

Ontario's Children with MENTAL HEALTH needs



2007 Report

*Level of Functioning Outcomes for Children and Youth
Receiving Mental Health Treatment*



SickKids®

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This report was authored by *the CAFAS in Ontario* team at the Hospital for Sick Children

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About This Report



INTRODUCTION

This report follows eight years of system-wide training and implementation of a standardized global level of functioning outcome tool in children's mental health organizations across Ontario. First mandated for use by the provincial government in 2000, the Child and Adolescent Functional Assessment Scale (CAFAS) (Hodges, 2003) is used in 117¹ children's mental health organizations, of which 20 are hospital-based² and 97 are community mental health centres (CMHCs). In 2006, 14 organizations were added to the roster of CAFAS user organizations across the province.

The CAFAS data provides standardized system-wide information about global level of functioning outcomes for Ontario children and youth who received mental health services in the participating organizations and for whom CAFAS ratings were completed. Use of the tool provides valuable clinical information for the treatment of individual clients, in addition to organizational level information for children and youth served and rated on this tool in each participating organization. Across the province, CAFAS data is intended to provide a common metric of functioning that can be used to monitor response to treatment individually, as well as for organizational and system planning and as a mechanism for ensuring service quality and accountability.

MEASURING OUTCOMES AND MANAGING RESPONSE TO TREATMENT

Outcome measurement leads to improved treatment, enhances clinical science, provides accountability, and maintains the ethical responsibility of practitioners to examine service quality (Barlow, Hayes & Nelson 1984; Ogles, Lambert & Masters, 1996). All too frequently, children receive care that is based on outdated practices and narrowly defined outcomes as opposed to care that is based on increasing evidence of effectiveness and a wider spectrum

¹ New agencies were added in 2006.

² Sunnybrook Medical Centre -Child Mental Health was removed from the participant list in 2007

of desired functional and quality of life outcomes (Huang, Hepburn & Espiritu, 2003). The field continues to rely on practices that have little supporting evidence or, at worst, have poor outcomes (Busch 2002; Dishion, McCord & Poulin, 1999) despite evidence that most children who receive an empirically supported treatment get significantly better and do so more quickly than with other treatments or no treatment (Chambliss & Ollendick, 2001; JCCP 1998).

Global outcome measures, such as the CAFAS, help to standardize the measurement of quality and provide a common language and metric for comparison across programs, regions, and client populations (Busch 2002). Thus, global outcome measures are particularly relevant for system-wide application. Global outcomes provide an index of overall severity that is easier to aggregate than specific measures. They also put into practice National Institute of Mental Health (USA) criteria regarding the importance of measuring the impact of interventions on day-to-day functioning in the client's real life (Newman, Ciarlo & Carpenter, 1999).

The CAFAS (Hodges 2003) is designed to rate functional impairment in children and youth who have or may have emotional, behavioural, substance use, psychiatric, or psychological problems. It consists of behavioural descriptions, (e.g., expelled from school) arranged into four levels of impairment - severe, moderate, mild, and no or minimal impairment - across eight domains of functioning (subscales): school or work, home, community, behaviour towards others, moods and emotions, self-harmful behaviour, substance use, and thinking. The rater³ reads the items in each subscale, beginning with the severe items, until a description of the client's functioning is found. The score on each subscale is determined by the level of impairment under which the item appears: severe, 30; moderate, 20; mild, 10; no or minimal, 0. Subscale scores are combined to form a total score. Each subscale has an accompanying list of strengths and goals. Available in both paper and electronic form, raters familiar with the software take about 10 minutes to complete the scale.

Use of the CAFAS in practice requires practitioners to use client information typically collected in clinical service as the basis for the rating, and the software produces information required for practice (e.g., a client assessment, reports and treatment plan). Anecdotal reports from practitioners⁴ indicate that the CAFAS profile is a valuable tool for engaging the client and family in the early stages of clinical assessment and formulation of the treatment plan. It provides a common language based on clear behavioural indicators that are helpful in sharing the client's areas of strength and dysfunction, and in developing goals for treatment that can later be re-examined. The CAFAS treatment plan forms one piece of a more comprehensive plan that takes into account additional clinical and assessment information. Caregivers can sign the plan and it then becomes an important part of the clinical file for the client.

³ Responsibility for rating the CAFAS falls to the practitioner functioning as primary therapist for the client.

⁴ Practitioners are invited and encouraged to share their experiences of using the CAFAS tool at both client and organizational levels through the "community of practice" forums held regionally and on the CAFASwiki. The clinical 'lessons learned' are then shared with other CAFAS users province-wide on the wiki and the CAFAS in Ontario web site: www.cafasinontario.ca

Knowing something about the client's initial level of disturbance and early response to treatment helps clinicians to identify potential treatment failures, to improve outcomes, and reduce deterioration in the client (Lambert, Whipple, Smart, Vermeersch, Nielsen & Hawkins, 2001). As such, best practice in Ontario involves rating CAFAS (1) periodically to manage outcome and assess progress; (2) to assist with assessment, formulation, and planning, and (3) to measure overall outcome. As a multi-dimensional measure of global functioning, the CAFAS demonstrates better reliability in the field than unilateral measures (e.g., the GAF and CGAS) that are prone to rater bias (Herman, 1990). Previous research has demonstrated the reliability of the CAFAS (Hodges & Wong, 1996) as well as its concurrent and predictive validity. High interrater reliability has been reported across different sites and with both layperson and clinician raters (Barwick et al., work in progress; Hodges & Wong, 1996).

Studies of concurrent validity have found greater impairment on the CAFAS to be associated with: more intensive level of care, more restrictive or therapeutic placement, more serious psychiatric disorders, more problems in social relationships, involvement with juvenile justice, school related problems, and child and family risk factors (Hodges & Wong, 1996; Hodges, Doucette-Gates & Liao, 1999; Manteuffel, Stephens & Santiago, 2002). Studies of predictive validity have demonstrated that CAFAS scores at intake predicted: cost of services, service utilization, contact with the law, poor school attendance, and recidivism at either 6 or 12 months post-intake, depending on the study (Hodges et al 1999; Hodges, Doucette-Gates & Kim, 2000; Hodges & Kim, 2000; Hodges & Wong, 1997; Quist & Matshazi, 2000). The CAFAS has been successfully used to assess outcome for youths varying in degree of impairment, referral source, and diagnosis (Manteuffel et al 2002; Duchnowski, Hall, Kutash & Friedman, 1998; Rosenblatt & Furlong, 1998 Walrath, Mandell & Leaf, 2001). No differences have been observed for the total CAFAS score on gender, race/ethnic group (e.g., comparing Caucasians, African-Americans, and Hispanics), or caregivers' education level (Hodges & Wong, 1997).

In Ontario, a supplemental rating guideline has been developed for rating the CAFAS with Aboriginal children and youth (Barwick, Dilico Ojibway Child and Youth Services, Hodges 2004). In addition, Hodges has recently published a compilation of resources and guide for matching CAFAS profiles to evidence-based treatments (Hodges, 2004). There is also a screening interview (15 minutes) that inquires about the youth's functioning and is administered to a caregiver (or other adult informant). A newly developed Caregiver Wishlist examines caregiver functioning in the areas of: providing directions and follow-up; encouraging good behaviour; discouraging undesirable behaviour; monitoring activities; connecting positively with youth; and problem solving orientation.

TRAINING

To date, over 5,000 child and youth workers, social workers, psychologists, and psychiatrists have been trained to reliably rate the CAFAS. Training for the reliable use of the CAFAS is standardized using the CAFAS Self-Training Manual (Hodges, 2003) and two-day, face-to-face group training. In addition to detailed scoring information, the manual includes ten case studies or vignettes which must be scored to a prescribed level of accuracy (80% reliability with a criterion) in order for a rater to be deemed reliable. Supplemental assistance and support is provided to individuals until they can attain this criterion.

All practitioners are expected to use the software version of the CAFAS tool. Software training workshops are conducted to train practitioners in navigating the CAFAS software, as well as to provide administrators within each participating organization with the skills needed to manage the CAFAS database that is located on their respective servers.

Annual booster vignettes are completed on the anniversary of each rater's initial achievement to control for rater drift. The extent of rater drift over one-year and two-year gaps, as well as the rater drift among practitioners trained by CAFAS in Ontario versus an in-house trainer are being studied in order to provide recommendations to the province regarding how best to sustain reliability and maintain the quality of the data collected.

MANDATED USE

Organizations are expected, at a minimum, to complete a CAFAS rating as close to treatment entry and treatment exit as possible for all clients entering into treatment. Because the value of outcome measurement lies in its capacity to gauge treatment response, practitioners are also encouraged to complete a CAFAS rating periodically (e.g., every 3 months or at scheduled review times) while the client is receiving service(s), thereby providing useful information that can be used to alter the treatment plan as required. The current provincial mandate for CAFAS completion is for entry and exit ratings, however, this is not clinically optimal since it does not encourage practitioners to use the tool for purposes of *outcome management*. Further work (e.g., site visits, communities of practice) is required to assist organizations in appreciating that use of the CAFAS is a part of ongoing clinical service, rather than merely a bureaucratic requirement.

DATA LIMITATIONS

The data included in this report represent children and youth receiving mental health treatment in Ontario in CAFAS-user organizations who were rated on the scale. Not all organizations serving children and youth with mental health needs are participating in the

use of the tool⁵. Not all children and youth receiving treatment services within participating organizations are rated on the CAFAS, typically for reasons related to lack of information on which to rate the scale, insufficient human resources and high service needs, exceptions made for group, crisis, or redirection (see below), or for other reasons made by the organization's senior management.

Among organizations required to use the tool, there are four exceptions in its application:

- Children and youth receiving services for which no detailed screening or assessment occurs (e.g., prevention, outreach, parenting education groups, support groups);
- Children and youth receiving services that are delivered in 1 to 3 sessions (e.g., crisis, early intervention, single-session intervention). If the client moves from crisis/prevention to longer-term active service, CAFAS is completed as per guidelines;
- Children and youth seen at one organization primarily to redirect appropriately to another;
- Children and youth receiving service for problems other than a psychological, emotional, behavioural or substance abuse problem (e.g., developmental impairment). Each organization may decide whether to rate CAFAS for clients with co-morbid developmental impairment and mental health problems.

CAFAS data describe level of functioning changes for children and youth receiving treatment, but they do not address whether these changes are due to specific interventions. Information about type of treatment, treatment fidelity or treatment dose is not captured. The data provide descriptive information about children and youth who come into treatment - their areas of functional impairment and strengths at entry to treatment and at completion or exit from service. It is anticipated that the next version of the tool will allow users to capture service type (i.e., residential, outpatient) and evidence-base programs (i.e., SNAP, COPE, MST, CBT, Triple P, etc).

DATA EXPORT AND CONFIDENTIALITY

Organizations using the CAFAS export their data to the CAFAS in Ontario office at Hospital for Sick Children on a quarterly basis. Detailed exporting instructions and procedures ensure data are sent without client identifying information.

Use of CAFAS data for service delivery accountability and planning meets the requirements of privacy legislation according to consultation with the Ontario Privacy Commissioner's Office. A brochure developed for a parent/caregiver audience outlines the purpose, use,

⁵ Several organizations serving children and youth (including those in related sectors such as Education and Child Welfare) both within Ontario and elsewhere in Canada, have expressed great interest in using the tools in their organizations. Where possible, training has been provided on a cost-recovery basis until such time as formal approvals for adding other organizations is obtained by MCYS.



and confidentiality pertaining to the CAFAS (and the other mandated tool, the Brief Child and Family Phone Interview); it is available on the CAFAS in Ontario website (<http://www.cafasinontario.ca/caregivers.asp>) in both French and English.

Detailed exporting instructions and a data submission schedule are made available to our liaison contacts at hospitals and children's mental health centres via e-mail reminders on a quarterly basis, and are posted on the website at (<http://www.cafasinontario.ca/data.asp#schedule>).



Yearly Overview



NEW CAFAS SOFTWARE UNDER DEVELOPMENT

A list of new CAFAS functionality and software requirements was collected by the CAFAS in Ontario office from service providers in the field over this past year and sent to the developer for consideration in the new software edition due for release sometime in 2009. It is expected that the new software will be implemented in Ontario in 2009/10. The new web-based version of the CAFAS will include the CAFAS, the PECFAS (Preschool and Early Childhood Functional Assessment Scale), the JIFF (Juvenile Inventory of Family Functioning), and the Caregiver Wishlist. Updates on new software features will be posted on the CAFAS website over the course of the year.

CLOSING THE DATA LOOP

This year marked the second full year in which exported data was analyzed and sent back to participating organizations. Six to eight weeks after the data are collected, two types of reports are produced:

- A .pdf report entitled "CAFAS Export Data Audit" (formerly called "Missing and Erroneous Data Report")
- A report of the organization's CAFAS data in relation to their region and the province's aggregate data

Export #	Number of Individual Organization Reports Produced ¹
6	65
7	96
8	100
9	109
10	105
11	113
12	107
13	108
14	(estimated) 110
TOTAL:	913 reports

The CAFAS Audit is intended for a CAFAS rater or clinician audience and provides a series of tables outlining errors or missing data for specific clients identified by their organizational client number. This is useful information for cleaning data before the next



export submission is due. The second report is comparative, depicting the organization in relation to their regional and provincial data. Five rounds of quarterly reports were made to each CAFAS user organization that had submitted data in 2007 (see Table 1.1).

FRENCH CAFAS SOFTWARE

Two Eastern region organizations, *Équipe D'Hygiene Mentale pour Enfants et Adolescents* and *Centre Psycho-Sociale*, tested beta versions of the French language CAFAS software over the winter of 2005. Although version 5.4 French functions as expected, several revisions are necessary, e.g., some language appearing on specific screens is still in English, some French phrases or words have been truncated inadvertently; reports do not print out in French).

NEW CAFAS USER ORGANIZATIONS

In 2006-2007 14 organizations across five regions were added to the user group (Table 1.2). See the CAFAS website for a full list of user organizations (<http://www.cafasinontario.ca/findcentre.asp>)

TECHNOLOGICAL SUPPORT

The CAFAS team enlisted an external IT consultant who was available for site visits.

CAFAS IN ONTARIO WEBSITE

The website was revised and given a new look; www.cafasinontario.ca. We continue to provide up-to-date/current information to the field regarding software, data export, training, and other CAFAS-related activities on our site.

Table 1.2 New CAFAS User Organizations

Central West
Community Youth Programs
Halton Trauma Centre
Central East
Durham Family Court Clinic
Fernie House
Peterborough Youth Services
Point in Time
Northern
Weechi-it-te-win Family Services Inc.
Sioux Lookout First Nation Health Authority
South West
Anago Resources Inc
Children's Health Care Network
Community Services Coordination Network
Merrymount Children's Centre
Toronto
Centre Francophone de Toronto
Native Child & Family Services of Toronto

PROFESSIONAL DEVELOPMENT ACTIVITIES

Ontario Psychological Association Pre-Conference Workshop

A professional development day was held in February 2007 in partnership with the Ontario Psychological Association, the Ministry of Children and Youth Services, Children's Mental Health Ontario, and Sick Kids Hospital. Held as a pre-conference workshop to the OPA Annual Conference, the event brought together approximately 170 participants, the majority of whom identified as practitioners. With its combination of didactic presentations and a 'community of practice' discussion, the conference was deemed a huge success.

CAFAS Training

Over the 2006-2007 year, 46 training events were held across the province, reaching 428 individuals; these included 14 reliability training sessions, 11 train-the-trainer sessions, and 21 software training sessions. The bulk of the training occurred in June-July 2006 and February - March 2007. The majority of software training was conducted in the Eastern, Northern, and Toronto regions, while reliability training was conducted mainly in the Northern and Toronto regions.

Training was also conducted by invitation for 100 practitioners in Erie County, New York between November 2006 and February 2007. This took 12 days and was conducted on a cost recovery basis.

Communities of Practice

We continued supporting the clinical application of the CAFAS and BCFPI tools through regional communities of practice across the province, averaging 24 participants per event, and including a total of 287 participants across most regions (Table 1.3). There were no requests for a community of practice in the Toronto region this past year.

Presentations & Site Visits

Invited presentations occurred in 4 locations throughout the fiscal year (Table 1.4) and 3 site visits took place in the Toronto and Northern regions (Table 1.5).

Table 1.3 Communities of Practice 2006-07

City (Region)	Date	Participants
London (SW)	Feb15 th , 2006	25
Kingston (SE)	Mar27 th , 2006	25
Newmarket (CE)	Apr19 th , 2006	30
Hamilton (HN)	Apr24 th , 2006	22
Ottawa (E)	May 1 st , 2006	25
North Bay (NE)	May 9 th , 2006	25
Sault Ste Marie (N)	May 30 th , 2006	12
London (SW)	June 15 th , 2006	25
Dryden (N)	June 19 th , 2006	15
London (SW)	Sept27 th , 2006	25
Mississauga (CW)	Feb 20 th , 2007	30
London (SW)	Feb 28 th , 2007	28

Table 1.4 Presentations

Location	Attendees
Frontenac Youth Services, Oshawa (CE) 26June06	20
Child & Youth Wellness Centre of Leeds & Grenville, Brockville (SE) 22Sept06	40
Lake-of-the-Woods Child Development Centre, Kenora (N) 20Nov06	12
Centennial College - Child & Youth Worker Program (T)23Nov06	60
Total:	132

Table 1.5 Site Visits

Location	Attendees
Scarborough General Hospital (T) 23Oct06	10
Youthdale (T) 13Sept06	2
Lake-of-the-Woods Child Development Centre (N) 21Sept06	3

Phone and Email Support

The CAFAS in Ontario team continued to provide support via telephone and email (Table 1.6), totaling an estimated 3,151 phone calls and 6,216 emails per year, fielded by our 3 fulltime staff and one technical software consultant.

<u>Table 1.6 Phone Calls and Emails to Support the Field in 2007</u>				
	Phone Calls		Emails	
	Monthly	Yearly	Monthly	Yearly
Training Coordinator	40-50	480-600	200	2400
Admin Coordinator	120	1440	100	1200
Data Analyst	100	1200		2588
Tech Consultant		31		28
TOTAL:		3151		6216

CAFAS-BCFPI Wiki

The development of a wiki site ("Communi-CAFAS") was initiated in 2007 by CAFAS in Ontario and BCFPI to support the sharing of knowledge and best practices for users of the tools. A wiki working group comprised of CAFAS/BCFPI Advisory Committee and CAFAS Champion members was established in August 2007 to collaborate regarding continued work in this area. A core objective was to assess the feasibility of the wiki as an interactive, web-based means of knowledge exchange - to gauge interest in the use of the tool by front-line providers, to identify barriers-to-participation, and to assess user training needs. We will continue to examine the sustainability of the wiki, along with the application of it for other uses (e.g. to manage evaluation/research endeavors) in 2008-09.



Analyzable Cases

This section of the report describes Ontario rating guidelines, export procedures and the number of cases that were analyzable for this report.

ONTARIO RATING GUIDELINES

CAFAS items are behavioural in nature and indicate global severity of impairment in functioning. These behaviours are important and relevant to the child or youth's functioning in "real-world contexts" (Hodges, 2003). An assessment of the impact of problems on the child or youth's everyday functioning is considered to be an essential outcome indicator for evaluating therapeutic change (Kazdin & Kendall & Weisz, 1998).

In Ontario, participating children's mental health service providers are asked to rate CAFAS on the following clients:

- CAFAS should be rated on all children ages 6 years through 17 years 11 months who receive mental health services⁶;
- Practitioners using the tool must have sufficient knowledge about the client and/or family in order to rate CAFAS reliably.

EXPORT PROCEDURES

Organizations are instructed to export specific data variables based on a standard pre-defined filter file that is updated and sent quarterly along with the data call. The filter was created to ensure inclusion of only those variables of interest to the analysis. Exported data exclude identifying information (i.e., client name, address.).

Data exported for the last quarter of 2007 are for both open (ongoing treatment) and closed cases (treatment ended).

⁶ Some clients turn 18 years of age during treatment, therefore, our age parameters are 6-18 years.

The filter also serves to eliminate over- and under-exporting of required data fields.⁷ Thus, the implementation of the export file filter has had a positive impact on the completeness of data submitted as well as error reduction. Only three (vs. four in 2006) agencies failed to use the file correctly, resulting in 327 (vs. 533 in 2006) cases outside of the required admission date range: 01/01/2005 and 12/31/2007. Of the remaining 36,305 exports, 11,445 were outside of the date range required by the present report (01/01/2007 to 31/12/2007). Analyzable submissions also exclude cases missing age or cases outside the age range as well as cases missing the date of the first evaluation (T1)⁸ (see Figure 2.1).

The data sample used for this report is composed of:

1. All cases admitted to treatment in 2007, and
2. All cases admitted to treatment prior to 2007⁹ that were either closed in 2007 or are still active through 2007

This selection method resulted in a 2007 sample size that is 1.3 times larger than the sample used in the 2006 annual report, 2.5 times greater than the 2005 sample, and 4 times larger than the 2004 sample. The lower number of cases in 2004 was also due to lower compliance (see Figure 2.2). The number of analyzable cases for the period 2004-2007 includes:

6,042 analyzable cases in the 2004 report
 9,634 analyzable cases in the 2005 report
 18,623 analyzable cases in the 2006 report
 23,566 analyzable cases in the 2007 report

Requesting cumulative data at export and allowing analyses to include cases that had a first evaluation more than 1 year prior to the reporting start date (2 years in the case of the present report) contributed significantly to a higher number of analyzable cases in the last 2 years.

The larger sample size in 2007 is also due to an increase in the number of CAFAS user organizations; 6 out of the 14 new participants collected and sent their CAFAS data for the last quarter of 2007 (see Table 2.1).

Other factors contributing to an increase in responsiveness included:

- Creating greater user engagement by closing the data loop with aggregate reports for each quarterly submission;

⁷ The data used for this report is a subset extracted from the larger data bank. Initially, we have asked the agencies to export data with cases admitted between (01/01/2005 to 31/12/2007).

⁸ T1 (entry to treatment) ratings are mandatory. Cases without T1 may represent clients who are transferred from one agency to another or from one site to another where new files are opened without keeping the history of the treatment. These situations are not encouraged by CAFAS best practices and they are considered 'errors'.

⁹ Does not include cases predating January 1, 2005 due to limitations in the data exports; data integrity was supported by the Common Data Set as of September 2004.

- Developing data audit (missing data or error) reports per organization;
- Improving our data export instructions;
- Developing an automatic filter file to select the variables requested for export;
- Providing on-call support;
- Hiring an IT consultant for troubleshooting and support

A higher number of organizations submitted CAFAS data in 2007 as compared to the previous 3 years (106 in 2007 vs. 98 in 2006, 93 in 2005 and only 87 in 2004 - see Table 2.1 for more details).

8 out of the 13 agencies who did not submit data for the last quarter of 2007 were newly trained agencies that either had not yet started collecting CAFAS data or did not send their data, leading to a decrease in compliance. Eighty-nine percent of organizations submitted data for the last export of 2007, compared with 92.5% submitting in the last quarterly export of 2006. Nevertheless, compliance for 2007 is better than 2004 (81.31%) or 2005 (86.92%). The compliance percentage is expected to increase again during 2008.

Of the 23,566 analyzable cases:

- 19,663 came from children's mental health agencies
- 3,903 came from hospitals
- 13,312 were boys
- 10,202 were girls

Gender data were missing for 52 cases as compared to 184 cases last year. This is due to gender data not being recorded by the practitioner at the time of the CAFAS rating, or because the gender field was not exported by the submitting organization. The new instituted CAFAS Audit report likely helped to reduce errors and missing data.

BEST PRACTICE NOTE

In some organizations, the task of 'entering' a client's CAFAS rating into the software program is assigned to a support person, who may not be aware of basic data that is missing from the paper form from which they are entering the data. This is not endorsed as best practice. Rather, the primary clinician is responsible for conducting the CAFAS rating in-person, using the software available to each organization.

Figure 2.1 Selection Process for Analyzable Cases in 2007

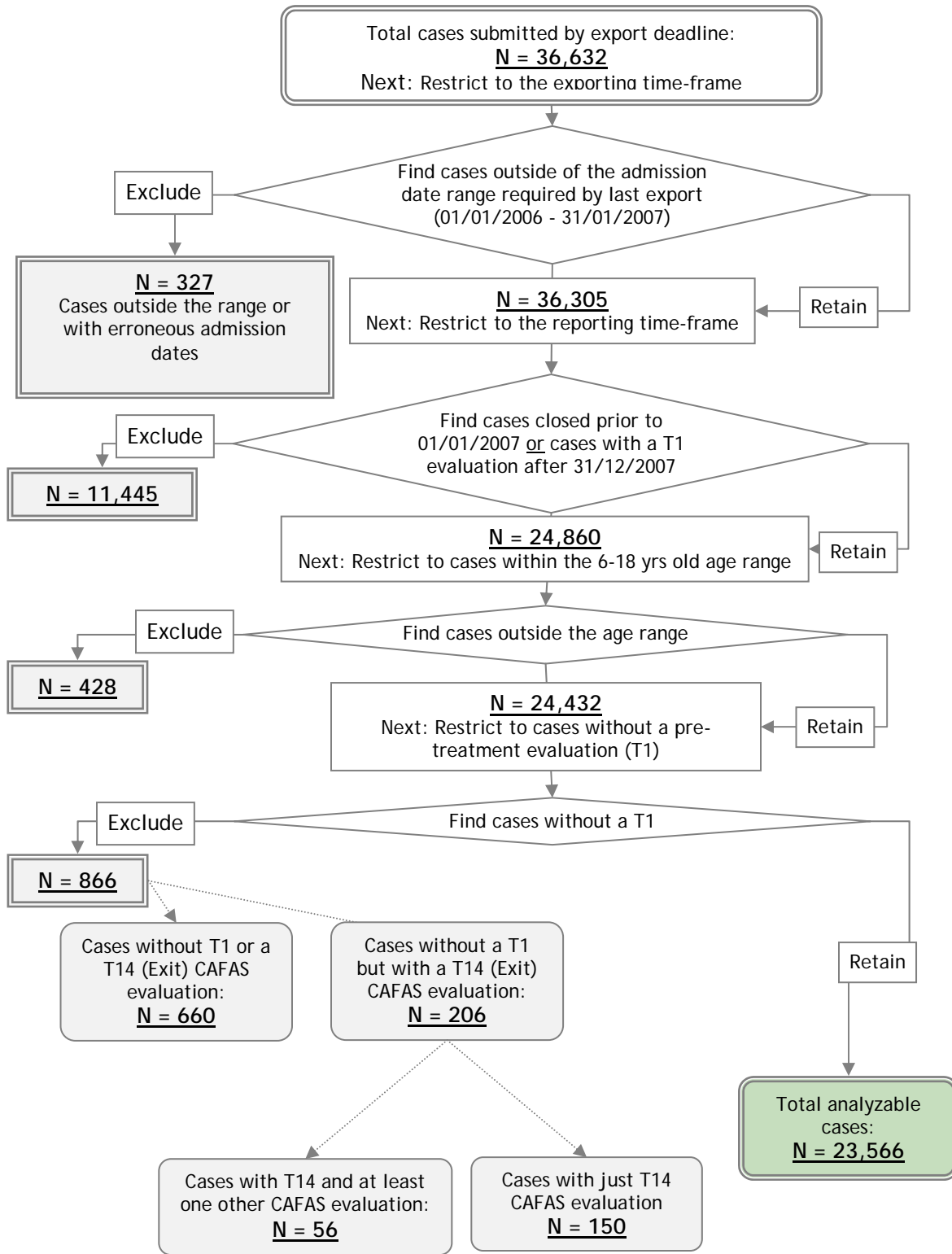
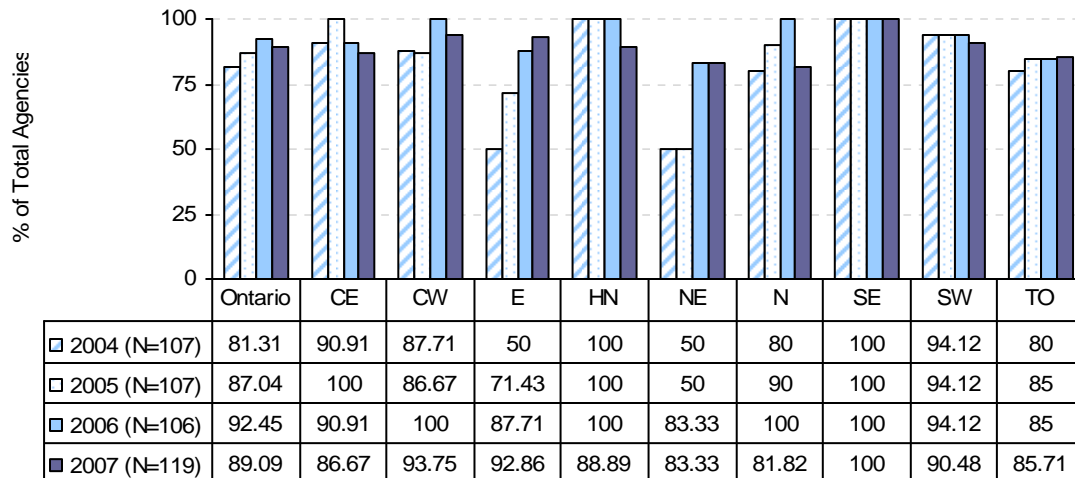


Figure 2.2 Regional CAFAS Export Compliance for 2004 -2007



The slightly lower compliance rate (Fig 2.2) for 2007 compared to 2006 must be regarded in the context of 14 organizations newly added to the 'CAFAS family' that may not have been in a position to send data because they were ramping up their implementation. Six of the 14 agencies submitted data for the last quarter of 2007.

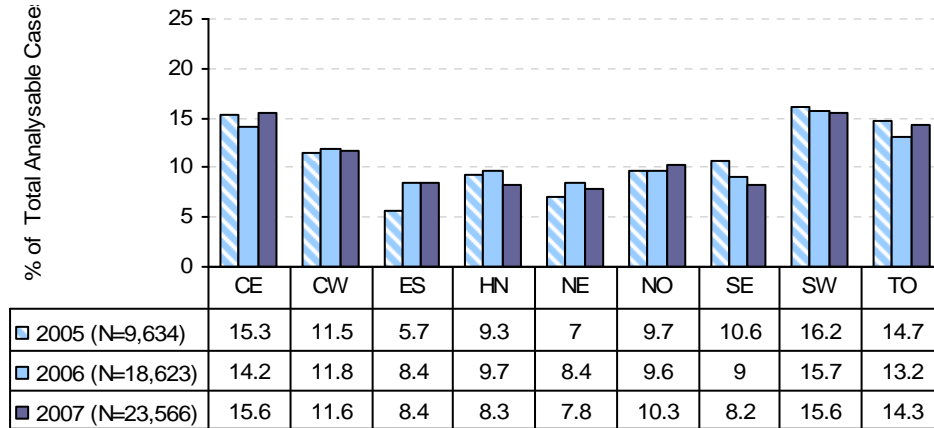
Table 2.1 Number and Regional Distribution of Mandated Agencies Submitting Data

Region	2004		2005		2006		2007		
	Participant agencies	Agencies submitting data	Participant agencies	Agencies submitting data	Participant agencies	Agencies submitting data	Participant agencies	Agencies submitting data	No. Analyzable of Cases Submitted
Central East	11	10	11	11	11	10	15	13	3,667
Central West	14	12	14	12	14	14	16	15	2,740
Eastern	14	7	14	10	14	12	14	13	1,973
Hamilton-Niagara	9	9	9	9	9	9	9	8	1,955
North East	6	3	6	3	6	5	6	5	1,839
Northern	10	8	10	9	9	9	11	9	2,430
South East	6	6	6	6	6	6	6	6	1,926
South West	17	16	17	16	17	16	21	19	3,670
Toronto	20	16	20	17	20	17	21	18	3,366
Total	107	87	107	93	106	98	119¹⁰	106	23,566

¹⁰ The total number of organizations (119) in this table reflects that one agency (Woodview Children Centre) has locations in more than two regions, and two organizations merged (Sault. Ste Marie Memorial Hospital has joined Algoma Family Service Centre and will be henceforth reported as one agency). Note that the official number of active CAFAS organizations count is 117 (as mentioned in page 1)

Figure 2.3 shows the percentage of analyzable cases submitted by region in the last three years. The South West region submitted the highest number of cases, likely because it is one of the regions (along with the Toronto region) with the greatest number of organizations participating in CAFAS.

Figure 2.3 Analyzable Cases Submitted by Region in the last 3 years





Client Characteristics

This section of the report describes the characteristics of children and youth who received children's mental health services in the participating Ontario service provider organizations during the 2007 calendar year, and for whom CAFAS was rated.

GENDER AND AGE CHARACTERISTICS

The mean age for this sample of 23,566 children and youth was 11.9 years, with a median of 12.0 years and a mode (most common age) of 15.0 years. Slightly more boys than girls received mental health services with CAFAS assessment in these organizations during 2007 (56.5% versus 43.3%). The gender distribution in 2007 is similar to those for 2005 and 2006. The distribution of clients by age remains unchanged (see Figure 3.2)

Figure 3.1 Gender Distribution of Children and Youth Receiving CMH Services and CAFAS Rating

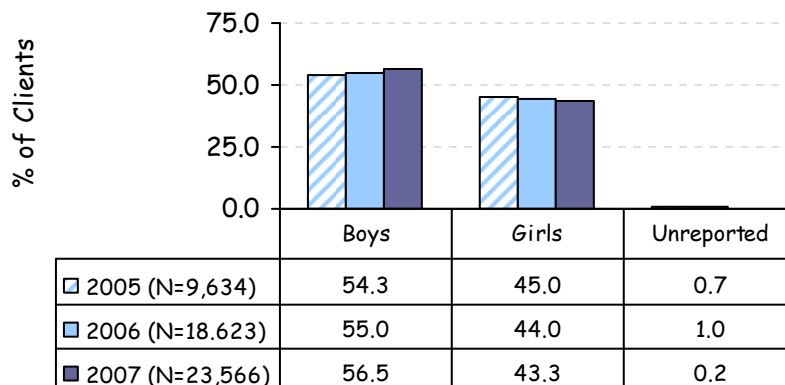
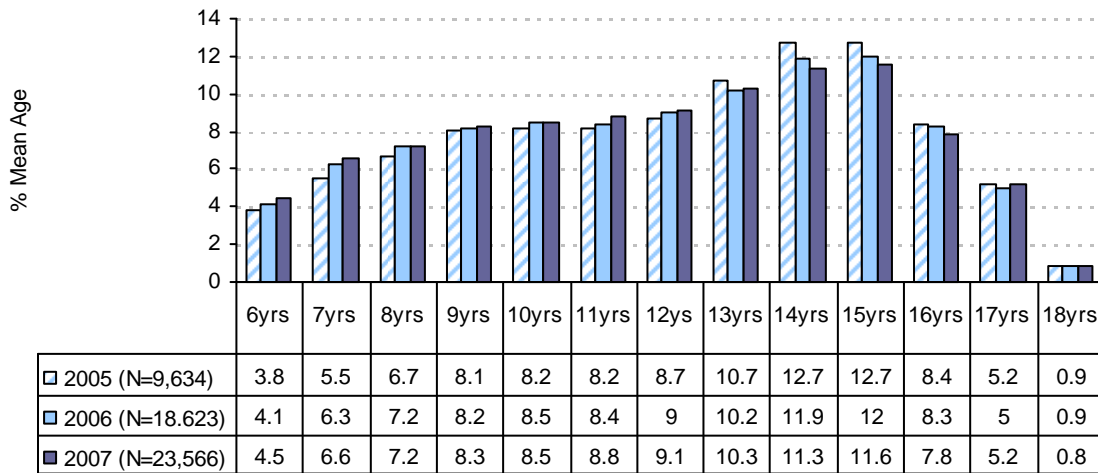


Figure 3.2 Age Distribution at Admission to Treatment



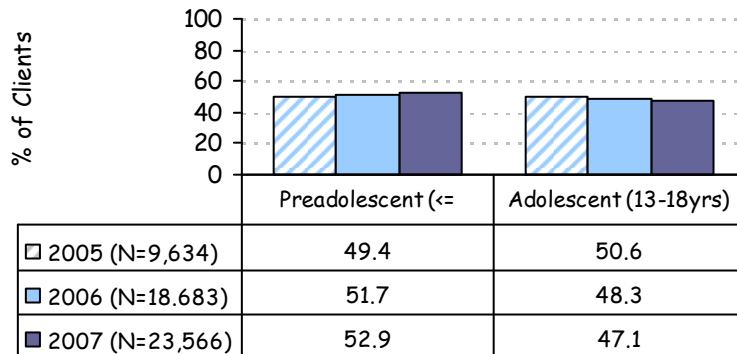
On average, male clients were approximately a year younger than females (see Table 3.1), following the same pattern as seen in 2006.

The distribution of adolescent (52.9%) and preadolescent (47.1%) clients changed again in 2007; where it was more equally distributed in 2005, preadolescents now show a greater proportion in 2007 due to a continuous increase of cases between 6 and 13 years of age (Figure 3.3).

Table 3.1 Age by Sex ¹¹

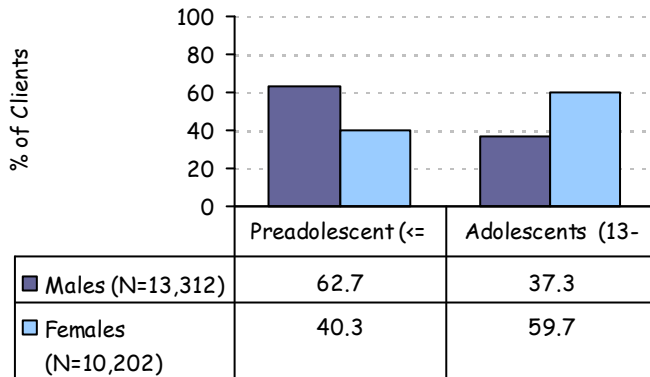
Year	Mean	Median	Mode
2005			
Boys (N=5,230)	12.85	14	15
Girls (N=4,335)	11.54	12	13
2006			
Boys (N=10,232)	11.38	11	10
Girls (N=8,200)	12.71	13	15
2007			
Boys (N=13,312)	11.30	11	11
Girls (N=10,202)	12.69	13	15

Figure 3.3 Distribution of Preadolescent and Adolescent Clients



¹¹ Some gender data for the sample of 23,566 was not reported (7 cases) or exported (45 cases) for a total of 52 cases missing this information.

Figure 3.4 Distribution of Preadolescent and Adolescent Clients by Sex



Boys make up two-thirds of the preadolescent group, whereas girls comprise two-thirds of the adolescent group (Figure 3.4).

SCHOOL CHARACTERISTICS

The higher percentage of clients in kindergarten through 8th grade in 2007 reflects the increase of cases within the 6-13 year age range. There is significant missing data on grade-level (26.5%; Figure 3.5). However, this figure is slightly less for 2007 than for either 2005 or 2006 - where upwards of 1/3 of cases were missing grade-level information.

Figure 3.5 Percentage of Clients by School Grade Level

N=23,566

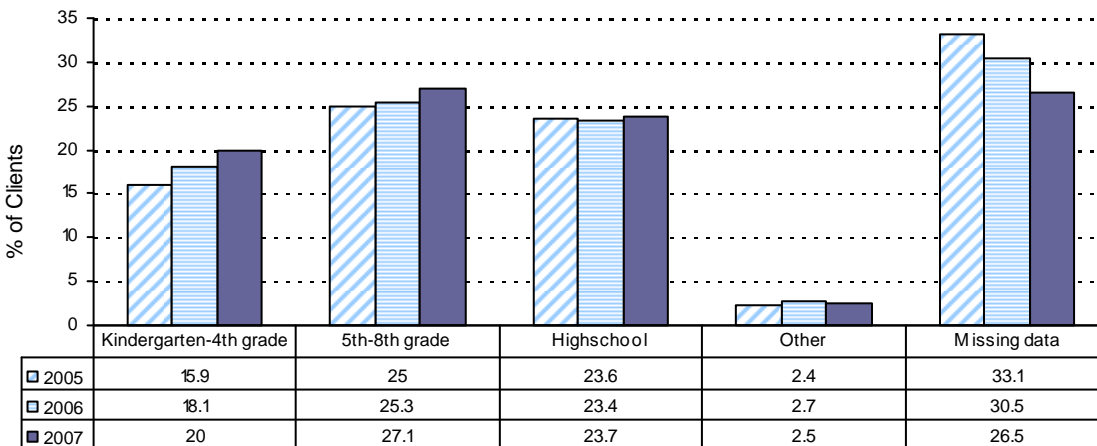
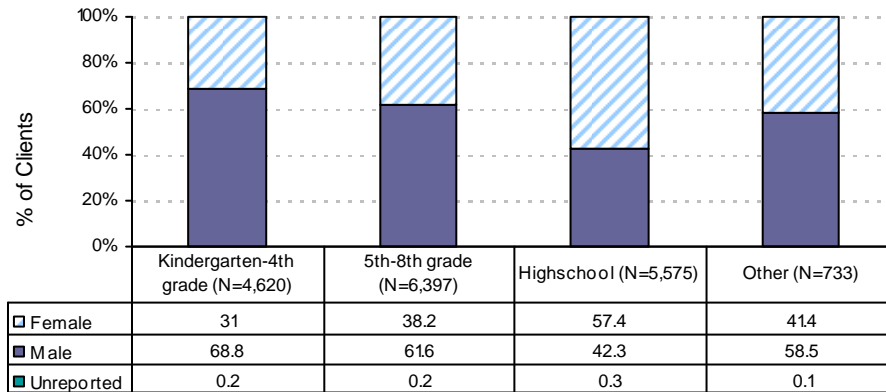


Figure 3.6 shows client grade-level by sex. About two-thirds of clients in kindergarten-8th grade are boys. Girls comprise the larger group in the high school years.

Figure 3.6 Percentage of Clients by School Grade Level - by Sex
N=23,566



CHILDREN AND YOUTH WITH COMPLEX NEEDS

Some data were available on complex needs. Approximately 16% of youth were placed outside of the home, and 6.5% of families were involved with child welfare (Figure 3.7). Few youths were reported as having a formal diagnosis of developmental disability (3.4%), chronic mental illness (2.5%), or concurrent substance use problems (3.5%) (Figure 3.9). However, these figures must be interpreted with caution due to missing data and because not all Ontario organizations specializing in service for dually diagnosed (developmental disorder and mental disorder) children and youth are included in this database.

Not surprisingly, out-of-home placement increases with age (based on the percentage of preadolescent vs. adolescent clients with data for placement situations)(Figure 3.8). A larger percentage of families with adolescents were involved with child welfare. While few clients were identified as having complex mental health characteristics, about one-third with substance use issues, developmental disabilities, and chronic conditions were adolescent (see Figure 3.10).

Figure 3.7 Percentage of Clients Placed Outside the Home
(N=23,566)

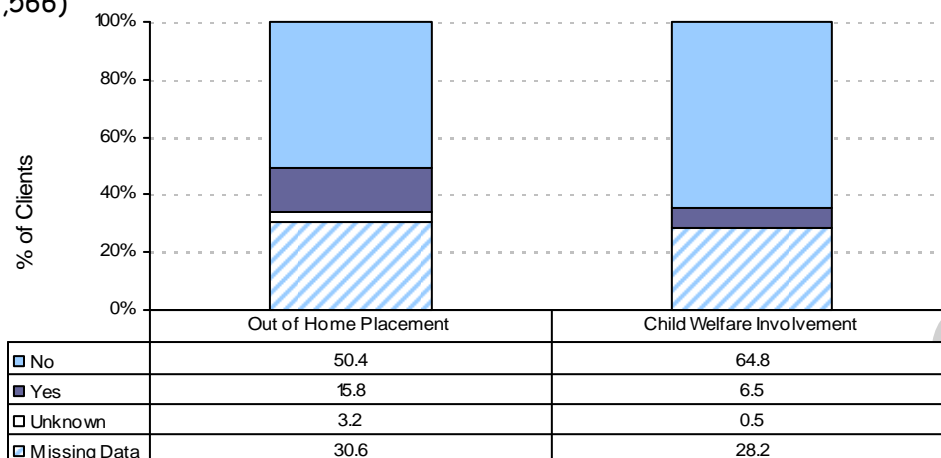


Figure 3.8 Percentage of Clients Placed Outside the Home by Age Group

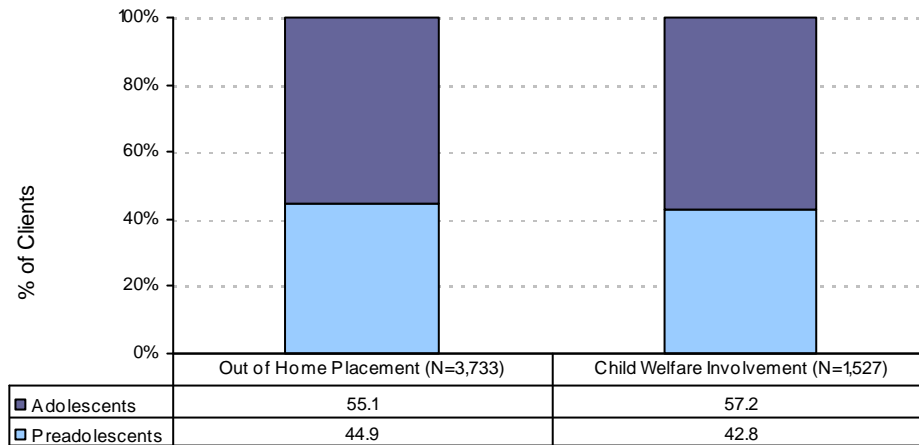


Figure 3.9 Percentage of Clients with Identified Mental Health Disorders (N=23,566)

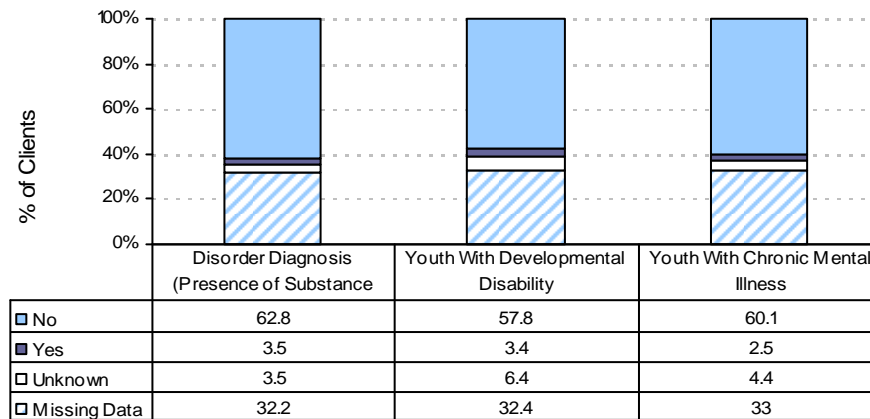


Figure 3.10 Percentage of Clients with Identified Mental Health Disorders by Age Group (N=23,566)

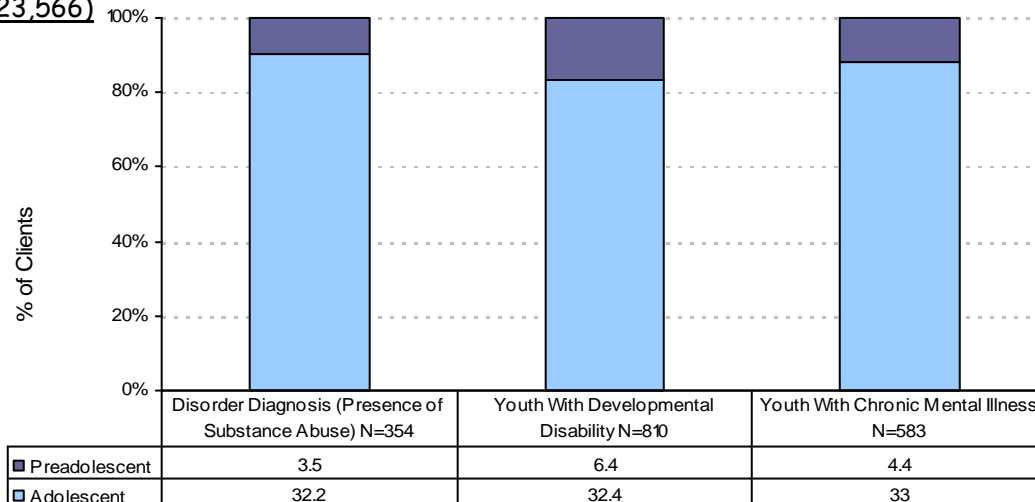
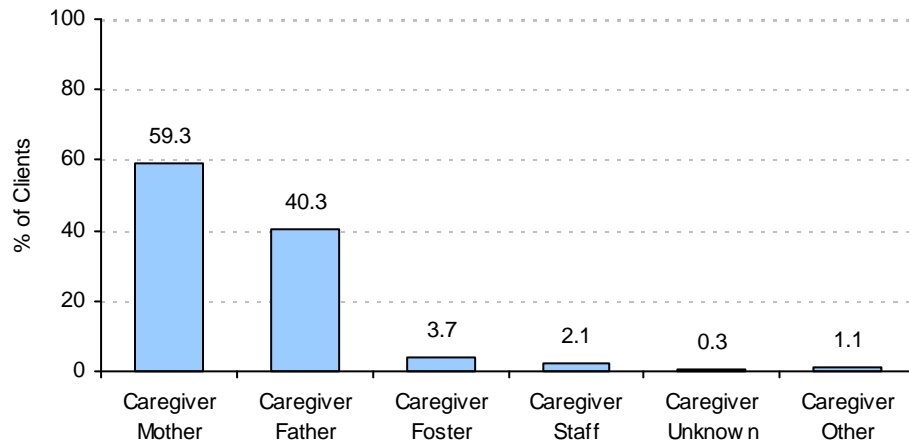


Figure 3.11 Type of Caregiver

(N=23,566)



CAREGIVER IN THE HOME

Information on caregivers for clients in the 2007 sample indicates that about 60% had a mother figure in the home, and 40%, a father figure (see Figure 3.11; please note that the percentages are not mutually exclusive in this chart). In addition to mothers and fathers as caregiver/s, about 4% of youth were in foster care situations, and 2% had organizational staff as main caregivers at some point. Few clients had unknown, or "other" caregivers.

There is much missing data regarding the nature of the relationship between caregiver mother/father and client as reported in Fig.3.12. We can surmise that biological mothers were present in the home for 56.1% of clients with type of mother figure information (vs. 52.8% in 2006), whereas biological fathers comprised 29.8% of father figures in the homes of these youth (vs. 28.1% in 2006). Grandparents, "live-in" caregivers, other relatives, and stepparents make up the remainder.

Figure 3.12 Caregiver - Client Relationship

(N=23,566)

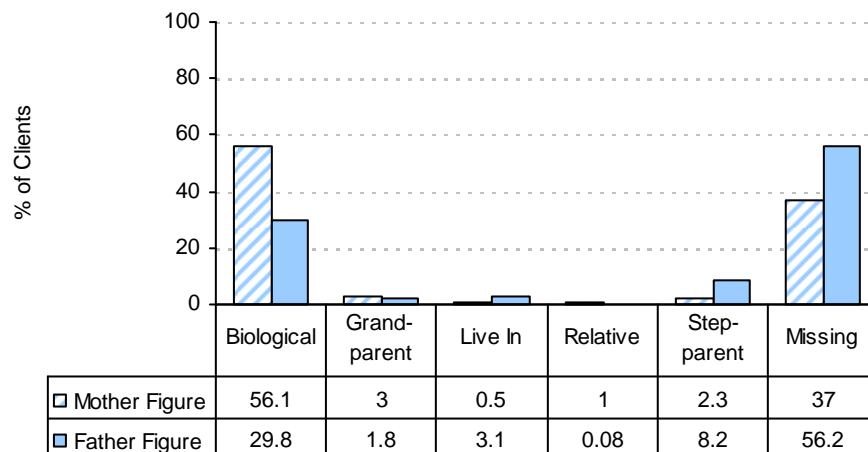
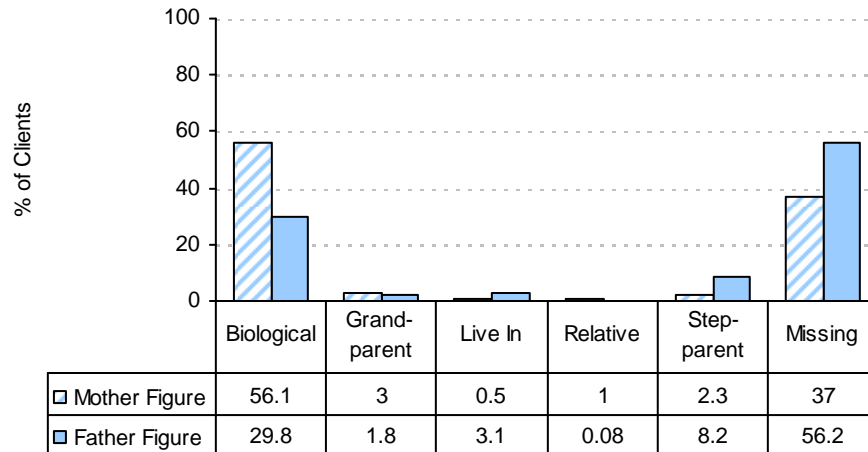


Figure 3.13 Sources of Information
(N=23,566)



Functional information was provided by a 'caregiver mother' for almost 60% (vs. 56% last year) of the clients included in this sample, while for 40.3% (vs. 38.2% last year) of the sample rating information was provided by a 'caregiver father' (Fig.3.13). Very small percentages of clients had information provided by a foster parent or other caregiver. Please note that the percentages in the graph below are not mutually exclusive.



Functioning at Entry to Service



This section of the report describes clients' global level of functioning at entry to service for children and youth who received children's mental health services in designated Ontario service provider organizations during the 2007 calendar year, and for whom CAFAS was rated.

BEST PRACTICE NOTES

Periodic Ratings: Although CAFAS evaluation at entry and exit are the only administrations explicitly mandated by the Ministry of Children and Youth Services, best practice dictates that periodic evaluations provide an opportunity to gauge response to treatment and, thus, alter the treatment plan according to progress or lack thereof.

T2 Rating Designation: It was the developer's intent that T2 be used to identify T1-related information that did not come to the clinician's attention until later in the treatment process. In Ontario, use of the T2 CAFAS Rating is not recommended and this marker should be ignored.

ASSESSING RESPONSE TO TREATMENT

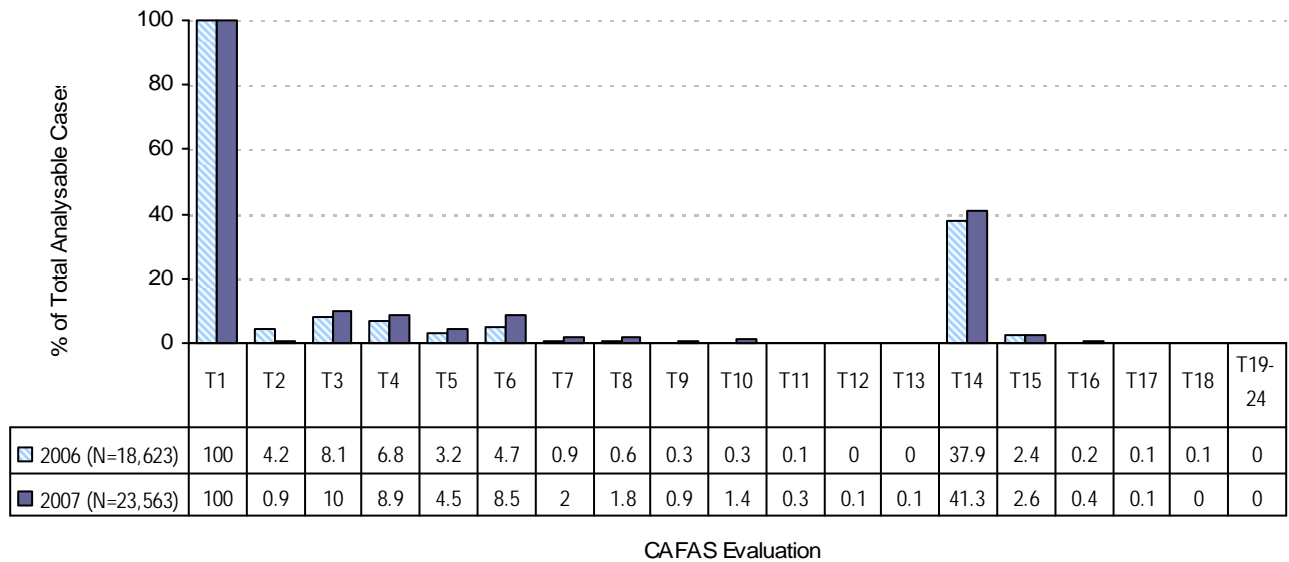
Because periodic CAFAS ratings allow the clinician to assess response to treatment and make adjustments to the treatment plan, we the frequency with which CAFAS evaluations are done per individual client is of interest (Table 4.1). There continues to be a relatively large number of T2 evaluations (N=223) even though a rating at this time point is not recommended as a best practice (see Best Practice Note above). However the number of T2 evaluations dropped drastically from the previous years, mainly because of an intensive data cleaning process conducted by each organization. Continued use of T2 evaluations may be due to clinician error, or to identifying alternate entry when a client is transferred from one organization to another or from one site to another.

Table 4.1 Frequency of CAFAS Assessments Over Time

T-Value	2006		2007	
	N	%	N	%
T1 (1 st Evaluation)	18,623	58.9%	23,566	54.3%
T2 (2 nd Evaluation)	788	1.8%	223	0.5%
T3 (3 months)	1,503	3.5%	2,357	5.4%
T4(6 months)	1,274	2.9%	2,108	4.9%
T5(9 months)	605	1.4%	1,051	2.4%
T6(12 months)	869	2.0%	1,996	4.6%
T7(15 months)	166	0.4%	467	1.1%
T8(18 months)	118	0.3%	426	1.0%
T9(21 months)	49	0.1%	213	0.5%
T10(24 months)	50	0.1%	335	0.8%
T11(year 3)	6	0.0%	71	0.2%
T12(year 4)	2	0.0%	30	0.1%
T13(year 5)	2	0.0%	24	0.1%
T14(Exit)	7,051	16.3%	9,742	22.5%
T15(Other)	445	1.0%	612	1.4%
T16(Other)	46	0.1%	85	0.2%
T17(Other)	15	0.0%	26	0.1%
T18(Other)	7	0.0%	11	0.0%
T19(Other)	6	0.0%	9	0.0%
T20(Other)	4	0.0%	5	0.0%
T21(Other)	3	0.0%	4	0.0%
T22(Other)	2	0.0%	3	0.0%
T23(Other)	0	0.0%	2	0.0%
T24(Other)	0	0.0%	2	0.0%
Total no. of CAFAS evaluations	31,634	100%	43,368	100%

Of the 43,368 CAFAS evaluations conducted in 2007, 54.3% were T1 (Entry) evaluations, and 22.5%, T14 (Exit) evaluations. If T2's are excluded, the remainder of evaluations from T3-T13 (20.9%) and those post-T14 (1.8%) comprise 22.7% of all CAFAS ratings. This information provides a useful benchmark against which to track clinician's use of the CAFAS as an outcome management tool that can assist in determining the potential success of a client's treatment plan while the client is still engaged in treatment. An additional view of CAFAS evaluations and their use for periodic assessment is shown in Figure 4.1. It is evident that clinicians have not incorporated periodic ratings into their practice, as suggested.

Figure 4.1 Rating Distribution Across CAFAS Evaluation Time Points



FUNCTIONING AT ENTRY TO TREATMENT

The interpretation of CAFAS scores is guided by the corresponding service delivery characteristics depicted in Table 4.2.

Table 4.2 Service Delivery Characteristics Corresponding with Total CAFAS Scores

Total Score of:	Corresponds to clients who are:
0-30	Likely referred to qualified health professional
40-70	Likely requires outpatient services
80-100	Likely requires outpatient care with additional services of a supportive or intensive nature
110-130	Likely requires intensive, community-based services, although some youths may need acute residential services at some point
> 140	Very intensive services would be required; maybe in residential or inpatient settings at some point

In 2007, 23,347 of 23,566 cases had an Entry CAFAS and valid total score at T1. Less than a 1 percent (0.93%) of cases did not have a total score at T1. Two percent of the total analyzable cases did not have a total score at T1 in 2006.

Central tendency figures shown in Figure 4.2 are similar for the years 2005, 2006 and 2007 despite the larger sample size over each year. The majority of clients in this sample (mode = 40) likely require outpatient services based on their level of functional impairment at entry to treatment. A median score of 60 suggests that nearly half probably require outpatient care with additional services of an intensive nature.

Figure 4.2 CAFAS Rating¹² at Entry to Treatment

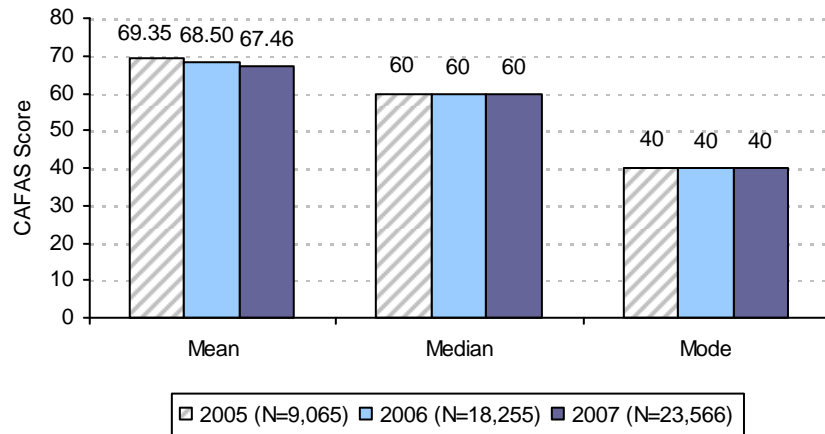
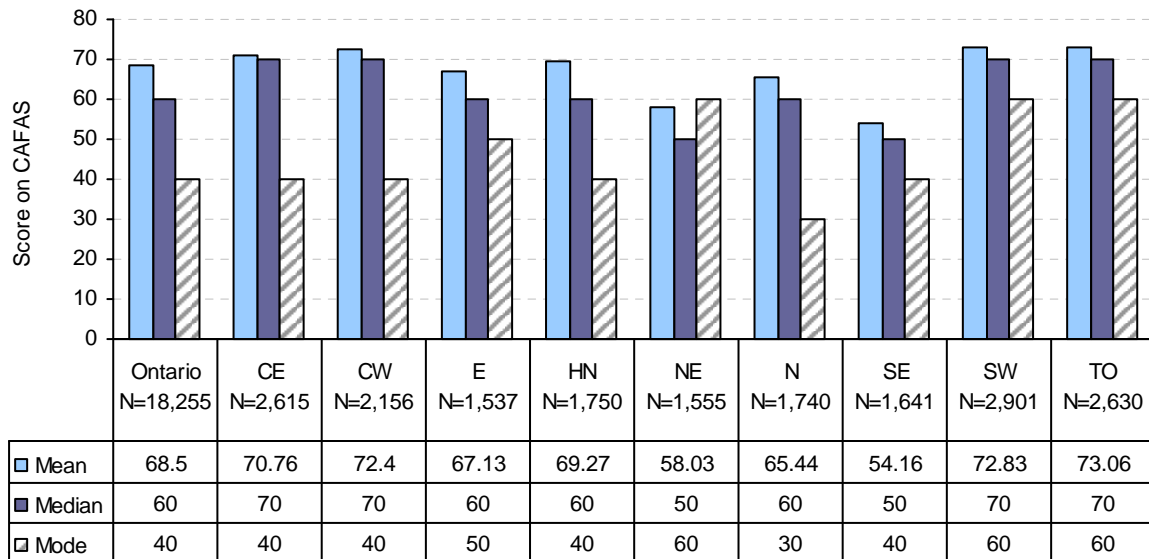


Figure 4.3 CAFAS Total Score at Entry to Treatment: Ontario and Regions - 2006



¹² Standard deviation is 41.679 for 2005, 40.414 for 2006 and 39.899 for 2007.

Mean levels of dysfunction vary across the province, ranging from a low mean CAFAS total score of 56.44 in the South East region to a high of 72.94 in the South Western region (Figs. 4.3, 4.4). The North and North East regions, having the most low scores in 2006 (mode=30) now demonstrates a greater number of clients with higher functional impairment in 2007 (mode=60). The Toronto and Eastern regions follow with a mode of 50; all of the other six regions have a balanced mode of 40.

In comparison with 2005 and 2006 regional data, level of dysfunction is relatively stable within regions over time, with the exception of the North Eastern region (Figure 4.5).

Figure 4.4 CAFAS Total Score at Entry to Treatment: Ontario and Regions - 2007

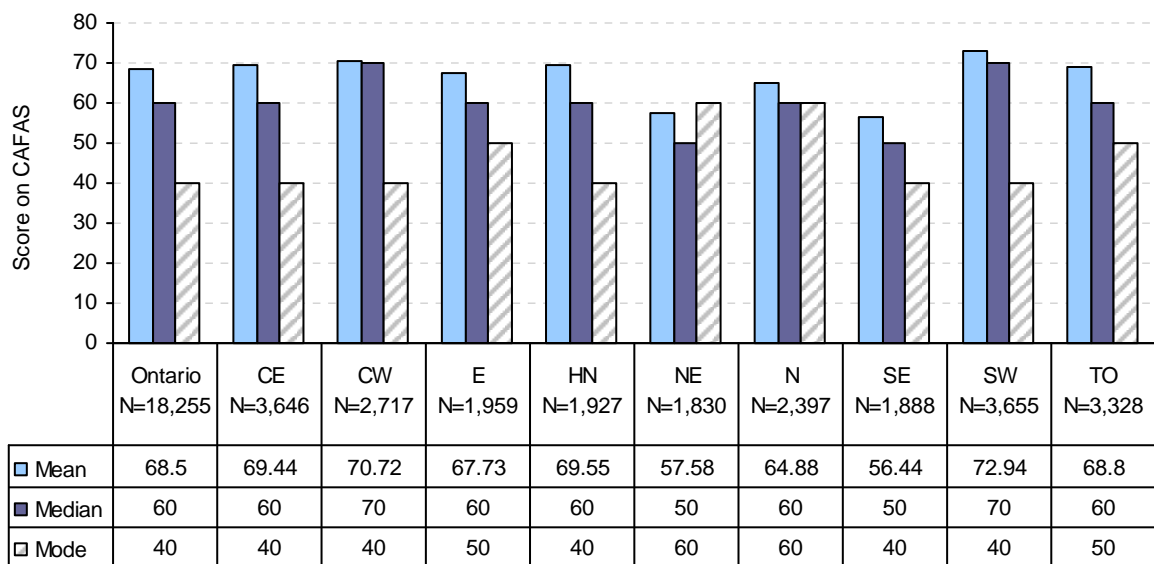
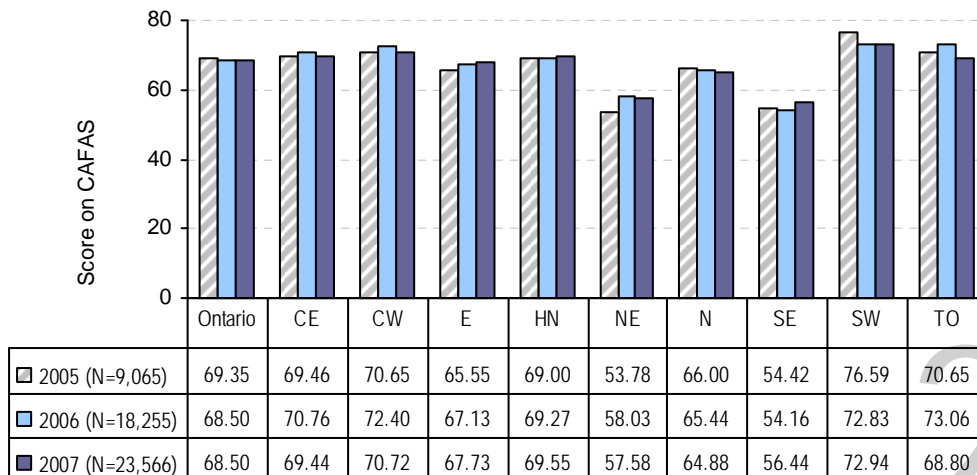


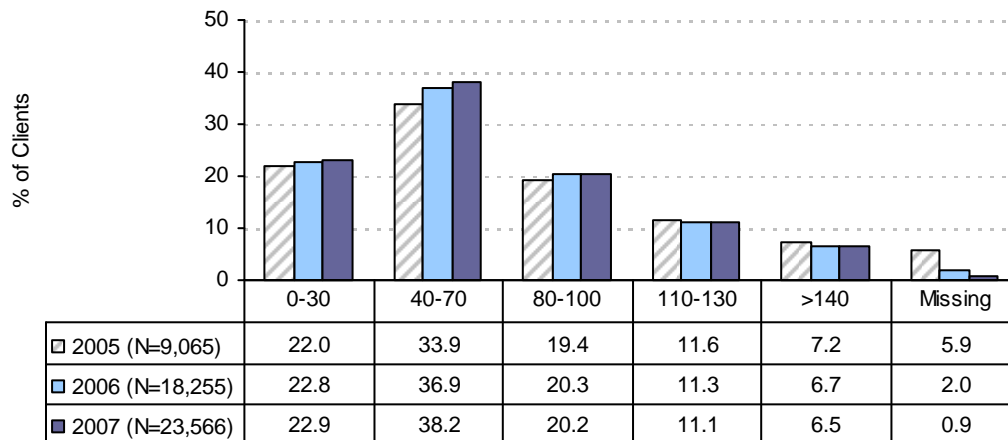
Figure 4.5 CAFAS Average Total Score at Entry to Treatment: Ontario and Regions - 2005, 2006, 2007



Overall level of client dysfunction at treatment entry for 2007 shows that the largest group of children and youth presenting for treatment (38.2%) are in the 40-70 range on the total CAFAS score, suggesting that they likely require outpatient services (e.g., weekly contact) (see Fig 4.6). Greater than one-third (37.8%) of clients need more support than traditional outpatient visits (e.g., have a score of 80 or above), and of these, 6.5% are extremely highly impaired.

Nearly 23% of clients came into treatment with less significant functional impairment (e.g., a score of 30 or less). Approximately 0.9% of cases submitted had no total score at entry but this is significantly better than the last two years due to improvements in selection method and data quality. The main reason for lack of a total entry score is that one or more of the CAFAS subscales were not or could not be rated.

Figure 4.6 Severity of CAFAS Rating at Entry to Treatment for years 2005, 2006 and 2007



Severity of functioning varies across Ontario regions, with certain regions (NE, N, SE) having a larger percentage of clients who appear to be functioning well (falling within the 0-30, and 40-70 severity range) as compared to the remainder of the province (Table 4.3). This pattern holds true for the last two years. In the Toronto region we see that there are fewer clients rating as needing intensive or very intensive supports in this year compared to the previous two years.

Table 4.3 Severity at Entry to Treatment for Ontario and Regions (%)
 (2005: N=9,065; N= 2006: N=18,255; 2007: N=23,566)

	0-30 <i>Some need for service</i>			40-70 <i>Outpatient needs</i>			80-100 <i>Outpatient plus extra supports</i>			110-130 <i>Intensive needs</i>			140+ <i>Very intensive supports</i>		
	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007
Ontario	22.0	22.8	22.9	33.9	36.9	38.2	19.4	20.3	20.2	11.6	11.3	11.1	7.4	6.7	6.5
CE	20.1	19.7	20.8	34.6	36.9	38.2	21.6	23.2	22.1	11.9	12.2	11.7	5.4	6.7	6.6
CW	19.6	19.2	20.4	35.9	36.7	38.1	21.8	21.1	20.4	12.0	13.0	12.5	6.7	8.4	7.8
E	25.0	22.2	20.9	32.9	38.4	39.9	18.9	21.1	22.0	11.5	11.4	10.9	4.3	5.0	5.6
HN	19.8	20.1	20.6	36.0	37.3	37.9	20.2	21.9	21.6	11.9	12.0	12.6	5.6	5.8	6.0
NE	33.2	29.4	29.7	39.4	41.4	41.8	15.2	17.2	17.9	6.3	7.9	7.6	2.6	3.4	2.6
N	26.6	25.0	24.2	31.1	37.9	40.5	18.8	19.2	18.8	9.3	9.8	9.4	7.1	5.7	5.8
SE	31.1	34.1	31.1	37.7	39.1	40.8	14.3	14.3	14.6	5.5	7.1	8.2	3.4	2.9	3.4
SW	19.8	21.3	20.3	30.5	34.4	34.8	19.1	21.4	22.4	14.7	12.7	13.3	11.4	9.6	8.9
TO	13.8	19.7	23.5	31.2	33.9	36.5	21.1	20.3	19.4	15.7	12.6	11.3	11.6	9.1	8.2

Severity scores tend to look more similar across regions with higher levels of dysfunction. Regions with the highest need for intensive services (scores 110 or higher), and with the highest percentage of clients who are extremely highly impaired (a score of 140 or higher) are Central West, South West and Toronto.

Organizations having more than 10 clients with scores 140 or higher are depicted in Table 4.4 below. Most of these organizations are community mental health centres and nine are hospitals (more than last year when six hospitals were included in a similar list; the Regional Mental Health Centre in London was the only hospital in 2005).

Table 4.4 Organizations Having 10 or more Clients Scoring ≥ 140 (Severe Dysfunction) on CAFAS at Entry to Treatment -2007

Organization (* denotes agencies that were <u>not</u> present in this list for the 2005 or 2006 reports; hospitals are highlighted)	Number of clients with total score ≥ 140 at T1	Number of clients with total score at T1	Percent of sample ≥ 140
Central East Region:			
Chimo	23	261	9
Frontenac	23	284	8
Kinark	88	1,327	7
New Path Youth and Family Services	41	512	8
Peterborough Regional Health Centre*	12	258	5
The York Centre	11	102	11
Whitby Mental Health Centre	18	109	17
Central West Region:			
Associated Youth Services of Peel	45	401	11
Cambridge Memorial Hospital	16	73	22
Grand River Hospital*	13	182	7
kidsLINK	12	78	15
Lutherwood-CODA	61	391	16
Peel Children's Centre	16	298	5
Trellis Mental Health and Development*	20	387	5
Eastern Region:			
CHEO (Children's Hospital of Eastern Ontario)	26	303	9
The Phoenix Centre for Children and Families	12	303	4
Roberts Smart Centre	18	76	24
Royal Ottawa Healthcare Group	14	149	9
Youth Services Bureau of Ottawa Carleton*	15	186	8
Hamilton-Niagara Region:			
Hamilton Child and Adolescent Services	19	82	11
The Community Adolescent Network of Hamilton	11	21	22
Lynwood Hall Child & Family Centre*	20	222	7
McMaster Children's Hospital*	13	306	15
Niagara Child And Youth Services	11	449	16
Niagara Health System*	14	312	5
North East Region:			
Algonquin Child & Family Services	31	822	4
Northern Region:			
Algoma Family Services	48	433	11
Child and Family Centre in Sudbury	33	791	4
Children's Centre Thunder Bay	23	545	4
Dilico Anishinabek Family Care	17	185	9
Lake of Woods Child Development Centre*	10	69	14
South East Region:			

Organization (* denotes agencies that were <u>not</u> present in this list for the 2005 or 2006 reports; hospitals are highlighted)	Number of clients with total score ≥ 140 at T1	Number of clients with total score at T1	Percent of sample ≥ 140
Child and Youth Wellness Centre of Leeds & Grenville	21	588	4
Open Doors for Lanark Children & Youth	12	319	4
Pathways for Children & Youth	23	596	4
South West Region:			
Child and Parent Resource Institute -CPRI (London)	87	328	27
Community Services Coordination Network*	17	44	39
Craigwood Youth Services	21	140	15
Glengarda Child & Family Services*	11	117	9
Huron-Perth Centres for Children & Youth	27	464	6
London Health Sciences Centre	11	370	3
Madame Vanier Children's Services	28	380	7
Maryvale Youth & Family Services	22	114	19
Regional Mental Health Centre	16	73	22
St. Clair Child & Youth Services	33	366	9
Toronto Region:			
East Metro Youth Services	28	161	17
George Hull Centre for Children & Families	17	172	10
Hincks-Dellcrest Centre	17	460	4
Youthdale Treatment Centres	166	641	26

The South West region continues to top the province in client severity, although eight out of 10 of the organizations present in the 2007 'severity' list were also present in the 2005 and 2006 list(s). These 10 agencies represent nearly half (48%) of all agencies submitting data in the SW region, which is slightly less than for 2006 (Table 4.5).

Youthdale Treatment Centre (Toronto region) and Kinark Child and Family Services (Central East Region) continue to show a high frequency of clients with scores 140 or higher as compared to other agencies. However, these values must be considered in light of the larger number of clients seen within these organizations (i.e. those with a total CAFAS score).

The SW region's Child and Parent Resource Institute -CPRI (London) and Community Services Coordination Network have the highest severity percentage out of the total number of cases within the highly impaired category.

Table 4.5 Annual Comparison of Organizations with Highly Dysfunctional Clients

Region	Number of Organizations with at least 10 clients scoring ≥ 140 at T1		Total number of agencies		%	
	2006	2007	2006	2007	2006	2007
Central East	6	7	11	15	55	47
Central West	7	7	14	16	50	44
Eastern	4	5	14	14	29	36
Hamilton-Niagara	3	6	9	9	33	67
North East	1	1	6	6	17	17
Northern	4	5	9	11	45	45
South East	3	3	6	6	50	50
South West	9	10	17	21	53	48
Toronto	4	4	20	21	20	19

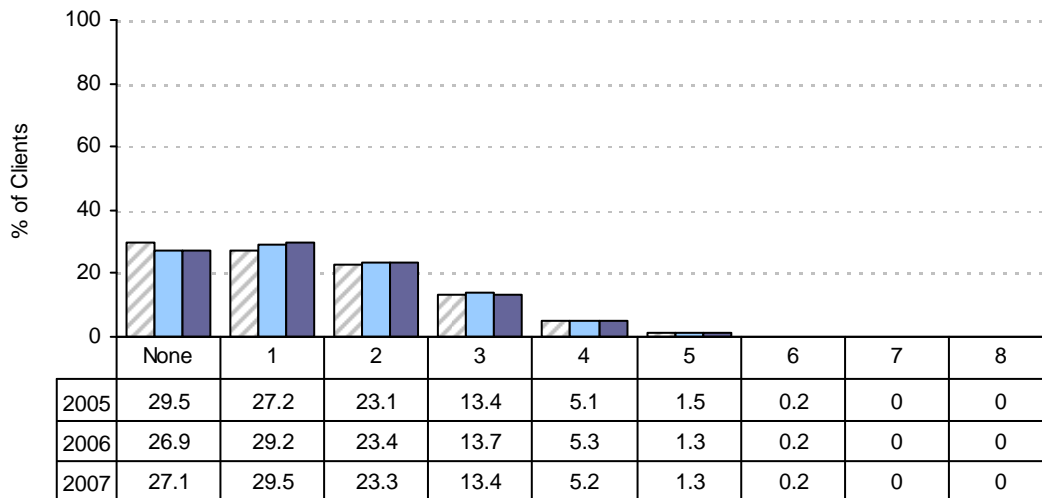
The clinical burden of clients served in these organizations during the 2007 year is depicted below in Figures 4.7 & 4.8. Clinical burden is defined as the percentage of clients rated as either moderately or severely impaired at entry to treatment (e.g., a subscale score of 20 or 30) on none, one, two, etc. of the individual CAFAS subscales.

We see that 72.9% (vs. 70.5% observed in 2005, and 73.1% for 2006), or almost three-quarters of the sample, are moderately impaired on one or more of the 8 CAFAS subscales¹³. Less than half, or 43.4 % (similar percentages for 2005 and 2006), have multiple impairments at this level of severity (e.g., clients with 2 or more subscales rated as moderate). Discrepancies in percentages may be explained by different sample sizes for the two reports (23,566 cases for this report vs. 18,623 cases for 2006 and 9,634 for 2005).

¹³ The number of subscales with moderate or severe impairment was calculated among all cases with some data. That means that the "none" subscale includes all cases with no scores of 20 or 30 but also missing data.

Figure 4.7 Percentage of Clients Rated Moderately Impaired on None to 8 of the 8 CAFAS Subscales at Entry to Treatment (subscale score =20)

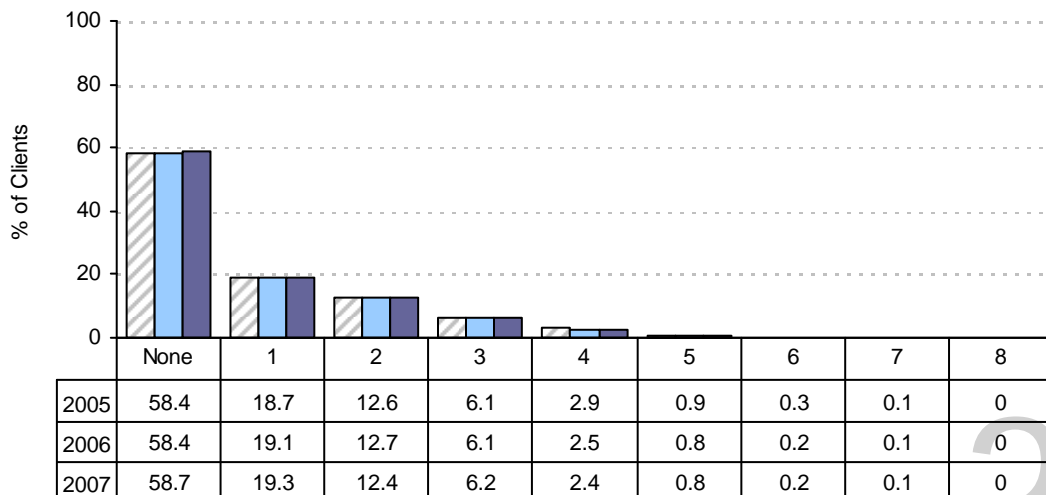
(2005: N=9,634 and 2006: N=18, 623; 2007: N=23,566 cases with at least some subscale data)



More than 41% of clients have one or more severe impairments across all three years: 2005 to 2007. No clients had all 8 subscales rated as severely impaired (Figure 4.8). This data can be used to target those clients who have the highest needs and should receive more intensive treatments.

Figure 4.8 Percentage of Clients Rated Severely Impaired on None to 8 of the 8 CAFAS Subscales at Entry to Treatment (subscale score =30)

(2005: N=9,634 and 2006: N=18, 623; 2007: N=23,566 cases with at least some subscale data)



Boys have a slightly higher mean CAFAS score at entry to treatment compared to girls (Fig 4.9), although they make up fewer of those clients in the low dysfunction group (Fig 4.10)

Figure 4.9 CAFAS Total Score at Entry to Treatment by Sex

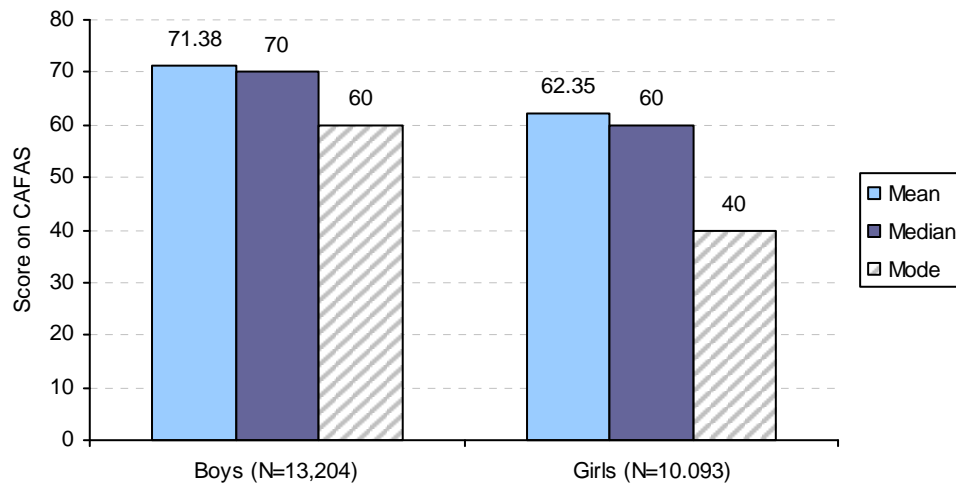
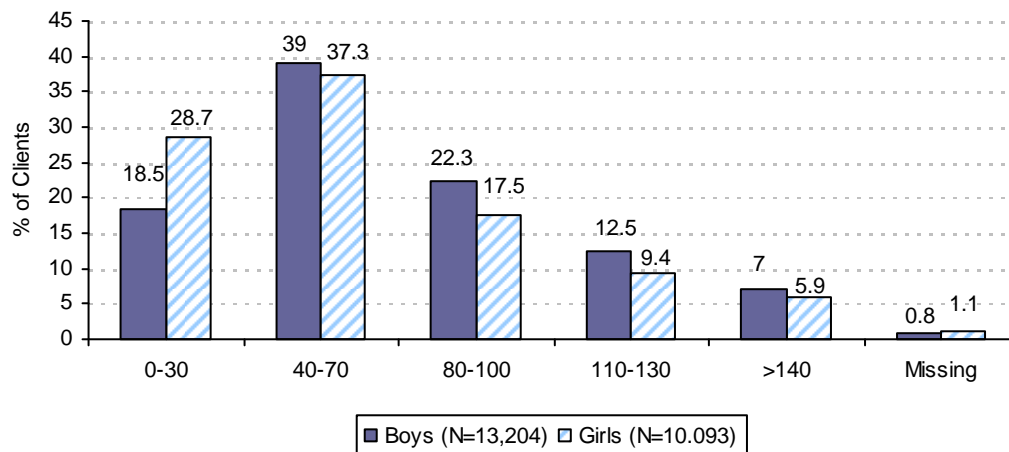


Figure 4.10 Severity of CAFAS Rating at Entry to Treatment by Sex



The same observation can be drawn between a higher entry score for adolescents compared with pre-adolescents (Fig.4.11). Preadolescents are more represented in the mild and moderate dysfunction groups, whereas adolescents surpass preadolescents in the higher levels of dysfunction (Fig.4.12).

Figure 4.11 CAFAS Total Score at Entry to Treatment by Age Group

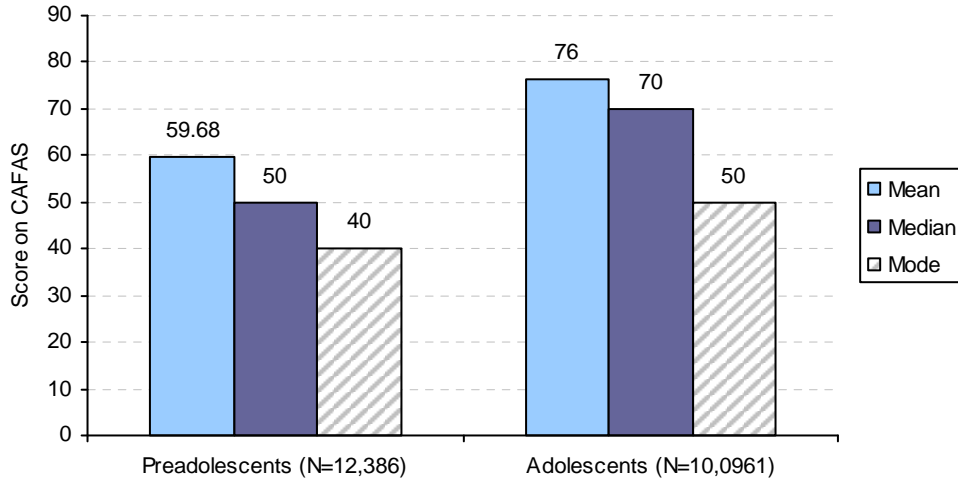
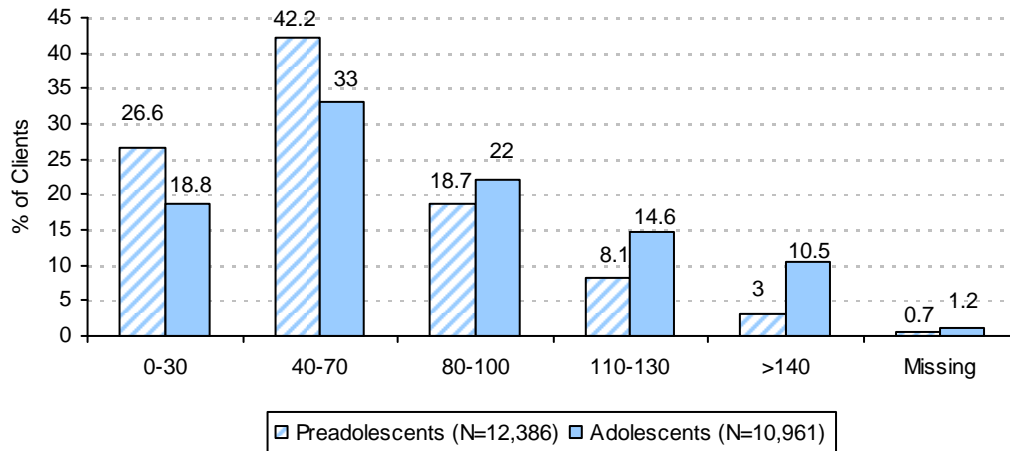
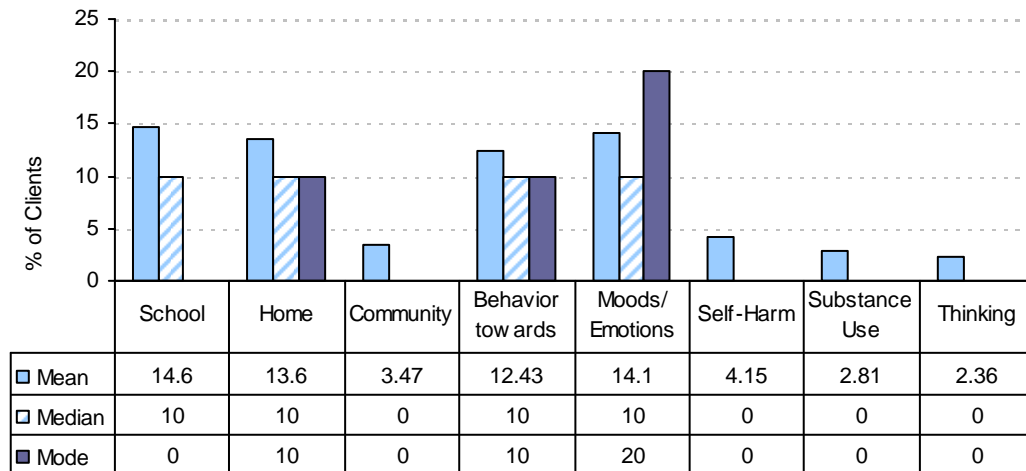


Figure 4.12 Severity of CAFAS Rating at Entry to Treatment by Age Group



Looking at dysfunction for the CAFAS subscales indicates that client dysfunction is largely evident in the domains of school (ability to function satisfactorily in a group educational environment), home (extent to which child/youth observes reasonable rules and performs age appropriate tasks), behaviour towards others (appropriateness of child's/youth's daily behaviour), and moods and emotions (modulation of child's/youth's emotional life) (Fig. 4.13).

Figure 4.13 CAFAS Scores at Entry to Treatment by Subscale (Mean, Median and Mode)
(N varies between 23,495 and 26,510 because of missing scores on different subscales)



Almost half (49%) of clients present as moderately to severely impaired in the area of schooling, which suggests that they may be best served by including school personnel in the treatment plan (Figure 4.14). The relatively low levels of dysfunction in the area of community behaviour (respect for the rights of others and their property and conformity to law) may be due to fewer young offenders in this mental health sector sample, as compared to what might be found in a juvenile justice sample.

In this sample, 16% had moderate to severe impairment in the self-harm domain (extent to which the child/youth can cope without resolving to self-harmful behaviour or verbalizations); 9.5% were moderate to severe with respect to substance use (child's/youth's substance use and the extent to which it is not appropriate or is disruptive); and 9.2% were moderate to severe in thinking (ability of child/youth to use rational thought processes).

There are very little differences in severe impairment (i.e. subscale score of 30) over the last three years (see Fig. 4.15).

Figure 4.14 Functioning on CAFAS Subscales at Entry to Treatment

(N varies between 23,495 and 26,510 because of missing scores on different subscales)

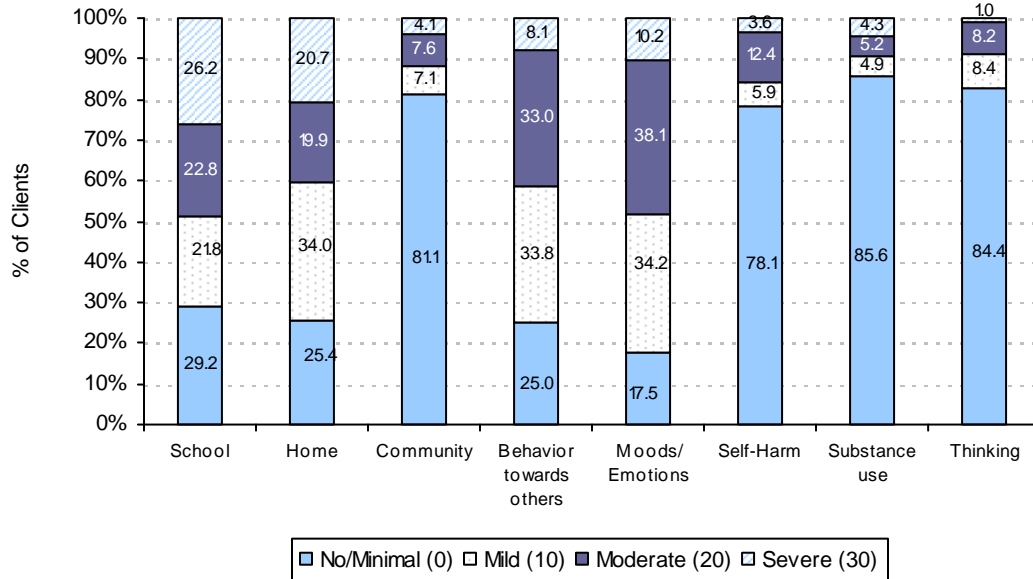
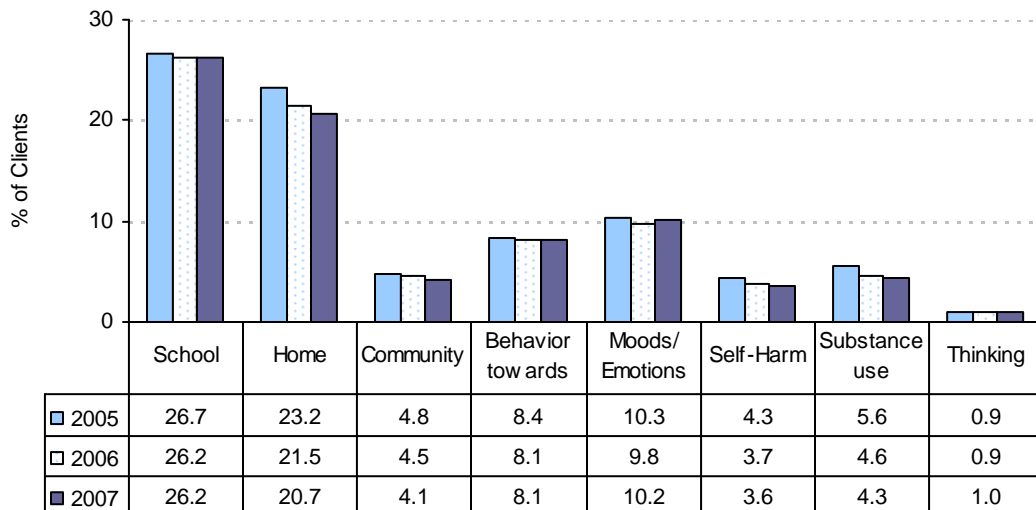


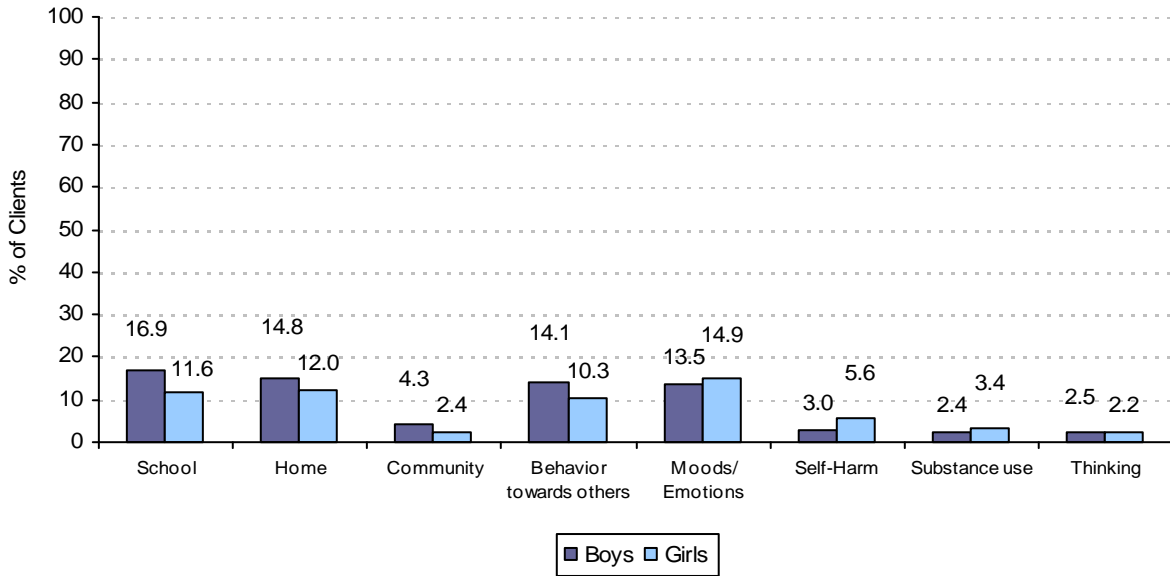
Figure 4.15 Severe Impairment on CAFAS Subscales at Entry to Treatment - years 2005 to 2007

(N varies because of missing scores on different subscales N: 9,220 - 9,237 for 2005; N:18,528 - 18,546 for 2006; N: 23,495 - 26,510 for 2007)



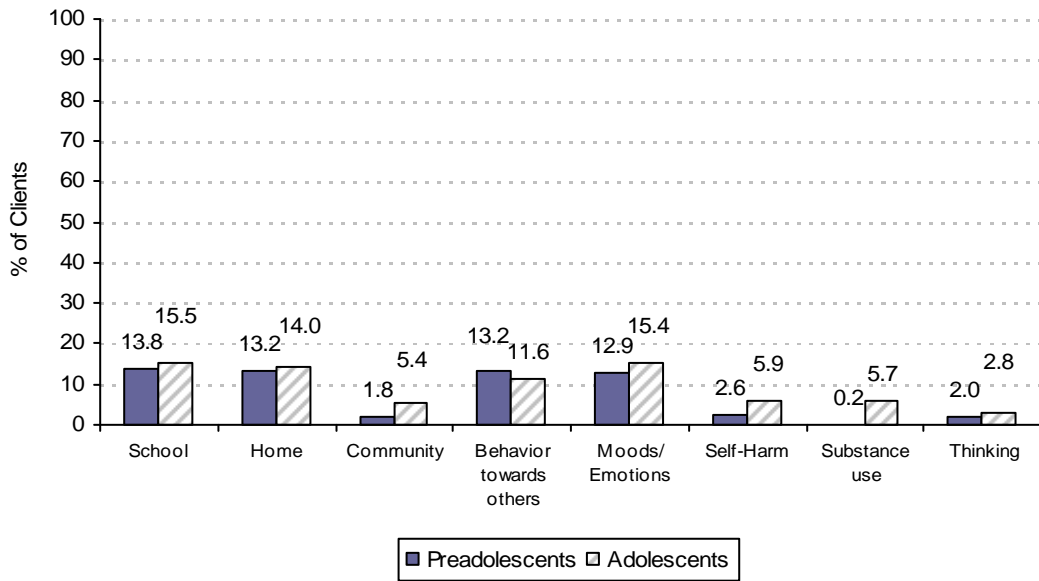
Sex differences in area of dysfunction are evident, with boys demonstrating higher dysfunction in the domains of school, home, community, and behaviour towards others compared to girls (Fig. 4.16). Girls were found to surpass boys' level of dysfunction in the domains of moods/emotions, self-harm, and substance use.

Figure 4.16 Average CAFAS Subscale Score at Entry to Treatment (T1) by Sex
(N for Boys varies between 13,280 and 13,286 and N for Girls varies between 10,162 and 10,173 because of missing scores on different subscales)



Differences in levels of dysfunction by age group suggest greater dysfunction for adolescents across all domains except behaviour towards others (Fig.4.17).

Figure 4.17 Average CAFAS Subscale Score of Preadolescents & Adolescents by Subscale at Entry to Treatment
(N for Preadolescents varies between 12,444 and 12,450 and N for Adolescents varies between 11,049 and 11,062 because of missing scores on different subscales)





Functioning at Exit from Service

This section of the report describes clients' level of functioning upon exit from treatment for children and youth who sought children's mental health services in designated Ontario service provider organizations during 2007 and for whom CAFAS was rated.

Using level of functional impairment as an outcome indicator is useful in helping to determine whether the observed change from pre-to post-treatment is clinically and/or statistically meaningful (Hodges, 2003). In order to determine the proportion of cases that experienced a meaningful improvement, a procedure is used for calibrating outcome that can be applied to each client. This calibration is referred to as "clinical significance" and refers to whether changes are meaningful, as evidenced by having an impact on the clients everyday functioning in the "real world" (Jacobson & Truax, 1991; Kazdin & Kendall, 1998; Kazdin & Weisz, 1998).

CAFAS data permits at least three ways of viewing outcome, of which only two are represented in this report:

1. Change in average scores from treatment entry to treatment exit/last CAFAS evaluation
2. Proportion of clients improved (combining all clients)

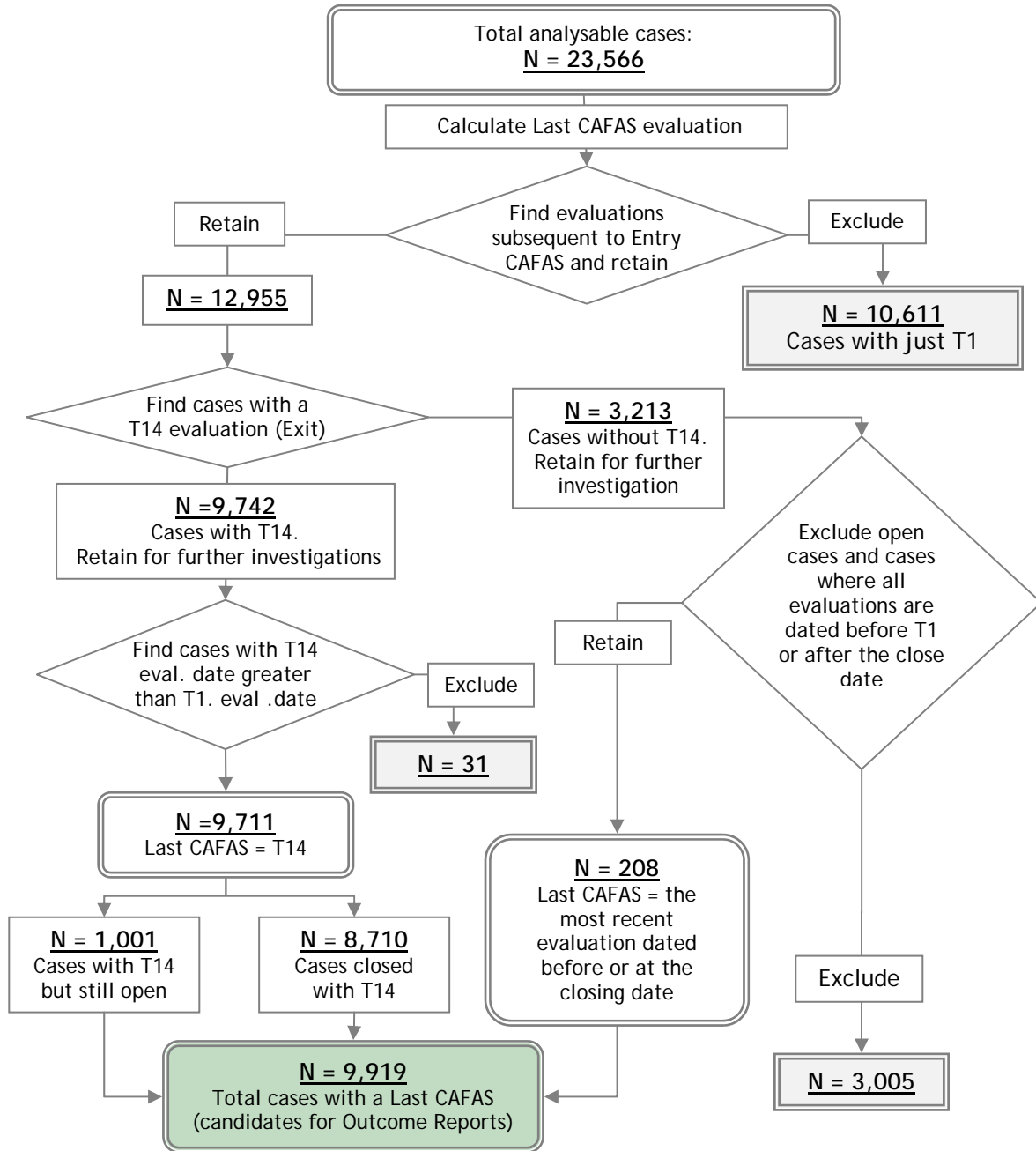
The third method involves examining changes in type of client dysfunction over time. Client typologies for CAFAS have not been implemented as an interpretation or clinical strategy across Ontario, as yet.

The following analyses of client outcomes include 9,919 cases that met the following criteria:

- Were either open or closed cases
 - Where treatment was delivered
 - Had an Exit CAFAS rating (also referred to as T14)
- OR, if the case was closed without a T14:
- Had at least one evaluation other than the Entry CAFAS (also referred to as T1) or the optional Entry CAFAS (or T2)

Figure 5.1 describes the process of selecting the last CAFAS evaluation used for outcome measurement.

Figure 5.1 Calculating Last CAFAS



N = 23,347: Cases with valid Total Scores at Entry (T1)
N = 9,705: Cases with valid Total Scores for Last CAFAS
N = 9,663: Cases with valid Total Scores for both Entry (T1) and Last CAFAS
N = 9,501: Cases with valid Total Scores for Exit CAFAS (T14)
N = 9,462: Cases with valid Total Scores for both Entry (T1) and Exit CAFAS (T14)

It is of interest to examine the frequency with which clients rated at exit to treatment were also rated at different time points throughout their service at the particular organization. Table 5.1 depicts the frequency of CAFAS evaluations that qualify as Last CAFAS. Approximately 98% of cases had an Exit CAFAS (T14), with the remaining 2.1% being cases that did not have an Exit CAFAS completed.

Table 5.1 Distribution of Last CAFAS Evaluation (N=9,919)

T-Value	Frequency	%	T-Value	Frequency	%
T14(Exit)	9,711	97.9%	T8(18 months)	7	0.1%
T3 (3 months)	78	0.8%	T9(21 months)	5	0.1%
T4(6 months)	42	0.4%	T10(24 months)	6	0.1%
T5(9 months)	23	0.2%	T15(Other)	16	0.2%
T6(12 months)	21	0.2%	T16(Other)	1	0.0%
T7(15 months)	5	0.1%	T17(Other)	3	0.0%

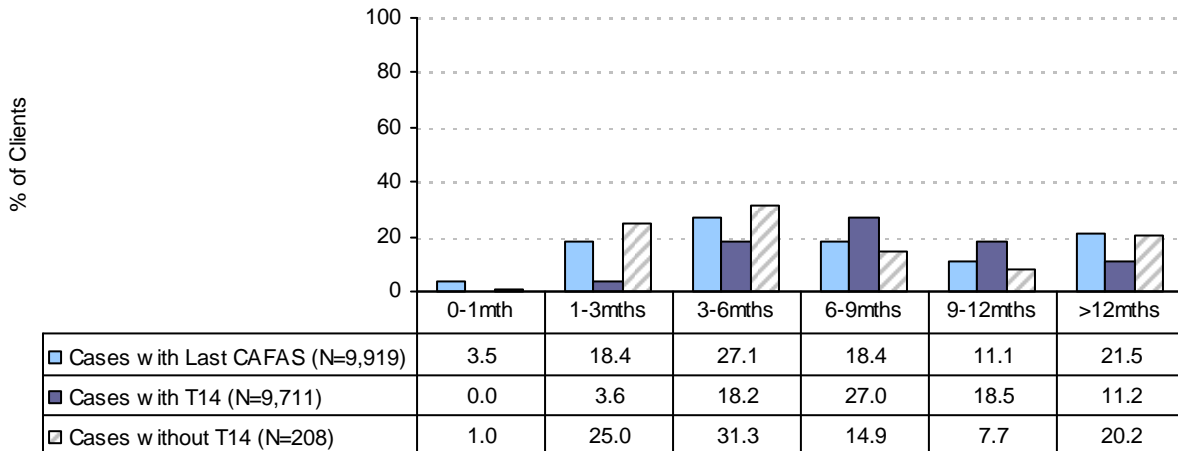
Among the 9,711 cases with a T14, 21.2% were rated at least one more time in addition to having Entry and Exit CAFAS ratings (Table 5.2). The numbers of separate CAFAS evaluations per individual begin to drop dramatically after 2 ratings, suggesting that clinicians are not using the tool to manage response to treatment, or that clients are staying in treatment for a short period of time.

Table 5.2 Number of Evaluations for Cases with an Exit CAFAS (T14) (N=9,711)

Number of CAFAS evaluations	Frequency	%	Number of CAFAS evaluations	Frequency	%
2 (T1 & T14)	7,650	78.8%	9	23	0.2%
3	1,185	12.2%	10	14	0.1%
4	423	4.4%	11	3	0.0%
5	205	2.1%	12	3	0.0%
6	115	1.2%	13	2	0.0%
7	51	0.5%	14	2	0.0%
8	35	0.4%			0.0%

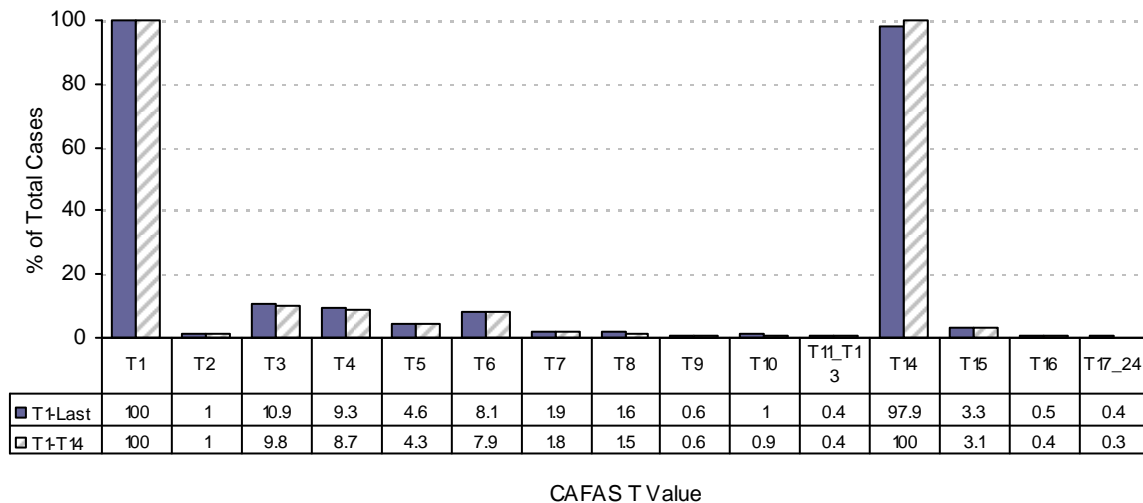
A similar interpretation is evident when CAFAS evaluations are depicted according to time (Figure 5.2)

Figure 5.2 Time between Entry to Treatment and Last CAFAS



Curiously, 3,313 clients having an Entry CAFAS (T1) that was rated more recently, (that is, within less than 100 days), have no subsequent CAFAS rating. A greater number of clients, 10,334, with Entry CAFAS that were rated at more than 100 days have no subsequent CAFAS. This suggests that clinicians may only recently have begun the practice of periodic CAFAS ratings, and/or, the longer the time passed since Entry rating, the less likely there is to be a subsequent rating (Figure 5.3).

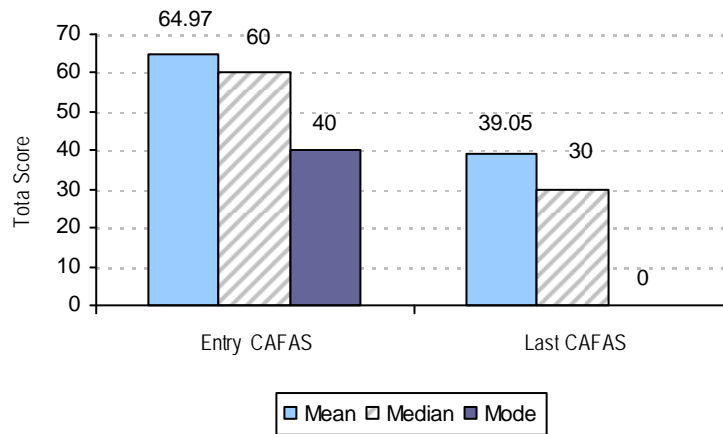
Figure 5.3 Percentage of CAFAS Evaluations



CHANGE IN AVERAGE SCORES FROM TREATMENT ENTRY TO LAST CAFAS

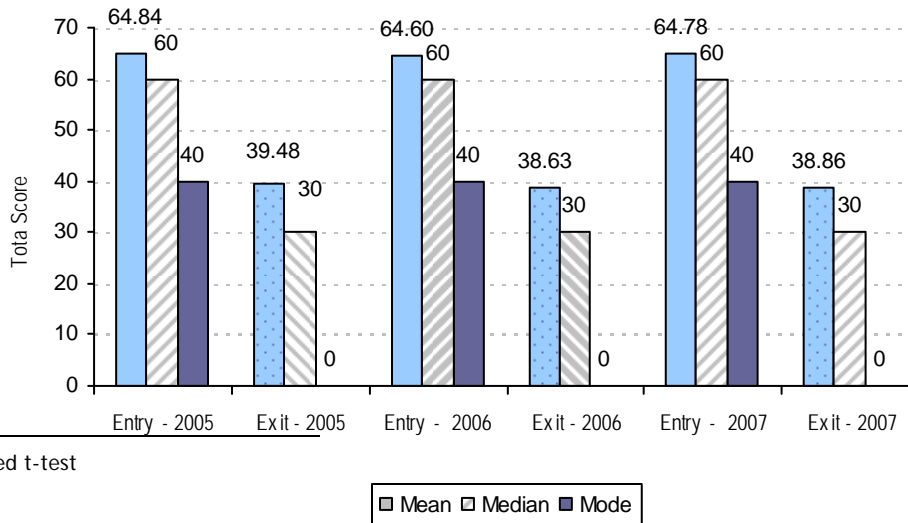
The first view of change in dysfunction shows that for the 9,663 cases for which exit data was available (Last CAFAS), there is a significant statistical improvement in functioning from entry to last CAFAS ($p < .0001$, $t=74.461$).¹⁴ On average, there was a 25.93 point drop (improvement) in impairment from an average CAFAS total score of 64.97 at entry to treatment, to an average total score of 39.05 on the last CAFAS evaluation (Fig.5.4). The results are similar to those reported in 2005 and 2006 where there were a 25.36 and a 25.97 point drop in impairment, respectively.

Figure 5.4 Change in Average CAFAS Total Score from Treatment Entry to Last CAFAS (N=9,663)



A comparison of central tendency measures for the years 2005 and 2006 shows them to be quite similar (Fig.5.5).

Figure 5.5 Change in Average CAFAS Total Score from Treatment Entry to Treatment Exit (N=2,164 for 2005, N=6,721 for 2006, N=9,462 for 2007)



¹⁴ Paired t-test

A difference score of 20 or greater carries clinical significance over and above statistical significance, as reflected by an effect size¹⁵ of 0.66 (vs. 0.65, 0.63 and 0.64 presented in the 2006, 2005 and 2004 annual reports, respectively). An effect size of 0.6 represents a moderate to large effect in magnitude, and indicates that the mean of the treated group is at the 73rd percentile of the untreated group as defined by Cohen (1988).

A comparison of CAFAS data for Ontario children and youth and for child and youth mental health populations from other jurisdictions is provided in Table 5.3. Ontario effect sizes appear comparable to those reported for other jurisdictions.

Table 5.3 Severity of Child Functioning for Various Jurisdictions

Author / Source	Sample Description	CAFAS total score Mean (SD)		Diff	Effect Size
		Entry	Exit		
Ontario, 2007	N= 9,462 children and youth served in community and hospital based mental health organizations.	64.78 $\sigma_1=39.886$	38.86 $\sigma_2=38.398$	25.92	0.66
Ontario, 2006	N= 6,721 children and youth served in community and hospital based mental health organizations.	64.60 $\sigma_1=40.73$	38.63 $\sigma_2=39.33$	25.98	0.65
Ontario, 2005	N= 2,164 children and youth served in community and hospital based mental health organizations.	64.84 $\sigma_1=40.13$	39.48 $\sigma_2=40.53$	25.36	0.63
Ontario, 2004	N=964 children and youth served in community and hospital based mental health organizations.	63.85	37.85	26	0.64
Hodges,	N=11,815 youth referred to Michigan	80	56	<i>Not</i>	0.66

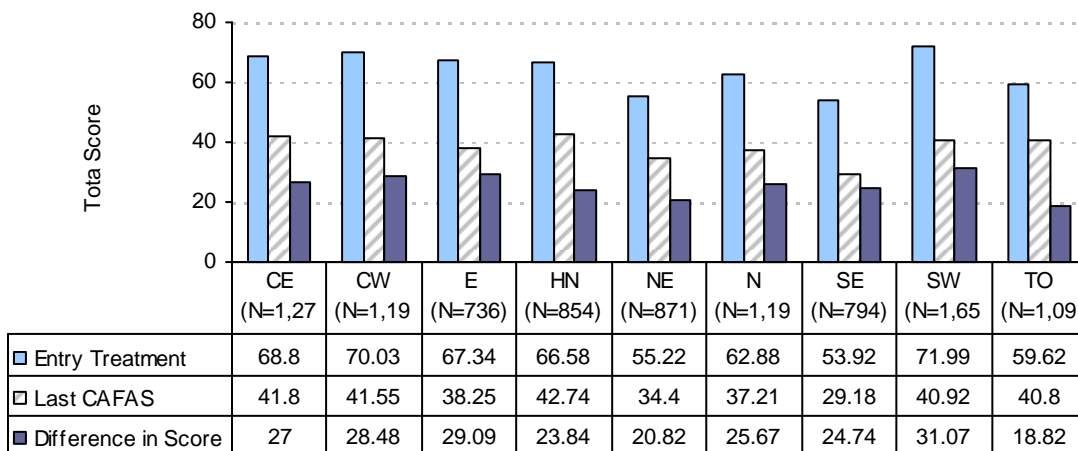
¹⁵ Effect size (ES) is a name given to a family of indices that measure the magnitude of a treatment effect. Unlike significance tests, these indices are independent of sample size. ES measures are the common currency of meta-analytic studies that summarize the findings from a specific area of research. There is a wide array of formulas used to measure ES. Cohen's (1988) definition of ES is used here: $d = M_1 - M_2 / \sigma$, where d is defined as the difference between means ($M_1 - M_2$) divided by the standard deviation of either group. In meta-analysis the two groups are considered to be the experimental and control groups. By convention the subtraction, $M_1 - M_2$, is done so that the difference is positive if it is in the direction of *improvement* or in the predicted direction and negative if in the direction of *deterioration* or opposite to the predicted direction. Cohen argued that the standard deviation of either group could be used when the variances of the two groups are homogeneous. Cohen (1988) hesitantly defined effect sizes as "small, $d = .2$," "medium, $d = .5$," and "large, $d = .8$," stating that "there is a certain risk inherent in offering conventional operational definitions for those terms for use in power analysis in as diverse a field of inquiry as behavioural science". Thus, in the case where both samples are the same size, the appropriate effect size is calculate by the formula $d = \frac{mean_1 - mean_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$, where $mean_1$ and SD_1 (σ_1) are the mean and standard

deviation for group i , for $i = 1, 2$.

Author / Source	Sample Description	CAFAS total score Mean (SD)		Diff	Effect Size
		Entry	Exit		
2003	State public mental health in fiscal year 2002. Of these, N=2,501 had an intake and discharge CAFAS.			<i>reported in manual</i>	
Georgia State, USA, MATCH	N=678 children served by Georgia's Multi-Agency Team for Children who have severe emotional disturbances requiring mental health treatment in a residential setting, 64% male and 36% female. 54% Caucasian. Results are for those with an intake and discharge rating, N=125.	135	99	<i>No standard deviations reported, hence, no effect size calculation.</i>	
Hodges, Xue & Wotring 2004	N=5, 638 youths with serious emotional disturbance (score above 50) ages 7-17 years served in community mental health service providers in Michigan	89.35 $\sigma_1=32.35$	63.14 $\sigma_2=38.78$	26.21	0.73

A regional view of CAFAS change shows a range of difference scores, with the largest improvements occurring in the South West (31.07 points) and Eastern (29.09 points) regions, and the least amount of change occurring in the Toronto region (18.82 points) (Fig.5.6).

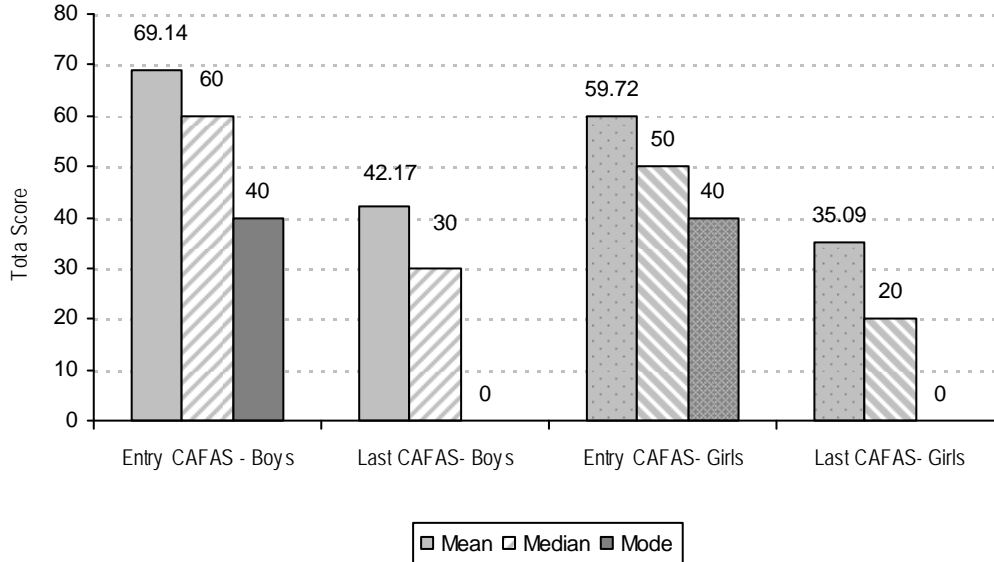
Figure 5.6 Change in Average CAFAS Total Score from Treatment Entry to Last CAFAS By Region



With respect to gender differences in functional improvement, we find that boys show slightly larger gains in functioning than girls (difference score of 26.97 versus 24.63) (Fig.5.7)

Figure 5.7 Change in Average CAFAS Total Score from Treatment Entry to Last CAFAS By Sex

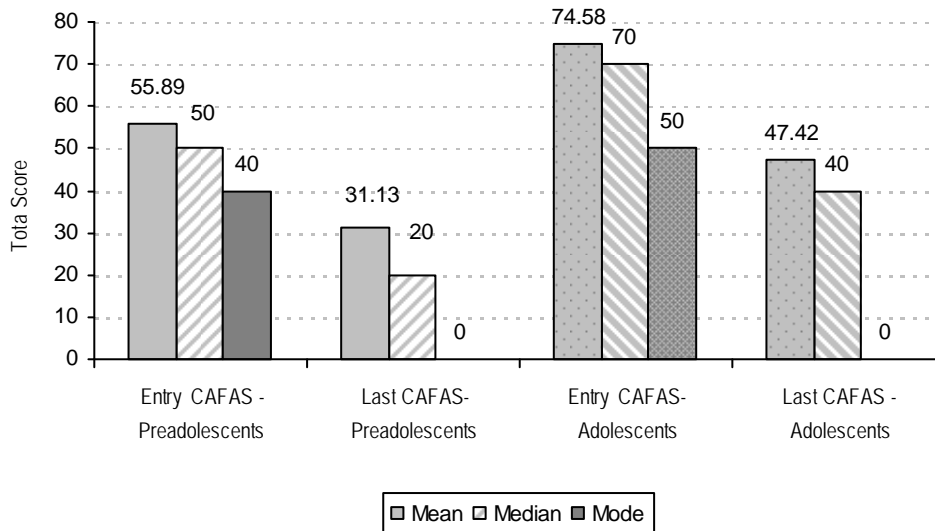
(N=5,413 for Boys and N=4,234 for Girls)



Preadolescents show a difference score of 24.76 compared to 27.16 for adolescents (Fig.5.8). Functional improvements appear to be less strong for younger children compared to older youth, however they younger ones start off with lower levels of dysfunction.

Figure 5.8 Change in Average CAFAS Total Score from Treatment Entry to Last CAFAS By Age Group

(N=4,967 for Preadolescents and N=4,696 for Adolescents)



Also of interest is functional improvement across CAFAS subscales. As can be seen in Figure 5.9, the largest improvements are made in the domains of moods/emotions and behaviour towards others. This has been a consistent finding across the last three years (Table 5.4). School and home functioning also show good degree of change in the expected direction.

Figure 5.9 Change in Average Score on CAFAS Subscales from Treatment Entry to Last CAFAS

(N varies between 9,783 and 9,799 because of missing scores on various subscales)

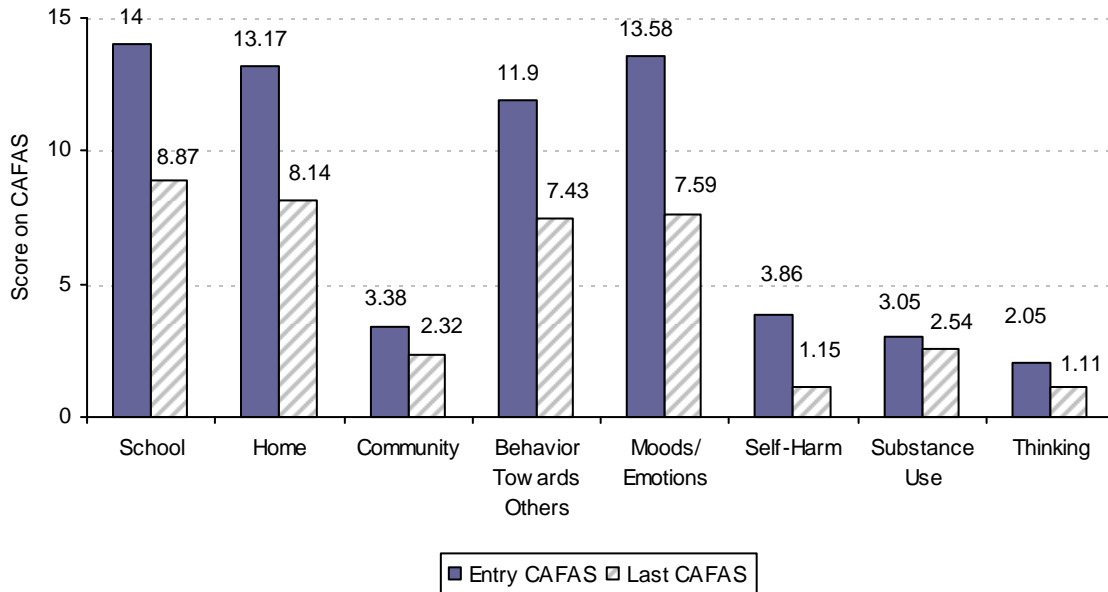


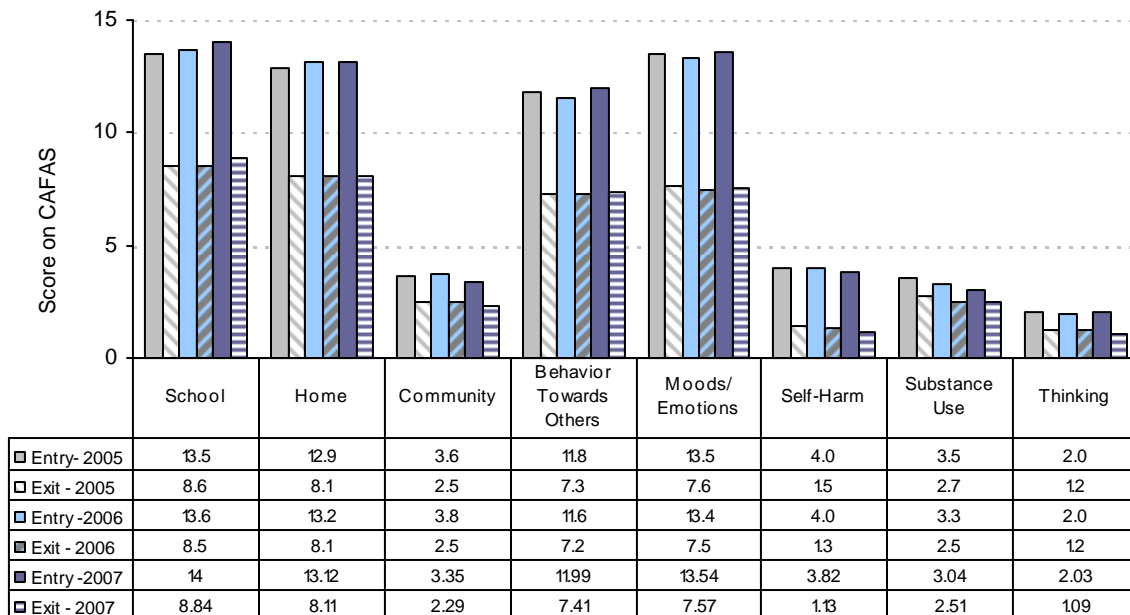
Table 5.4 Subscale Change Scores and Effect Sizes from Treatment Entry to Treatment Exit

Subscale	Mean Difference			† Statistic (.95 confidence interval)			Effect Size		
	Year 2005	Year 2006	Year 2007	Year 2005	Year 2006	Year 2007	Year 2005	Year 2006	Year 2007
School	4.90	5.01	5.13	23.02	40.23	48.35	.44	.46	.46
Home	4.80	5.05	5.03	23.51	41.3	49.90	.47	.49	.50
Community	1.08	1.31	1.06	7.96	16.47	16.10	.14	.17	.15
Behaviour Towards Others	4.55	4.33	4.56	25.94	42.17	53.05	.52	.50	.53
Moods / Emotions	5.87	5.85	5.98	31.26	53.78	64.40	.66	.68	.70
Self Harm	2.58	2.69	2.71	16.41	28.47	34.14	.37	.40	.41
Substance Use	.79	.79	.52	7.16	10.48	8.73	.10	.11	.07
Thinking	.81	.76	.95	8.26	13.26	18.88	.16	.15	.19

If we capture change by including the Exit CAFAS or T14 score rather than the last CAFAS rating on record (Fig.5.10), there is very little difference with the view presented in Figure 5.9.

Figure 5.10 Change in Average Score on CAFAS Subscales from Treatment Entry to Treatment Exit

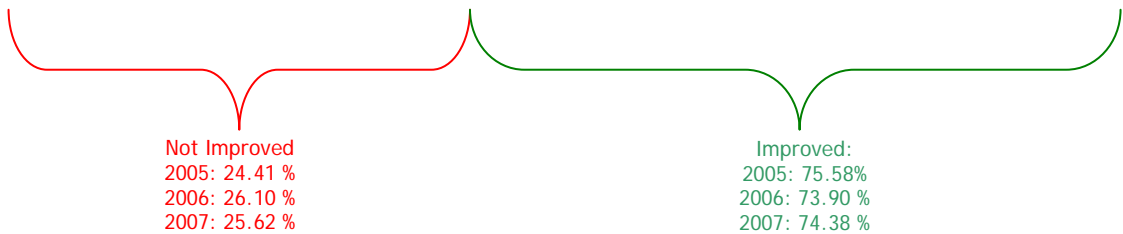
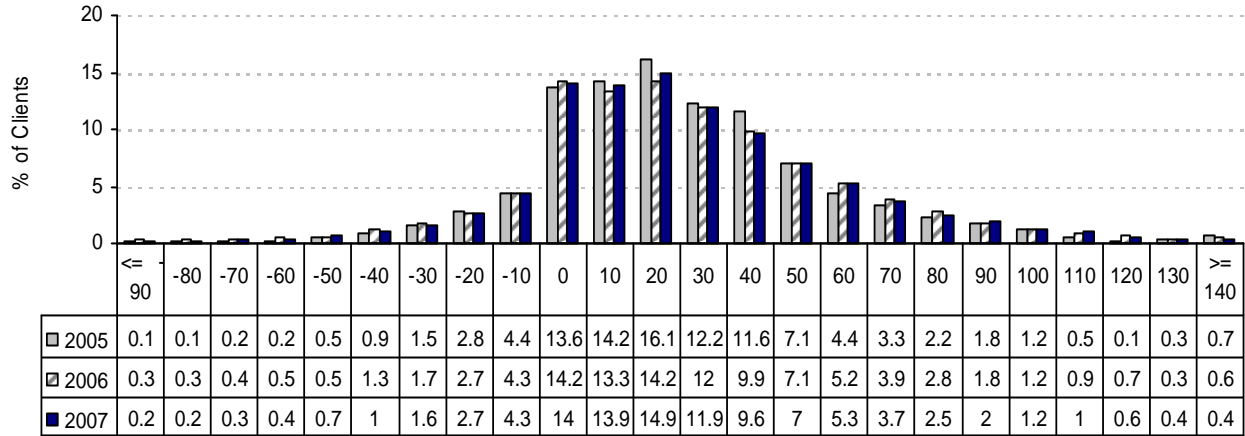
(N varies because of missing scores on various subscales: N for 2005: 2,186 and 2,192, N for 2006: 6,874 - 6,895 for 2006, N for 2007: 9,780- 9,796)



Paired t-tests revealed that change effects were statistically significant for each of the eight subscales at $p < .0001$.

Almost 75% of clients showed functional improvement following service in a children's mental health organization (Fig.5.11). Fewer than 12% of clients showed a decrease in functioning, and 14% showed no change. These data do not account for treatment dose (frequency, time), and must be interpreted very generally. We have recently (fall 2008) begun to report back to organizations on the specifics of their clients who fall in the non-improved range with the intention that managers will review these cases to determine possible reasons underlying their treatment failures.

Figure 5.11 Absolute Change in Level of Functioning
 (N=2,164 for 2005, N=6,721 for 2006 and N=9,663 for 2007)



PROPORTION OF CLIENTS IMPROVED (COMBINING ALL CLIENTS)

Improvement in level of functioning is operationalized in three ways (3 outcome indicators):

1. Clinically meaningful reduction in overall impairment based on total score

Reduction in overall impairment is scored as successfully achieved if the CAFAS total score from entry to last CAFAS (or the last CAFAS evaluation on record) is reduced by 20 points or more. This indicator ensures that reduction in the CAFAS total score is more than measurement error. A change of 20 points corresponds to approximately a one-half standard deviation for the total CAFAS score, and is equivalent to an effect size of .50 which is defined as a medium effect using Cohen's (1988) guidelines. Hodges (2003) points out that if a Reliable Change Index were calculated using a reliability coefficient of .95 (Hodges & Wong, 1996), the value-defining reliable change for the eight subscale sum would be 20 or more points. *This outcome criterion can only be applied to youths with a total score of 20 or higher at intake, which will always be the case for youths with SED¹⁶.*

¹⁶ SED - Serious Emotional Disturbance

2. Free of severe impairment based on subscale scores

The criterion for successful outcome on this indicator is a score of less than 30 (severe) on each of the eight subscales (e.g., impairment is moderate or less on each subscale). *This indicator is only used for youths who were rated as severely impaired on one or more CAFAS subscales at intake.*

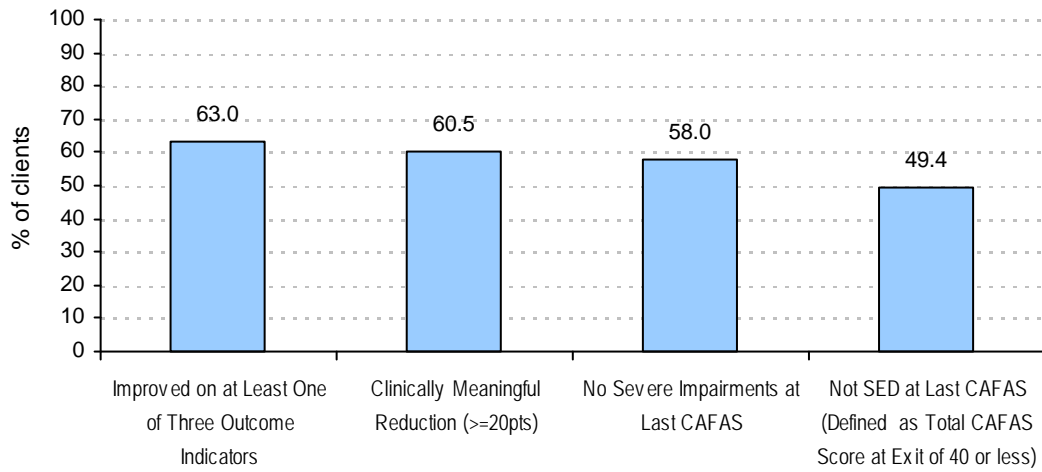
3. No SED at Exit (<40) (Restricted to youths with a score at entry CAFAS <40)

The criteria for this indicator are as follows (from Hodges, 2003): total CAFAS score of 40 or less and all subscale scores are 20 or lower. The reason for the latter criterion was to exclude youths who have a severe impairment (e.g., score of 30) on any of the eight CAFAS subscales. Although very rare, it is possible for a youth to have a total score of 30 or 40, with 30 points due to severe impairment on one subscale. *This indicator can only be applied to youths who have a total score of 50 or higher at intake.* The cut point of 40/50 was chosen because it has been found to be comparable to a cut point of 61/60 on the Children's Global Assessment Scale (CGAS: Shaffer et al., 1983) or Axis V of *DSM IV*, based on the data from the Ft. Bragg Evaluation Project. A score of 60 on the CGAS has been used as an inclusive definition of Serious Emotional Disorder (SED) (Friedman, Katz-Leavy, Manderscheid, & Sondheimer, 1996). A score of 61 on the CGAS would fall under the description "some difficulty in a single area, but generally functioning pretty well," whereas a score of 60 is summarized as "variable functioning with sporadic difficulties or symptoms in several but not all social areas" (Shaffer et al., 1983). This indicator represents a target end-of-service level of functioning that most likely means that the youth is functioning well enough to be living in the community with a family, and going to school or working. Thus, this indicator is labeled "Free of SED - serious emotional disturbance." Note, however, that it would be too simplistic a conceptualization to assert that a score of 50 or higher represents the presence of SED.

We find that 63% of children and youth (N=6,092) improved in functioning on at least one of the three outcome indicators (Figure 5.12). About 61% of children and youth (N=5,847) receiving treatment experienced a reduction in the total CAFAS score of 20 points or more, demonstrating a degree of improvement that has been shown to be a clinically meaningful and reliable amount of change. Of the subset of clients that had one or more severe impairments at entry to treatment (N=3,746), 58% had no severe impairments on their last CAFAS evaluation. This is an important finding given that these clients are the most challenging children and youth served by the system. Eliminating severe impairments makes it more likely that "natural helpers" in the community (e.g. coaches, teachers, ministers, neighbours) will be willing and able to assist the child/youth in their development and life roles (Hodges, 2003). Of those clients whose entry CAFAS score was 50 or higher (N=3,061), 49.2% had a lower level of impairment on their last CAFAS rating (defined as 40 or lower for total CAFAS score, and no subscale scores above 20).

Figure 5.12 Percentage of Clients Improved on at Least One of the Three Outcome Indicators

N=8,949/ 8,949/ 3,746/ 2,174/3,061- 2007





Characteristics of Closed Cases

This section of the report describes the characteristics of cases that have been 'closed' by the organization. Closing a case requires that the clinician complete the Close Episode screen for the client, when it is either known or suspected that the client is not returning to services.

We then examined the frequency of CAFAS evaluations for Closed cases, as in Table 6.1 below. The majority of closed cases have between 1 and 6 CAFAS evaluations. Moreover, most Closed cases had a T1 and T14 (N=6,914), representing 79% of all closed cases.

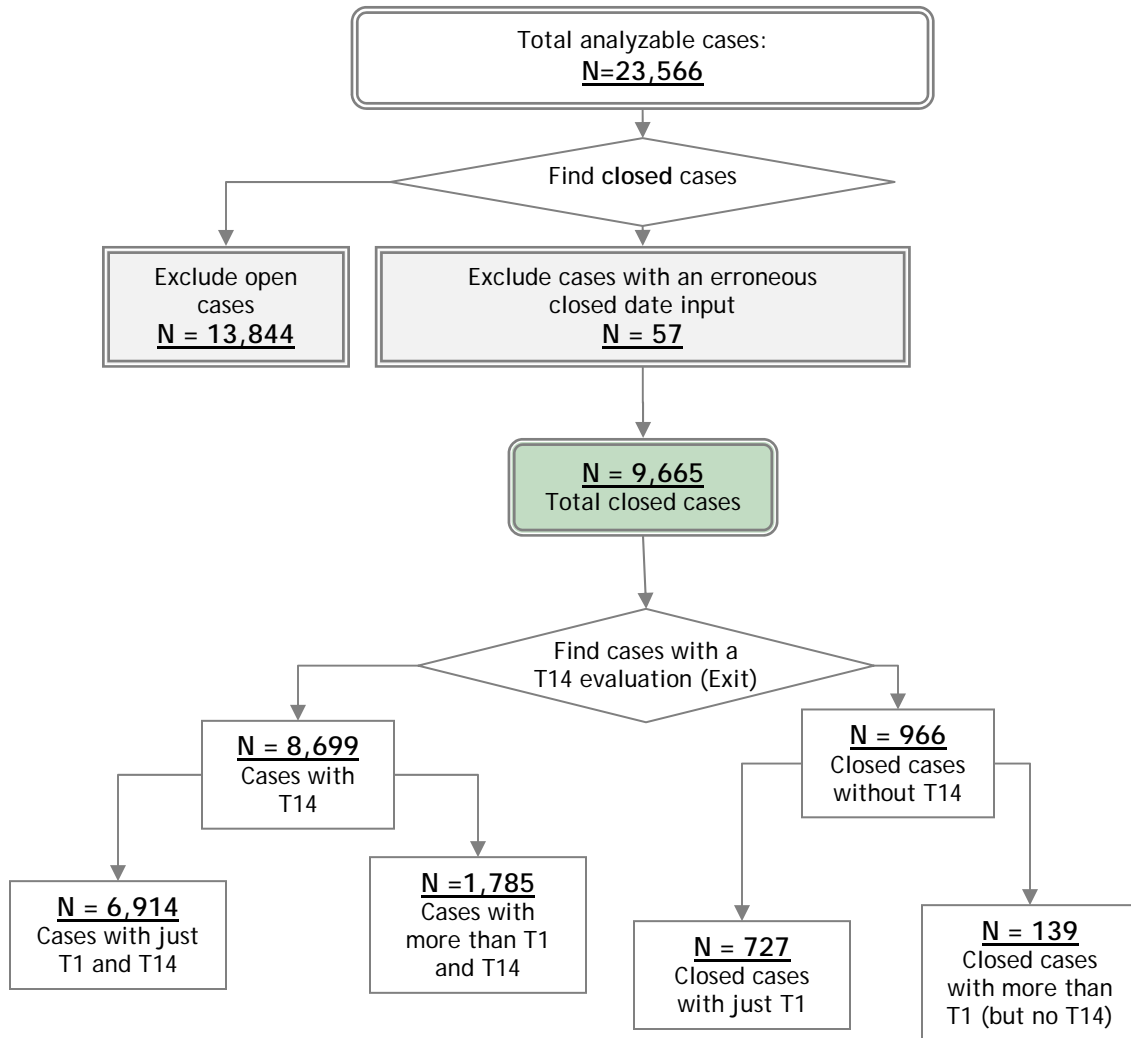
Table 6.1 Number of CAFAS Evaluations on Record for Closed Cases

Number of CAFAS evaluations	N for closed cases		N for closed cases with T14	
	2006	2007	2006	2007
1 (T1 Only)	770	727	N/A	N/A
2	5,339	7,071	(T1 & T14 only)	
			5,102	6,914
3	694	1,074	641	1,030
4	208	393	184	375
5	85	185	77	172
6	45	96	40	95
7	13	46	11	44
8	4	32	4	31
9	2	18	2	16
10	1	12	-	12
11	1	3	1	3
12	-	4	-	3
13	-	2	-	2
14	-	2	-	2

Total	N=7,162	N=9,665	N=6,062	N=8,699
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The following decision process was used to determine which cases were 'closed' (Figure 6.1).

Figure 6.1 Calculating Closed Cases



N = 9,603: Cases with closed dates, Entry Total CAFAS scores
N = 8,711: Cases with closed dates, Entry and Last CAFAS Total scores

Looking at when, during the course of treatment, cases tend to be closed provides another perspective. More than a quarter of cases (25.1%) are Closed between the 3rd and 6th month of service (Fig.6.2). When we consider those cases that closed with only a T1 evaluation, these tend to close earlier, between months 1 and 3. The disposition of closed

cases is depicted in Table 6.2. While it is evident from this data that most clients for whom a Close Episode was recorded improved, a large group did not improve.

Figure 6.2 Time between Entry to Treatment and Close Date

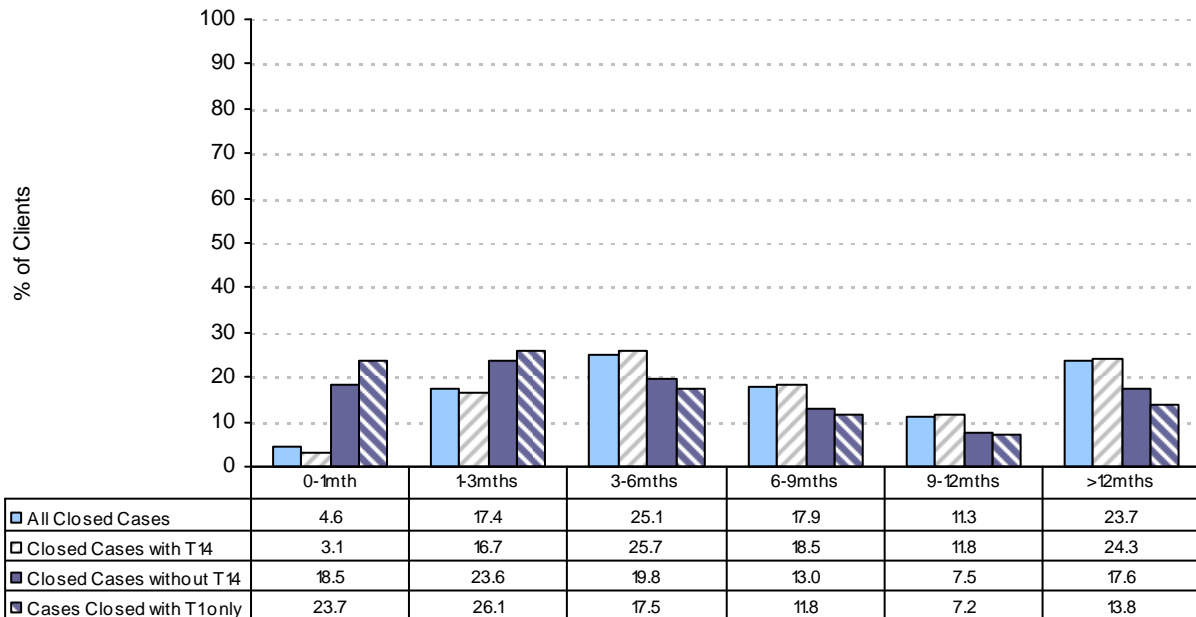


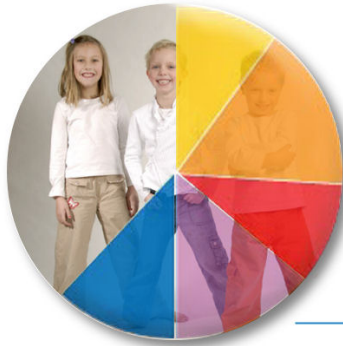
Table 6.2 Disposition of Closed Cases

Outcome	N
Treatment Not Needed Only one CAFAS evaluation was done and there was good reason for not providing treatment (i.e., evaluation only, no treatment needed, or referred to other service). This information is entered when the file is closed. Practice Implication: these 144 cases likely sat on a waitlist for service for several months, needlessly. Services provided for waitlist clients through improved triage processes could likely avert this situation in future.	144
Not Improved Did not improve on any of 3 outcome indicators. The development of our Non-Improved Report in 2008 will try to address the underlying reasons why these clients showed no improvement.	3171
Improved Improved on 1 or more of 3 outcome indicators.	5,396
Entry Was 0 OR 10 Outcome cannot be evaluated because the Entry CAFAS was a 0 or 10. Since the least "ambitious" outcome indicator requires a reduction of 20 points or more, it is not possible to evaluate outcome if the entry score is less than 20. As above in the Treatment Not Needed section, it is possible that these cases could have been helped earlier on through alternate means while on waitlist.	615
Likely Drop-Outs But Needed Treatment There was an entry CAFAS but no subsequent CAFAS evaluation and the case appeared to be appropriate for treatment (i.e., case was not coded as "evaluation only", "no services needed" or "referred to other services" when case was closed).	0

The Close Episode also captures the reason underlying the case closure (Table 6.3). Where it was recorded that no treatment was attempted, this was mostly due to 'no shows' and 'withdrawal' from treatment. This suggests a need to examine treatment attrition. Moreover, when treatment was noted as having been interrupted this was largely due to clients quitting.

Table 6.3 Reason for Case Closure

Closed Reason		All closed cases		Cases closed with T1 only		Cases closed without T14		Cases closed with T14	
		2006 N=7,162	2007 N=9,665	2006 N=770	2007 N=727	2006 N=1,100	2007 N=966	2006 N=6,062	2007 N=8,699
No Treatment Attempted	Not Needed	49	53	14	13	16	14	33	39
	No Show	96	121	45	37	52	38	44	83
	Withdrew	192	221	59	45	70	49	122	172
	Other service	67	87	21	20	25	27	42	60
	Evaluation only	35	69	0	25	12	30	23	39
	Other & Unknown	37	32	11	2	13	7	24	25
Treatment Interrupted	Quit	1,424	1,830	174	166	235	208	1,189	1,622
	Moved	413	512	38	39	54	53	359	459
	Therapist	53	93	11	17	14	25	39	68
	Ineligible	65	57	9	4	16	4	49	53
	Aged out	18	52	0	5	2	7	16	45
	Deceased	3	3	0	1	0	1	3	2
	Changed agency	164	221	14	11	25	22	139	199
Other & Unknown	230	330	26	35	39	46	191	284	
Treatment Was Accomplished	Successful	2,700	3,781	35	186	294	262	2,406	3,519
	Partially Successful	1,387	1,993	88	126	159	183	1,228	1,810
	Little Success	364	411	35	35	58	51	306	360
Other and Unknown		127	174	35	8	38	15	89	159

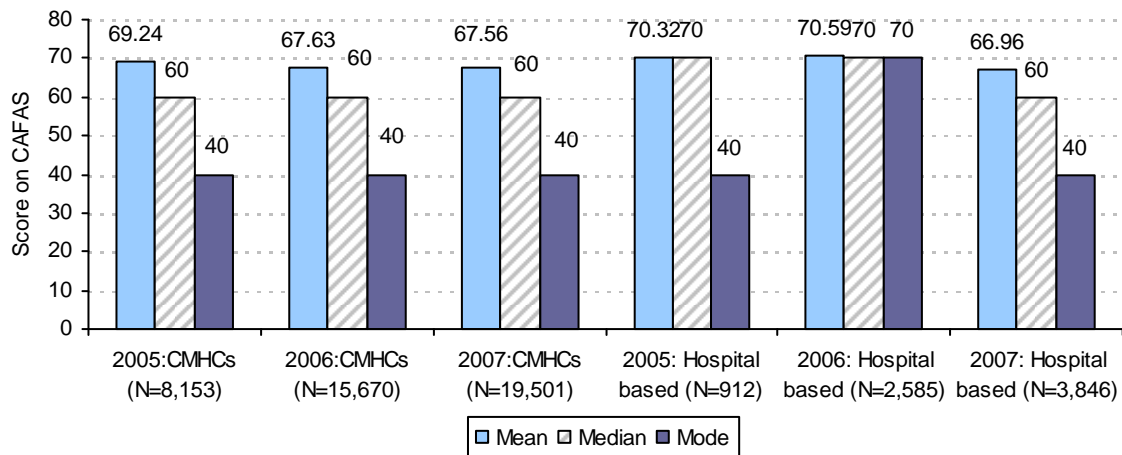


Community versus Hospital Treatment

This section of the report describes the level of functioning for children and youth served in community- versus hospital-based services, and for whom CAFAS data are available. As before, these data represent children and youth who sought children's mental health services in designated Ontario service provider organizations during the time frame specified above.

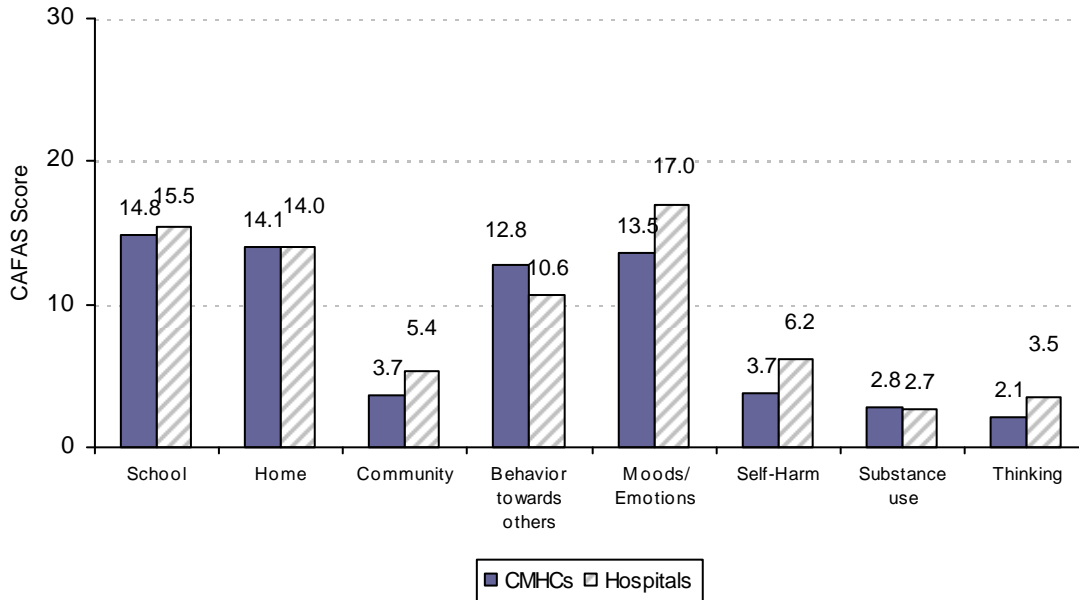
There is no difference in measures of central tendency for those clients served in the community versus those served in hospital settings, with one exception which is a relatively high mode for hospital clients in 2005 and 2006 that we believe reflects a bi-modal distribution (Fig.7.1).

Figure 7.1 CAFAS Rating at Entry to Treatment: Community-based versus Hospital-based



Differences in level of functioning across subscale domains are evident, however, with hospital clients showing greater levels of dysfunction in the areas of moods/emotions, self-harm, and thinking (Fig.7.2)

Figure 7.2 Average Entry Subscale Scores by Organization Type (Hospitals & CMHCs)
 (N for CMHCs varies between 19,610 and 19,623 N for Hospitals varies between 3,880 and 3,893 because of missing scores on different subscales)



Problems with mood and emotions, self-harm, and thinking are likely dispatched to psychiatry in hospital settings.

Differences between the two settings can also be observed when comparing levels of severity, as in Figure 7.3 below. As expected, community based organizations see a higher number of clients with lower dysfunction (overall score between 0-30). This finding is similar across the last three years, with difference scores (CMHC mean - Hospital mean) of 5.8, 4.8, and 2.0 each year respectively.

Hospital services see a larger percentage of clients in the 40-70, 80-100, and 110-130 ranges, but this difference is closing in 2007 compared to earlier years.

Community-based services see more clients in the higher (>140) range of dysfunction, with a difference gap CMHC mean - Hospital mean that has fluctuated from 2.0 in 2005, to 0.5 in 2006 and 1.2 in 2007.

This data do not support the contention that hospital settings are treating clients with higher overall dysfunction but there is a large discrepancy in sample size which may account for this finding. Rather, hospitals are seeing specific presenting problems (as noted above)

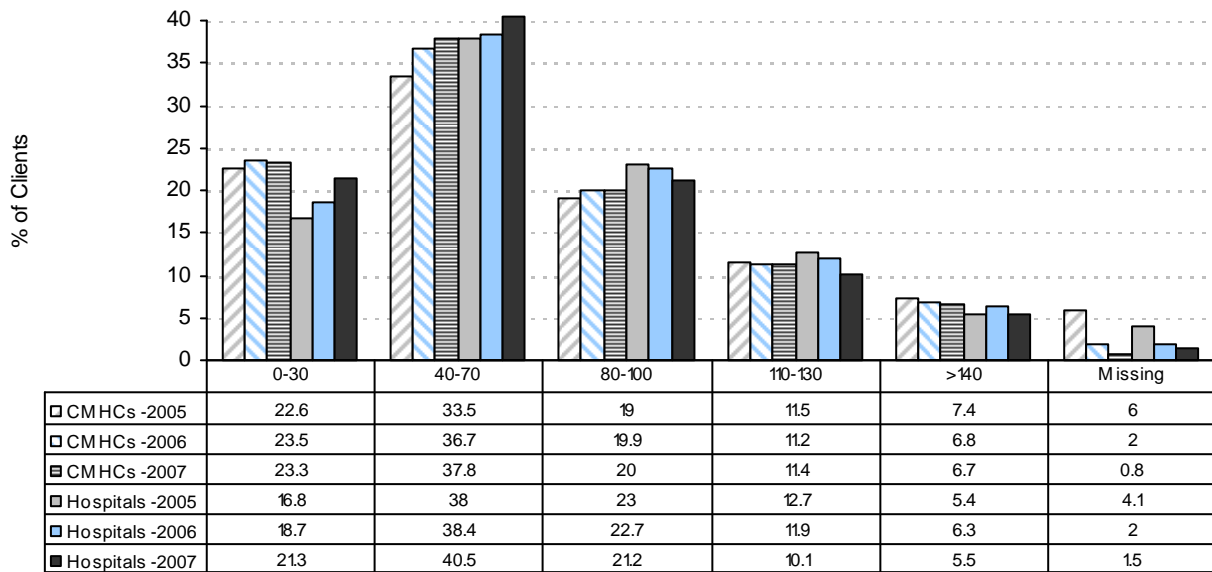
that may be better addressed by psychiatry and psychopharmacological interventions, i.e., self-harm, thinking disorders, mood disorders.

Figure 7.3 Severity on Entry to Treatment: Community-based versus Hospital-based

2005: Community-based (N=8,153); Hospital-based (N=912)

2006: Community-based (N=15,984); Hospital-based (N=2,639)

2007: Community-based (N=19,663); Hospital-based (N=3,903)



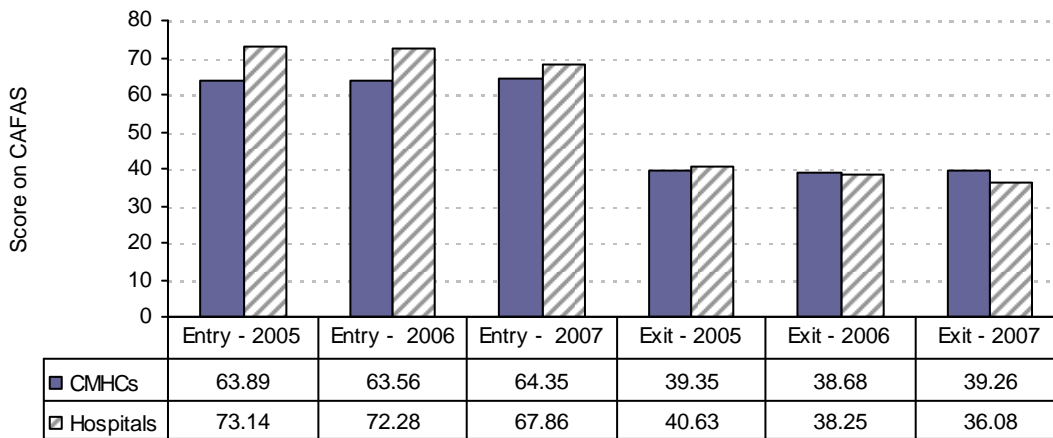
In summary, severity of functioning at entry to treatment shows little difference between settings (Figure 7.1). A slightly larger percentage of children and youth with very severe dysfunction (6.7%) receive services in community-based settings, as compared to 5.5% who receive treatment in hospital settings. However, the difference fluctuates over time: it is 4 times smaller in 2006 compared with 2005 (0.5% for 2006 vs. 2% for 2005); the difference is 1.2% in 2007, which is comparable to that observed in 2006.

Fewer clients seen in hospital settings (21.3%) have lower levels of dysfunction as compared to clients admitted to community-based services (23.3%) but the difference decreases from 5.8% in 2005 and 4.8 in 2006, to just 2% in 2007. The greatest concentration of clients for both types of organizations is in the 40-70 score area with a significant increase during the last 3 years for both community- and hospital-based organizations. This can also be due to the larger sample size available for each annual report.

Differences in level of functioning outcome scores between community- and hospital-based services are shown in Figure 7.4 below. Hospital-based clients show a larger difference score and effect size (Diff=31.77; SD¹⁷=34.670, ES=.84) than community-based clients (Diff=25.09; SD=34.075, ES=.64). The results are similar to those obtained in 2006 where we reported ES=.85 for hospitals and ES=.62 for community based organizations (for comparison purposes, T14 was used here as the outcome criteria as only these data were available for the previous 2 years). It may be that the larger effect sizes for hospital clients results from the use of medication.

Figure 7.4 Average CAFAS Total Score from Entry to Exit CAFAS (T14) for Community-Based Services and Hospitals

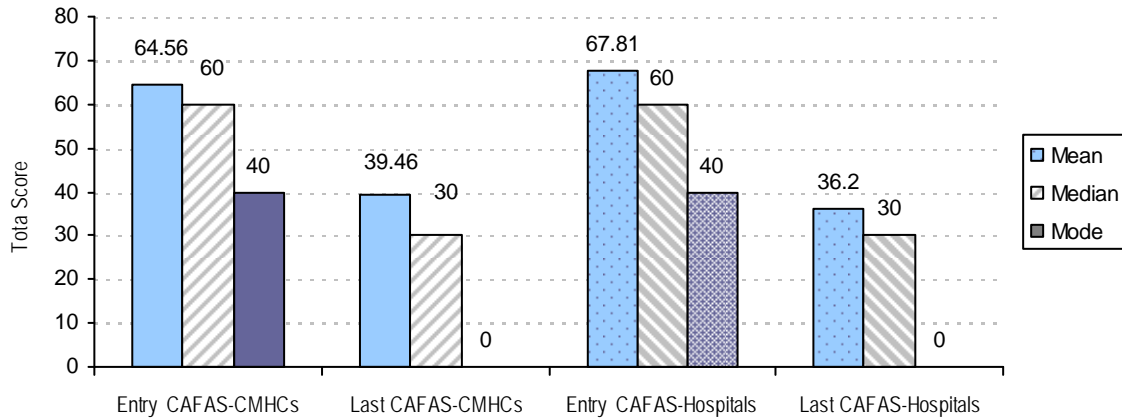
Total possible CAFAS score=240.



Very similar results are evident for the slightly larger sample that includes scores for cases closed without T14: Hospital-based clients show a larger difference score and effect size (Diff=25.094; SD=34.135, ES=.84) than community-based clients (Diff=31.613; SD=34.329, ES=.64) (Fig.7.5).

¹⁷ SD of the means difference

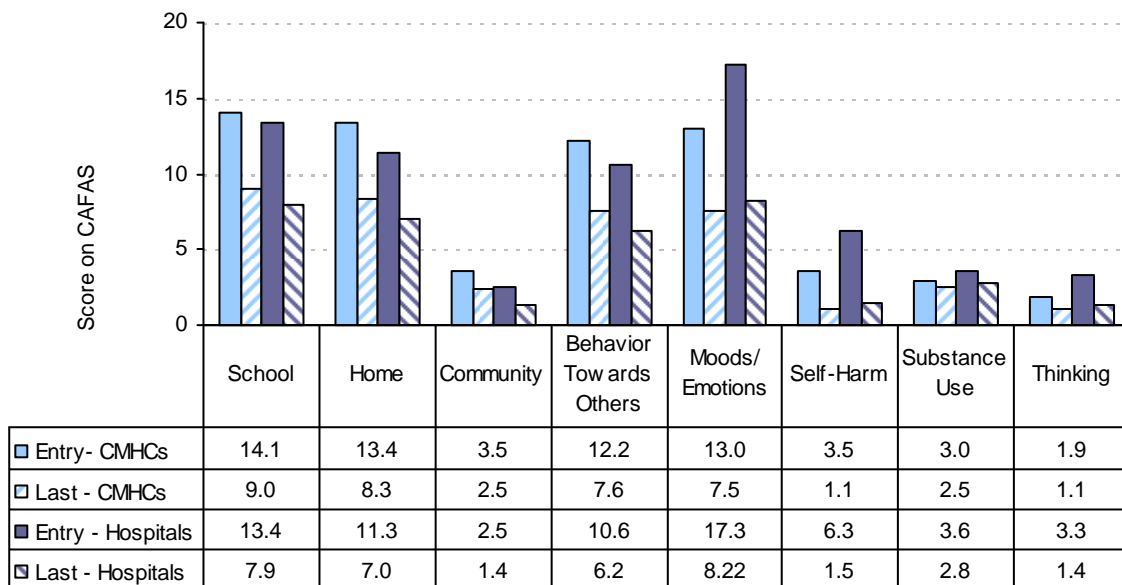
Figure 7.5 Change in Average CAFAS Total Score from Treatment Entry to Last Evaluation (N=8,429 for CMHCs and N=1,234 for Hospitals); Total possible score= 240.



Community-based service clients have higher entry to treatment scores on all subscales except moods/emotions, self-harm, substance use, and thinking.

Figure 7.6 Change in Average Score on CAFAS Subscales from Treatment Entry to Last Evaluation

N for CMHCs varies between 8,531 and 8,544 and N for Hospitals varies between 1,249 and 1,255 because of missing scores on different subscales. Total possible score =30.





Caregiver Characteristics

This section of the report describes the level of functional impairment of clients' caregivers at entry and exit to treatment. There are two caregiver subscales on the CAFAS scale: Material Needs and Social Support. For these two subscales, the *caregiver* is rated - not the client. Three types of caregivers can be rated on the CAFAS:

- (1) Primary Family - the parent(s) who is(are) rearing the client or with whom the client lives most of the time (e.g., biological parent, adoptive parent, where the client was before treatment and where the client will return);
- (2) Non-custodial Caregiver - the parent(s) who has a psychological impact on the client yet is non-custodial or is not living in the same home as the client; and
- (3) Surrogate Caregiver - surrogate parent(s) (e.g., persons substituting as parent, such as foster parents, group home caregivers, caregivers in residential treatment settings).

Hodges (2003) notes that these scales do not penalize parents or reflect how "good" or "bad" they are. Rather, receiving a score at the Severe, Moderate, or Mild level can mean simply that the client's needs are greater than the resources available to the caregiver.

The Material Needs subscale pertains to caregivers' ability to provide food, shelter, clothing and medical care for the client such that the client's functioning and development of skills are not impeded. The Family Social Support subscale captures the caregivers' capacity to satisfactorily meet the special needs of the client without jeopardizing other family members (level of resources available), to exercise good parental judgment so that s/he can provide a safe, secure, and healthy home environment in which the client's developmental needs can be met (parental judgment and functioning), to protect the client from abuse, or if abuse occurs, provide physical and emotional support to the client (non-abusive environment), provide a home and adequate supervision of the client's activities whether in or outside of the home (supervised home), and lastly, is free of domestic violence, hostility, or pervasive conflict (conflict management).

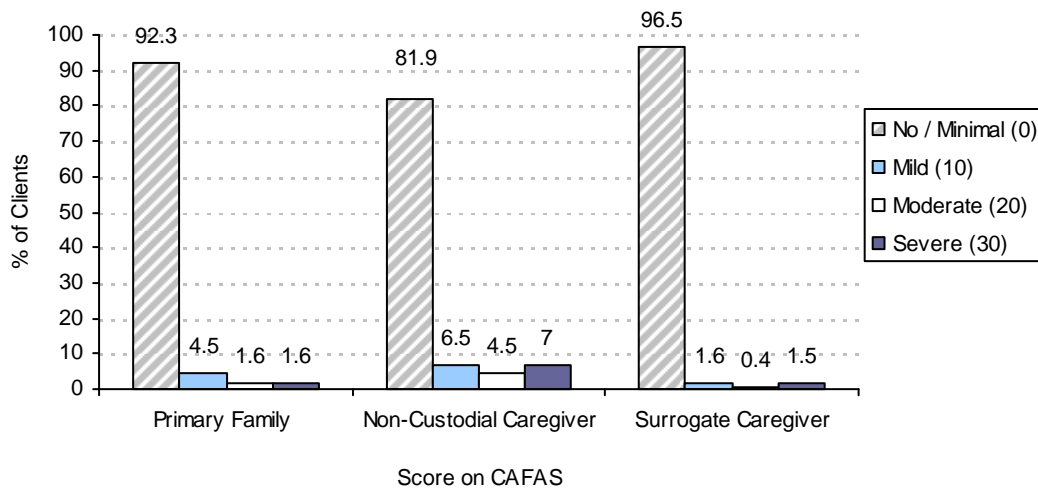
Analyzable caregiver data includes cases that are within the analyzable date range for youth (23,566) but also have scores for Entry CAFAS (T1) (Table 8.1) and scores for last CAFAS (see Table 8.2).

Table 8.1 Caregivers at Treatment Entry

		Material Needs Subscale			Family/Social Support Subscale		
		Primary Family	Non-Custodial Caregiver	Surrogate Caregiver	Primary Family	Non-Custodial Caregiver	Surrogate Caregiver
N	Valid	17,387	2,630	857	17,293	2,554	862
	Missing	1,236	15,993	17,766	1,330	16,069	17,761
	Mean	1.25	3.67	.69	8.27	13.44	2.74
	Median	.00	.00	.00	10.00	10.00	.00
	Mode	0	0	0	0	0	0
	SD	4.87	8.63	4.03	9.05	11.24	6.93

With respect to Material Needs, there is very little dysfunction across all types of caregivers. Non-custodial caregivers show the highest level of moderate and severe dysfunction in this domain, but it is still quite low in frequency.

Figure 8.1 Material Needs Subscale for Caregivers at Treatment Entry



Greater dysfunction is evident in the domain of family social support (Fig.8.2). Non-custodial caregivers demonstrate the greatest level of moderate and severe dysfunction in this domain. As expected, surrogate caregivers show the least level of impairment.

Figure 8.2 Family Social Support Subscale for Caregivers at Treatment Entry

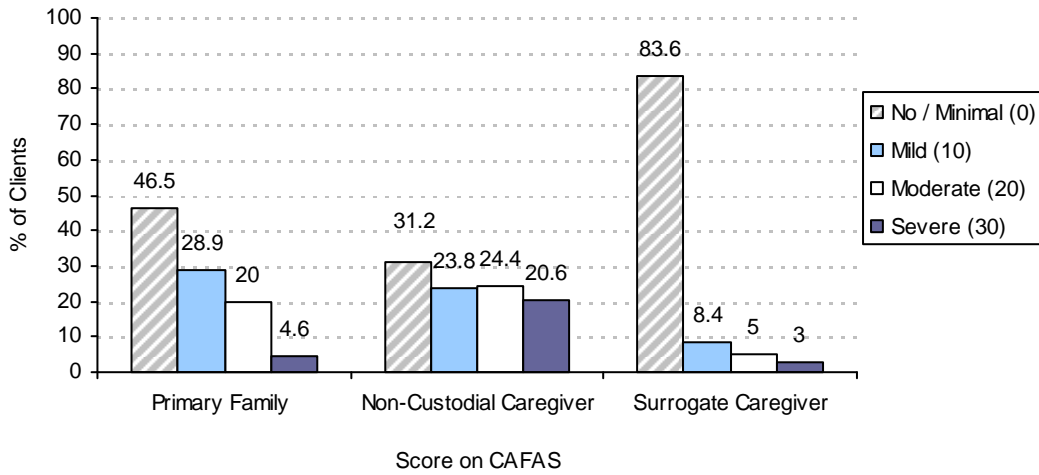


Table 8.2 depicts the level of change across caregiver types from entry to last CAFAS rating. Non-custodial caregivers make the largest functional gains in material needs, whereas both primary and non-custodial caregivers make the largest gains in social support.

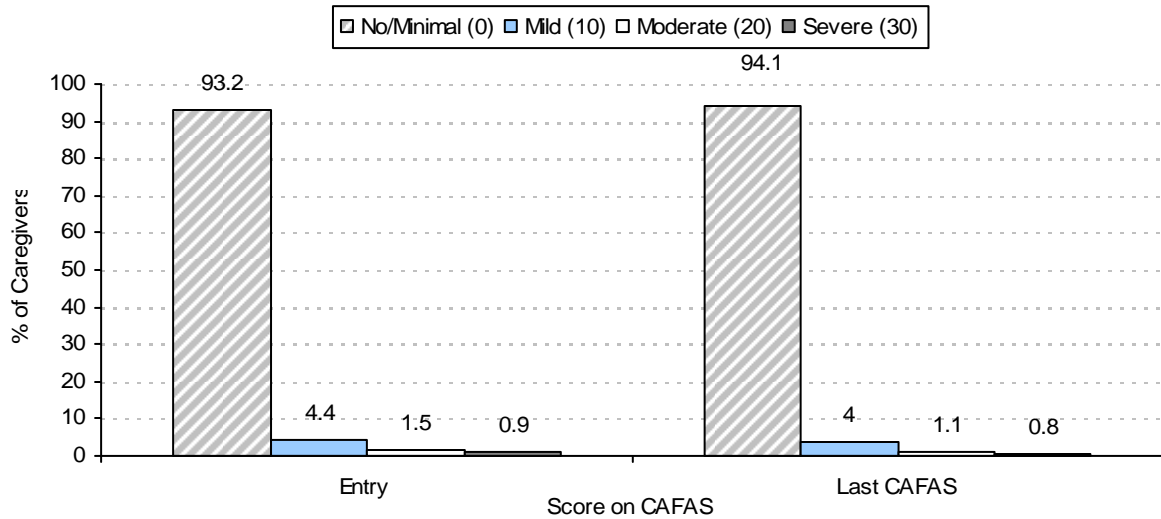
Table 8.2 Caregivers at Treatment Entry and Last CAFAS

	Material Needs Subscale						Family/Social Support Subscale					
	Primary Family		Non-Custodial Caregiver		Surrogate Caregiver		Primary Family		Non-Custodial Caregiver		Surrogate Caregiver	
	Entry	Last	Entry	Last	Entry	Last	Entry	Last	Entry	Last	Entry	Last
N	9,014		704		227		8,866		708		233	
Mean	1.00	.86	2.98	2.50	.62	.22	8.02	5.87	12.64	10.24	2.10	1.80
SD	4.156	3.842	7.742	7.056	3.829	2.195	8.872	8.307	11.039	10.386	6.252	5.664
Mean difference	.142		.483		.396		2.145		2.401		.300	
SD of the mean difference	4.190		6.270		4.027		8.376		8.569		6.324	

SD=Standard Deviation

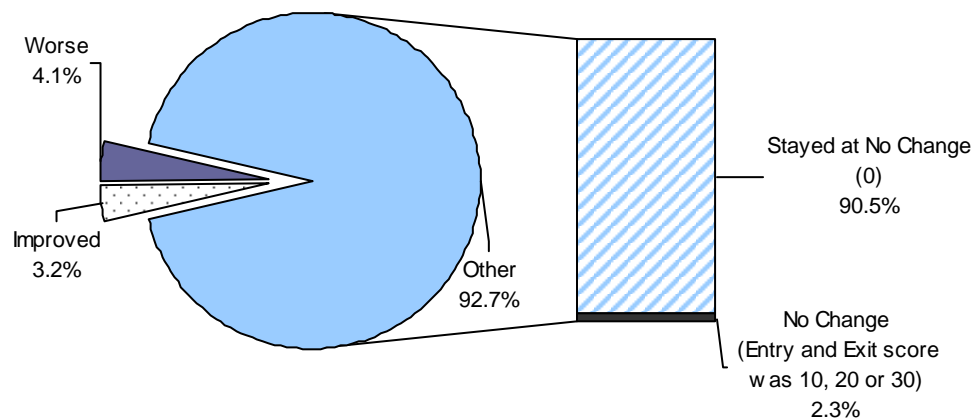
There is little improvement for the primary family, Material Needs Subscale. However, a high percent of 93.2% of families show no dysfunction in providing the provision of food, shelter, clothing and medical care for the client to begin with. All categories of functioning show improvement in this domain (Fig.8.3).

Figure 8.3 Primary Family Material Needs at Treatment Entry and Last CAFAS (N=9,014)



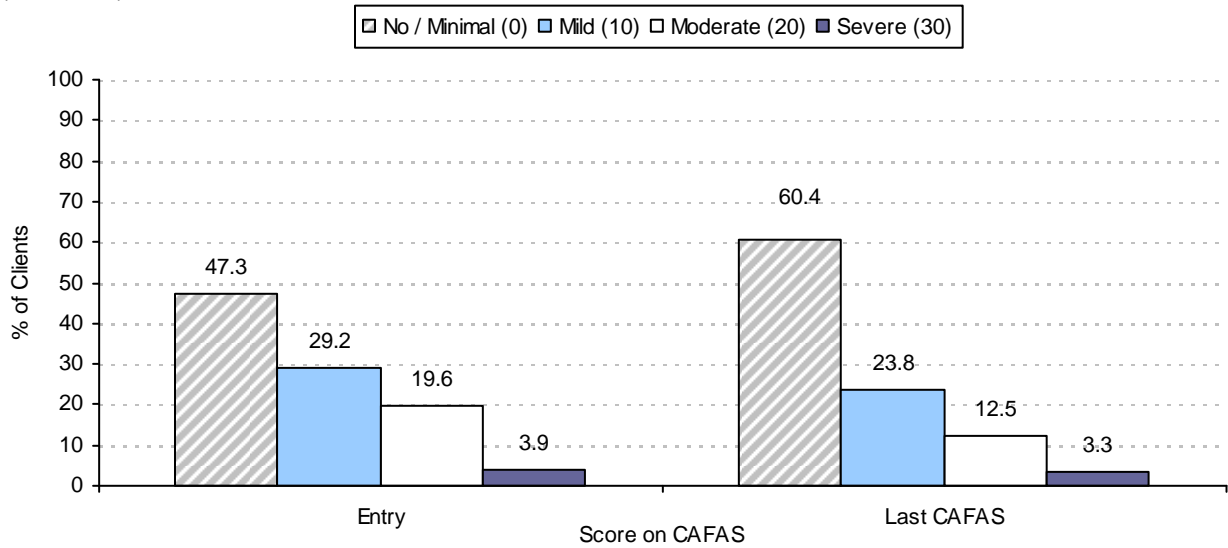
From another perspective, data for 9,014 primary families (over four and a half times more than the data collected in 2005 where N=1,967, and 1.4 times more than the 2006 figure of N=6,433) show that 3.2% improved on the Material Needs subscale, 4.1% got worse, and the vast majority showed no change, mainly because their scores at entry and last CAFAS were 0 (90.5%) or because there was no change in scores (2.3%) (see Fig.8.4).

Figure 8.4 Change in Primary Family Material Needs (N=9,014)



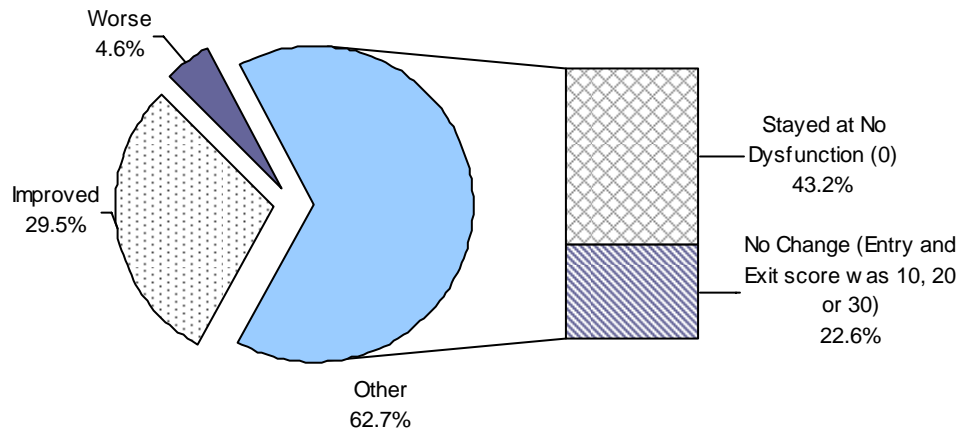
We see improvement for primary family functioning in the provision of social support, with 47.3% of families having no dysfunction in this area rising to 60.4% of families at the end of treatment. All categories of functioning show improvement in this domain (Fig.8.5).

Figure 8.5 Primary Family Social Support at Treatment Entry and Last CAFAS
(N=8,866)



Data for 8,866 (also almost 4.5 times more than the data collected in 2005 where N=1,973, and 1.4 times more than last year where N=6230) primary families shows that 29.5% improved in the social support domain, 4.6% got worse, and 62.7% showed no change, either because their scores at entry and exit to treatment were 0 (4.2%) or because there was no change (22.6%) (see Fig.8.6).

Figure 8.6 Change in Primary Family Social Support
(N=8,866)



A similar pattern of results for the Material Needs and Family/Social Support subscales were observed for Non-custodial and Surrogate caregivers, respectively (Table 8.4). All categories (severity of functioning) for social support and material resources revealed improvement for both caregiver types across treatment (entry to last CAFAS). A large percentage of families showed no change within these domains upon treatment entry to exit - whether characterized by scores of 0 at entry and last CAFAS, or no literal change in scores over time.

Table 8.3 Clinical Meaningful Change on Material Needs and Family/Social Support Scale: Non-Custodial and Surrogate Caregivers

	Non-Custodial Caregivers				Surrogate Caregivers			
	Improved	Worse	No Change		Improved	Worse	No Change	
			Stayed at No Dysfunction (Score=0)	No Change (Score other than 0)			Stayed at No Dysfunction (Score=0)	No Change (Score other than 0)
Material Needs	N=47 7.3%	N=32 5%	N=0 0%	N=567 87.8%	N=5 2.2%	N=2 .9%	N=219 96.5%	N=1 .4%
Family/Social Support	N=194 27.4%	N=72 10.2%	N=205 29%	N=237 33.5%	N=15 6.4%	N=11 4.7%	N=196 84.1%	N=11 4.7%



Future Recommendations

COMPLIANCE

Compliance with CAFAS use across the province is showing slow but steady improvement as evident in the rates of data export, however best practice use of the tool for managing response to treatment and outcomes remains relatively low.

In 2006, there were 4 hospital-based and 4 community-based organizations (3.77% each) who did not export data for the final report. In 2005, there were 5 hospital-based (4.67%) and 6 community-based organizations (5.61%) who did not export data for the final report. Looking back at the 2004 CAFAS report, there were 7 hospital-based (6.54 %) and 16 community-based organizations (14.95%) who did not export data for the final report.

Compliance with CAFAS use (e.g., use of CAFAS software tool and export of data to Sick Kids) has yet to achieve 100%. However, a huge step forward is evident from 2004 to 2006, due to continuous support through phone and email, and the development and dissemination of a variety of instructional documents intended to clarify software installation, data management, and data export..

TECHNICAL DIFFICULTIES

The addition of an IT consultant to the CAFAS team has improved response to the technical assistance needs of the field. This was a good decision, and these services will be retained in the upcoming fiscal year.

There continues to be a need to improve computer hardware (e.g., server capacity) and computer literacy, and to assist organizations that have little in the way of IT support - which appears to be the majority of them. With the onset in 2007 of providing organization-specific data reports following each quarterly export, organizations require some level of support in interpreting their "results." Most CMHC and hospital-based organizations have no one on staff with the training and competencies to support EBP

training, program evaluation, and data interpretation. As it stands now, most organizations assign CAFAS liaison and data export duties as an add-on responsibility to a staff member with no training in this area. The solution continues to be continued education and capacity building by the CAFAS in Ontario team, and ideally, recognition from the Ministry that a restructuring of roles and responsibilities is badly needed if CYMH services are to move toward evidence-based treatments and practices.

COLLECTION OF THE ONTARIO COMMON DATA SET (OCDS)

Analysis, and hence utility of the CAFAS data, is hindered by the lack of data regarding client and program characteristics. Versions 5.3 and 5.4 of the CAFAS software identify the OCDS clearly on the screen for the rater to see using a maple leaf icon, however the software does not capture type of treatment or program.

Mere identification of the OCDS in the software is necessary but not sufficient to encourage practitioners to rate all of these fields. Support from organizational, regional and provincial leadership will be very important in this regard.

USING CAFAS FOR PROGRAM EVALUATION

It is expected that the new version of CAFAS due out in 2009 will capture program level data. This is greatly needed and has been much requested by the field.

NEED FOR A UNIQUE IDENTIFIER

Certain questions can be asked of the dataset in the event that CAFAS and BCFPI client level data can be matched. In order that we may link this data, organizations and practitioners would be required to consistently use a unique identifier for each client on both tools. Presently, they are instructed to use the same organization-assigned client number on the CAFAS and BCFPI for a client.

When the data set includes client characteristic data from the OCDS, and when the data can be linked to BCFPI data, case mix analyses can be done to control for several factors known to have an impact on outcomes, e.g., severity of mental health problems (functioning, symptoms), type of program or service, and type of service provider organization. Case mix adjustment can be useful in behavioural sciences research to "level the playing field" when comparing outcomes for any two or more groups, such as clients in different streams of a mental health care system (e.g., community based versus hospital clinic versus specialized community setting).

We are optimistic that the Ministry's long term data strategy will begin to address this issue across the system.

RATING OF ALL ELIGIBLE CLIENTS

We know little about what percentage of clients receiving treatment in the participating organizations are being rated on the CAFAS. Data from 2004 showed 15,104 clients¹⁸ BCFPI data at intake and 6,594* clients for CAFAS. Of those, only 715 clients with identical Client IDs were found in both CAFAS and BCFPI merged databases suggesting either that fewer than 5% (4.73%) of the clients with a BCFPI intake subsequently received CAFAS evaluations or that organizations were not using identical client numbers to link CAFAS and BCFPI ratings for individual clients. This needs to be examined further in order to be improved upon, as described in the previous paragraph. Efforts could be made organizationally and provincially to increase this rate.

Starting in October 2006, the Ministry of Children and Youth Services was adamant that CAFAS, BCFPI, and CYMH Fund data for each client be linked using a unique (case) number. The following announcement was sent to all organizations to require the linking of CAFAS, BCFPI, and CYMH fund data (where applicable) in the following manner:

The BCFPI "Client ID" (Person Screen) - however derived - must be entered onto the CAFAS "Client Identification Number" (Client Identification and Background Screen) and onto the clients' CYMH fund data that is required from MCYS. This procedure requires that the clinician rating CAFAS knows the BCFPI Client ID. BCFPI always predates the CAFAS rating at Time 1 (entry to treatment) and the BCFPI print out must be in the file information available to the designated treatment clinician. In the event that the organization receives BCFPI data from another location/organization, and this occurs following the first CAFAS rating, then organizations must put procedures into place to ensure a data match using the BCFPI Client ID, i.e., go back into CAFAS and enter the BCFPI Client ID.

CONTINUED TRAINING IN CLINICAL APPLICATION AND BEST PRACTICE

Further education regarding the utility of the CAFAS tool for client-level treatment and case management, and increased understanding of *outcome management*, is needed. Human resources limitations are an often cited factor here, however practitioners need to come around to seeing how CAFAS can be embedded in regular ongoing practice rather than continuing to view it as an add-on.

The CAFAS team is developing a Best Practice Manual through CMHC participation on the new CAFAS wiki. As such, this manual will be co-developed and under constant development.

¹⁸ Based on the Annual Provincial Report 2004

DATA COLLECTION AND DATA ANALYSES

The data export process will be simplified by using an on-line system that will facilitate both secured data uploads from the organization and quarterly report downloads. This system will speed up the data transfer process, drastically reducing the burden of hundreds of emails with large attachments that are exchanged every quarter of the year. This on-line application is produced by a third party developer and it is expected to run at the beginning of 2009.

Through the continue collaboration with the CAFAS/BCFPI Advisory Committee, feedback assessment from the organizations and frequent team meetings, new ideas emerged regarding the usefulness, readability and content improvement of the quarterly reports produced for the agencies. The reports will have additional sections, such as an interpretation guide and a methodology part, which will help the recipients understand and present the reports to their management and staff.



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