 10
Change in Child Strengths From Intake to 6 Months, Intake to 12 Months, and Intake to 18 Months



Child strengths were measured with the Behavioral and Emotional Rating Scale (BERS; Epstein & Sharma, 1998). The BERS focuses on strengths and resiliency, identifying emotional and behavioral strengths of children and adolescents ages 5 to 18 in key areas related to school, family, relationships, and personal competence.

⁶Figure 10 presents RCI results for change in child strengths. As noted in the footnote on page 21, improvement and deterioration are defined as a difference in outcome scores, adjusted for measurement error of the outcome, which exceeds the 95 percent confidence bounds around a change score of 0. In other words, a difference of that magnitude would not be expected simply due to the unreliability of the measure.

CHILD FUNCTIONAL OUTCOMES

Academic performance and attendance are important indicators of children’s abilities to function well in environments critical to their well-being. In systems of care, children improved their school performance and attendance.

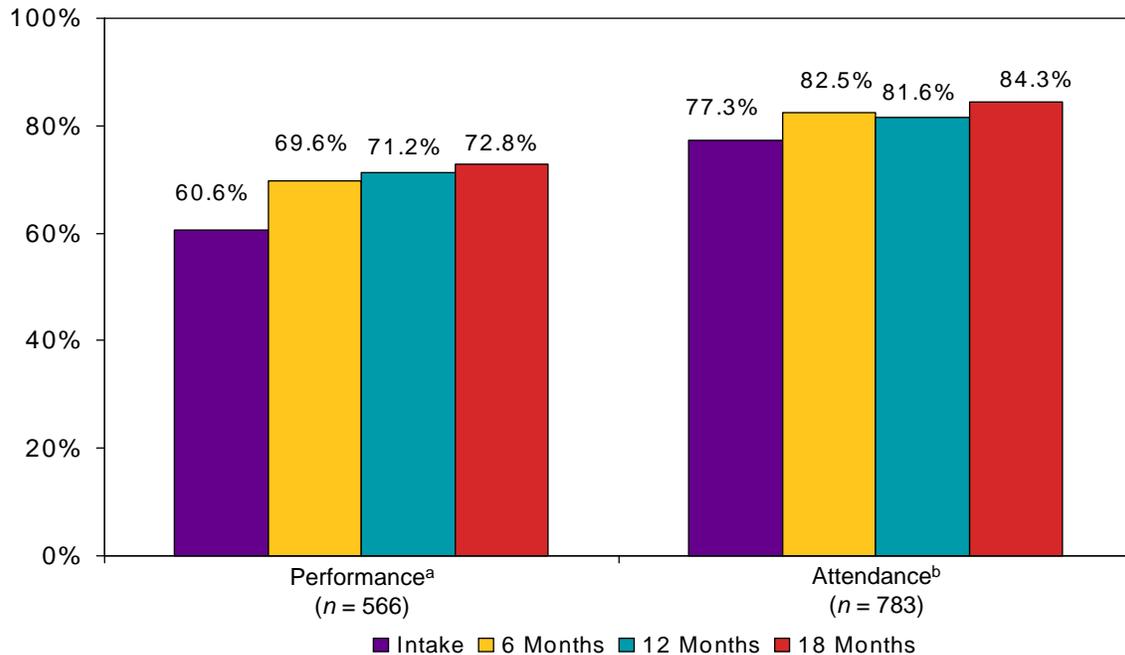
School Performance Improved

School performance here is defined as passing grades. Only about 60 percent of children received passing grades (a grade average of C or better) during the 6 months before they entered system of care services. After 6 months, the percentage of children with passing grades increased to 69.6 percent. The proportion of children with passing grades continued to increase to 72.8 percent after 18 months. The change from entry to 18 months was statistically significant.

School Attendance Improved

As they entered system of care services, about 77 percent of children attended school regularly (75 percent of the time or more). *School attendance* increased to over 82 percent at 6 months and to over 84 percent 18 months after service intake; the change from entry to 18 months was statistically significant.

Figure 11
School Performance and Attendance at Intake, 6 Months, 12 Months, and 18 Months



^a $z = 4.36, p < 0.001$.

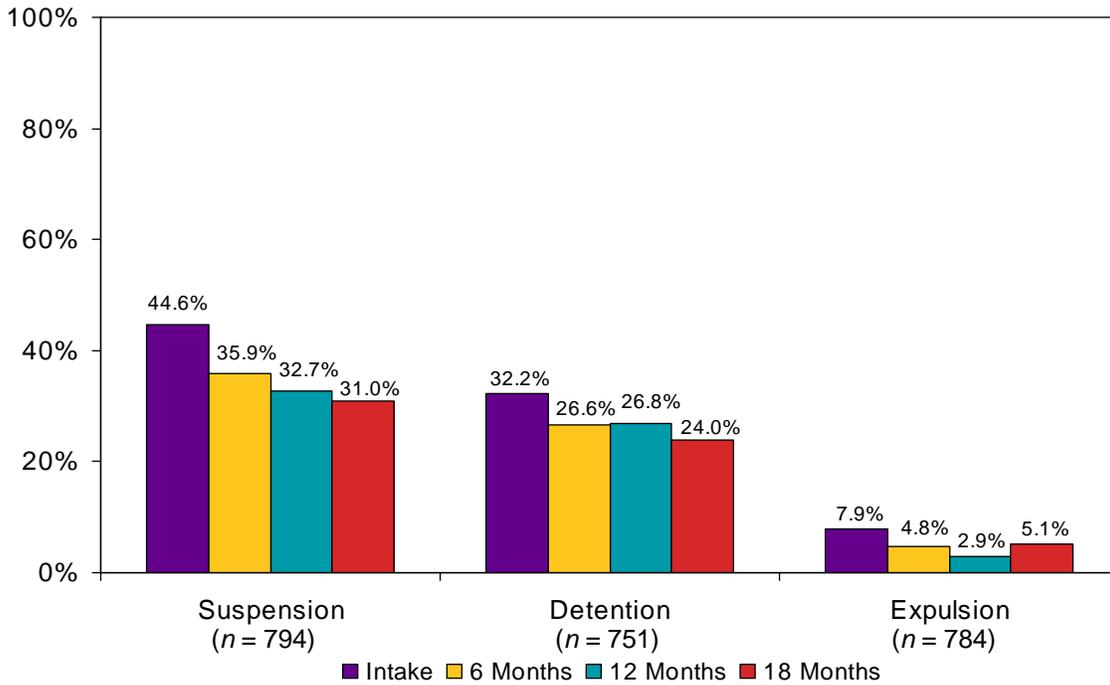
^b $z = 3.24, p < 0.01$.

Fewer Children and Youth Missed School Due to Disciplinary Actions

Fewer children were suspended, sent to detention, or expelled 6, 12, and 18 months after entering systems of care than during the 6 months before service intake. Proportionally, the greatest decrease occurred among the percentage of children expelled.

From service intake to 18 months, *expulsions* fell by 35 percent. Similarly, *suspensions* decreased by 30 percent and *detentions* decreased by 25 percent from intake to 18 months. These changes were not statistically significant.

Figure 12
Percentage of Children Suspended, Detained, or Expelled at Intake, 6 Months, 12 Months, and 18 Months

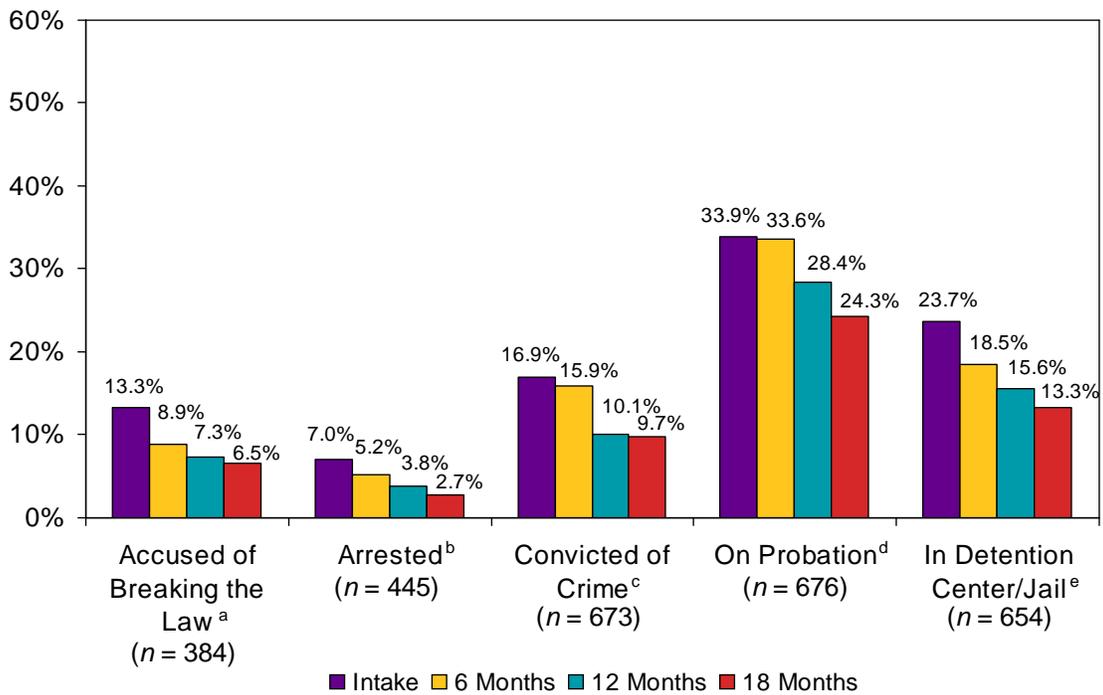


Law Enforcement Contacts Decreased Across Five Indicators

The percentages of youth *accused of breaking the law, arrested, convicted of a crime, on probation, or in a detention center or jail* decreased steadily from entry into systems of care to 6, 12 and 18 months after intake.

Arrests fell at the greatest rate, with a 61 percent reduction in youth arrests from intake to 18 months. The number of youth *accused of breaking the law (by a legal authority), convicted of a crime, or in a detention center or jail* at any time between 6 and 18 months after service intake fell between 51 and 43 percent compared to youth law enforcement contacts reported for the 6 months before service intake.

Figure 13
Law Enforcement Contacts at Intake, 6 Months, 12 Months, and 18 Months



^az = -3.32, p < .01.

^bz = -3.12, p < .01.

^cz = -4.71, p < .001.

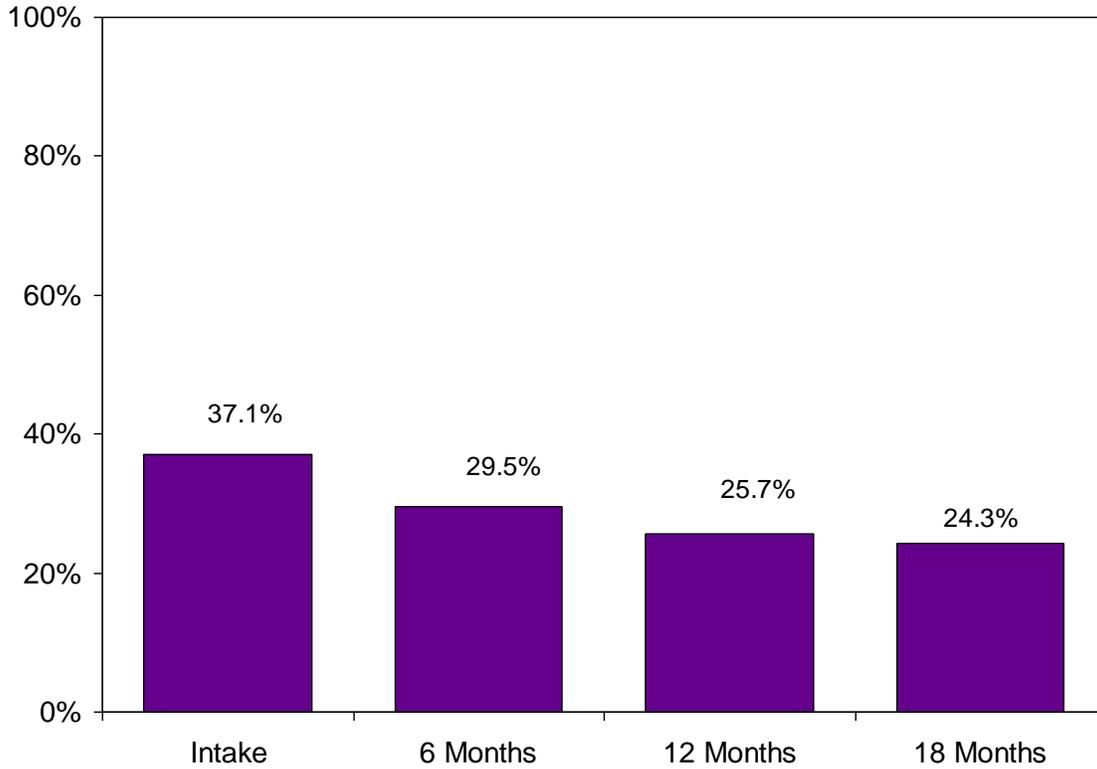
^dz = -4.30, p < .001.

^ez = -5.07, p < .001.

Children Living In Multiple Settings Decreased

Most children (63%) lived in only one setting during the 6 months before entering system of care services. However, the percentage of children who lived in multiple settings decreased at 6, 12, and 18 months after entering services. Eighteen months after entering system of care services, the number of children living in multiple settings showed a 35 percent decrease from the percentage reported at service intake. These changes were not statistically significant.

Figure 14
Percentage of Children Living in Multiple Settings at Intake, 6 Months, 12 Months, and 18 Months



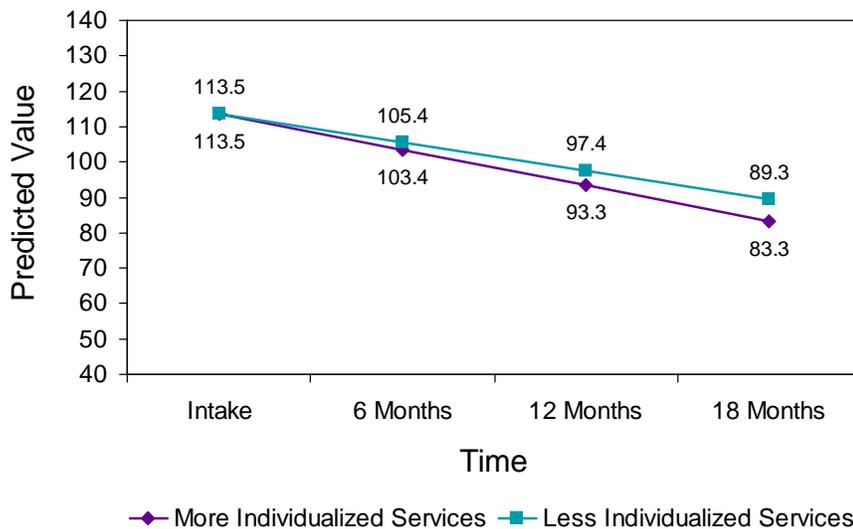
Number of children = 1,140.

Individualized Service Delivery Significantly Contributes to Improved Child Functioning

Children served in communities rated as providing services in a highly individualized manner benefited in their rate of improvement. For children assessed from service entry to 18 months after intake, those receiving services in communities providing highly individualized care improved in their social functioning at a faster rate than children in communities rated less successful at providing individualized care (the difference in change rates was statistically significant).

The Child and Adolescent Functional Assessment Scale (CAFAS)⁷ was used to assess child functioning. Higher CAFAS scores indicate more impaired functioning, whereas lower scores indicate less impaired functioning. Decreases in CAFAS scores, as seen in the downward sloping lines in Figure 15 show the improvement of children in their functioning in school, home, and community.

**Figure 15
Reduction of Impaired Functioning by Degree of Individualized Service Delivery**



Note: CAFAS = Child and Adolescent Functional Assessment Scale.

Data points presented are predicted values based on CAFAS outcome data available for 1,912 children and system of care assessment scores across 38 grant communities.

To represent the influence of the continuous variable Individualized care, values at the 25th and 75th percentiles of the distribution of ratings were selected for calculating predicted values for the graph. High Individualized = High individualized care scores (i.e., predicted values using individualized scores at the 75th percentile). Low Individualized = Low individualized care scores (i.e., predicted values using individualized scores at the 25th percentile).

Coefficient = -12.56, standard error = 4.68, $t(36) = -2.67$, $p < 0.05$.

⁷The CAFAS (Hodges, 1990) is a widely used measure of child functioning. It assesses the degree to which a youth's mental health or substance abuse disorder is disruptive to his or her functioning in everyday life in each of eight psychosocial domains: the community, the school, the home, substance use, moods and emotions, self-harming behavior, behavior towards others, and thinking. The CAFAS is designed to assess the effects of the child's challenges and behaviors on his or her ability to function successfully in various life domains.

FAMILY OUTCOMES

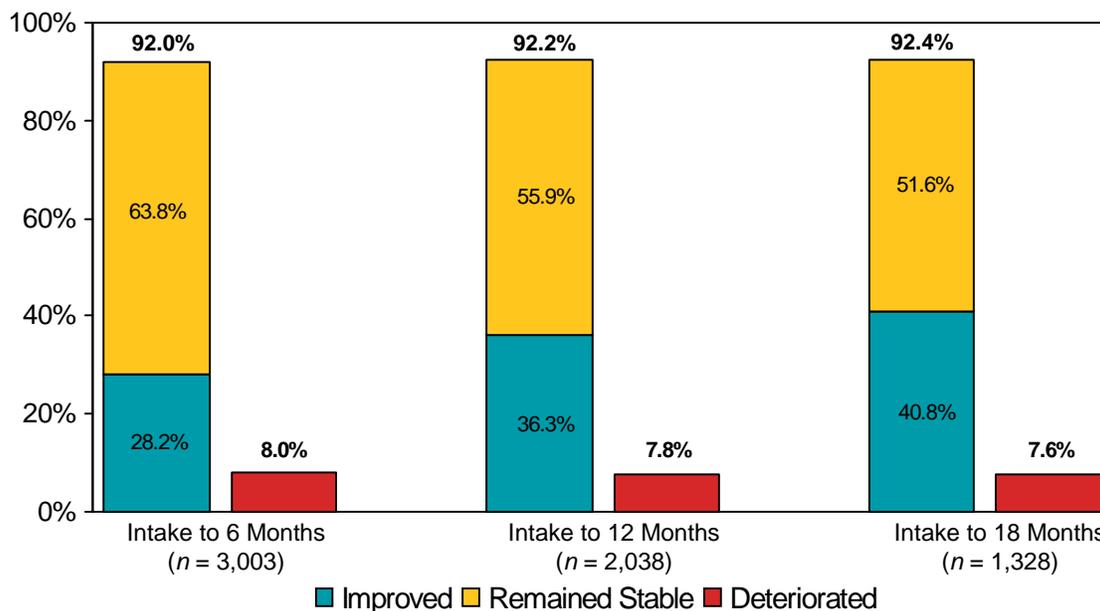
Caregiver Strain Decreased

Over 92 percent of families in systems of care reported either decreased or stabilized strain associated with caring for a child with a serious emotional disturbance when assessed after entering services.

Reductions in caregiver strain that reached levels considered to be clinically significant were reported by 28.2 percent of caregivers from intake to 6 months.

After 12 months, 36.4 percent of caregivers reported decreased strain, and at 18 months after service intake, this percentage increased to 40.8 percent.

Figure 16
Change in Caregiver Strain from Intake to 6 Months, Intake to 12 Months, and Intake to 18 Months



Caregiver strain was measured with the Caregiver Strain Questionnaire (CGSQ; Brannan, Heflinger, & Bickman, 1998), which assesses the extent to which caregivers are affected by the special demands associated with caring for a child with emotional and behavioral problems. The CGSQ provides a way to assess the impact that participating in system of care services has on the strain caregivers and families may experience. For example, the CGSQ can be used to determine whether strain lessens over time as better services and supports are provided by the system of care.

Individualized Care Promotes Reduced Caregiver Strain

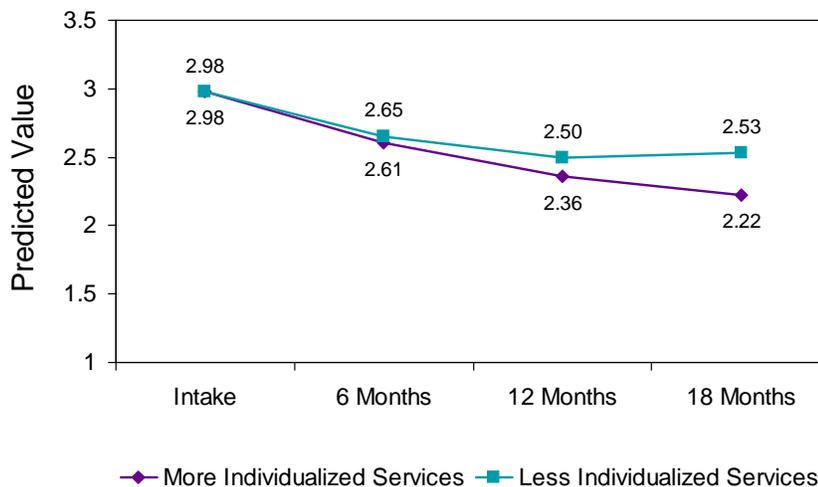
The individualization of services for children with serious emotional disturbance and their families positively impacted reductions in strain. In particular, caregiver strain⁸ was reduced at a higher rate when the source of the strain was “objective,” or due to observable negative events or consequences related to a child’s disorder. Examples of events that could be sources of this type of strain include trouble with neighbors; disrupted family relationships, routines, and social activities; and loss of personal time.

When services are individualized to the strengths and needs of a specific child, there are fewer events of this type in the child’s life, and their caregiver experiences less strain related to these types of events.

Over an 18-month period, caregivers reported greater decreases in their objective strain when services were received in communities rated as highly successful at providing individualized care than caregivers in communities rated as less successful at individualizing service delivery (the difference in change rates was statistically significant).

[Note that a decrease in scores indicates a reduction in caregiver strain. Therefore, decreases in the slope of the lines in Figure 17 indicate that caregiver strain was reduced.]

Figure 17
Reduction in Objective Caregiver Strain by Degree of Individualized Service Delivery



Data points presented are predicted values based on service use information available for 2,088 children and system of care assessment scores across 41 grant communities.

To represent the influence of the continuous variable Individualized care, values at the 25th and 75th percentiles of the distribution of ratings were selected for calculating predicted values for the graph. High Individualized = High individualized care scores (i.e., predicted values using individualized scores at the 75th percentile). Low Individualized = Low individualized care scores (i.e., predicted values using individualized scores at the 25th percentile).

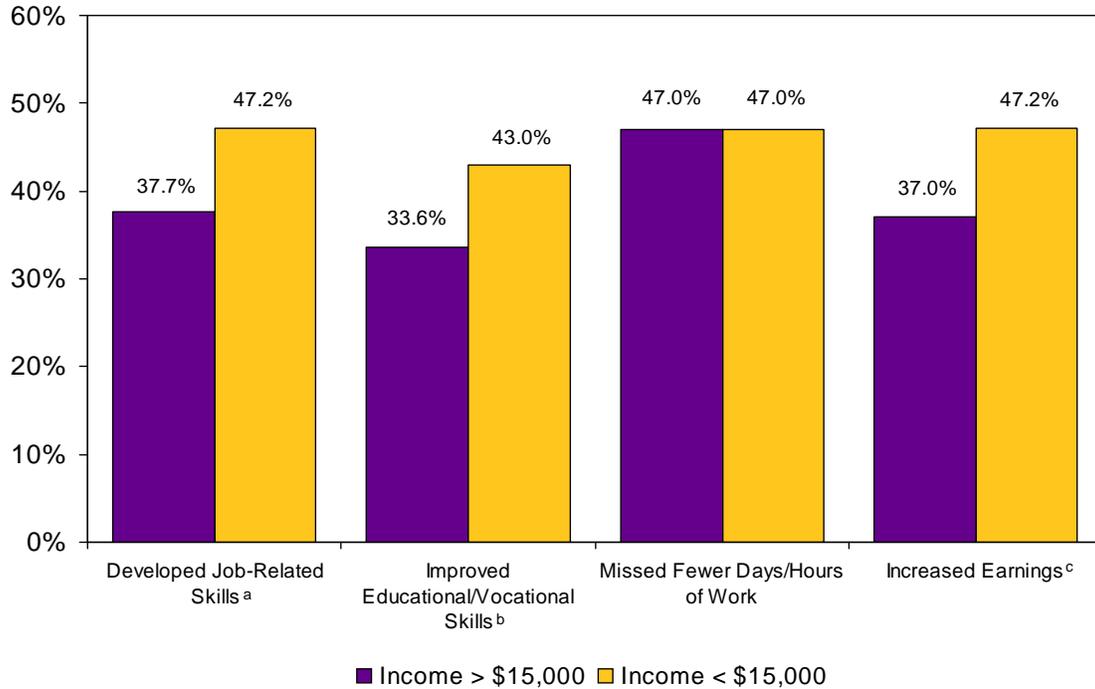
Coefficient = -0.43, standard error = 0.09, $t(2,086) = -4.78$, $p < 0.001$.

⁸Caregiver strain was measured using the CGSQ. For a description of this measure, see previous page.

Economic Outcomes of Caregivers Improved

Between 33.6 percent and 47.2 percent of employed caregivers ($n = 1,469$) reported that services that their families received in systems of care helped them improve a variety of economic and job-related outcomes. Caregivers with an annual income of less than \$15,000 were more likely to report statistically significant improvements in *job-related skills, vocational and educational skills, and increased earnings*.

Figure 18
Percent of Improvement in Economic Outcomes of Caregivers From Intake to 18 Months After Entering Systems of Care for Caregivers With Incomes Above and Below \$15,000 per Year



Number of caregivers = 1,469.

^a $z = 3.38, p < .01.$

^b $z = 3.42, p < .01.$

^c $z = 3.79, p < .01.$

Improvements in economic outcomes can result from caregivers needing to spend less time taking care of children whose behavioral and emotional problems improved. In addition, some programs employ caregivers in support of activities such as service delivery, management, and evaluation. Anecdotal evidence provided by representatives of local family organizations suggests that observed improvements in economic outcomes may be explained by the building of job skills through this type of employment.

SYSTEM-LEVEL OUTCOMES

The CMHI supports system-level change in the manner in which mental health services are provided to children and their families. The system of care approach that underlies the CMHI is guided by a set of principles that specify that services should be provided in a family-focused, individualized, and culturally competent manner, by child-serving agencies and service providers who work together collaboratively, and where services are accessible by time and location, are available in home communities and are provided in the least restrictive environments that are therapeutically appropriate.

The national evaluation assesses the extent to which grant communities successfully apply eight *system of care principles* in the development and implementation of their grant-funded programs:

- Family focused
- Individualized
- Culturally competent
- Interagency
- Collaborative/coordinated
- Accessible
- Community based
- Least restrictive

The national evaluation collects data using the system of care assessment tool to measure the extent of system change. (See appendix C for a detailed description of this tool.) Data are collected during periodic site visits by the national evaluator. Information is collected through a combination of document review, review of randomly selected case records, and semistructured interviews. Respondents from all aspects of the program are interviewed, including project directors, core agency representatives, direct service providers, case managers/service coordinators, representatives from family organizations, and individual family caregivers. Interview information describes approaches used by the grant communities to implement system of care principles, documents the extent to which system of care principles are achieved within each grant community and across grant communities, tracks system development over time, and evaluates these data using quantitative and qualitative methods.

The system of care assessment tool is guided by a conceptual framework that describes generic components of any service delivery system. The framework categorizes these generic components within two domains, infrastructure and service delivery. Each domain contains four service system components defined as follows:

Infrastructure

- **Governance:** The governing structure responsible for explicating the system's goals, vision, and mission, strategic planning and policy development, and establishing formal arrangements among agencies. Governance structures may be

boards of directors, oversight or steering committees, interagency boards, or management teams.

- **Management and operations:** The administrative functions and activities that support direct service delivery. For this study, this component focuses primarily on staff development, funding approaches, and procedural mechanisms related to the implementation of the service system.
- **Service array:** The range of service and support options available to children and their families through the system.
- **Quality monitoring:** Quality management conducted by the system that tracks the integration of process assessment and outcome measurement, and the use of continuous feedback loops to improve service delivery.

Service Delivery

- **Entry into service system:** The processes and activities associated with children and family initial contact with the service system including eligibility determination.
- **Service planning:** The identification of services for children and families through initial development and periodic updating of service plans.
- **Service provision:** The processes and activities related to the on-going receipt of and participation in services.
- **Case review structure:** The process used to review the care of children at risk of out-of-home or out-of-community placement. For those already in such placements, there may be routine monitoring to determine if that setting is still appropriate, or to plan transition to services in the community or back to the home. This process may also include review of challenging cases to resolve difficult problems that could not be resolved by other means. Key to the case review process is that the persons involved have the authority to make service decisions including transitions to and from restrictive or out-of-community placements.

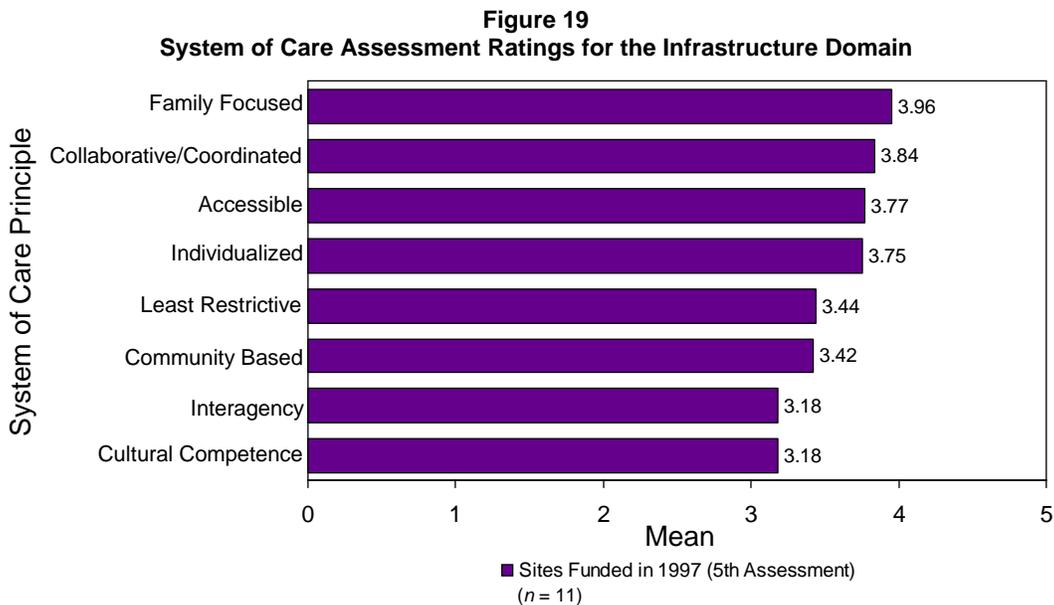
These generic components are rated to determine how well the eight system of care principles are applied to each of them. The findings are then aggregated to show the overall achievement in both domains for all grant communities included in a particular grant funding cohort.

The following bar graphs illustrate the final level of achievement of a group of grant communities according to data collected in the final year of grant funding. This group of communities received initial grant funds in FY 1997 and the data were collected in FY 2003.

Infrastructure Domain: Grant Communities Rated Highest in Family Focus

The values in the bar graphs represent an average of the scores (1 = lowest, 5 = highest) grant communities received in their individual assessments of achievement. Overall, the communities funded in 1997 reached at least moderate levels of achievement in the application of all eight system of care principles across all four elements found in the infrastructure domain. As a group, they were more successful in including family members in their governing and program evaluation efforts, hiring family members and paraprofessionals to provide direct services, training staff in the concept of family-focused service provision, and including services that support families in their service arrays (principle of family focus).

Achievement in the application of other principles in infrastructure components were, in descending order: grant community efforts to establish effective mechanisms for collaboration among various public and private child-serving agencies and service providers, to develop and implement system-wide structures that enhanced financially accessible services provided across a range of times and places within the communities, to train staff in the concept of individualizing services, and to develop a complete array of services so that unique needs of children and families could be met.

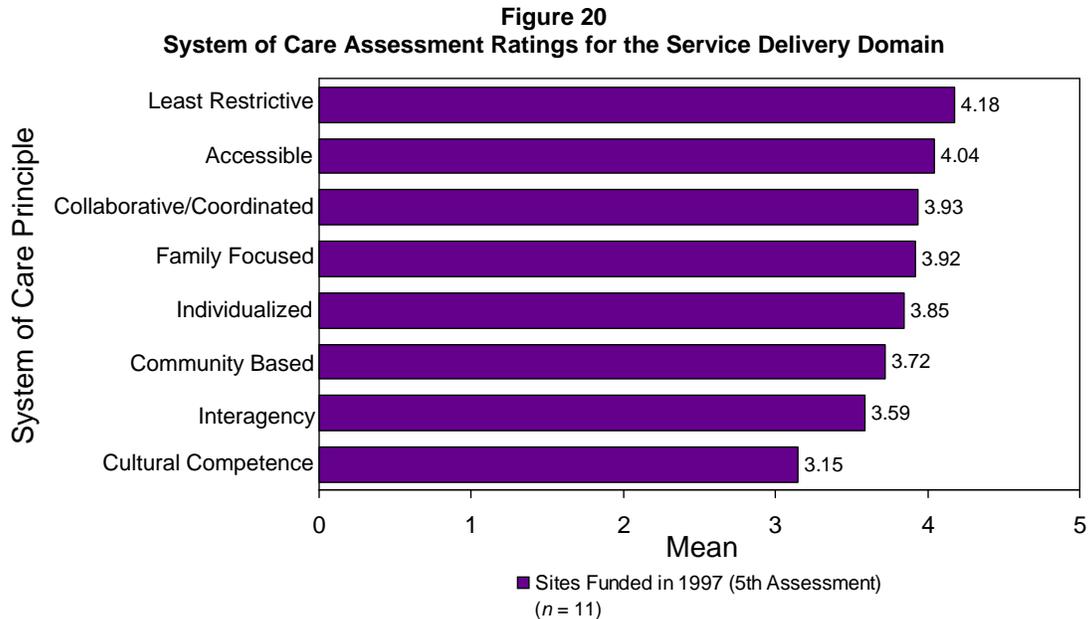


Note: Maximum score = 5.

These grant communities as a group were less successful in putting structures in place to assure service provision in least restrictive environments and in the home communities of the children and families served; achieving diversity in governance body membership and among direct service staff; making effective efforts to develop and maintain culturally relevant service arrays (principle of cultural competence); and maintaining strong interagency partnerships among core public child-serving agencies. The moderate success achieved by these grant communities indicate that the potential exists for improvement in these areas.

Service Delivery Domain: Grant Communities Rated Highest in Least Restrictive Care

Overall, this group of grant communities was more successful in applying system of care principles in the service delivery domain than in the infrastructure domain. That is, higher levels of achievement (scoring: 1 = *lowest*, 5 = *highest*) were realized in the application of all eight principles in all four elements contained in the service delivery domain: entry into services, service planning, service provision, and case review than were achieved across the four elements contained in the infrastructure domain: governance, management and operations, service array, and quality monitoring/evaluation.



Note: Maximum score = 5.

The grant communities were largely able to provide services in least restrictive service settings that were therapeutically appropriate for most children served and made effective efforts to transition children from restrictive settings to less restrictive settings as soon as the children were ready for such a transition. This group of communities was relatively successful in providing financially accessible services across a range of times (e.g., evenings, weekends) and physical locations in local communities (e.g., homes, schools, agency offices) to meet the needs of children and families served. Public child-serving agencies and private service providers were able to coordinate their service planning and provision to a large extent, and efforts to involve families in the care of their children were effective, if not entirely sufficient, to meet program goals.

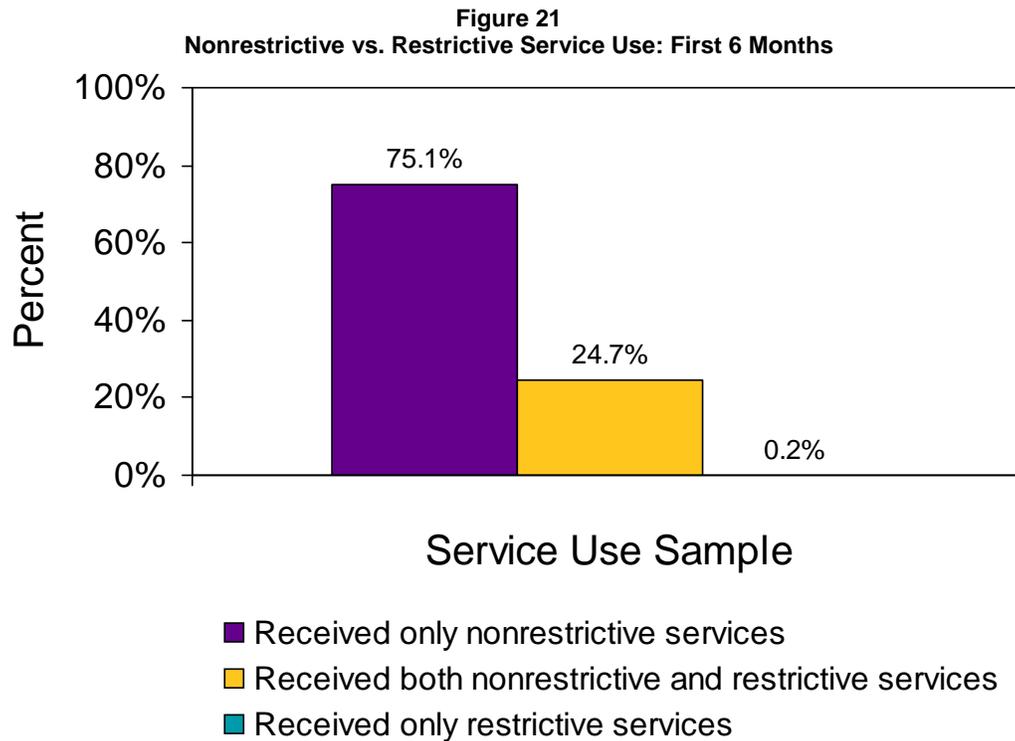
Similar to the relatively lower achievement level attained in the infrastructure components, this group of grant communities was less successful in the application of the cultural competence principle across the service delivery components. Grant communities most often had difficulty meeting the variety of language needs of children and families who were not primarily English-speaking and in planning and providing a comprehensive range of culturally appropriate services.

SERVICES, COSTS, AND FINANCING

Most Children Received Services in Community Settings, and Did Not Need Restrictive Placements

In the first 6 months of enrollment in systems of care, most children and families received *nonrestrictive community-based services* that included case management, individual therapy, assessment and evaluation, medication monitoring, family therapy, group therapy, crisis stabilization, day treatment, recreational activities, family support, behavioral aide, family preservation, respite, independent living, transition services and flexible funds. *Restrictive services* include inpatient hospitalization, residential treatment, therapeutic group home placement, therapeutic foster care and residential camp.

Seventy-five percent of children received only *nonrestrictive community-based types of services*, and about one-fourth of children received *both restrictive and nonrestrictive services*, or *only restrictive services*.



Number of children = 3,009.

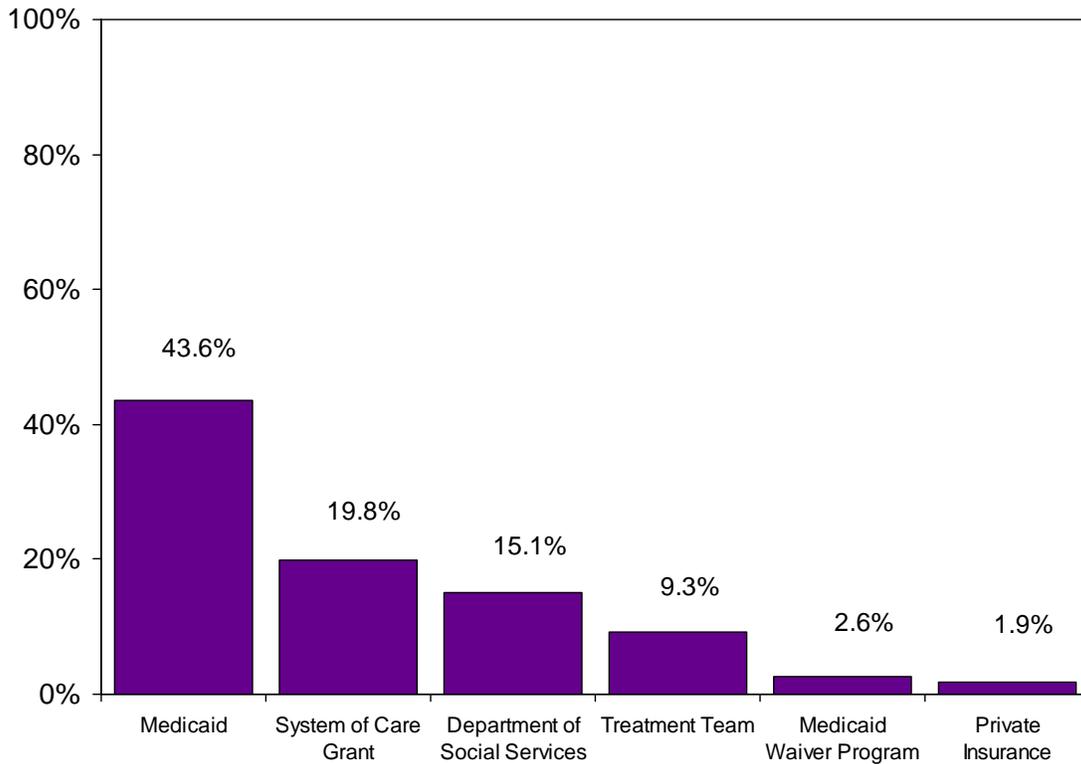
***The Services Were Financed Through Multiple Funding Sources,
and Community-Based Services Accounted for the Largest Part of Total Costs***

Analysis of the comprehensive services and costs billing data from one system of care community revealed that the costs for serving 82 children in 2000 totaled \$1.3 million dollars, or about \$16,454 per child.

Community-based services accounted for the largest part of the total costs. Community-based services included case management, in-home treatment, mentoring, parent aide, child and family team meeting, day care, respite services, camp, transportation, school strategist, therapeutic community support services, and other supported services.

Figure 22 shows the top six funding sources for the services provided to children in this community.

**Figure 22
Service Financing: Top Funding Sources**



***Flexible Funds Were Used to Improve Children’s Living Environments
and Provide Needed Resources to Their Families***

Flexible funds were often used to provide innovative and nontraditional mental health services to children with serious emotional disturbance and their families. Some communities have set aside a portion of their CMHS grant funds to be used as flexible funds, which can be supplemented by private contributions from charitable organizations, local businesses, and individuals.

Flexible funds are among the highest rated services in terms of caregiver satisfaction. Table 4 presents an example of how one system of care community used flexible funds to provide various types of assistance to children and families.

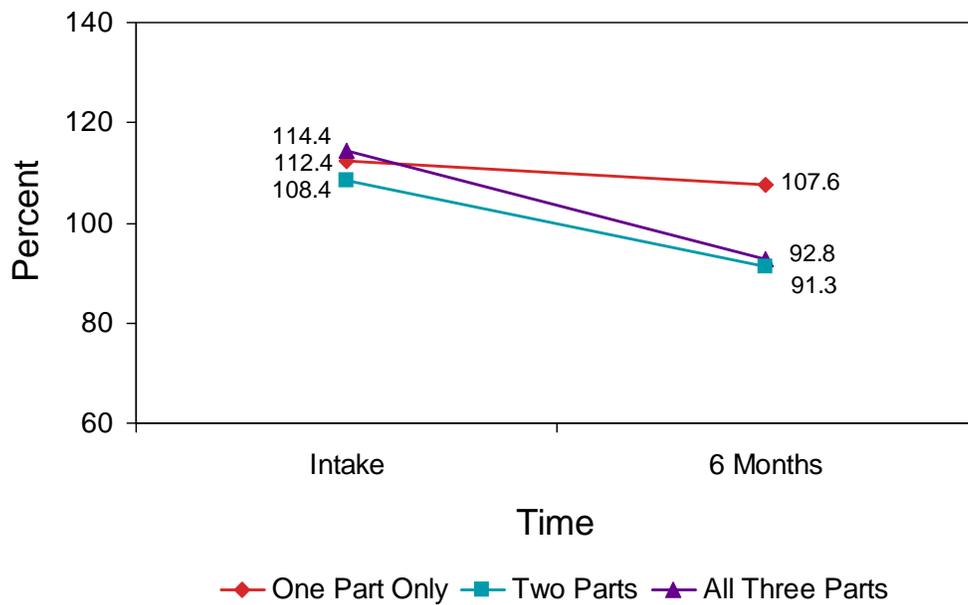
**Table 4
Use of Flexible Funds: 1999 to 2000**

Items or Services Purchased	Percent of Total
Transportation and Vehicles	18.1
Rent and Housing	16.6
Clothing	13.4
Parent Aides	11.7
Respite Care	7.1
Household Items	5.8
Training and Education	5.3
Medical Care	4.4
Electricity and Utilities	3.5
Childcare	2.9
Moving expenses	2.8
Recreation	2.3
Mentoring	1.6
Food and groceries	1.6
Miscellaneous	1.2
Home Repairs	0.7
Furniture	0.6
Legal Services	0.3
Behavioral Plans	0.1
Total	100.0

Children Whose Families Received Continued Support With Flexible Funds Improved in Their Functioning at Greater Rates

Continuous receipt of flexible funds by children and families has been found to result in significantly greater rates of improvement in children’s functional impairment (see Figure 23). The results indicate that children of families who received flexible funds throughout the 6-month period exhibited more improvement than those who received flexible funds in one part or two parts only of the 6-month period.

Figure 23
Changes in Functional Impairment From Intake to 6 Months by Duration of Flexible Funds



Number of children = 318.
Interaction: $F = 4.67$, $df = 2/315$, $p = .01$.

Child functional impairment is measured using the CAFAS, which was described on page 28. Decreases in CAFAS scores, as seen in the downward sloping lines in Figure 23, indicate improvement of children in their functioning in school, home, and community.

PROGRAM EFFECTIVENESS

Comparison Studies: Phase I

The longitudinal comparison studies⁹ conducted through the national evaluation have provided critical information about children and adolescents with serious emotional disturbance, challenges they face, services they receive, and factors that influence improvement in child and family outcomes across time. Some important findings include:

- Results from measures of program implementation fidelity at the system level, as measured by the system of care assessment, indicated that Federal funding had a positive impact on the development and incorporation of system of care principles within programs' infrastructures and service delivery components in funded communities compared to their matched comparison communities (Brannan, Baughman, Reed, & Katz-Leavy, 2002).
- With respect to service delivery, the service experiences of subsamples of children and families selected for a special substudy were more consistent with system of care principles in communities with Federal funding compared to unfunded communities (differences were statistically significant; Hernandez et al., 2001; Stephens, Holden, & Hernandez, 2004).
- Improvement in clinical and functional outcomes over time has been observed for children served in systems of care and in traditional service delivery systems. Evaluation results suggest that a system of care can be more beneficial than services delivered in a traditional manner in a matched comparison community for those children with greater functional impairment, high levels of delinquent behavior, and contact with law enforcement for serious offenses (these differences were statistically significant); however, these findings have been observed inconsistently across the pairs of comparison study communities (Stephens et al., 2005).
- Analysis of service data has found statistically significant differences in the provision of mental health services; specifically, systems of care extensively use case management compared to traditional service delivery systems (Foster, Qaseem, & Connor, 2004).
- Analyses of costs of services found statistically significant cost savings in other child-serving sectors that suggest an offset of increased costs associated with providing an expanded service array in systems of care (Foster et al., 2004).

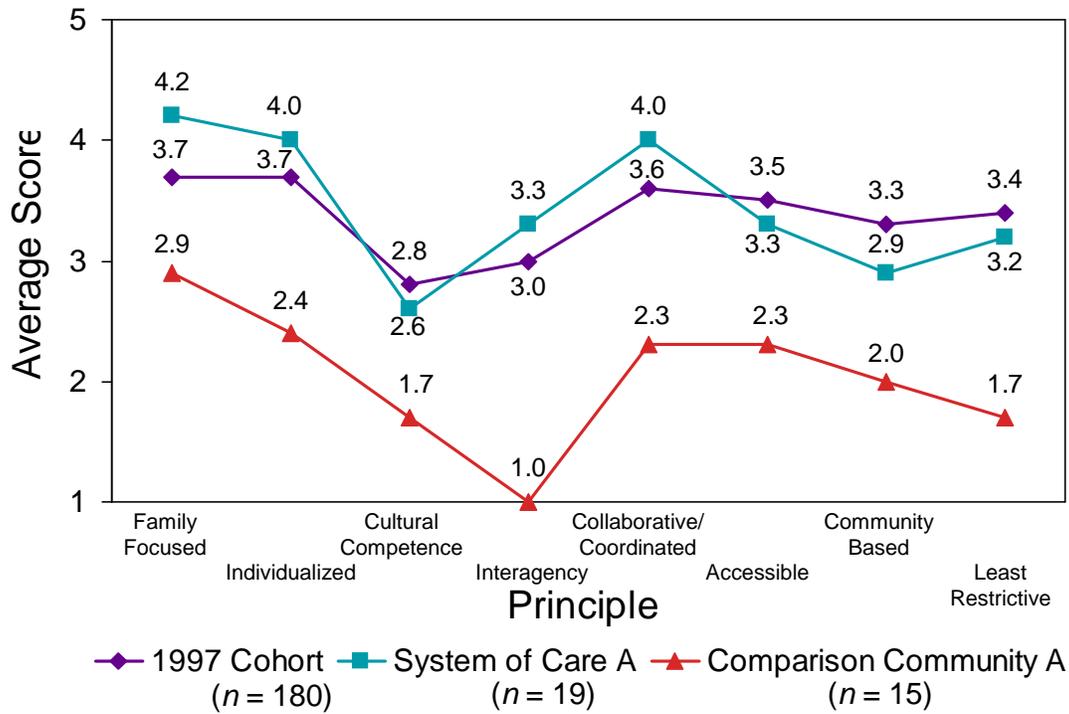
⁹More information about the comparison studies can be found in appendix C.

Comparison Studies: Phase II

Grant Communities Scored Higher Than Non-System of Care Comparison Communities in Applying System of Care Principles

The cohort of grant communities funded in 1997 scored higher than a non-funded community selected as a matched community to one community in this cohort.¹⁰ Overall, grant-funded system of care communities in this cohort were more successful than the matched community in developing organizational and service system infrastructure according to the principles of family focused, individualized, collaborative/coordinated, accessible, least restrictive and community based than according to the principles of interagency and cultural competence.

Figure 24
System of Care Assessment Scores for a System of Care and a Matched Comparison Community and 1997 Cohort by Infrastructure Domain

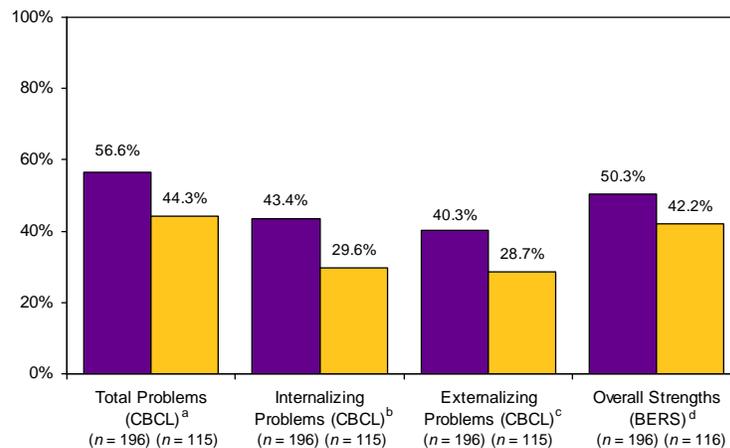


¹⁰Grant-communities were selected for the comparison study based on the maturity of their systems, geographic, demographic and economic characteristics, and rate of child enrollment into services to allow for the required study sample size. Service delivery approaches of comparison communities were assessed prior to selection for their contrast with the system of care approach through site visits, discussions with local agency directors, and State mental health representatives. Similarity in geographic, demographic, and economic characteristics; child referral patterns across agencies; and willingness of the study participation were factored into comparison community selection. See appendix C for more information.

Clinically Significant Change From Intake to 12 Months Was Greater in a System of Care Community Than in a Matched Comparison Community

A larger percentage of children enrolled in services within a system of care community demonstrated clinical improvement¹¹ in their behavioral and emotional problems overall, which was true for both their *internalizing* problems (e.g., anxiety and depression) and their *externalizing* problems (e.g., aggressiveness and delinquency) from intake to 12 months when compared to children enrolled in the matched comparison services.¹² In addition, fewer children in system of care services exhibited deterioration in these areas (these differences were statistically significant).

Figure 25
Percentage of Children Who Showed Clinically Significant Improvement From Intake to 12 Months in a System of Care and a Matched Comparison Community



Measures

■ System of Care A ■ Comparison Community A

Note: CBCL = Child Behavior Checklist; BERS = Behavioral and Emotional Rating Scale.

^a $\chi^2 = 12.89, df = 2, p < .01.$

^c $\chi^2 = 8.32, df = 2, p < .05.$

^b $\chi^2 = 8.06, df = 2, p < .05.$

^d $\chi^2 = 13.15, df = 2, p < .001.$

In addition, there was evidence of differential improvement between the two communities with regard to behavioral and emotional strengths:

- More children in the system of care community improved from intake to 12-month follow-up, as compared to children in the matched comparison community.
- Fewer system of care children exhibited deterioration in behavioral and emotional strengths than children in the matched comparison community.

¹¹Clinical improvement was determined using RCI. See footnote on page 21.

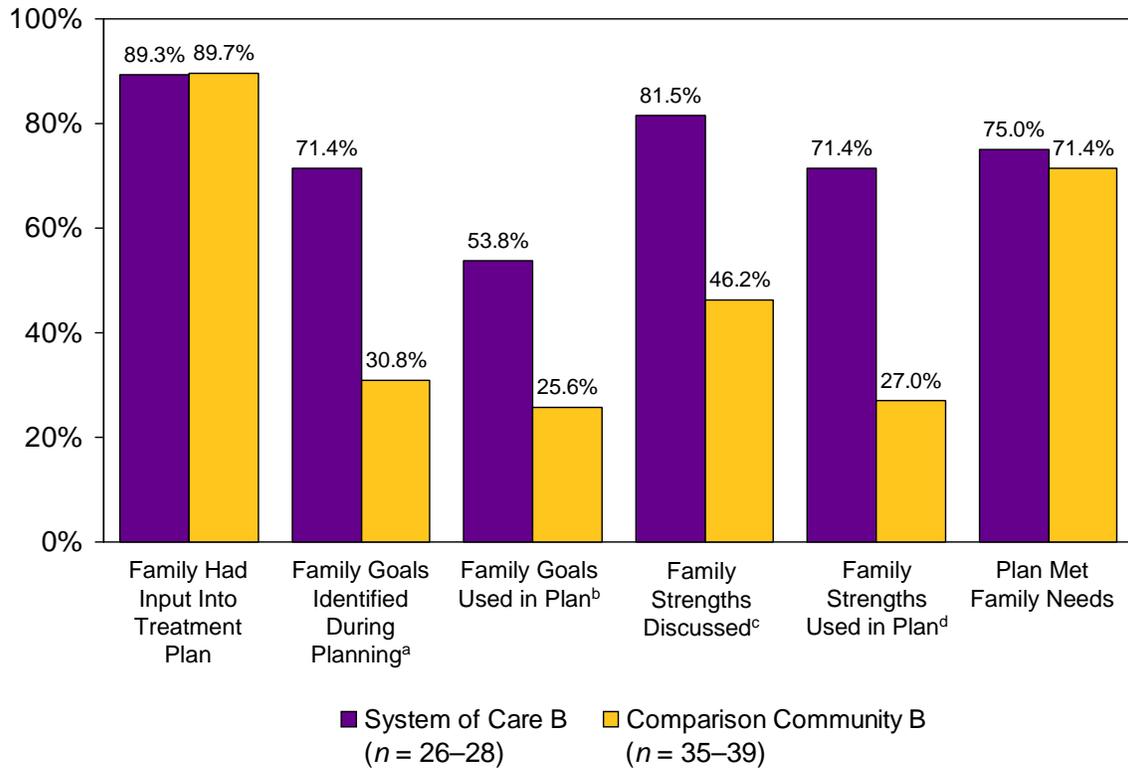
¹²To enroll a similar sample of children in the systems of care and matched comparison communities, an eligibility screening process was applied in the comparison communities to identify children who met the eligibility criteria for the study so that only those children with serious emotional disturbance were enrolled in the study. Children in the comparison communities were determined to be eligible for the study if they had a *DSM-IV* diagnosis and also met one of the following criteria: history of or at risk for out-of-home placement, and/or participation in special education for serious emotional disturbance and/or involvement in the juvenile justice system. Enrollment in each community was closely monitored and selection of children was modified as needed to more closely equate samples in each matched pair.

**Services Were More Family-Focused in a System of Care Community
Than in a Matched Comparison Community**

Figure 26 summarizes the degree to which caregivers enrolled in one pair of communities participating in the substudy of the 1997 comparison study found the treatment-planning process to be family focused. Caregivers in a system of care community were much more likely to report that *family goals* and *family strengths* had been discussed and used to tailor the treatment plan, than were caregivers in the matched comparison community (the differences were statistically significant).

About 90 percent of caregivers from both communities report that family members had *input into the treatment plan*; accordingly, caregivers in each community were equally likely to have input into the plan.

Figure 26
Percentage of Caregivers in a System of Care and a Matched Comparison Community Who Reported Various Family-Focused Experiences in the Treatment Planning Process



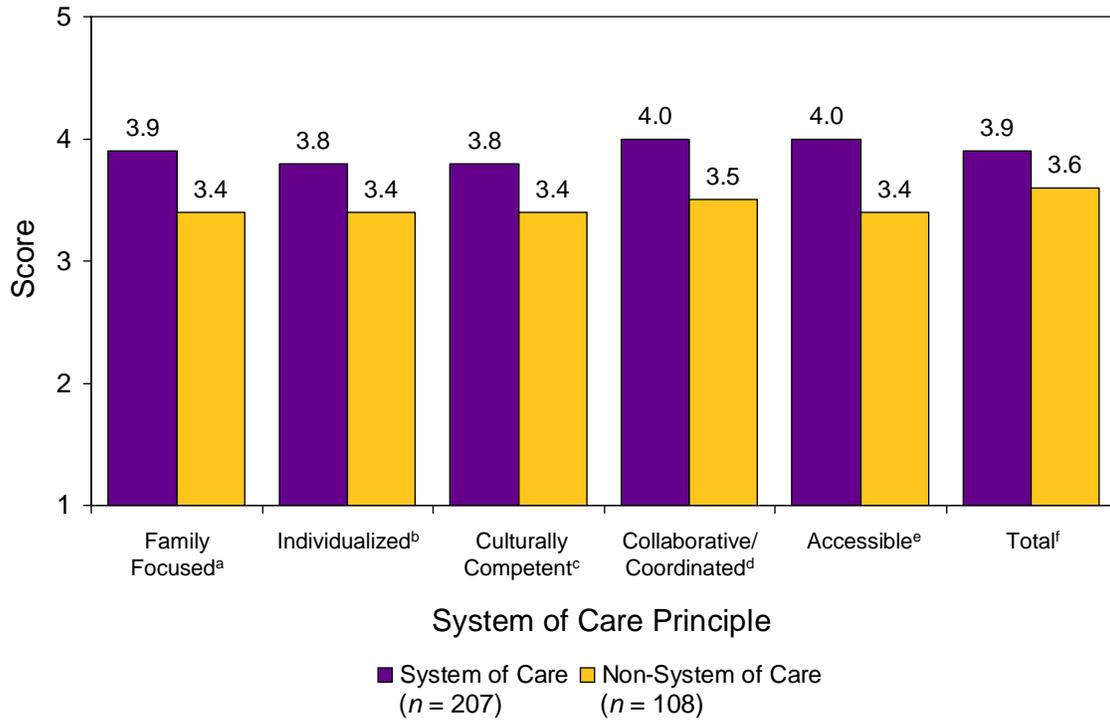
^a $\chi^2 = 10.8, df = 1, p = .01.$
^b $\chi^2 = 5.3, df = 1, p < .05.$

^c $\chi^2 = 8.3, df = 1, p = .01.$
^d $\chi^2 = 12.6, df = 1, p = .001.$

**Caregivers in System of Care Communities Reported
Positive Experiences With Case Management**

Caregivers in system of care communities in two States (Alabama and Nebraska) reported experiences with case management that better reflected system of care principles of *family focus*, *individualized*, *cultural competence*, *collaborative/coordinated*, and *accessible* than caregivers in matched, non-system of care communities in these same States (the differences were statistically significant).

**Figure 27
Comparison of Caregiver Case Management Ratings in
System of Care and Matched Comparison Communities**



^at = 3.69, df = 313, p < .001.

^bt = 3.12, df = 313, p < .01.

^ct = 2.90, df = 313, p < .01.

^dt = 3.85, df = 313, p < .001.

^et = 4.56, df = 313, p < .0001.

^ft = 3.74, df = 313, p < .001.

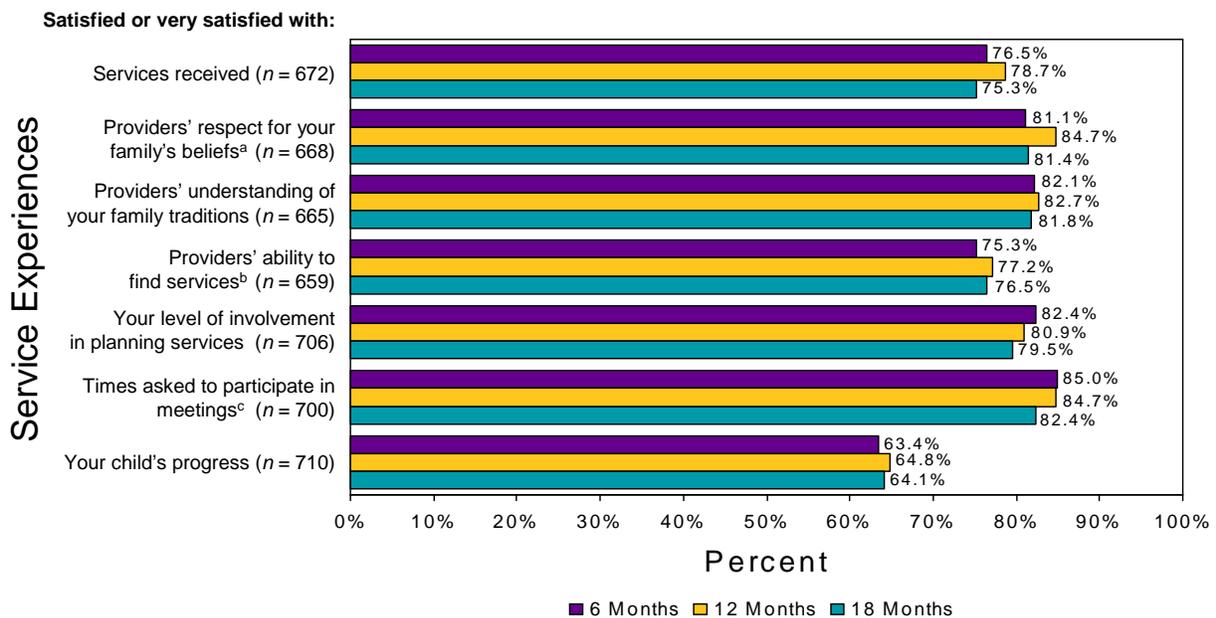
SATISFACTION WITH SYSTEM OF CARE SERVICES

Caregivers and Youth Were Satisfied With Services Over Time

The majority of caregivers were satisfied with the services they received in system of care programs at 6, 12, and 18 months. Caregivers were *most* satisfied, at both 6, 12, and 18 months, with

- the number of times they were asked to participate in meetings where services for their children or themselves were discussed,
- providers' respect for family beliefs about mental health, and
- providers' understanding of family traditions.

Figure 28
Caregiver Ratings of Satisfaction at 6 Months, 12 Months, and 18 Months



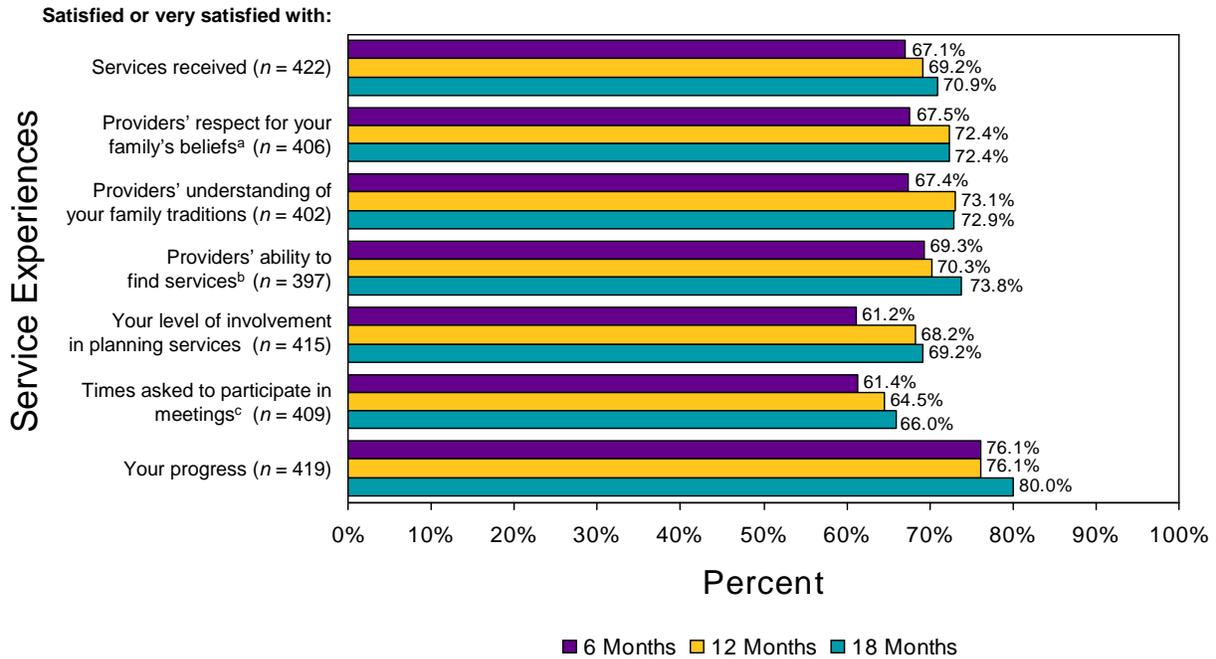
^a Specifically, beliefs about mental health.

^b Specifically those services that acknowledge the positive aspects or strengths of your family's culture and traditions.

^c These are meetings where services for child (or caregiver) were discussed.

Another underlying tenet of systems of care is the involvement of youth in their service planning and provision. The majority of youth reported they were satisfied with services after 6, 12, and 18 months in system of care programs. Children were least satisfied with the *number of times asked to participate in meetings* and their *level of involvement in planning services*.

Figure 29
Youth Ratings of Satisfaction at 6 Months, 12 Months, and 18 Months



^a Specifically, beliefs about mental health.

^b Specifically those services that acknowledge the positive aspects or strengths of your family's culture and traditions.

^c These are meetings where services for child (or caregiver) were discussed.

GPRA INDICATORS FOR PROGRAM FOR FY 02 AND FY 03

GPRA Program Indicators	Actual Performance
(1) Increase in number of children receiving services	
▪ FY 03 Target: Establish baseline	7,032
(2) Increase in percentage of children attending school 75% or more of time after 12 months	
▪ FY 03 Target: 82.6%	86.5%
▪ FY 02 Target: 82.6%	83.5%
(3) Increase in percentage of children with no law enforcement contacts at 6 months	
▪ FY 03 Target: 47%	50.5%
▪ FY 02 Target: Establish baseline	
(4) Decrease in utilization of inpatient facilities at 12 months (E, O)	
▪ FY 03 Target: -3.00 days	-3.48 days
▪ FY 02 Target: Establish baseline	-2.95 days
(5) Decrease inpatient costs	
▪ FY 03 Target: Establish baseline	-\$6,024,855

S U M M A R Y

SUMMARY

Many advances in the children's mental health knowledge base have been made in understanding the determinants of mental illness, the course of the disease, and treatment and service delivery approaches. These advances in the knowledge base have served to illuminate continuing challenges in delivering services and unmet needs, and have thrust the issue of children's mental health into the public spotlight. The system of care approach to organizing service systems and providing services to children with serious emotional disturbance and their families has become widely accepted and continues to offer a framework for system reform (Stroul, 2002). The information contained in this report provides evidence of the effectiveness of the *Comprehensive Community Mental Health Services for Children and their Families Program* (CMHI) to support implementation of systems-of-care and improve the outcomes of children with serious emotional disturbance and their families; and highlights the importance of continuing to expand the program's reach.

The CMHI supports system-level change in the way mental health services are provided to children and their families. As indicated by the system of care assessment results, grant-funded system of care communities were successfully developing organizational and service system infrastructure according to system of care principles. As expected, incorporation of system of care principles into infrastructure and service delivery occurred to a lesser extent in the matched, non-funded communities. While the communities assessed for this report reached at least moderate levels of achievement in the application of all eight system of care principles across all four elements found in the infrastructure domain, they were more successful in applying system of care principles in the service delivery domain. Grant communities were able to provide services in the least restrictive service settings that were therapeutically appropriate. Cultural competence remained a challenge with communities most often having difficulty achieving diversity in governance body membership and among direct service staff, making effective efforts to develop and maintain culturally relevant service arrays, meeting the variety of language needs of children and families who were not primarily English-speaking, and planning and providing a comprehensive range of culturally appropriate services. Clearly, the program should continue to support communities in their efforts to improve in these areas.

These changes at the system level enabled transformation of the service experiences of the children and families served. Most children received only nonrestrictive services, community-based services; and these service experiences translated into increasing satisfaction with services, especially among youth. This finding is in contrast to research involving non-system of care communities (Lavigne et al., 1998), which suggest that a substantial number of children and youth with mental illness have unmet needs because they do not receive services, or receive inadequate or overly restrictive services. Services were financed through multiple funding sources with the majority of funding derived from Medicaid. Community-based services accounted for the largest part of total costs.

These service experiences were associated with improvements in clinical and functional outcomes for children and their families. Emotional and behavioral problems and functional impairment were reduced. School attendance and school performance improved, and children missed fewer days of school due to suspensions or expulsions. All forms of law enforcement contacts decreased, and living situations became more stable. Youth with substance abuse comorbidity experienced significantly greater improvement in their overall functioning. Further, the findings indicate that outcomes for children and families in systems of care are not only shaped by the unique characteristics and experiences of the child and family, but also by the initiative's values and principles that guide how the service system is developed and implemented. Individualized and accessible service delivery at the system level significantly contributed to improved child functioning, reduced behavioral and emotional problems, and reduced caregiver strain. These findings strongly support the underlying system of care assumptions that children and families will benefit more from a service system that takes into account their unique needs and characteristics and that makes services financially and physically accessible (Pires, 2002; Stroul & Friedman, 1986).

Perhaps the strongest evidence for program effectiveness is provided by the findings from the longitudinal comparison studies conducted through the national evaluation (Foster et al., 2004; Stephens et al., 2005). These studies have provided critical information about children and adolescents with serious emotional disturbance, and have comprehensively explored the structure and function of a system of care and their relationship to child and family outcomes. As noted previously, data from these studies indicate that, at the system level, the grant initiative has been effective in translating system of care principles into reform of a system's infrastructure and service delivery approach. It is clear from the findings that the system of care approach to serving children with severe emotional needs and families provided a more comprehensive service experience than the non-system of care approach.

Findings from the comparison studies suggest that for those children with greater functional impairment, high delinquency scores, and contact with law enforcement for serious offenses, a federally funded system of care can be more beneficial than services delivered as usual in a matched comparison community, although there is some inconsistency in these findings across pairs of communities studied. Preliminary findings from the second comparison study indicate that children in system of care communities show greater improvements in behavioral and emotional problems, and in their behavioral and emotional strengths.

Although more financial resources were devoted to mental health services within system of care communities, a broader cost perspective suggests that this investment may offset increased costs across other child-serving agencies within the community such as juvenile justice, inpatient and residential placements, child welfare, and education. Other literature from the evidence-based treatment movement within children's mental health (Burns & Hoagwood, 2002) suggests that systems of care are an area in need of further study, especially with respect to the integration of evidence-based interventions within these community-based programs. Special studies in development within the national

evaluation employing randomized clinical trial designs will begin to address these questions.

In conclusion, the findings in this report provide information on how to optimize service delivery for children and families within systems of care.

A P P E N D I C E S

APPENDIX A

SYSTEM OF CARE COMMUNITIES FUNDED THROUGH THE COMPREHENSIVE COMMUNITY MENTAL HEALTH SERVICES FOR CHILDREN AND THEIR FAMILIES PROGRAM (1993–2000)

GRANT COMMUNITY	LOCATION	STATE
Phase I (Grants Awarded in 1993 and 1994)		
<i>Cycle I (Grants Awarded in October 1993)</i>		
East Baltimore Mental Health Partnership	East Baltimore, Maryland	Maryland
Stark County Family Council and Southern Consortium	Stark County and 10 southeastern counties	Ohio
The Village Project	Charleston and Dorchester counties	South Carolina
ACCESS	Statewide	Vermont
<i>Cycle II (Grants Awarded in February 1994)</i>		
Children's Systems of Care/California 5	Riverside, San Mateo, Santa Cruz, Solano, and Ventura counties	California
COMCARE	Sedgwick County	Kansas
Wings for Children and Families	Piscataquis, Hancock, Penobscot, and Washington counties	Maine
Olympia (formerly Doña Ana County Child and Adolescent Collaborative)	Doña Ana County	New Mexico
Pitt-Edgecombe-Nash Public-Academic-Liaison Project (PEN-PAL)	Pitt, Edgecombe, and Nash counties	North Carolina
Project REACH Rhode Island	Statewide	Rhode Island
Wraparound Milwaukee	Milwaukee County	Wisconsin
<i>Cycle III (Grants Awarded in September and November 1994)</i>		
Multiagency Integrated System of Care (MISC)	Santa Barbara County	California
Sonoma-Napa Comprehensive System of Care	Sonoma and Napa counties	California
Hawai'i 'Ohana Project	Wai'anae Coast and Leeward Oahu	Hawai'i
Community Wraparound Initiative	Lyons, Riverside, and Proviso townships	Illinois

GRANT COMMUNITY	LOCATION	STATE
KanFocus	13 southeastern counties	Kansas
K'é Project	Navajo Nation ^a	Arizona, Colorado, New Mexico, Utah
Families Reaching in Ever New Directions (FRIENDS)	Mott Haven	New York
Partnerships Project	Minot, Bismarck, and Fargo regions	North Dakota
New Opportunities	Lane County	Oregon
South Philadelphia Family Partnership Project	South Philadelphia	Pennsylvania
City of Alexandria System of Care	City of Alexandria	Virginia
Phase II (Grants Awarded in 1997 and 1998)		
Cycle IV (Grants Awarded October 1997)		
The Jefferson County Community Partnership	Jefferson County	Alabama
Children's Mental Health Services Initiative	San Diego County	California
Kmihqitahasultipon ("We Remember") Project	Passamaquoddy Tribe Indian Township ^a	Maine
Southwest Community Partnership	Detroit	Michigan
Nebraska Family Central	22 central counties	Nebraska
North Carolina Families and Communities Equal Success (FACES)	Blue Ridge, Cleveland, Guilford, and Sandhills	North Carolina
Sacred Child Project	Fort Berthold, Standing Rock, Spirit Lake, and Turtle Mountain Indian Reservations ^a	North Dakota
Children's Upstream Services	Statewide	Vermont
Northwoods Alliance for Children and Families	Forest, Langdale, Lincoln, Marathon, Oneida, and Vilas counties	Wisconsin
Cycle V (Grants Awarded October and November 1998)		
Tampa-Hillsborough Integrated Network for Kids (THINK) System	Hillsborough County	Florida
Kentucky Bridges Project	3 Appalachian regions	Kentucky
Mno Bmaadzid Endaad ("Be in good health at his house")	Sault Ste. Marie Tribe of Chippewa Indians and Bay Mills Ojibwa Indian Community; Chippewa, Mackinac, and Schoolcraft counties ^a	Michigan
Partnership With Families	St. Charles County	Missouri

GRANT COMMUNITY	LOCATION	STATE
Families First and Foremost	Lancaster County	Nebraska
Neighborhood Care Centers	Clark County	Nevada
Clackamas Partnership	Clackamas County	Oregon
Community Connections for Families	Allegheny County	Pennsylvania
Project Hope	Statewide	Rhode Island
The Children's Partnership	Travis County	Texas
Utah Frontiers Project	10 counties	Utah
Clark County Children's Mental Health Initiative	Clark County	Washington
Children and Families in Common	King County	Washington
With Eagle's Wings	Wind River Indian Reservation ^a	Wyoming
Phase III (Grants Awarded in 1999 and 2000)		
Cycle VI (Grants Awarded October 1999)		
Yuut Calilriit Ikaiyuquulluteng ("People Working Together") Project	Delta region of southwest Alaska ^a	Alaska
Project MATCH (Multi-Agency Team for Children)	Pima County	Arizona
Spirit of Caring Project	Contra Costa County	California
Colorado Cornerstone System of Care Initiative	Denver, Jefferson, Clear Creek, and Gilpin counties	Colorado
Families and Communities Together (FACT) Project	Statewide	Delaware
Family HOPE (Helping Organize Partnerships for Empowerment)	West Palm Beach	Florida
Circle Around Families	East Chicago, Gary, and Hammond	Indiana
Dawn Project	Marion County	Indiana
Community Kids	Montgomery County	Maryland
Worcester Communities of Care	Worcester	Massachusetts
PACT (Putting All Communities Together) 4 Families Collaborative	Kandiyohi, Meeker, Renville, and Yellow Medicine counties	Minnesota
COMPASS (Children of Mississippi and Their Parents Accessing Strength-Based Services)	Hinds County	Mississippi
CARE NH: Community Alliance Reform Effort	Manchester, Littleton, and Berlin	New Hampshire
Burlington Partnership	Burlington County	New Jersey
Westchester Community Network	Westchester County	New York

GRANT COMMUNITY	LOCATION	STATE
North Carolina System of Care Network	11 counties	North Carolina
Gateways to Success	Greenwood	South Carolina
Nagi Kicopi—Calling the Spirit Back Project	Oglala Sioux Tribe, Pine Ridge Indian Reservation, Pine Ridge ^a	South Dakota
Nashville Connection	Nashville	Tennessee
Mountain State Family Alliance	12 counties	West Virginia
Cycle VII (Grants Awarded May and July 2000)		
A-KO-NES Wraparound System of Care	Humboldt and Del Norte counties ^a	California
Kidsnet Rockdale	Rockdale and Gwinnett counties	Georgia
Phase IV (Grants Awarded in 2002 and 2003)		
Cycle VIII (Grants Awarded October 2002)		
Ch'eghutsen' A System of Care	Fairbanks Native Association ^a	Alaska
Glenn County	Glenn County	California
Sacramento Model System of Care	Sacramento County	California
San Francisco System of Care	San Francisco	California
Project BLOOM	El Paso, Fremont, and Mesa counties, and the City of Aurora	Colorado
Partnership for Kids (PARK) Project	Statewide	Connecticut
D.C. Children Inspired Now Gain Strength (D.C. CINGS)	Districtwide	Washington, District of Columbia
One Community Partnership—Working Together For Our Children	Broward County	Florida
I'Famagu'onta (Our Children)	Territorywide	Guam
Building on Each Other's Strengths	Statewide	Idaho
System of Care—Chicago	Chicago	Illinois
Show-Me Kids Project	Green, Christian, Taney, Stone, Barry, and Lawrence counties	Missouri
Keeping Families Together in New York City	New York City	New York
Choctaw Nation CARES	Choctaw Nation of Oklahoma ^a	Oklahoma

GRANT COMMUNITY	LOCATION	STATE
Oklahoma State Department of Human Services	Kay, Tulsa, Oklahoma, Canadian, and Beckham counties	Oklahoma
Puerto Rico Mental Health Initiative for Children	Llorens Torres Housing Project in San Juan, Municipality of Gurabo	Puerto Rico
Border Children's Mental Health Initiative	El Paso County	Texas
Children's Voices, Family Choices, Community Solutions: Building Blocks for Healthy Families	Fort Worth	Texas
<i>Cycle IX (Grants Awarded September 2003)</i>		
La Familia Sana/The Healthy Family System of Care	Monterey County	California
Urban Trails	Oakland	California
Louisiana Says YES to Children with Mental Health Needs and Their Families (LA-YES)	Jefferson, Orleans, Plaquemines, St. Bernard, and Tammany parishes	Louisiana
Transitions: St. Louis System of Care	St. Louis County and City	Missouri
Project TAPESTRY: Weaving Solutions for Child Mental Health	Cuyahoga County	Ohio
Mid-Columbia Child and Family Partnership	Gilliam, Hood River, Sherman, and Wasco counties	Oregon
YouthNet—A Comprehensive Mental Health Treatment Network for Children and Youth	Catawba, Chester, and Lancaster counties and Catawba Indian Nation	South Carolina

^aAmerican Indian/Alaska Native tribe.

APPENDIX B

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APPENDIX C

EVALUATION METHODOLOGY

Sample Sizes

The number of children for whom data were available varied due to missing data and variations in data collection procedures across communities and across study components. Although study enrollment and data collection procedures were established nationally, each community customized aspects of the evaluation to meet local criteria or needs. For example, variations in local procedures were influenced by informed consent requirements, administration of additional local measures, data collection strategies, and available resources. Interview incentives provided to caregivers and youth varied also according to local resources and preferences.

Sample size varied by analyses across data collection points and instruments for a number of reasons. First, not all children receiving services were enrolled in the longitudinal outcome study because they did not meet criteria for enrollment in the outcome study or their caregivers did not give consent for their participation. This accounts for a large number of children who had descriptive and demographic information but for whom outcomes data were not collected using instruments such as the CBCL and CAFAS. Second, in order to address community needs and the recommendations of local institutional review boards and community groups affiliated with the service program, some accommodations in item administration were sometimes required to enable the evaluation to proceed despite community concerns. Differences in target populations served across communities contributed to differences in sample size available across instruments. For example, some communities served older youth, for whom some of the measures may not be applicable. Third, youth measures were administered to youth 11 years or older; therefore, the sample sizes for the youth measures (e.g., YSR, DS) will always be smaller than those for the caregiver measures. Fourth, attrition rates at follow-up varied across communities and across data collection points. The longer the follow-up assessment was from intake into the study, the more likely that attrition occurred. The national evaluator worked very closely with communities to develop tracking strategies to minimize attrition. A tracking system was developed and provided to all communities free-of-charge in order to help local evaluators keep track of children and families served in the program. However, it was the responsibility of the local communities to ensure retention of children and families in the study. In some cases, caregivers may have refused to participate in the longitudinal outcomes study at any of the follow-up data collection points, which also contributed to differences in sample size across data collection points. Even within the same measure, sample size may vary for different questions because (a) some questions were not applicable for subgroups of children or families, (b) some caregivers or youth refused to answer the questions, (c) some caregivers or youth did not know the answers to the questions, or (d) some interviewers did not ask the questions during the interview. Since the evaluation occurs in multiple communities with multiple data collectors, it is not possible to control local interviewer issues. Each site evaluator regularly received a Data Issue Report and was required to address data issues prior to the next data submission. If the issues identified in the report were likely related to protocol implementation and interviewer issues, it was the responsibility of local evaluators to address these issues. National evaluation liaisons under the employ of the national evaluation contractor provided guidance and followed up with evaluator on the resolution of these issues.

System of Care Assessment

Introduction

The system of care assessment is guided by a conceptual framework that describes generic components of any service delivery system and rates each component on how well system of care principles are manifest. The framework is organized into a table with two domains that each contains four service system components that form the columns of the table. The domains are infrastructure and service delivery. The infrastructure domain is comprised of four components that address governance, management and operations, service array, and evaluation and quality monitoring. The service delivery domain is comprised of four components that address entry into services, service planning, service provision, and case review. Definitions of the components are provided in Table C-1.

Table C-1
Definition of Service System Components

Infrastructure	
Governance	The governing structure responsible for explicating the system's goals, vision, and mission; strategic planning and policy development; and establishing formal arrangements among agencies. Governance structures may be boards of directors, oversight or steering committees, interagency boards, or management teams.
Management and Operations	The administrative functions and activities that support direct service delivery. For this study, this component focuses primarily on staff development, funding approaches, and procedural mechanisms related to the implementation of the system of care service delivery system.
Service Array	The range of service and support options available to children and their families across the system of care.
Quality Monitoring	Quality management conducted by the system that tracks the integration of process assessment and outcome measurement, and the use of continuous feedback loops to improve service delivery.
Service Delivery	
Entry into Service System	The processes and activities associated with children and families' initial contact with the service system, including eligibility determination.
Service Planning	The identification of services for children and families through initial development as well as periodic updating of initial service plans.
Service Provision	The processes and activities related to the ongoing receipt of and participation in services.
Case Review Structure	The process used to review the care of children at risk of out-of-home or out-of-community placement. For those already in such placements, there may be routine monitoring to determine whether that setting is still appropriate, or to plan transition to services in the community or back to the home. This process may also include review of challenging cases to resolve difficult problems that could not be resolved by other means. Key to the case review process is that the persons involved have the authority to make service decisions, including transitions to and from restrictive or out-of-community placements.

The rows of the framework table are comprised of eight system of care principles: family focused, individualized, culturally competent, interagency, collaborative and coordinated, accessible, community based, and least restrictive. Definitions of the system of care principles are provided in Table C-2.

Table C-2
Definition of System of Care Principles

Principle	Definition
Family Focused	The recognition that (a) the ecological context of the family is central to the care of all children; (b) families are important contributors to, and equal partners in, any effort to serve children; and (c) all system and service processes should be planned to maximize family involvement.
Individualized	Provision of care that is expressly child centered, addresses child-specific needs, and recognizes and incorporates child-specific strengths.
Culturally Competent	Sensitivity and responsiveness to, and acknowledgment of, the inherent value of differences related to race, religion, language, national origin, gender, socioeconomic background, and community-specific characteristics.
Interagency	The involvement and partnership of core agencies in multiple child-serving sectors, including child welfare, health, juvenile justice, education, and mental health.
Collaborative/ Coordinated	Professionals working together in a complimentary manner to avoid duplication of services, eliminate gaps in care, and facilitate child and family movement through the service system.
Accessible	The minimizing of barriers to services in terms of physical location, convenience of scheduling, and financial constraints.
Community Based	The provision of services within close geographical proximity to the targeted community.
Least Restrictive	The provision of services in settings that maximize freedom of choice and movement, and that present opportunities to interact in normative environments (e.g., school and family).

The intersection of these organizational aspects and system of care principles form the assessment framework (see Figure C-1). Each component within the two domains (infrastructure and service delivery) is rated on the extent to which it manifests system of care principles. Each cell in the framework contains indicators or measures of system performance that are linked to a series of questions asked of respondents during semistructured interviews described below. The indicators upon which the ratings are based are included in each cell of the framework. For example, for the cell in which governance and family focused intersect, questions are asked about three distinct indicators to address the general question, “To what extent is system governance conducted in a family-focused way?”

**Figure C-1
System of Care Assessment Framework**

Infrastructure Domain				
	Governance	Management & Operations	Service Array	Quality Monitoring
Family Focused				
Individualized				
Cultural Competence				
Interagency				
Collaborative/Coordinated				
Accessible				
Community Based				
Least Restrictive				
Service Delivery Domain				
	Entry Into System	Service Planning	Service Provision	Case Review
Family Focused				
Individualized				
Cultural Competence				
Interagency				
Collaborative/Coordinated				
Accessible				
Community Based				
Least Restrictive				

Data Analysis Methods

The quantitative data are determined from items linked to framework indicators. Site visitors rate these items on a 5-point scale, with 1 being the lowest and 5 the highest possible rating. For each interview, items are rated using only information reported by that specific informant and are based on standard criteria. Mean ratings are derived from ratings of the system of care assessment protocols. This information reveals how systems of care have developed or are developing vis-à-vis system of care principles.

The qualitative data are derived from a narrative report that organizes and describes all information obtained from the community. The report includes a summary of service component areas, as well as a brief and preliminary synopsis of observed salient strengths and challenges. The report is entered into the *Atlas.ti* qualitative analysis software that organizes and classifies all information. This process is helpful in identifying themes and patterns in the data. The data are analyzed according to a set of defined codes that are assigned to segments of the text. The codes are identified a priori, and represent components of a system of care service structure.

Reliability and Validity

To maximize measurement quality, the assessment framework was reviewed by experts in the field and revised to incorporate any suggestions. Interview protocols based on the revised framework were developed and pilot-tested in four grant communities funded in 1993 and 1994.

After a secondary review from field experts, a final version of the measure was developed and is used currently to assess system of care development in grant communities funded in 1997, 1998, 1999, and 2000.

Because the data collected through the system of care assessment are used to track system development over time and to make comparisons across systems, it is imperative that the ratings are reliable. In order to ensure interrater reliability (i.e., reduce variation across raters), rating criteria for each item were made as explicit as possible. Site visitors participated in a 3-day training session to learn how to apply criteria in a standard fashion. At the training, each site visitor was required to achieve 85 percent agreement with accurate ratings for 25 hypothetical scripts. Additionally, reliability testing and refresher training sessions are conducted twice a year to ensure continued reliability among site visitors.

The validity of the assessment is supported by independent ratings of the grant communities funded in 1993–94 by a panel of experts. The communities that were rated highest on the System of Care Assessment Index were also found by the expert panel to be the most developed. In addition, preliminary analyses suggested that expected relationships exist between the infrastructure and service delivery domain ratings.

For the qualitative data, intercoder reliability was established through coder agreements. One individual coded each report, while another coder reviewed the coded report. Whenever a disagreement occurred, the coder and the reviewer came to an agreement to apply the most appropriate code.

Descriptive Study

The primary purpose of the descriptive study is to provide information on the children and families served by the systems of care across grant communities. Data for the descriptive study were obtained at intake into services and included demographic characteristics, custody status, living arrangements, child and family risk factors, presenting problems, clinical diagnoses, functional status, and mental health service history. Descriptive information about the child's history of chronic illness; medications for physical, emotional, or behavioral problems; and status as a Medicaid recipient was collected, as was information about family socioeconomic status, composition, and available resources. This type of information about child and family characteristics contributes to our understanding of the similarities and differences among the children served as well as the extent to which these factors may be related to family service experiences, changes in children's emotional and behavioral problems and social functioning, and changes in caregiver strain and family functioning over time. Descriptive information is to be collected on every child who is enrolled in system of care programs. Please refer to the section entitled "Measures" for a list of descriptive data collected in the study.

Longitudinal Child and Family Outcome Study

The primary purpose of the longitudinal outcome study is to assess changes over time among children and families participating in system of care services. Outcome data collected from caregivers included the child's clinical and social functioning, behavioral and emotional strengths, restrictiveness of living situation, educational performance, and satisfaction with services. Assessments of family functioning, family resources, and caregiver strain also were obtained from caregivers. In addition, youth 11 years or older reported on their own delinquent behaviors, behavioral and emotional problems, history of substance use, perceptions of family functioning, and service satisfaction. Standardized and nonstandardized instruments typical in the

field of children's mental health services were used to collect these data. Please see the section entitled "Measures" for detailed descriptions of these instruments. In addition to meeting the eligibility for enrollment in system of care programs, children enrolled in system of care programs must meet all the following criteria to be enrolled in the longitudinal outcome study:

- Enter the grant-funded system of care (child has completed intake, descriptive information has been collected, and caregiver has consented to treatment).
- Be receiving or on the verge of receiving services in the community by the time of the baseline outcome study interview. Services can be considered to include clinical assessment, contact with a service coordinator (case manager), and initial efforts to plan additional services.
- Have a caregiver who legally can grant consent to participate in the evaluation (can grant consent for treatment), or a legal custodian who will grant consent for the child and the child's primary caregiver to participate in the outcome study.
- Have a caregiver who can provide the information requested and is capable of completing a data collection interview (e.g., no severe cognitive impairment).
- Be no younger than 5 years old and no older than 17.5 years old at the time of intake (baseline).
- Not be the sibling of a child already enrolled in the outcome study.
- If applicable, be selected through the sampling method used at the community.

Methods and Study Sample

The longitudinal outcome study of grant communities assessed children and their families every 6 months, for up to 36 months, regardless of whether the children continued to receive services through system of care programs. This allowed comparison of clinical and functional outcomes for all children who participated in the outcome study, regardless of whether they remained in or exited system of care services. In the evaluation during Years 2 through 4 of funding, each grant community is expected to enroll approximately 284 families for communities funded in 1997 and 1998 and 276 families for communities funded in 1999 to 2000, although this figure may vary slightly for communities funded to serve smaller numbers of children (e.g., funding in some communities may be directed primarily toward infrastructure development, or the number of children meeting service criteria for serious emotional disturbance may be lower). While in most grant communities all willing families need to be recruited into the outcome study, in some larger communities, sampling strategies may need to be employed to select a sufficient number of families at random from the pool of children who enter the system of care program. Sample size in analyses conducted in this report fluctuates due to differences in enrollment and data completion rates across grant communities. Appendix E presents study enrollment and data completion rates through April 2003 for each community funded from 1997 to 2000. Recommendations to the funded communities regarding enrollment goals incorporate an expectation of 8 percent attrition. The impact of attrition or loss to follow-up (for longitudinal results) include the possible introduction of bias in the samples for some analyses conducted. Analyses of the child and family outcome study data to examine the characteristics of children who remain in the evaluation versus those who do not remain indicate several statistically significant differences. Those who remain in the evaluation at the 18-month follow-up are younger, more likely to be male, more likely to be White, have a greater number of family risk factors, and have more behavioral and emotional problems. Therefore, results found for long-term outcomes are more generalizable to children who have these characteristics. Children with more

risk factors and greater behavioral and emotional problems are the children targeted by the program

Comparison Studies

Community Selection and Characteristics

This section provides detailed information regarding the process used to select communities for the Phase I and Phase II comparison studies. Beginning in the summer of 1997, three grant communities were selected from among the 22 communities funded in 1993–94 for the Phase I comparison studies. Beginning in the fall of 1999, two grant communities were selected from among the 23 communities funded in 1997–1998 for the Phase II comparison studies. In each case, the CMHS-funded system of care community was matched with a non-CMHS-funded community that used a different approach to serving children. The following criteria were used in selecting each of the comparison study communities:

- **Service delivery approach.** Grant-funded communities were selected based on the extent of their progress in developing a system of care. “Mature” systems were identified based on system of care assessment data and information from State and local experts familiar with the communities. Eligible comparison communities were identified that did not have Federal funding to support the development of a system of care. Because it was not possible to conduct a formal system of care assessment for site selection purposes, alternative methods were used to determine whether service delivery approaches in potential matched communities differed from the system of care approach. These alternative methods, which included site visits, discussions with local agency directors, and discussions with State mental health representatives, were used to determine whether service delivery approaches in potential matched comparison communities contrasted with the system of care approach.
- **Geographic, demographic, and economic characteristics.** Data from the 1990 Census were used in selecting matching non-system of care communities, including population size, child age distributions, racial and ethnic composition, per capita income, size of the catchment area, the percentage of people living below the poverty level, and the percentage of adults with high school educations. When possible, geographical proximity was also considered in selecting comparison communities to ensure they would be subject to the same State mental health structure and health care changes (e.g., managed care). Statewide adoption of the system of care service delivery approach made this infeasible for one grant community, resulting in the recruitment of a non-system of care community outside of the State. For the Phase II comparison studies, an in-state comparison was selected and the system of care and their comparison communities were located within a few hours of each other in both the urban and the rural settings.
- **Rate of child enrollment.** The number of children and families entering the system of care needed to be large enough to ensure a sample size that would yield sufficient statistical power to detect significant group differences if they existed. Communities had to be able to enroll the number of children needed to meet the required sample size during the proposed study period.
- **Child referral patterns.** Depending on the referring agency, children entering mental health services may differ in terms of presenting problems, risk factors, types of disorders, and mental health needs (Walrath, Nickerson, Crowel, & Leaf, 1998). To facilitate the selection of children with similar degrees and types of emotional and

behavioral problems, similarity in referral patterns was examined when selecting matching communities.

- **Caregiver consent.** The final selection criterion was the community's willingness to participate in the comparison study.

A few potential communities were unwilling to participate because of other planned activities during the proposed study period. The selection of multiple comparison pairs provided the opportunity to examine multiple replications of the comparison study design with pairs that have different geographical and demographic characteristics. Unique to the Phase II studies was the selection of comparison pairs from both a rural and an urban environment. This was the first opportunity to test the comparison study approach in a rural community setting in the mid-West with vastly different geographical and demographic characteristics when compared to the pairs selected in the urban South.

Methods and Study Sample

All children between the ages of 5 and 17.5 at the time they entered services provided by the grant program in the system of care communities were eligible to participate in the comparison studies. To enroll children with behavioral and emotional problems of a similar severity to those served by programs in system of care communities, providers serving children with serious emotional disturbance were identified in the comparison communities. To enroll a similar sample of children in the systems of care and matched comparison communities, an eligibility screening process was applied in the comparison communities to identify children who met the eligibility criteria for the study so that only those children with serious emotional disturbance were enrolled in the study. Children in the comparison communities were determined to be eligible for the study if they had a *DSM-IV* diagnosis and also met one of the following criteria: history of or at risk for out-of-home placement, and/or participation in special education for serious emotional disturbance and/or involvement in the juvenile justice system. Enrollment in each community was closely monitored and selection of children was modified as needed to more closely equate samples in each matched pair. Selecting children with equivalent severity of problems in matched communities created challenges because communities differed in the ways in which families of children with comparable problems could access services.

Recruitment and Data Completion

Phase I

The Phase I comparison study had an enrollment goal of 1,100 children across all six communities. Each individual community had an enrollment goal of 150 to 200 children, depending upon the local agency's enrollment capacity. Enrollment of children and families ended in January 2000, with a total of 1,036 families enrolled (see Table C-3). Six-month interviews, which included 869 families, were completed in June 2000. Through December 2000, 842 families were interviewed at 12 months, 697 families at 18 months, and 475 families at 24 months. Because enrollment continued into January 2000, some children and caregivers were not eligible for their 18- and 24-month interviews before the end of data collection in December 2000. By the end of data collection, 87 percent of families had been approached for their 18-month interview, and 63 percent of families had been approached for their 24-month interview.

**Table C-3
Number of Completed Interviews and Completion Rates for
Each Community at Each Data Collection Point Through August 15, 2003**

	Baseline Interviews	6-Month Interviews	12-Month Interviews	18-Month Interviews	24-Month Interviews
SOC 1	232	200	204	183	143
Comparison 1	217	209	203	193	154
SOC 2	142	111	101	87	63
Comparison 2	100	63	73	55	21
SOC 3	131	109	105	54	33
Comparison 3	214	177	156	126	63
Total	1036	869	842	698	477
Completion Rates		84%	81%	77%	73%

In addition to the number of children and families initially enrolled into the study, the number of families retained in the study over time affects the statistical power to detect differences across communities. Overall, through the end of data collection in December 2000, 84 percent of families had been retained in the study. Retention rates across communities ranged from 73 to 84 percent. The overall retention rate across the four follow-up waves was 80 percent.

Enrollment in the Phase II comparison studies began in August 1999 in the rural communities, and in September 1999 in the urban communities. Prior to the start of the comparison study, enrollment goals were set based on two primary criteria: (a) the number of study participants needed to generalize results from this study to other populations of children with severe behavioral and emotional disorders, and (b) the capacity of local mental health agencies to enroll children into services before entering the study. Given these criteria, goals for study enrollment were set at 225 children in each community. This is the minimum number of children needed, based on power estimates appropriate to the study design, to detect changes in the outcomes of children and family served within each community over the course of the study.

Phase II

Baseline enrollment of children and families into the Phase II comparison studies ended April 30, 2003. A total of 942 children were enrolled into the study across all four communities. As of August 15, 2003, follow-up interviews had been completed with 757 families at 6 months, 642 families at 12 months, 553 families at 18 months, 417 families at 24 months, and 248 families at 30 months (follow-up data collection will continue until May 2004). The number of completed interviews at each assessment point and overall completion rates (determined by number of families who have reached a follow-up assessment period at this stage of the study) for each of the four communities are presented in Table C-4.

Table C-4
Number of Completed Interviews and Retention Rates for
Each Community at Each Data Collection Point Through August 15, 2003

	Baseline Interviews	6-Month Interviews	12-Month Interviews	18-Month Interviews	24-Month Interviews	30-Month Interviews
Urban SOC	202	134	124	98	72	38
Urban Comparison	192	154	130	117	93	49
Rural SOC	320	279	233	211	158	113
Rural Comparison	228	190	155	127	94	48
Total	942	757	642	553	417	248
Completion Rates		89%	85%	86%	79%	72%

Services and Costs Study

Overview

The goal of this study is to describe the types of services used by children and families, children's utilization patterns, and the associated costs. The relationship between service use and outcomes will also be explored. This study uses data from already existing management information systems (MIS's) typically used locally for fiscal purposes (e.g., charge, billing). While some grantees plan to develop new MIS's, or improve old ones, as part of their grant initiative, the *Services and Costs Study* of the national evaluation relies on established systems that are already in place when grant services begin. Because communities vary widely in the completeness, quality, and availability of usable service and cost data, the *Services and Costs Study* will be tailored to individual communities as described below.

Methods and Study Sample

Management information systems vary widely across grantees. Few communities have highly developed management information systems that are linked across agencies and used for continuous quality improvement, program development, reimbursement, third-party billing, and State reporting requirements. Some communities may have little or no electronic service and cost information and few resources to develop MIS's. As a result, grantees participate in the *Services and Costs Study* at varying levels based on the adequacy of their service and cost data. Each grantee's level of MIS development is assessed using a survey. After the survey is completed, communities with sufficiently developed MIS's are identified, their billing data is extracted and analyzed. Billing data are collected for all children participating in the child and family outcome study in the selected communities, since in most cases, cross-agency data can only be collected if an informed consent has been obtained. The communities provide data on comprehensive cross-agency costs incurred over the duration of the program. These data are episodic in nature (multiple service records per individual).

APPENDIX D

MEASURES

Caregiver Report Outcome Measures

Behavioral and Emotional Rating Scale (BERS)

The BERS identifies the emotional and behavioral strengths of children. Whereas most existing assessment measures focus on deficits and problems, the BERS focuses on areas of strength and resiliency. The principal uses of the BERS include identifying children with limited strengths, targeting goals for an individual treatment plan, identifying strengths and weaknesses for intervention, documenting progress in a strength area as a consequence of specialized services, and measuring strengths in research and evaluation projects.

The 52-item checklist includes items that identify emotional and behavioral strengths of children across five dimensions of childhood strengths that correspond to the five subscales in the measure. The dimensions and subscales are Interpersonal Strength, Family Involvement, Intrapersonal Strength, School Functioning, and Affective Strength. Behaviors are rated on a 4-point scale: (0) *not at all like the child*, (1) *not much like the child*, (2) *like the child*, and (3) *very much like the child*.

The BERS has demonstrated test–retest reliability, interrater reliability, and internal consistency (Epstein, Cullinan, Harniss, & Ryser, 1999). Test–retest reliability coefficients for the BERS subscales ranged from .85 to .99 with a 10-day interval between the two ratings. Interrater reliability was tested using a sample of 96 students with emotional and behavioral disorders rated by their special education teachers. Cronbach’s alpha coefficients for the scales were .83 or above. Content validity (Epstein, 1999) and convergent validity (Harniss, Epstein, Ryser, & Pearson, 1999) have been established.

Child and Adolescent Functional Assessment Scale (CAFAS)

The CAFAS is a widely used measure of child functioning. It assesses the degree to which a youth’s mental health or substance abuse disorder is disruptive to his or her functioning in everyday life in each of eight psychosocial domains: the community, the school, the home, substance use, moods and emotions, self-harming behavior, behavior towards others, and thinking. The CAFAS is designed to assess the effects of the child’s challenges and behaviors on his or her ability to function successfully in various life domains. For instance, a youth with a variety of symptoms as indicated on the CBCL may still function successfully in the community, in school, and in relationships with family and friends.

A score is assigned to each subscale by the CAFAS rater to designate the level of impairment the child is experiencing for that life domain. For each subscale, there is a “menu” of behaviors associated with each level of impairment. The four levels of severity are as follows:

- (30) Severe impairment (severe disruption or incapacitation)
- (20) Moderate impairment (major or persistent disruption)
- (10) Mild impairment (significant problems or distress)
- (0) Minimal or no impairment (no disruption of functioning)

Good interrater reliability has been found among a variety of raters, including mental health intake workers, providers, lay raters, and graduate students. In a recent study, Hodges & Wong (1996) reported that the most behaviorally oriented scales (e.g., community role and home role) had the highest reliability, with correlations for the total CAFAS score ranging from .92 to .96 across four different samples. Intra-class correlations for total scores ranged from .84 to .89. Adequate test–retest reliability has also been reported (Cross & McDonald, 1995). A variety of studies (e.g., Hodges, Lambert, & Summerfelt, 1994) demonstrated the construct, concurrent, and discriminant validity of the CAFAS when used with child clinical samples.

Child Behavior Checklist (CBCL)

The CBCL is designed to provide a standardized measure of symptoms and behavioral and emotional problems among children aged 4 through 18 years. The CBCL has been widely used in children’s mental health services research and for clinical purposes to assess social competence, behaviors, and feelings. The CBCL elicits a rich and detailed description of behaviors and symptoms that provides information beyond diagnosis.

Although it does not yield diagnoses, the CBCL assesses children’s symptoms along a continuum and provides a total problems score; two broadband syndrome scores; eight narrow-band syndrome scores; and competence scores in activities, social, and school.

Achenbach (1991) has reported a variety of information regarding internal consistency, test–retest reliability, construct validity, and criterion-related validity. Good internal consistency was found for the Internalizing, Externalizing, and Total Problems scales ($\alpha > = .82$). The CBCL demonstrated good test–retest reliability after 7 days (Pearson r at or above .87 for all scales). Moderate to strong correlation with the Connor Parent Questionnaire and the Quay-Peterson scale (Pearson r coefficients ranged from .59 to .88) suggested the construct validity of the CBCL. The CBCL was, for most items and scales, capable of discriminating between children referred to clinics for needed mental health services and those youth not referred (Achenbach, 1991). A variety of other studies have also shown good criterion-related or discriminant validity (e.g., Barkley, 1988; McConaughy, 1993).

The instrument has been nationally normed on a proportionally representative sample of children across income and racial and ethnic groups. Racial and ethnic differences in total and subscale scores of the CBCL disappeared when controlling for socioeconomic status, suggesting a lack of instrument bias related to differences in race and ethnicity.

Caregiver Strain Questionnaire (CGSQ)

The CGSQ assesses the extent to which caregivers are affected by the special demands associated with caring for a child with emotional and behavioral problems. It is currently being used in several studies of children’s mental health services. The CGSQ provides a way to assess the impact that participating in system of care services has on the strain caregivers and families may experience (e.g., determining whether strain lessens over time as better services and supports are provided by the system of care).

The CGSQ contains 21 items that assess strain experienced by caregivers in the last 6 months related to the care of a child with emotional and behavioral challenges. It is comprised of three related dimensions of caregiver strain:

- **Objective Strain.** (11 items) Assesses the extent to which observable negative events or consequences related to the child’s disorder have been a problem for the family, such as

- trouble with neighbors, disrupted family relationships, routines, and social activities, and loss of personal time.
- **Subjective-externalized Strain.** (4 items) Relates to negative feelings about the child such as anger, resentment, or embarrassment.
 - **Subjective-internalized Strain.** (6 items) Refers to the negative feelings that the caregiver experiences such as worry, guilt, and fatigue.
 - **Global Strain.** (All items) Provides an indication of the total impact on the family.

The CGSQ is a 5-point scale with the following response options: (1) *not at all*, (2) *a little*, (3) *somewhat*, (4) *quite a bit*, and (5) *very much*.

The CGSQ demonstrated good reliability and validity in previous research. Confirmatory factor analysis findings from previous research with the CGSQ have supported the existence of three related dimensions of caregiver strain (Brannan et al., 1998). The three CGSQ subscales demonstrated adequate internal consistency with alpha coefficients ranging from .73 to .91 (Heflinger, Northrup, Sonnichsen, & Brannan, 1998). In addition, the CGSQ subscales were found to correlate with measures of family functioning and caregiver distress in expected ways, providing evidence of construct validity (Brannan et al., 1998). The predictive validity of the CGSQ is supported by findings that the prediction of service utilization pattern by the CGSQ was above that provided by measures of the child's clinical and functional status (Foster, Summerfelt, & Saunders, 1996; Lambert, Brannan, Breda, Heflinger, & Bickman, 1998).

Educational Questionnaire (EQ)

The EQ was developed to collect information on children's educational status and their experiences in school during the past 6 months. The EQ contains 21 questions, including items about school (first grade through twelfth grade) attendance; grade level; school achievement; type of school setting (e.g., special or alternative school); reasons for placements; special education; overall academic performance; and whether the child has been suspended, detained, or expelled from school. The final items on the questionnaire assess availability and effectiveness of help (from the school) to meet the educational, behavioral, and/or emotional needs of the child.

There is no formal reliability and validity information for the EQ because items included on the questionnaire do not measure a single educational domain. However, the EQ has been reviewed and revised by experts with experience and knowledge in special education and education in general.

Restrictiveness of Living Environments and Placement Stability Scale–Revised Version (ROLES–R)

Originally developed to operationalize the concept of restrictiveness, this scale incorporates an adapted version of the Restrictiveness of Living Environments Scale (ROLES) with a Placement Stability Scale. In the original scale, ratings of restrictiveness were associated with each of the living arrangements or placements. In this revised version, the ratings are not calculated but valuable information about the type of placement and length of stay is captured.

Collecting information regarding the nature of children's living environments helps determine how the type and number of living arrangements may affect children's lives. For instance, children with fewer changes in living environments within a 6-month period may experience more stability.

The ROLES–R documents the settings in which children have lived (starting with the most recent settings) during the past 6 months. There are 27 placement categories, including the following:

- Independent, living by self
- Living independently in community with minimal supervision
- Two parents/caregivers, at least one biological
- Biological mother only, without partner
- Camp
- Supervised independent living
- Foster care

No formal reliability and validity information is available on the original ROLES; however, expected relationships have been found between levels of restrictiveness, as assessed with the original ROLES, and programmatic variables. The original ROLES was used to document changes in the restrictiveness of placements over time as a quality assurance indicator for children in foster care (Thomlison, 1993) and as a process outcome for a therapeutic case management program for children with severe emotional disturbance (Yoe, Bruns, & Burchard, 1995).

Youth Report Outcome Measures

Delinquency Survey (DS)

The Delinquency Survey gathers information reported by youth about their delinquent behaviors such as contact with law enforcement and juvenile justice. The questionnaire consists of 25 items that assess the youth's behaviors toward others in the community, and contact with law enforcement, including criminal offenses, arrests, and probation. Nineteen of the 25 items ask specific questions about the youth's delinquent acts, such as fire setting, stealing, and property damage. These 19 items are coded along a 3-point scale that measures the frequency of these acts: (1) *none*, (2) *one time*, and (3) *two or more times*.

There is no formal reliability and validity information for the DS. However, field testing and review of the measure have been conducted in the comparison study communities funded in 1993 and 1994. Based on reliability analysis of the national evaluation data from grant communities funded in 1997–98, Cronbach's alpha coefficient for the 19 delinquent act items was .83.

Substance Abuse Survey (SUS–AB)

The SUS–AB provides important information regarding the self-reported substance abuse of the children and youth in the national evaluation.

The SUS–AB has two parts:

- SUS–A. The SUS–A collects information about the frequency of a youth's substance use, including use of cigarettes, alcohol, and other drugs.
- SUS–B. The SUS–B focuses on the consequences of substance use that youth have experienced ever and during the past 6 months. The SUS–B is adapted from the Child and Adolescent Functional Assessment Scale (CAFAS) Parent Report with permission of the author and is for use only in the CMHS national evaluation.

SUS–A. The first nine items measure a youth’s use of alcohol (including history and frequency of drinking behaviors) and cigarettes. The next 12 items focus on the youth’s use of illegal substances. The remaining items assess the youth’s illicit use of prescription drugs and use of nonprescription or over-the-counter drugs for recreational purposes. Response options for the first nine items include yes/no and multiple choice. Response options for the next 12 items include yes/no (e.g., ever used substance, yes or no), fill-in-the-blank (e.g., age at first usage, number of times used in past 30 days), and multiple choice.

SUS–B. Twenty-one items assess the consequences of the youth’s alcohol or drug use. Questions ask about the youth’s lifetime experiences (ever) and the consequences experienced in the past 6 months. Response options for the SUS–B are yes/no (were consequences of usage experienced, yes or no).

Based on reliability analysis of the national evaluation data from grant communities funded in 1997–98, Cronbach’s alpha coefficient for the items on lifetime substance use on the SUS–A (SUS–A Items 1, 6, 10, 11a, 12a, 13a, 14a, 15a, 16a, 17a, 18a, 19a, 20a, and 21a) was .84. Cronbach’s alpha coefficient for the lifetime consequence items on the SUS–B (all the a. items on the SUS–B, e.g., Items 1a, 2a, 3a, etc.) was .89.

Service Experience Measures of the National Evaluation

Family Satisfaction Questionnaire–Abbreviated Version (FSQ–A)

The FSQ–A assesses the caregiver’s satisfaction in the past 6 months. It contains one screening question followed by 14 items divided into two parts. The initial screening question asks whether the caregiver, youth, and/or his or her family have received any services in the past 6 months. If not, the remainder of the questionnaire is skipped.

The first part of the FSQ–A contains seven items that assess the caregiver’s satisfaction with services as a whole, the child’s progress, and the cultural competence and family-focused nature of services. Respondents report their satisfaction on a 5-point scale: (1) *very dissatisfied*, (2) *dissatisfied*, (3) *neutral*, (4) *satisfied*, and (5) *very satisfied*. The second part of the FSQ–A contains seven items that assess whether the services the family received improved the caregiver’s (or other family member’s) ability to work for pay, and quantifies the impact in terms of days worked.

The measures from which the satisfaction items were extracted have demonstrated internal consistency in their original forms. The items collected for the abbreviated versions also demonstrated internal consistency. Based on reliability analysis of the national evaluation data from grant communities funded in 1997–98, Cronbach’s alpha coefficient for the seven satisfaction rating items (Item 1 through Item 7) was .88.

Multi-Sector Service Contact Questionnaire (MSSC)

The MSSC assesses the types and frequencies of services children and families receive across different service settings and child-serving sectors as well as the caregiver’s perceptions about whether services met the child and family’s needs. The MSSC identifies the services received; service settings; and the location, frequency, and sequence of services for 22 different types of services.

Based on reliability analysis of the national evaluation data from grant communities funded in 1997–98, Cronbach’s alpha coefficient was .98 for the 22 items (Items 3, 4, 5, etc.) that asked about whether a child received services or not in the past 6 months.

Youth Satisfaction Questionnaire–Abbreviated Version (YSQ–A)

The YSQ–A assesses youth satisfaction in the past 6 months. It contains one screening question followed by eight satisfaction-related items. The screening (initial) question asks whether the youth or their family have received any services in the past 6 months. If not, the remainder of the questionnaire is skipped.

The next seven items assess youth satisfaction with services as a whole, the youth’s progress, and the cultural competence and individualization of services received. Respondents report their satisfaction on a 5-point scale: (1) *very dissatisfied*, (2) *dissatisfied*, (3) *neutral*, (4) *satisfied*, and (5) *very satisfied*. The last item asks whether services were helpful, and if so, what was the most helpful thing about the services received.

The measures from which the satisfaction items were extracted have demonstrated internal consistency in their original forms. The items collected for the abbreviated versions also demonstrated internal consistency. Based on reliability analysis of the national evaluation data from grant communities funded in 1997–98, Cronbach’s alpha coefficient for the seven satisfaction rating items (Items 1 through 7) was .89.

APPENDIX E

Study Enrollment and Program Interview Completion as of April 2003

Community	Descriptive Sample	Outcome Sample ^a	Eligible for Interview at Each Assessment Point					Completed Interview at Each Assessment Point					Interview Completion Rate at Each Assessment Point				
			6-Month	12-Month	18-Month	24-Month	30-Month	6-Month	12-Month	18-Month	24-Month	30-Month	6-Month	12-Month	18-Month	24-Month	30-Month
Grant Communities Funded in 1997 and 1998																	
1	500	28	28	28	28	28	28	6	21	20	18	10	21.4%	75.0%	71.4%	64.3%	35.7%
2	788	306	306	306	306	250	183	264	262	260	200	132	86.3%	85.6%	85.0%	80.0%	72.1%
3	144	50	3	3	2	6	3	2	1	1	1	0	66.7%	33.3%	50.0%	16.7%	0.0%
4	455	114	111	107	86	71	50	65	48	25	16	7	58.6%	44.9%	29.1%	22.5%	14.0%
5	451	86	86	84	63	59	44	61	58	55	39	17	70.9%	69.0%	87.3%	66.1%	38.6%
6	665	448	380	341	246	217	156	291	233	163	127	84	76.6%	68.3%	66.3%	58.5%	53.8%
7	159	96	95	75	44	27	10	33	29	22	7	3	34.7%	38.7%	50.0%	25.9%	30.0%
8	316	316	306	274	253	215	186	136	117	57	44	15	44.4%	42.7%	22.5%	20.5%	8.1%
9	260	151	128	105	81	58	37	77	68	61	43	27	60.2%	64.8%	75.3%	74.1%	73.0%
10	405	176	130	103	80	30	0	54	52	30	14	0	41.5%	50.5%	37.5%	46.7%	—
11	500	208	194	171	121	83	38	147	123	82	53	25	75.8%	71.9%	67.8%	63.9%	65.8%
12	246	80	77	69	56	54	42	35	21	16	11	9	45.5%	30.4%	28.6%	20.4%	21.4%
13	223	108	93	80	64	39	25	66	43	28	19	5	71.0%	53.8%	43.8%	48.7%	20.0%
14	259	188	164	124	88	63	31	114	84	56	24	15	69.5%	67.7%	63.6%	38.1%	48.4%
15	350	189	153	128	92	79	46	102	62	46	30	15	66.7%	48.4%	50.0%	38.0%	32.6%
16	218	154	145	139	114	92	54	117	94	66	46	26	80.7%	67.6%	57.9%	50.0%	48.1%
17	279	165	155	142	111	81	48	122	110	87	57	35	78.7%	77.5%	78.4%	70.4%	72.9%
18	390	114	43	34	24	22	5	10	9	0	1	0	23.3%	26.5%	0.0%	4.5%	0.0%
19	144	95	84	61	43	31	8	51	29	20	6	2	60.7%	47.5%	46.5%	19.4%	25.0%
20	181	183	167	139	61	40	33	153	121	45	34	23	91.6%	87.1%	73.8%	85.0%	69.7%
21	742	322	288	225	152	111	70	234	155	97	67	39	81.3%	68.9%	63.8%	60.4%	55.7%
22	273	158	144	121	102	83	63	93	61	42	36	23	64.6%	50.4%	41.2%	43.4%	36.5%
23	206	43	22	10	0	0	0	17	9	0	0	0	77.3%	90.0%	—	—	—

^a Expected outcome sample for grant communities funded in 1997 and 1998 is 284 and for grant communities funded in 1999 and 2000 is 276.

Community	Descriptive Sample	Outcome Sample ^a	Eligible for Interview at Each Assessment Point					Completed Interview at Each Assessment Point					Interview Completion Rate at Each Assessment Point				
			6-Month	12-Month	18-Month	24-Month	30-Month	6-Month	12-Month	18-Month	24-Month	30-Month	6-Month	12-Month	18-Month	24-Month	30-Month
Grant Communities Funded in 1999 and 2000																	
24	222	38	39	16	8	0	0	16	5	0	0	0	41.0%	31.3%	0.0%	—	—
25	123	114	68	58	53	32	13	62	49	43	26	10	91.2%	84.5%	81.1%	81.3%	76.9%
26	359	82	29	9	1	0	0	14	7	0	0	0	48.3%	77.8%	0.0%	—	—
27	174	14	14	6	0	0	0	8	4		0	0	57.1%	66.7%	—	—	—
28	264	177	158	125	49	16	0	73	46	12	8	0	46.2%	36.8%	24.5%	50.0%	—
29	59	19	18	16	11	7	0	14	9	4	0	0	77.8%	56.3%	36.4%	0.0%	--
30	193	126	81	59	39	33	7	70	38	24	16	5	86.4%	64.4%	61.5%	48.5%	71.4%
31	38	36	19	16	4	0	0	7	1	1	0	0	36.8%	6.3%	25.0%	—	—
32	94	61	42	30	16	13	5	36	29	13	10	2	85.7%	66.7%	81.3%	76.9%	40.0%
33	453	247	196	140	88	49	13	128	63	25	8	1	65.3%	45.0%	28.4%	16.3%	7.7%
34	151	15	8	4	0	0	0	2	0		0	0	25.0%	0.0%	—	—	—
35	88	82	77	64	41	26	12	70	51	33	20	8	90.9%	79.7%	80.5%	76.9%	66.7%
36	262	175	161	138	103	85	43	149	125	85	59	5	92.5%	90.6%	82.5%	69.4%	11.6%
37	354	161	126	108	75	30	0	92	56	30	8	0	73.0%	51.9%	40.0%	26.7%	—
38	202	74	68	53	26	14	0	51	27	15	2	0	75.0%	50.9%	57.7%	14.3%	—
39	200	141	125	89	59	25	0	85	39	3	3	0	68.0%	43.8%	5.1%	12.0%	—
40	195	178	149	114	75	28	2	84	60	35	15	0	56.4%	52.6%	46.7%	53.6%	0.0%
41	489	277	229	186	140	66	22	136	102	56	18	6	59.4%	54.8%	40.0%	27.3%	27.3%
42	96	56	40	34	25	7	0	24	13	12	0	0	60.0%	38.2%	48.0%	0.0%	—
43	34	22	10	8	0	0	0	7	0	0	0	0	70.0%	0.0%	—	—	—
44	180	125	108	83	48	22	8	86	62	34	16	5	79.6%	74.7%	70.8%	72.7%	62.5%
45	444	178	124	63	18	5	0	92	28	8	1	0	74.2%	44.4%	44.4%	20.0%	—
Total	12828	6176	5191	4288	3096	2197	1285	3556	2615	1712	1103	554	68.5%	61.0%	55.3%	50.2%	43.1%

^a Expected outcome sample for grant communities funded in 1997 and 1998 is 284 and for grant communities funded in 1999 and 2000 is 276.