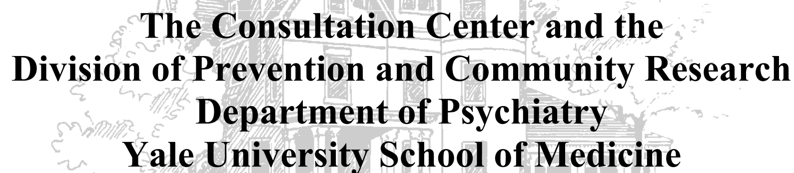
Children's Intensive Services (CIS) Evaluation Report

First Year Performance (Revised Certification Standards)



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Division of Prevention and Community Research
Department of Psychiatry
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First Year Performance
(Revised Certification Standards)

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Executive Summary

This report summarizes performance of Children's Intensive Services (CIS) during its first year of operation under the revised program certification standards implemented in April 2004. The Consultation Center at Yale University School of Medicine is responsible for the ongoing statewide evaluation of the implementation of CIS – an acute hospital diversion program that provides community-based services for youth (age 0 to 21) at risk for hospitalization or out-of-home placement. The CIS program is intended to last for a period of up to 6-months based upon the continuing behavioral health needs of the child and family. The evaluation examines service utilization patterns for CIS clients served statewide through all certified CIS provider agencies. During the first 12-months of program operations, nine community-based mental health agencies were certified to provide CIS services. Major findings from the report are summarized below:

Profile of Program Admissions

Results from the ongoing evaluation for CIS demonstrate the program's ability to meet clearly specified service implementation goals and provide appropriate services to children across the state with identified serious emotional and behavioral disorders.

- The program provided services to 2,606 cases involving over 2,479 children and adolescents across the state.

Demographic Characteristics of Children Served by the CIS Program:

- The average age of children admitted to CIS was 11 years 4 months. Very few children were 2 years or younger (2%); 12% were between the ages of 3 and 5; 29% between the ages of 6 and 10; 45% between the ages of 11 and 15; and 12% were 16 or older at the point of admission.

- Over half of clients served (57%) were male.

- Most children admitted to CIS during the evaluation period were identified as White (54%), Hispanic (13%), Bi- or Multi-racial (13%), or African American (9%). The representation of minority children in CIS caseloads varied by provider; those agencies serving urban locations indicated higher percentages of minority children and adolescents among their active caseload.

- Referrals to CIS came primarily from self-referrals or family and friends (25%), followed by referrals from the school system (16%), social service agencies (13%), and inpatient psychiatric facilities (10%), and DCYF (8%).

Clinical Characteristics of Children Served by the CIS Program:

- Diagnostic and clinical assessment data indicate that the CIS program serves a group of children and adolescents with significant mental health needs. Over half of cases admitted to CIS (55%) presented with diagnoses in two or more primary diagnostic categories.

- The majority of cases (62%) admitted to CIS presented with a behavioral disorder diagnosis. Frequently endorsed behavioral diagnoses included Attention Deficit Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder (ODD), and Conduct Disorder.

- Mood disorders constituted the second most prevalent diagnostic category for children entering CIS (33% of admissions) including Major Depressive Disorder, Bipolar Disorder, or Dysthymia.

- Anxiety and adjustment disorders were also prevalent among CIS admissions (20% of admissions for each).

- The majority of children entering CIS were experiencing significant problems in their primary support group or family life (77%), educational or academic life (72%), or social functioning (63%). Significant impairment in socioeconomic security (21%) or housing (14%) was also observed. Approximately 16% of cases also indicated evidence of some legal system involvement per clinician report.

- Clinician ratings on a number of indicators of clinical functioning including the Modified Children's Global Assessment Scale, Ohio Problem and Functioning Scales, and the Child and Adolescent Functioning Assessment Scale each indicated significant levels of clinical impairment, problem behavior, and impaired functioning among CIS clients.

Levels of Care for Children Served in the CIS Program:

One significant feature of the CIS program, introduced in the revision to program certification standards, was the use of specified levels of care based on child impairment and need for supportive services. Levels of care range from Crisis Management (Level 1) to Maintenance Care (Level 4).

- Seventy-nine percent (79%) of children were admitted to the CIS program at the Intermediate level of care (Level 3), with only a small percentage of children entering through more intensive care levels (15% at Level 2, 1% at Level 1).

- Results of the ongoing evaluation indicate that admission to care levels based upon clinical functioning was consistent with program standards.

- Changes in level occurred during the course of care in CIS for approximately 38% of cases. In general, cases tended to move from more to less intensive levels of care over time, rather than the converse.

Profile of Service Delivery Patterns

- Analyses reveal that median weekly average service contact for levels of care are consistent with clinical contact levels as indicated in the revised program certification standards. Children at Level 1 received a median of 8.6 hours of clinical service per week; children at Level 2 received a median of 5.4 hours, children at Level 3 received a median of 3.7 hours, and children at Level 4 received a median of 1.5 hours of clinical service per week.

- Services included a range of individual, family, and group therapy (accounting for approximately 78% of service delivery time) and therapeutic case management services (accounting for about 16% of service delivery time), as well as access to emergency/crisis services, individual and family assessment, and medication-related services.

- Approximately 64% of service delivery occurs in home and community settings.

- Contact with masters level and licensed masters level clinicians account for the greatest percentage of service contact hours (46% and 17% respectively). Clinical contact with providers of bachelor's level or below account for 35% of contact hours (primarily through the delivery of therapeutic case management services). Access to nursing, doctoral level, and medical doctor staff was also provided for additional services including medication-related services.

Profile of Clients Discharged from the CIS Program

- A total of 1,517 cases were discharged from CIS during the first year of operations under revised certification standards.

- Median length of time from admission to discharge (after excluding cases admitted to CIS before the implementation of revised certification standards) is approximately 5.4 months. On average, children spend approximately 4.8 months in Levels 1 through 3 – the most intensive service levels of the program.

- Children discharged from the program made statistically significant improvements in clinical functioning and reductions in problem behavior.

- The most common reason for discharge was an indication that therapeutic goals had been accomplished (44%), though a significant number of clients discharge for other reasons including treatment drop-out (9%) or a move from the area (6%). A change to the collection of discharge data for evaluation purposes has been implemented in October 2005 to identify types of referrals made to clients leaving the program.

Profile of Selected Case Examples of CIS Clients Served

Four cases were selected to provide a sample of the types of cases served by CIS providers under the revised program certification standards. These examples each reflect a single case experience; within each level of care, children vary significantly across demographic and clinical dimensions. Names have been changed to protect the identity of children in care.

- "Susan" is a 12-year old Caucasian female referred for services by her school. She lives at home with her parents. Susan's clinician diagnosed her with major depressive disorder, and she was admitted to CIS at Level 1 (Crisis). In addition to major depression, Susan's clinician identified significant challenges for Susan in her family and school domains. Ratings of clinical functioning on the M-CGAS and Ohio Scales reinforced the level of clinical impairment, and the need for intensive mental health service involvement. Susan's total score on the CAFAS (110) reveals marked impairment in overall functioning, with particular problems in school role demands (e.g., inappropriate behavior and non-compliance in school), mood and emotional regulation (e.g., significant depression), substance use (e.g., weekly use of alcohol or drugs), and thought processing (e.g., frequent distorted thinking). During treatment, Susan had regular contact with her clinicians, receiving a mix of direct clinical services, therapeutic case management, and other necessary services. Treatment initially included significant levels of service related to crisis management. Susan was transitioned to Level 2 (Standard Care) and, finally, Level 3 (Intermediate Care). At this point, she was also receiving a mix of individual and family therapy, as well as regular visits related to medication management. Case management activities continued throughout the course of treatment. She was discharged from the CIS program about 7 months after admission. The clinician indicated that therapeutic goals had been accomplished, and that Susan would remain at home with her parents at the time of discharge. Clinician ratings on the M-CGAS confirmed that Susan's functioning had improved significantly during her treatment in the program. Ratings on the CAFAS had also improved dramatically at discharge (total score of 30 points at discharge), with an indication that problem domains had reduced to only minimal impairment. She was re-admitted to the CIS program two months later following another referral from her school, and she remained in the program as of March 2005.

- "Aiesha" is a 5-year old African American female referred to CIS by a social service agency and living with family in subsidized public housing. This was Aiesha's second admission to CIS, following a very brief period in care completed during the first month of the revised program standards. Aiesha's clinician identified the presence of learning, communication, and disruptive behavior disorders, and observed that the family was facing problems with housing. Ratings of clinical functioning on the MCGAS and Ohio Scales reinforced the level of clinical impairment, and the need for intensive mental health service involvement. She was admitted to the program at Level 2 (Standard), but her level of service intensity was later reduced to Level 3 (Intermediate Care). Treatment involved a mix of individual, family, and group therapy, as well as regular visits related to medication assessment and management and therapeutic case management services. She was subsequently discharged four months after admission when her family moved from the area.

- "Mike" is a 16-year old Caucasian male diagnosed with Oppositional Defiant Disorder and significant impairment of the parent-child relationship. He was admitted to the program at Level 3 (Intermediate Care). Mike's clinician observed that he was having significant difficulty in family, school, and social settings. Ratings of problem behavior and clinical functioning by the clinician confirmed the level of difficulty with which Mike was coping. Mike's total score on the CAFAS (140) reveals severe impairment in overall functioning, with particular problems in home and school role demands (e.g., serious or chronic inappropriate behavior and non-compliance in both settings), and moderate levels of

impairment in behavior toward others (e.g., poor judgment and impulsive behavior toward others), regulating his mood and emotions, and concerns about potential self-harm (e.g., repeated thoughts of harming himself). Despite some missed or cancelled appointments, Mike was seen regularly by his clinician throughout the course of treatment. Treatment involved a mix of primarily individual therapy and therapeutic case management services, with services generally taking place in community locations outside the office. Mike also participated in a family therapy session and had a visit with a physician to assess medication needs. Mike remained at Level 3 during his five months of treatment and was then discharged from the program and remained home with his parents. His clinician indicated that treatment goals had been accomplished at the point of termination. Improvements in Mike's ratings of clinical functioning and decreased level of problem behavior provided further evidence of his treatment progress in CIS. CAFAS scores had also improved significantly (total score of 90 points at discharge), particularly in the areas of home role demands, behavior toward others, and regulation of his mood and emotions.

- Finally, "Luis" is an 8-year old Hispanic male re-admitted to the CIS program at Level 4 (Maintenance Care) following an earlier episode at Level 3 (Intermediate Care) that had ended approximately 5 weeks earlier. He was referred by family members and diagnosed with Attention Deficit Hyperactivity Disorder (ADHD), a mood disorder, and enuresis (persistent 'bed wetting' unrelated to a medical condition). Luis's clinician observed that he was facing significant challenges in both school and social settings. Clinician ratings of problem behavior and functioning confirmed that Luis would benefit from intensive services consistent with admission to CIS at the maintenance level. Treatment involved a mix of family therapy and therapeutic case management services, as well as occasional individual therapy sessions with his clinician. Luis remain the CIS program for approximately 6 ½ months and was then discharged from the program. His clinician indicated that treatment goals had been accomplished.

This report summarizes performance of Children's Intensive Services (CIS) during its first year of operation under the revised program certification standards implemented in April 2004. The Consultation Center at Yale University School of Medicine is responsible for the ongoing statewide evaluation of the implementation of CIS – an acute hospital diversion program that provides community-based services for youth (age 0 to 21) at risk for hospitalization or out-of-home placement. The CIS program is intended to last for a period of up to 6-months based upon the continuing behavioral health needs of the child and family. The evaluation examines service utilization patterns for CIS clients served statewide through all certified CIS provider agencies. During the first 12-months of program operations, nine community-based mental health agencies were certified to provide CIS services. These agencies included the Community Counseling Center of Pawtucket; East Bay Mental Health Center; Family Services of Rhode Island; the Kent Center; Mental Health Services of Cranston, Johnston, and NW RI (Metro West); Newport County Mental Health; NRI Community Services, Inc.; the Providence Center; and South Shore Community Mental Health Center. A 10th service provider, Child and Family Services of Newport, was certified to begin delivering services to CIS clients in March, 2005, but is not included in the present report.

Children's Intensive Services was developed out of recognition of the need for a community and home-based mental and behavioral health program to meet the needs of children with serious emotional disorders (SED). Children with SED often present with mental health issues that place children at risk for placements in more restrictive living arrangements including a psychiatric facility, residential placement, or juvenile detention setting. Children's Intensive Services is intended to provide an array of clinically oriented, community-based services and supports to address the emotional and behavioral needs of the child and reduce risk for such placements. The program provides a continuum of services including individual, family, and group therapy; therapeutic case management; crisis evaluation and treatment services; individual and family assessment; medication-related services; and other therapeutic support services. Intensive services and supports are provided to the child and family to reduce likelihood of preventable inpatient admissions, support more timely returns to the community in situations where such placements are necessary, and provide critical community-based supports to children with acute needs.

A series of evaluation reports prepared by staff at The Consultation Center at Yale examined service delivery patterns within CIS beginning in 2000 through the June 2003. These initial reports revealed that clients enrolled in the program received a median average of approximately 2 hours service per week. Clients received a mix of primarily clinical and case management services. While these reports provided evidence of the therapeutic merit of the program, they also prompted the development of revised program certification standards in the fall 2003. The revised standards introduced specific criteria for admission to CIS within four defined levels of care, as well as specific service requirements for each level. Nine agencies were certified to provide CIS under the revised program standards in April and May 2004. This report provides information on the demographic and clinical characteristics of children and adolescents served by CIS during its first year of operation under revised certification standards, the amount and types of services provided to children, and the status of those discharged from CIS.

Profile of Program Admissions

During the first year of program operations under the revised standards, CIS providers delivered services to 2,479 children representing 2,606 admissions to the program. A significant percentage (19%) of these admissions to the program were already admitted to CIS prior to implementation of the revised standards and continued in the program following agency re-certification. Approximately 95% of children opened to CIS experienced only one episode of care during the first 12-month period under the new standards; 126 children experienced at least one discharge from CIS and subsequent re-admission to a new episode of care. Data presented in this report was analyzed at the episode-level for each admission to CIS, so children with more than one episode of care are included multiple times in frequency data presented in the report.

Demographic Characteristics of Children Served by the CIS Program: The average age of children admitted to CIS is 11.3 years. Figure 1 provides the age breakdown of children admitted to CIS; the program is primarily targeted to children above 3 years of age as specialized standards are planned for younger children. Males comprised 57% of all admissions to CIS during its first year under the revised standards. Information on race and ethnicity of children admitted to the CIS program is provided in Figure 2. Most of the children admitted to CIS during the 12-month period identified as White (54%), Hispanic (13%), Bi- or Multi-racial (13%), or African American (9%). This representation of minority children in CIS caseloads varied by provider; those agencies serving urban locations indicated higher percentages of Hispanic and African American children and adolescents among their active caseload.

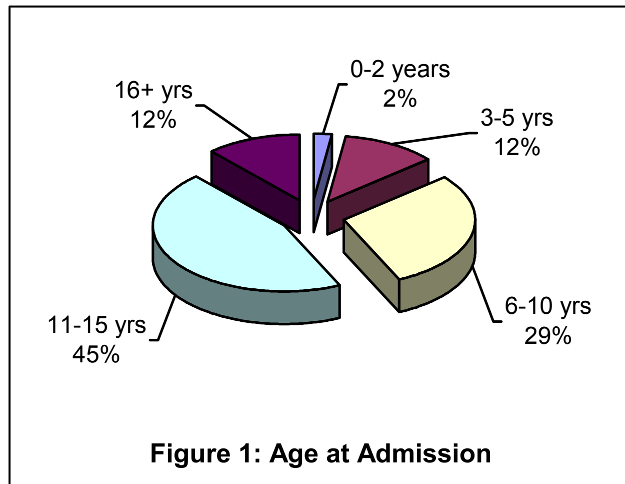


Figure 1: Age at Admission

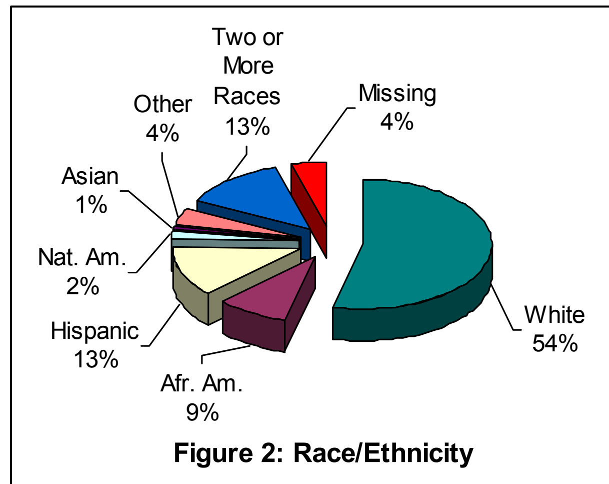


Figure 2: Race/Ethnicity

Residential information indicates that at admission to CIS, 69% of children reside in a private residence, and an additional 11% reside in subsidized public housing. Approximately 5% reside in a foster home setting and nearly 3% in a group home or residential facility. Very few children (about 1%) were indicated as homeless or in temporary housing at the time of admission; data on residence were unavailable for 10% of new admissions.

As shown in Figure 3, children referred by self, family, or friend constituted the largest portion of new admissions for the quarter (25%), followed by children referred by school systems or educational agencies (16%) and children referred by social service agencies (13%). Because CIS is intended to serve as a bridge between Rhode Island's inpatient psychiatric facilities and

outpatient services, the number of children referred by inpatient psychiatric facilities represents an important performance monitoring item for CIS providers. During the first year of program operations under the revised standards, referrals from inpatient psychiatric facilities accounted for nearly 10% of admissions to the program. Children referred by DCYF (intake, direct service, and probation) accounted for 8% of admissions.

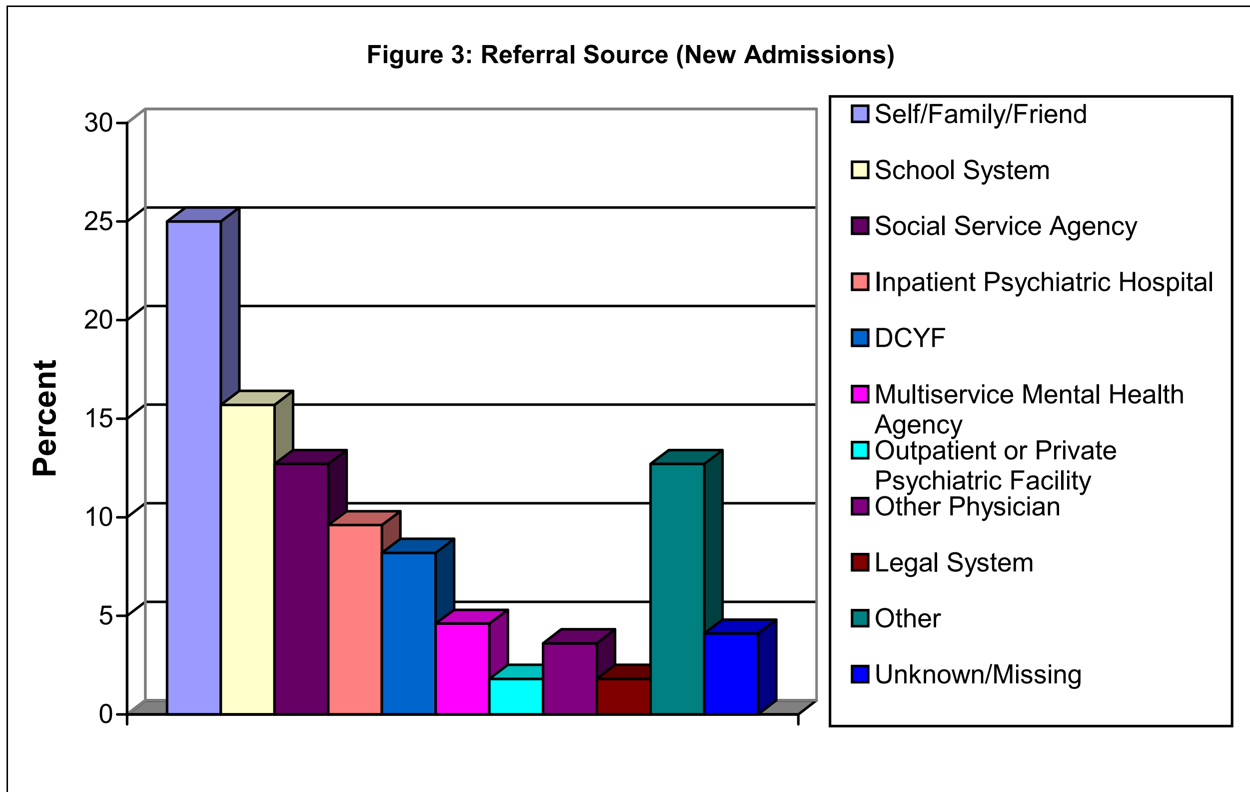
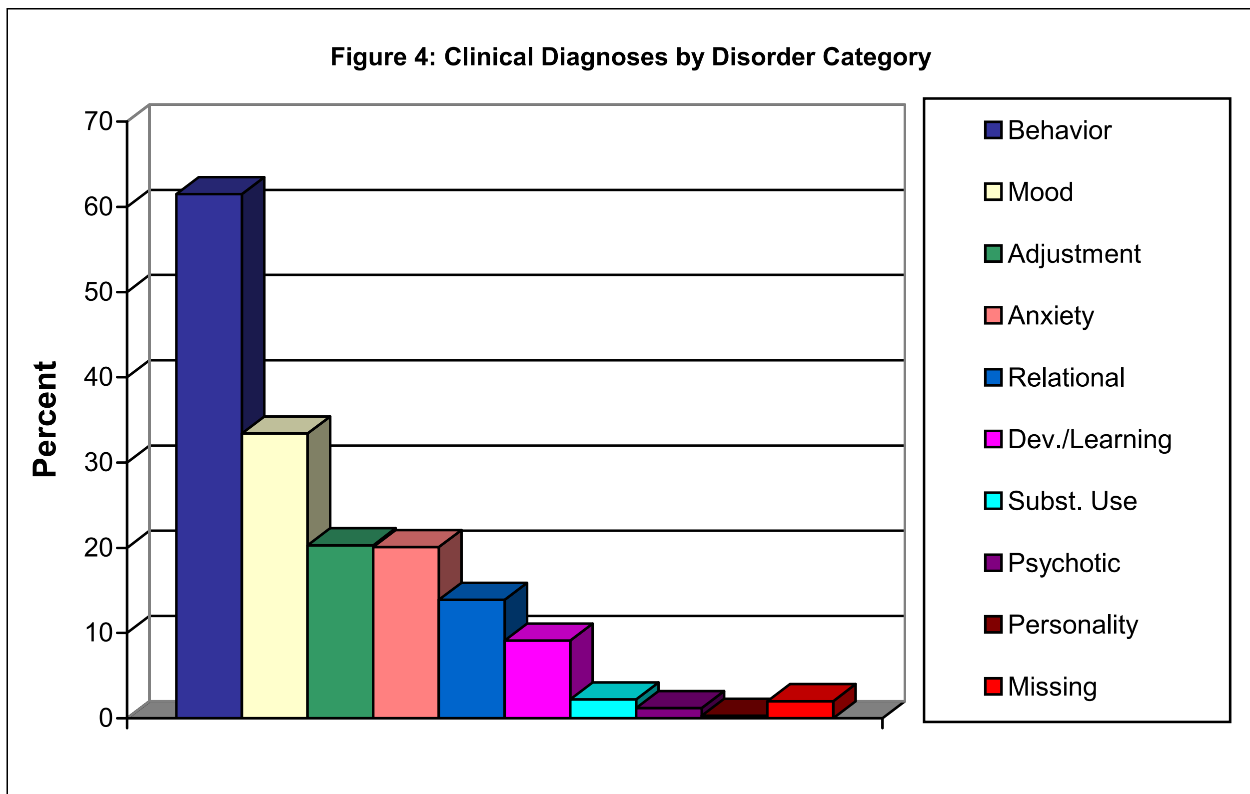


Figure 3: Referral Source (New Admissions)

Clinical Characteristics of Children Served by the CIS Program: Eligibility for CIS is based on the child's having an identified Axis I (Clinical Disorders) or Axis II (Personality Disorders and Mental Retardation) diagnosis as specified in the Diagnostic and Statistical Manual (current edition) and a major functional impairment (defined as a substantial interference with or limitation of a child's achievement or maintenance of one or more developmentally appropriate social, behavioral, cognitive, communicative, or adaptive skills), which has lasted or is expected to last at least one year. CIS is intended to serve children with SED who require more intensive community- and family-based services than available in a traditional outpatient service modality or for who there is an identified risk for out-of-home placement or placement in a more restrictive setting (due to presenting concerns with behavior).

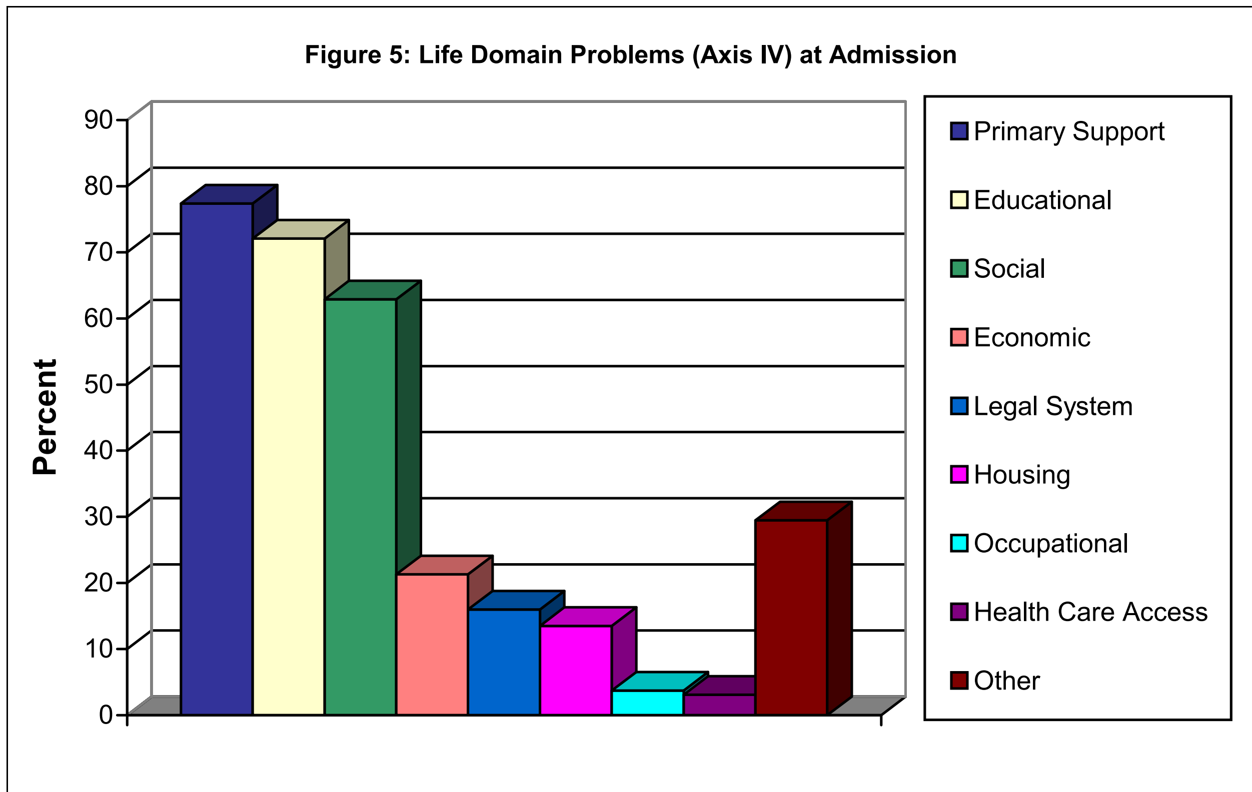
Diagnostic information was provided for all children admitted to CIS. Agencies are able to provide up to three diagnoses for Axis I and two diagnoses for Axis II. Diagnostic information was further collapsed into nine categories based upon the primary feature of clinical diagnosis. This information is presented in Figure 4. Over half of cases opened to CIS (55%) presented with diagnoses in two or more categories. The majority of cases (62%) opened to CIS presented with a diagnosed behavioral disorder including Attention Deficit Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder (ODD), or Conduct Disorder. Of cases presenting with

a behavioral disorder, the majority (65%) were diagnosed with ADHD – a disorder marked by persistent symptoms of inattention and hyperactivity or impulsivity resulting in clinically significant impairment in social, academic, or occupational functioning. Nearly half (48%) were diagnosed with ODD, a condition marked by persistent negativistic, hostile, and defiant behavior resulting in clinically significant impairment in social, academic, or occupational functioning. Approximately 13% of cases with an identified behavioral disorder involved Conduct Disorder, a condition associated with repetitive and persistent behaviors involving violation of the rights of others or societal norms including aggression toward people or animals, destruction of property, deceitfulness or theft, or serious violations of rules leading to impairment in social, academic, or occupational function.



Mood disorders constituted the second most prevalent diagnostic category for children entering CIS (33%). About 34% of these cases were diagnosed with a Major Depressive Disorder; 21% were diagnosed with Bipolar Disorder, a condition associated with periods of depressive symptoms and at least one episode of manic behavior (i.e., clinically elevated or expansive mood disturbance). Other diagnoses within the mood disorders category included Dysthymic Disorder or other non-specified mood-related disorders. Approximately one-fifth of cases presented with an adjustment disorder, a condition associated with significant emotional or behavioral symptoms related to an identifiable stressor and resulting in significant impairment for the child. Anxiety disorders were also diagnosed for a significant number of CIS admissions (20%). Fewer cases (14%) presented with a relational disorder such as clinically-significant levels of parent-child relationship problems or indication of child maltreatment. Other diagnostic categories were less frequently given for children entering CIS.

Agencies also provided information related to the presence of problems experienced by the child and/or family are across a number of life domains as captured in Axis IV of the DSM-IV (see Figure 5). The majority of children entering CIS were experiencing significant problems in their primary support group or family life (77%), educational or academic life (72%), or social functioning (63%). Significant impairment in socioeconomic security (21%) or housing (14%) was also observed. Approximately 16% of cases also indicated some evidence of legal system involvement per clinician report.



Approximately 8% of children had experienced a recent psychiatric hospitalization (during the 90-day period preceding admission to CIS), based upon agency report. This number varied significantly across providers, however, with some agencies indicating higher rates of recent hospitalization among their admissions than others.

Levels of Care for Children Served in the CIS Program: The introduction of levels of care within CIS represents one of the most significant changes to the program introduced in the revision to the program standards. Revised certification standards specified four levels of care for CIS. In addition, certification standards designated the use of a Modified Children's Global Assessment of Functioning Scale (M-CGAS) as an indicator of clinical functioning at admission, change in level, or discharge from the program. The M-CGAS provides an indication of clinical functioning, as rated by a mental health clinician, from 1 to 100 with lower scores indicative of lower clinical functioning. Level 1 (Crisis Management or Stabilization) was specified for children experiencing a behavioral, psychiatric, or developmental crisis that threatens his or her ability to remain in or move to a less restrictive living environment. Children at this level of care would be expected to have an M-CGAS score between 10 and 30 (indicating serious impairment

across multiple domains of functioning). Level 2 (Standard Care) was specified for a cases in which the child or family has multiple needs, and for which other less intensive levels of service have not been effective; (e.g., regularly scheduled weekly outpatient therapy). Children at this level should have an M-CGAS scale score between 31 and 40 indicating moderately impaired functioning in most social areas or severe impairment in one area (e.g., home, school, peer interaction). Level 3 (Intermediate Care) was specified for cases in which the child and family have multiple needs, which are unable to be addressed through a single service (i.e., outpatient) but who have identifiable and available useful supports in community. Children entering this level would be expected to have an M-CGAS score between 41 and 50, indicating variable functioning with sporadic difficulties or symptoms in several but not all psychosocial areas. Finally, Level 4 (Maintenance) was specified for children identified with some difficulty in a single area, but generally functioning well who are moving down from a more intensive level of services within CIS and preparing to transition to a supportive and complementary outpatient clinical services modality. Direct entry to this level was limited to those cases closed to a previous CIS intervention within the previous 12 months. Children at this level of care would be expected to have an M-CGAS score between 51 and 60, indicating moderate symptom presence.

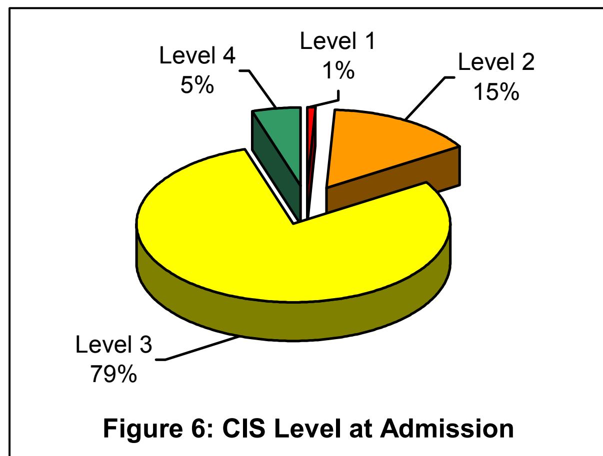


Figure 6: CIS Level at Admission

Figure 6 provides information on the percentage of cases admitted to CIS at each level during the first year of operations under the revised certification standards. Admissions to Level 1 comprised approximately 1% of program entries; 15% of cases entered at Level 2, 79% of cases at Level 3, and 5% of cases at Level 4. The overall mean score on the M-CGAS at admission to CIS was 43 – a score indicating the presence of serious clinical symptoms or serious impairment in social, academic, or occupational functioning. Scores on the M-CGAS were consistent with the ranges specified in the certification standards. Thus, children entering care at Level 1 had a mean M-CGAS score of 31, children entering CIS at Level 2 had a mean M-CGAS of 38, children entering at Level 3 had an M-CGAS of 44, and children entering at Level 4 had an M-CGAS of 51. These differences in M-CGAS ratings across levels of care were statistically significant.

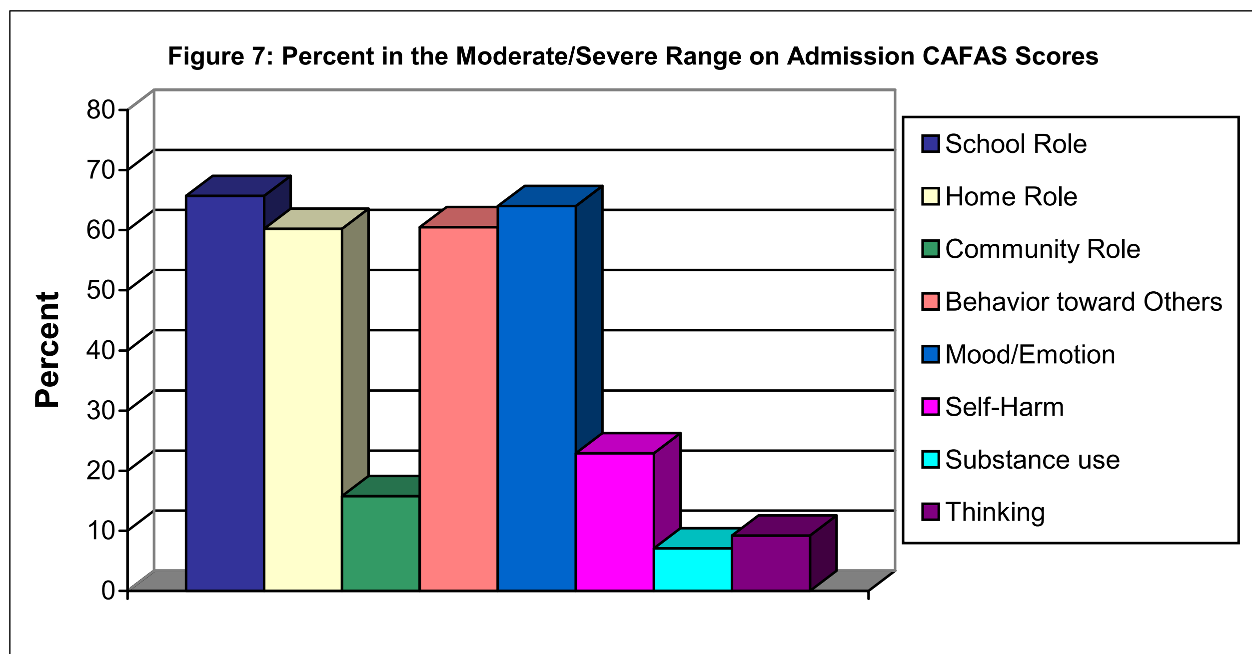
Changes in level occurred during the course of care in CIS for approximately 38% of cases. As a result, 19% of cases were placed at Level 2 at some point during their care, 86% of cases were placed at Level 3, and 30% of cases were placed at Level 4. In general, cases tended to move down in service intensity over time, rather than the converse.

Providers also submitted assessment data using the Ohio scales (Ogles, Melendez, Davis & Lunnen, 2001; Ogles, Lunnen, Gillespie & Trout, 1996), a measure designed to assess the level of symptom severity and functioning of children. Only the Ohio Problems scale and Ohio Functioning scale were used in this study. The Ohio Problems scale measures symptom severity and consists of 20 questions rated on a 6-point scale ranging from 0 (Not at all) to 5 (All of the time) with higher scores indicating worse symptoms. The Functioning scale consists of 20 questions rated on a 5-point scale ranging from 0 (Extreme troubles) to 4 (Doing very well)

lower scores indicate poorer functioning. The mean score for the Problem Severity Index was 34 (out of 100). Scores greater than 30 indicate moderate levels of problem severity and are consistent with intensive mental health service needs. The mean score for admissions on the Ohio Scales Functioning Index was 38 (out of 80). Scores lower than 44 indicate low levels of functional adaptation and suggest a need for intensive mental health service involvement.

Finally, providers submitted clinician ratings on the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, Cool, & McKnew, 1989; Hodges & Wong, 1997) for approximately 1,200 cases. The CAFAS was designed to measure functional impairment across eight domains including school role performance, home role performance, community role performance, behavior toward others, mood/emotion, self-harm, substance use, and thought processes. For each domain, clinicians determine the degree of impairment demonstrated by the child or adolescent over the previous 90-day period based on the following scale: severe (30 points), moderate (20 points), mild (10 points), and no or minimal impairment (0 points). A total scale score is generated by summing the eight scale scores, with possible scores ranging from 0 to 240 points. A total score between 50 and 80 is indicative of moderate impairment, scores between 90 and 130 of marked impairment, and scores above 140 of severe impairment (Hodges & Wotring, 2000).

Eligibility for CAFAS completion was limited to those cases over the age of 6 at the time of admission who remained in care for at least 30 days, and data was available for 58% of eligible cases at the time of these analyses. Figure 7 provides a summary of the percentage of children falling in the moderate to severe range on each domain, based upon available data[1]. CAFAS results indicate significant impairment in school and home roles, behavior toward others, and regulation of moods and emotions was present for 60% to 65% of cases admitted to CIS. The average total score on the CAFAS at admission was 85 points, indicating moderate to severe functional impairment.



[1] Note: Figure present valid percents after adjusting for missing data among CAFAS-eligible cases.

Follow-up analyses using available admission CAFAS data identified five CIS client types based upon CAFAS scale profiles using a statistical technique called Latent Class Analyses to group cases according to similar response patterns across CAFAS subscales. Results for these analyses are summarized in Figure 8. The first group (Mild Problems) represented 25% of CAFAS admissions, and consisted of children were rated by clinicians as having mild to minimal impairment across CAFAS domains, with only the school and mood regulation domains averaging higher than 10 (minimal impairment). The second group identified (Behavior Problems) was the largest group based upon CAFAS admission data (38%). This group consisted of children with scores near 20 (moderate impairment) on the School and Home Roles, Behavior toward Others, and Mood/Emotion Domains of the CAFAS. Similar to the Behavior Problem group, the remaining three groups had elevations on School, Home, Behavior, and Mood subscales, but also exhibited elevated scores on one or more additional domains. The Community Problems group involved 12% of CAFAS admissions. This group was characterized by moderate impairment in the Community Role domain in addition to the domains elevated in the Behavior Problem group. The Self-Harm/Internalizing group involved 18% of CAFAS admissions. This group demonstrated moderate impairment on the Mood/Emotion and Self-Harm domains of the CAFAS, in addition to the domains associated with the Behavior Problem group. Finally, the Substance Abuse group involved 7% of CAFAS admissions and had moderate impairment on the Drug Abuse domain and mild elevation of Community Role impairment, in addition to those identified in the Behavior Problems group.

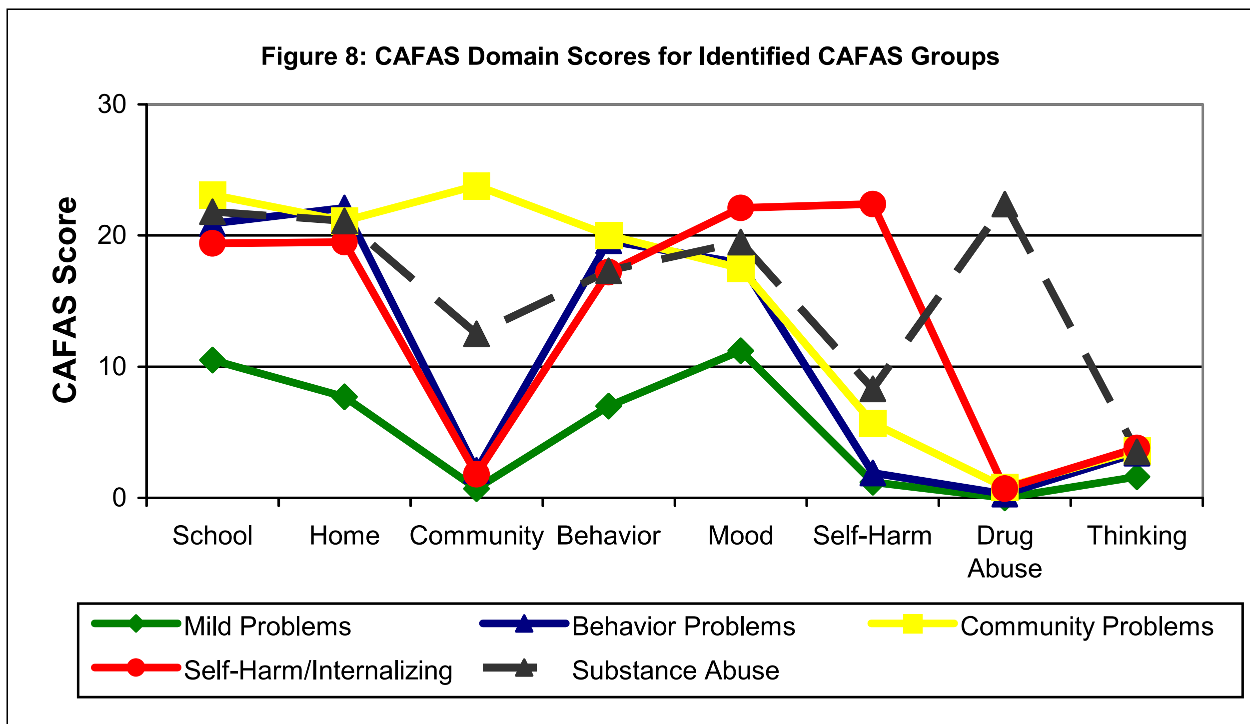


Figure 8: CAFAS Domain Scores for Identified CAFAS Groups

Comparisons among these identified groups revealed a number of interesting differences in demographic and clinical characteristics. Children in the Mild Problem group tended to be younger and were more likely to have a diagnosis of adjustment disorder than children in the other groups. Children in this group also tended to have higher scores on the M-CGAS, indicating higher clinical functioning overall, lower ratings of problem behavior on the Ohio

Scales, and higher ratings of functioning behavior on the Ohio Scales. Children in the Behavior Problems group and the Community Problems were more likely to be diagnosed with a behavior disorder than other CAFAS groups (72% and 73%, respectively). Children in the Community Problems group tended to be older than those in the Mild Problems or Behavior Problems groups, and they were more likely to have identified educational, occupational, or legal problems than children in other CAFAS groups. A greater percentage of children in the Self-Harm/Internalizing and Substance Abuse groups were diagnosed with a mood disorder than other CAFAS groups (55% and 58%, respectively). Children in the Self-Harm group were more likely to have had a recent psychiatric hospitalization (15%), and they were more likely to have identified educational, occupational, or legal problems than children in other CAFAS groups. This group also had a higher percentage of females than other groups (60%).

Summary of CIS Client Characteristics: Demographic characteristics of cases opened to CIS during the first year of operation under the revised certification standards indicates that access to the program is open to children from a wide variety of backgrounds. Clinical characteristics of the cases opened to CIS indicate that the program is serving a population of children significant mental health needs. More than 60% of children have an identified behavioral disorder, and more than 30% have an identified mood disorder. More than half of children have diagnoses in multiple domains. The majority of children have impairments in multiple domains of functioning including their primary support group or family, educational, or social domains. Ratings of clinical functioning including the M-CGAS, Ohio Scales Problem Index, and Ohio Scales Functioning Index each indicate significant impairment in functioning and elevated levels of problem behavior in the clinical range consistent with a need for more intensive mental health services than typically available through outpatient therapeutic modalities. Analysis of the use of CIS levels of care introduced in the revised certification standards indicates that few cases have entered CIS at Level 1 (1%), or Level 2 (12%). The majority of cases were opened at Level 3 (79%). Finally, preliminary CAFAS analyses for a portion of CIS admissions indicate significant impairment across school and home roles, behavior toward others, and emotional/mood regulation. Subsequent analyses of CAFAS data also identified five clinical profiles based on CAFAS subscale scores.

Profile of Service Delivery Patterns

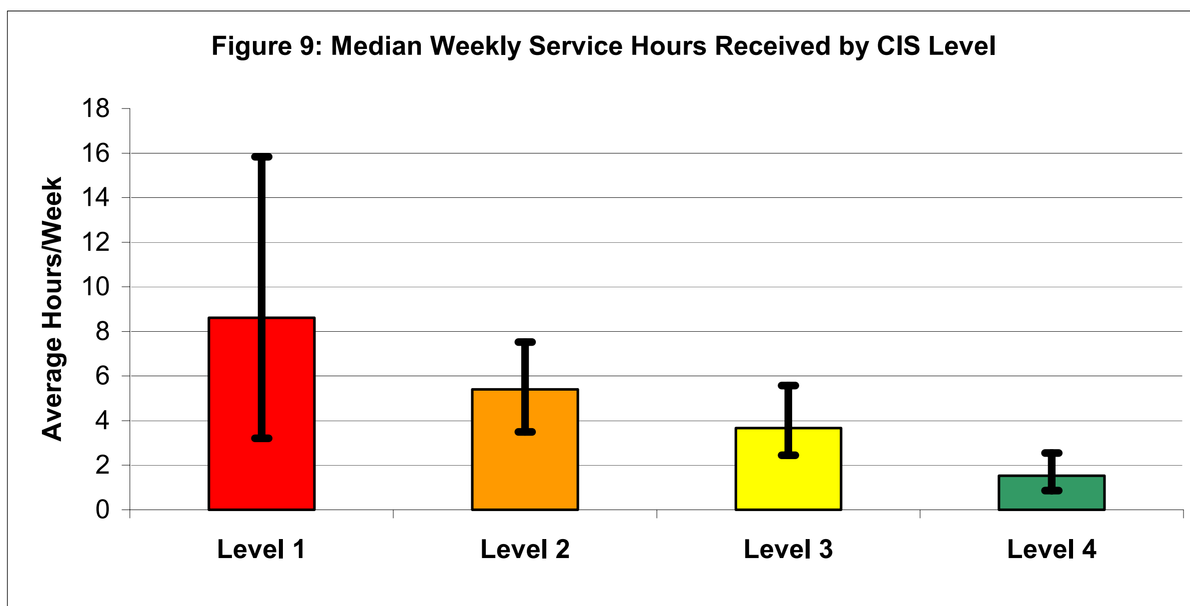
Certified Providers submit monthly data on the service activity for clients opened to CIS including type, duration, and location of service; and of the educational level of the service provider. Service data is analyzed to monitor the amount and type of service being provided to CIS clients within specified CIS levels of care. Revisions to the certification standards specify the amount and type of service contacts children within each level of care should receive on a weekly basis. Cases at Level 1 are expected to receive 6 to 14 hours of direct clinical service per week. Service components at this level include crisis stabilization and assessment services, medication evaluation, and therapeutic case management and service coordination. Service delivery at Level 1 should be provided over 85% of the time by a Masters Level or higher clinician. Cases at Level 2 are expected to receive 2 to 10 hours of clinical service per week including comprehensive family assessment, home- and/or community-based services from a Masters Level or higher clinician, and therapeutic case management and service coordination. Cases at Level 3 are expected to receive 2 to 5 hours of clinical service per week. The type of services at this level is consistent with those of Level 2, though at a less intensive level. Finally,

cases at Level 4 are expected to receive between .5 and 1.5 hours of clinical service per week, and 2 hours of case management services each month.

Analyses of amount of service by level are completed each quarter and reported to DCYF and certified providers. For this annual report, median weekly service amount is calculated based on the total number of service contact hours each child receives (within each level of care) divided by the total number of days he or she was active at each level of care. This figure is then converted to a figure representing average contact hours per week for each level. If a client remained open to CIS (i.e., was not discharged from the program) but had an extended period of service inactivity (greater than 30 days) for analytic purposes we considered them inactive within the program after that point.

Figure 9 summarizes weekly service amounts for the revised certification standards during their first year. The colored bars represent the median number of service hours/week (i.e., the amount of service that is received by at least 50% of all cases) for each level of care. The black bars for each level depict the degree of variation in service hours/week for each level – the bottom point of the bar depicts the 25th percentile and the top point of the bar depicts the 75th percentile. Very few children were served at Level 1 (Crisis Management) during the first 6 months of operations under revised certification standards; as a result estimates of average service delivery are subject to greater variation resulting from a smaller number of cases. During this period, median service contact/week for children at this level was approximately 8.6 hours – consistent with the level of service indicated in the standards. Cases at Level 2 (Standard Care) received a median average of 5.4 hours of direct clinical service/week, also consistent with the level of service contact outlined in the certification standards. Cases at Level 3 (Intermediate Care) received a median average of 3.7 hours of service per week. Finally, children at Level 4 (Maintenance) received a median average of 1.5 hours of service per week – consistent with the level of care, though toward the upper end of that range. The variation in service delivery indicates that most children within each level of receiving services consistent with their current level of care – though a number of cases at Level 4 may be exceeding the level of service contact as currently specified.

Figure 9: Median Weekly Service Hours Received by CIS Level



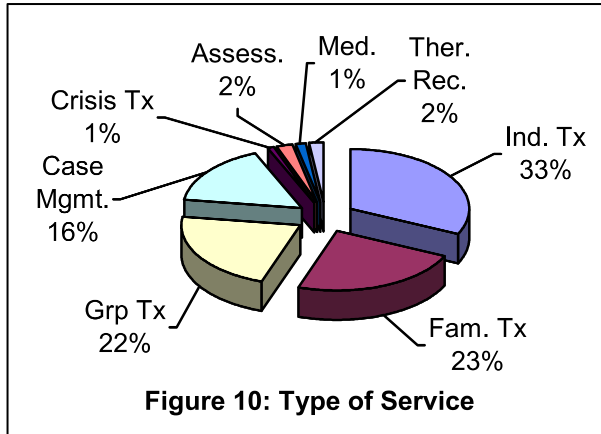


Figure 10: Type of Service

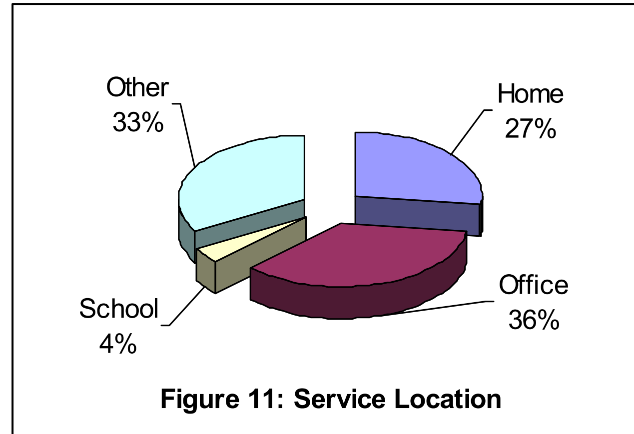


Figure 11: Service Location

CIS providers indicated the type of service clients received during each CIS encounter for the quarter. Agency procedure codes were categorized to maintain consistency in the definitions of service types across providers. Data reveal that individual therapy comprises approximately 33% of service time delivered by providers, followed by family therapy (23%), and group treatment (22%). Case Management and related service coordination efforts account for approximately 16% of service time. Relatively less time is spent delivering assessment services (2%), therapeutic recreation services (2%), or medication-related services (1%), though the percentage of children receiving at least one assessment service or medication-related service is higher. In general, cases at Level 1 had higher rates of crisis-related services, medication visits, and family sessions. Delivery of services within CIS is intended to take place in home- and community-based settings. Approximately 64% of services were delivered outside the clinical office setting; home-based services accounted for 27% of service delivery time, 4% of service time occurred in school-based settings, and an additional 33% of service time occurred in other non-office settings (see Figure 11).

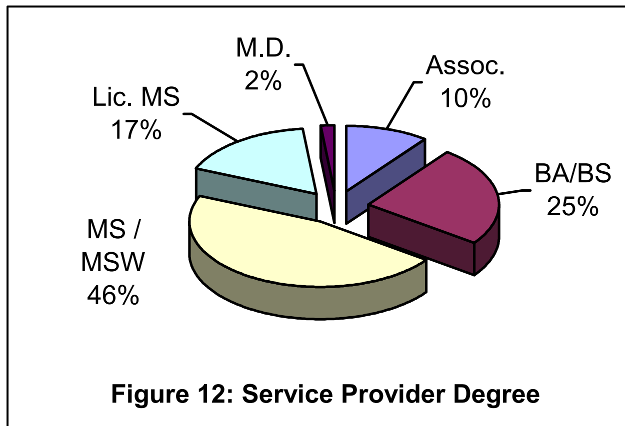


Figure 12: Service Provider Degree

Finally, agencies reported the educational degree of the providers delivering services to CIS clients. Statewide, Masters- Level clinicians provided 46% of services in the quarter, followed by providers with a Bachelors or Associates degree (35%). Licensed Masters-Level clinicians delivered 17% of services, while M.D. providers delivered approximately 2% of services (see Figure 12). Registered Nurses and Doctoral-level clinicians provided less than 1% of services each.

Profile of Clients Discharged from the CIS Program

A total of 1,517 cases discharged from CIS during the first year of operations under revised certification standards. Median length of time from admission to discharge (after excluding cases who were admitted to CIS prior to the implementation of certification standards) is approximately 5.4 months. It is likely that this figure over-estimates the period of active billing

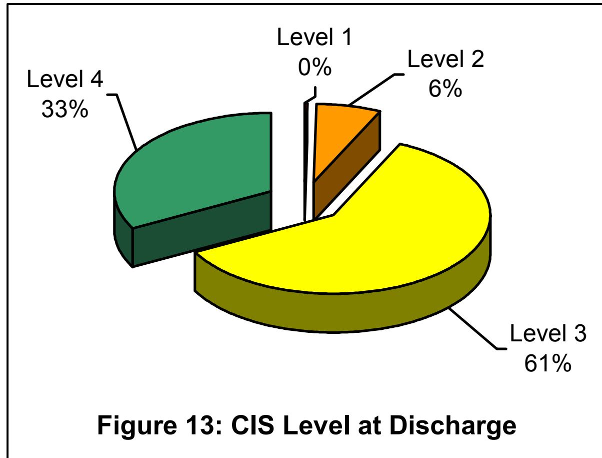
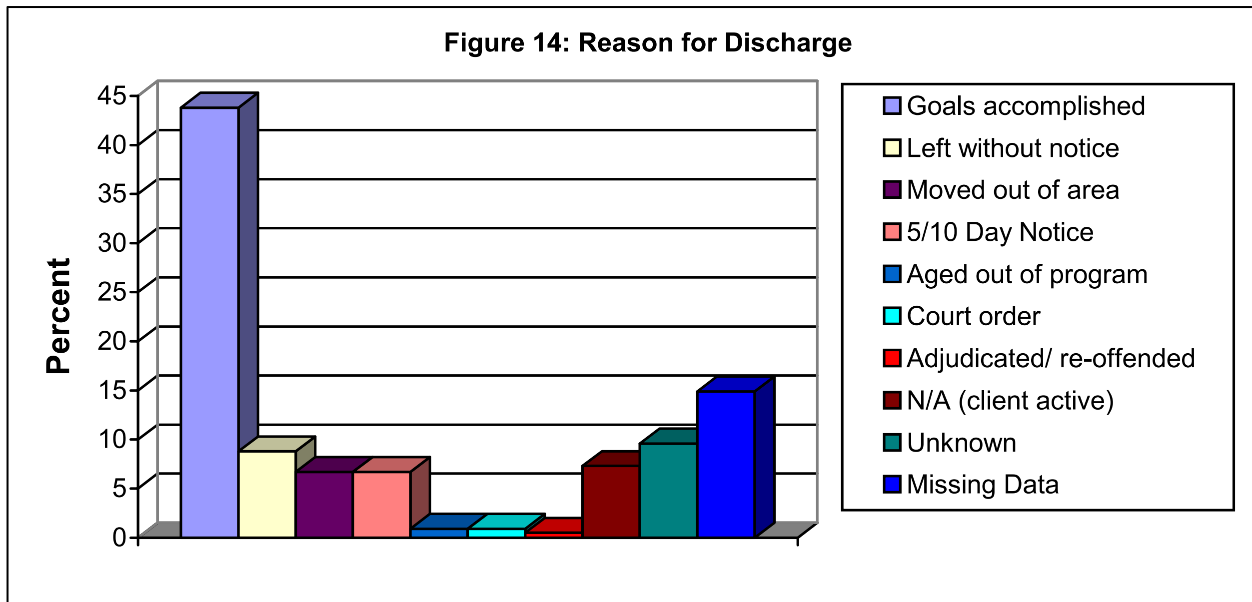


Figure 13: CIS Level at Discharge

for CIS clients as some agencies may report the date the case was closed rather than the date of last service contact for these analyses. As shown in Figure 13, 33% of cases were discharged from Level 4 (Maintenance), although 61% of cases were discharged directly from Level 3 (Intermediate Care) and 6% of cases from Level 2 (Standard Care). Less than 1% of cases discharged directly from Level 1 (Crisis Management). Most cases (66%) were discharged from CIS at the same level of care they were admitted to the program; 33% of cases were discharged from a less intensive level of care. Only 1% of cases discharged at a more intensive level of care. The mean M-CGAS score at discharge was 48. The four-point increase in M-CGAS scores from admission to discharge represents a statistically significant increase in clinical functioning as rated by clinicians.

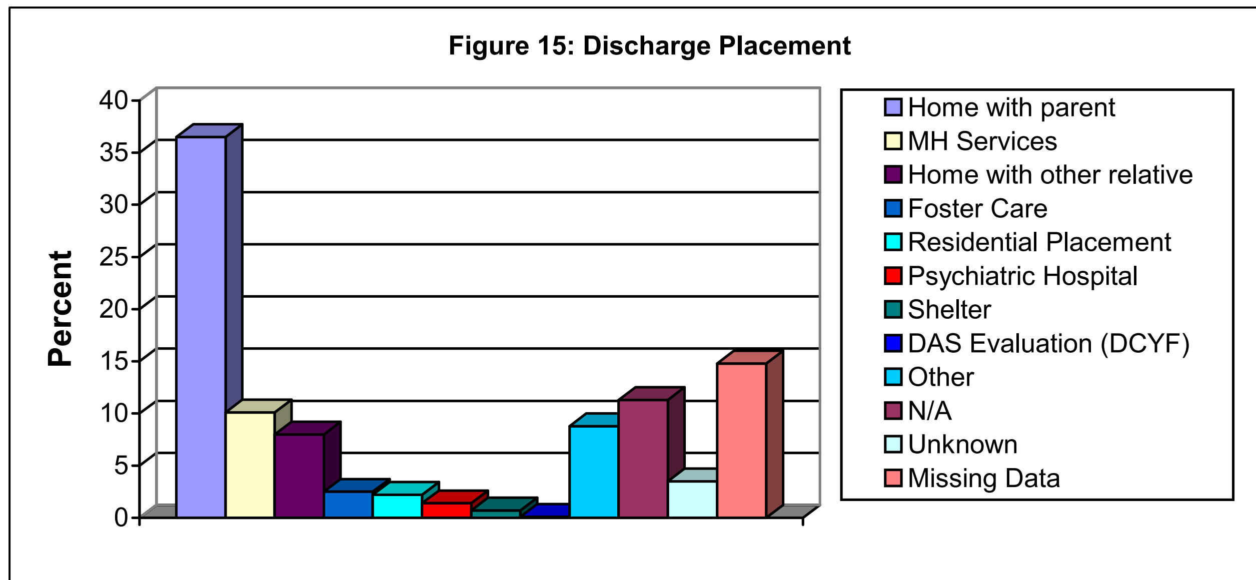
Data from the Ohio Scales was also collected upon discharge to provide an indication of problem severity and child adaptive functioning. The mean score for the Problem Severity Index was 28, and the mean score for the Functioning Index was 41; the average problem severity score suggests the potential need for supportive and clinical services in beyond those provided through outpatient treatment. Approximately 48% of cases demonstrated a need for additional services based upon the Problem Severity Index, and 52% demonstrated a need for additional services based upon their scores for the Functioning Index. Comparisons to admission scores on the Ohio Scales indicate that cases discharged from the program had significant reductions in problem behavior and significant improvements in functional behavior as rated by clinicians. It is important to note that Ohio Scales data was missing for 25% of children upon discharge, however.

Figure 14: Reason for Discharge



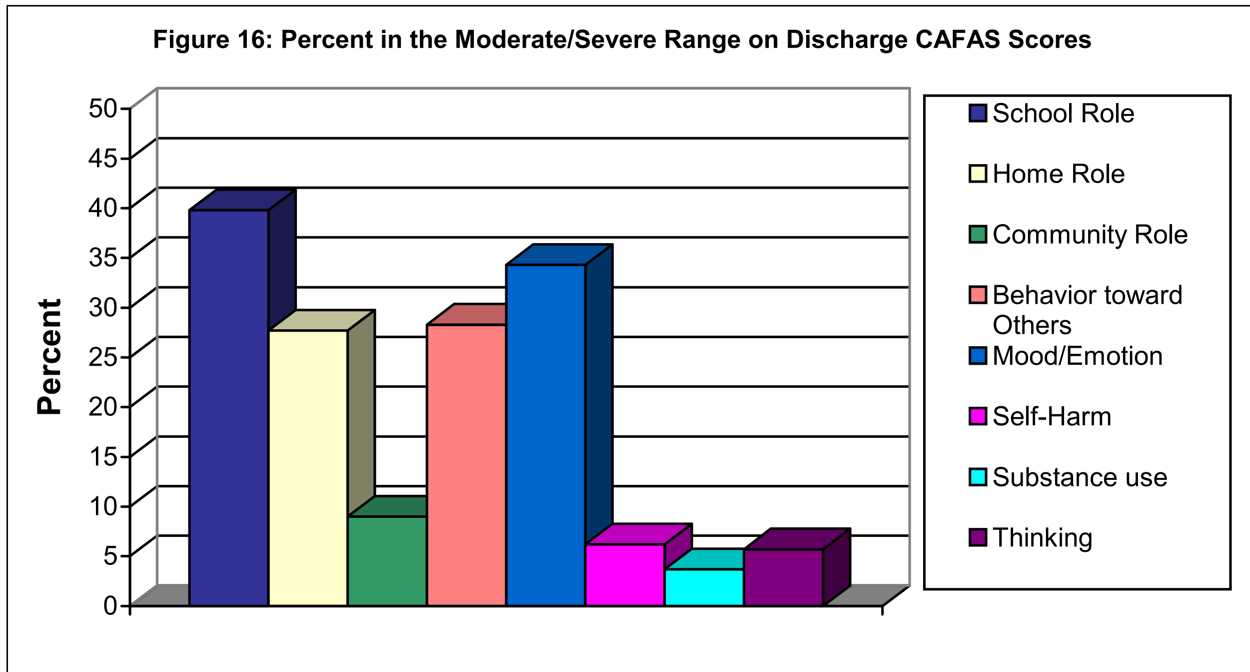
Approximately 44% of cases discharged from the program with an indication that clinical goals had been accomplished (see Figure 14). Approximately 9% of cases terminated their involvement in the CIS program without notice, and 6% terminated services as a result of a move. Data was missing or unknown for 25% of cases discharged from care, and reasons for discharge were reported as "not applicable, client remains active" for 7% of cases. At present, it is assumed that such cases remain active in outpatient treatment within the providing agency.

Discharge placement was also reported by CIS providers (Figure 15). Approximately 45% of cases were discharged with an indication that the child would remain home with a parent or other relative, and an additional 10% were indicated as being discharged with a plan for ongoing mental health services. Approximately 5% of children were discharged to a group home, shelter, or residential facility and 3% of children were discharged to a DCYF or specialized foster care setting – though most of these cases had been in foster care at admission. Approximately 1% of cases (21 children) were discharged from CIS directly to a psychiatric facility, and less than 1% of cases (9 children) were discharged to directly to the Rhode Island Training School detention facility. Data was missing or unknown for a significant percentage of cases (18%), and placement information was indicated as "not applicable" for 11% of cases.

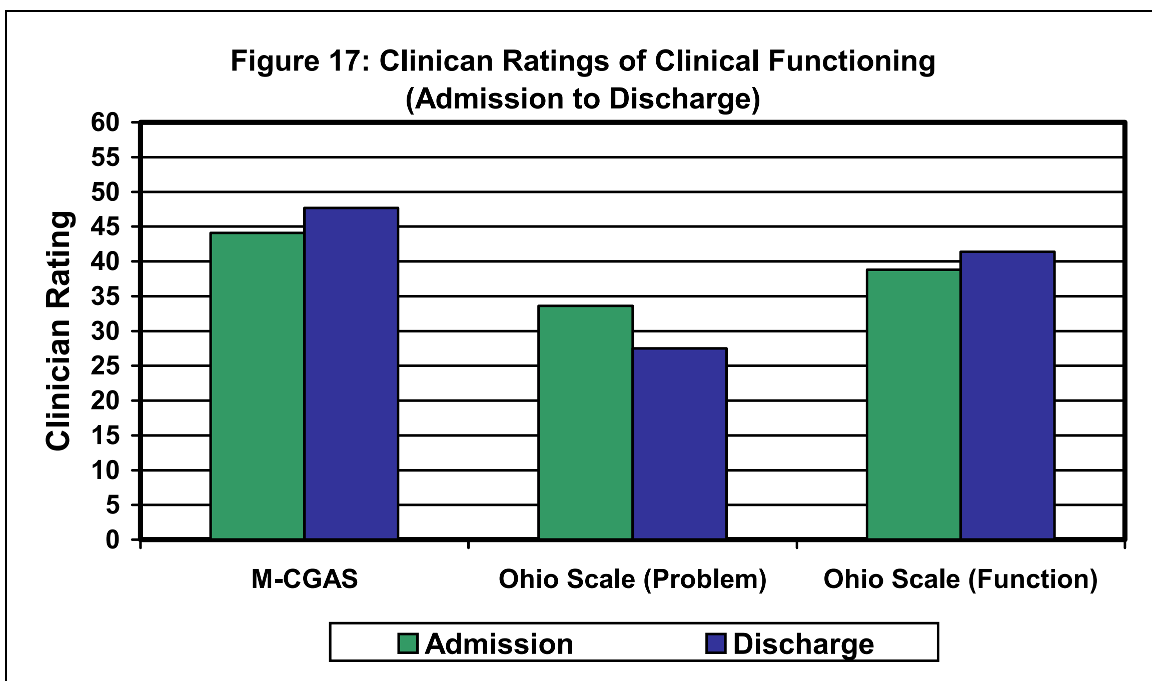


Providers submitted CAFAS ratings by clinicians for 513 cases at discharge. Eligibility for CAFAS completion was limited to those cases over the age of 6 at the time of discharge who remained in care for at least 90 days, and data was available for 56% of eligible cases at the time of these analyses. Figure 16 provides a summary of the percentage of children falling in the moderate to severe range on each domain, based upon available data[2]. CAFAS results indicate significant impairment in school and home roles, behavior toward others, and regulation of moods and emotions was present for 25% to 40% of cases discharged from CIS.

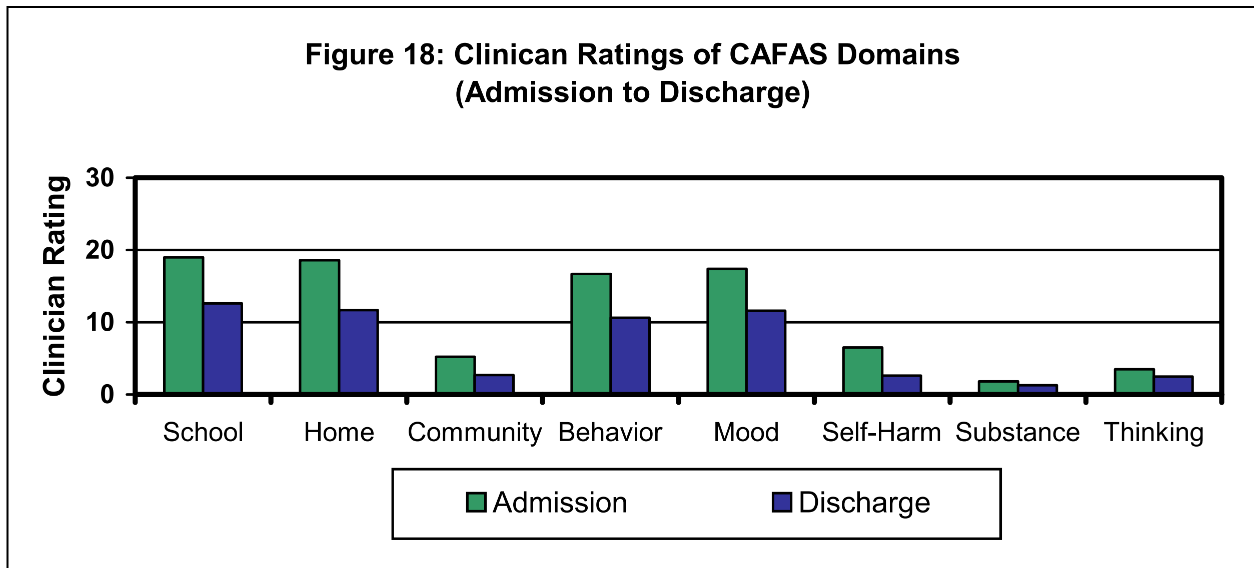
[2] Note: Figure present valid percents after adjusting for missing data among CAFAS-eligible cases.



For children with completed admission and discharge information on measures of clinical functioning, differences in mean scores were analyzed to assess emotional and behavioral changes over the course of CIS involvement. Approximately 89% of discharged cases had completed admission and discharge M-CGAS information, and 63% of cases had completed admission and discharge Ohio Problem and Functioning Scale information. Children demonstrated significant decreases in problem behavior and improvements in functioning across clinician rating scales from admission to discharge (see Figure 17). The most dramatic improvements were observed in improvements to problem behavior ratings by clinicians.



Approximately 83% of cases with discharge CAFAS were also administered an admission CAFAS. Children's scores on the CAFAS improved significantly from admission (total score = 90) to discharge (total score = 55). CAFAS subscale differences are presented in Figure 18. Note that many children discharged from CIS had missing admission and/or discharge CAFAS data, these figures only represent 46% of discharged cases edible for the CAFAS. Significant changes from admission to discharge ratings were observed in school and home roles, behavior toward others, and mood/emotional regulation. These results should be interpreted with caution given the significant amount of missing data across admission and discharge CAFAS scores.



Profile of Selected Case Examples of CIS Clients Served

Four cases were selected to provide a sample of the types of cases served by CIS providers under the revised program certification standards. These examples each reflect a single case experience; within each level of care, children vary significantly across demographic and clinical dimensions. Names have been changed to protect the identity of children in care:

"Susan" is a 12-year old Caucasian female referred for services by her school. She lives at home with her parents. Susan's clinician diagnosed her with major depressive disorder, and she was admitted to CIS at Level 1 (Crisis). In addition to major depression, Susan's clinician identified significant challenges for Susan in her family and school domains. Ratings of clinical functioning on the M-CGAS and Ohio Scales reinforced the level of clinical impairment, and the need for intensive mental health service involvement. Susan's total score on the CAFAS (110) reveals marked impairment in overall functioning, with particular problems in school role demands (e.g., inappropriate behavior and non-compliance in school), mood and emotional regulation (e.g., significant depression), substance use (e.g., weekly use of alcohol or drugs), and thought processing (e.g., frequent distorted thinking). During treatment, Susan had regular contact with her clinicians, receiving a mix of direct clinical services, therapeutic case management, and other necessary services. Treatment initially included significant levels of service related to crisis management. Susan was transitioned to Level 2 (Standard Care) and, finally, Level 3 (Intermediate Care). At this point, she was also receiving a mix of individual

and family therapy, as well as regular visits related to medication management. Case management activities continued throughout the course of treatment. She was discharged from the CIS program about 7 months after admission. The clinician indicated that therapeutic goals had been accomplished, and that Susan would remain at home with her parents at the time of discharge. Clinician ratings on the M-CGAS confirmed that Susan's functioning had improved significantly during her treatment in the program. Ratings on the CAFAS had also improved dramatically at discharge (total score of 30 points at discharge), with an indication that problem domains had reduced to only minimal impairment. She was re-admitted to the CIS program two months later following another referral from her school, and she remained in the program as of March 2005.

"Aiesha" is a 5-year old African American female referred to CIS by a social service agency and living with family in subsidized public housing. This was Aiesha's second admission to CIS, following a very brief period in care completed during the first month of the revised program standards. Aiesha's clinician identified the presence of learning, communication, and disruptive behavior disorders, and observed that the family was facing problems with housing. Ratings of clinical functioning on the MCGAS and Ohio Scales reinforced the level of clinical impairment, and the need for intensive mental health service involvement. She was admitted to the program at Level 2 (Standard), but her level of service intensity was later reduced to Level 3 (Intermediate Care). Treatment involved a mix of individual, family, and group therapy, as well as regular visits related to medication assessment and management and therapeutic case management services. She was subsequently discharged four months after admission when her family moved from the area.

"Mike" is a 16-year old Caucasian male diagnosed with Oppositional Defiant Disorder and significant impairment of the parent-child relationship. He was admitted to the program at Level 3 (Intermediate Care). Mike's clinician observed that he was having significant difficulty in family, school, and social settings. Ratings of problem behavior and clinical functioning by the clinician confirmed the level of difficulty with which Mike was coping. Mike's total score on the CAFAS (140) reveals severe impairment in overall functioning, with particular problems in home and school role demands (e.g., serious or chronic inappropriate behavior and non-compliance in both settings), and moderate levels of impairment in behavior toward others (e.g., poor judgment and impulsive behavior toward others), regulating his mood and emotions, and concerns about potential self-harm (e.g., repeated thoughts of harming himself). Despite some missed or cancelled appointments, Mike was seen regularly by his clinician throughout the course of treatment. Treatment involved a mix of primarily individual therapy and therapeutic case management services, with services generally taking place in community locations outside the office. Mike also participated in a family therapy session and had a visit with a physician to assess medication needs. Mike remained at Level 3 during his five months of treatment and was then discharged from the program and remained home with his parents. His clinician indicated that treatment goals had been accomplished at the point of termination. Improvements in Mike's ratings of clinical functioning and decreased level of problem behavior provided further evidence of his treatment progress in CIS. CAFAS scores had also improved significantly (total score of 90 points at discharge), particularly in the areas of home role demands, behavior toward others, and regulation of his mood and emotions.

Finally, “Luis” is an 8-year old Hispanic male re-admitted to the CIS program at Level 4 (Maintenance Care) following an earlier episode at Level 3 (Intermediate Care) that had ended approximately 5 weeks earlier. He was referred by family members and diagnosed with Attention Deficit Hyperactivity Disorder (ADHD), a mood disorder, and enuresis (persistent ‘bed wetting’ unrelated to a medical condition). Luis’s clinician observed that he was facing significant challenges in both school and social settings. Clinician ratings of problem behavior and functioning confirmed that Luis would benefit from intensive services consistent with admission to CIS at the maintenance level. Treatment involved a mix of family therapy and therapeutic case management services, as well as occasional individual therapy sessions with his clinician. Luis remain the CIS program for approximately 6 ½ months and was then discharged from the program. His clinician indicated that treatment goals had been accomplished.

Conclusions

Results from the ongoing evaluation for Children’s Intensive Services during the first year of operation under revised certification standards demonstrate the program’s ability to meet clearly specified service implementation goals and provide appropriate services to a significant population of children across the state identified with serious emotional and behavioral disorders. The program was able to provide services to over 2600 cases involving over 2400 children and adolescents across the state. The demographic characteristics of clients reveal access to services for a broad range of clients. Clinical characteristics indicate that the program is serving a group of children and adolescents with significant mental health needs. Behavioral disorders including attention deficit hyperactivity disorder, oppositional defiant disorder, and other conduct related problems predominate; followed by diagnoses associated with significant mood-related disorders such as major depression and bipolar disorder. Anxiety and adjustment disorders are also prevalent among the CIS population. Many children have diagnoses from more than one type of disorder, presenting with two distinct types of clinical service needs in nearly half of the clients served. Clinicians identified significant levels of impairment or psychosocial risk in the family, social, and educational domains for a majority of clients served. Finally, ratings of clinical impairment, problem behavior, and functioning were indicative of significant mental health service need for a majority of clients upon admission to the program.

One significant feature of the CIS program, introduced in the revision to program certification standards, was the use of specified levels of care ranging from crisis management (Level 1) to maintenance care (Level 4). Results of the ongoing evaluation indicate that admission to care levels based upon clinical functioning was consistent with program standards. Most children entered care through the intermediate level (Level 3), with only a small percentage of children entering through more intensive care levels. In marked contrast to pre-standards evaluation results, amount of clinical service was highly correlated with level of clinical need based upon clinician assessment as outlined in the certification standards. Analyses indicate that median weekly average service contact for Levels 2, 3, and 4 were all consistent with clinical contact levels as indicated in the standards. Due to the small number of clients served at Level 1, calculation of median service contact was more variable, but results also indicate that median service contact was in line with program standards.

Service contacts included a range of direct therapeutic treatment interventions including individual, group, and family therapy; as well as therapeutic case management and other

medically-necessary services as outlined in the standards. Contact with masters level and licensed masters level clinicians predominated service delivery, though providers utilized bachelors and associate level clinicians appropriately to provide therapeutic case management services and had access to nursing, doctoral level, and medical doctor staff for additional services including medication-related services.

As specified in the standards, much of the CIS program delivery was provided outside the office, with approximately 65% of services delivered directly in the home or other non-office settings.

Discharge data is encouraging, though additional follow-up will be necessary to continue monitoring program impacts. Average length of stay in the program is approximately 5 and ½ months, though time in Levels 1 through 3 is generally under 5 months. In general, children discharged from the program make significant improvements in clinical functioning, reductions in problem behavior levels, and are rated as having less severe problems on the CAFAS. The most common reason for discharge is an indication that therapeutic goals have been accomplished, though a significant number of clients discharge for other reasons, including treatment drop-out or a move from the area. Refinement of discharge tracking data was implemented in October 2005, to more accurately track reasons for discharge and the types of referrals made to clients leaving the program.

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