

# Trauma-Focused Cognitive Behavioral Therapy

CONNECTICUT'S EVIDENCE-BASED  
TREATMENT COORDINATING CENTER



## **Connecticut TF-CBT Coordinating Center**

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*The authors retain full responsibility for all opinions and content.*

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# I. EXECUTIVE SUMMARY

**T**rauma-Focused Cognitive Behavioral Therapy (TF-CBT) is an evidence-based treatment for children who experience symptoms related to trauma exposure, including symptoms of post-traumatic stress disorder (PTSD), depression, and anxiety. The Connecticut TF-CBT Coordinating Center (“Coordinating Center”) is located at the Child Health and Development Institute (CHDI). Funded by the Connecticut Department of Children and Families (DCF) and the Judicial Branch’s Court Juvenile Support Services Division (CSSD), the goal of the Coordinating Center is to expand access to high quality, evidence-based outpatient behavioral health treatment for children exposed to trauma. Since 2007, TF-CBT has been disseminated across the state. The Coordinating Center now supports a network of 48 TF-CBT providers throughout Connecticut and provides training, credentialing, implementation support, site-based consultation, data collection and reporting, and ongoing quality improvement.

This report summarizes the work of the Coordinating Center, highlighting the performance during fiscal year 2021 (July 1, 2020 through June 30, 2021). This year, the ongoing COVID-19 pandemic increased stress on individuals and systems. Individuals dealt with prolonged exposure to loss, isolation, social divides, fears related to safety and decreased predictability. Systems were required to adapt as businesses and schools re-opened. Connecticut’s behavioral health system experienced changes to client service needs and agency leaders reported staff burnout and turnover. To adapt to these changes, provider agencies integrated a hybrid approach of both in-person and telehealth sessions. CHDI continued to provide virtual training, consultation virtually and spaces for our network to troubleshoot concerns and sustain EBP implementation. Even amidst these challenges, TF-CBT demonstrated strong results in quality and outcomes for Connecticut children and families.

## HIGHLIGHTS OF FY21:

**1,034** children received TF-CBT

There were no significant differences in the rates of successful discharges and improvement in any child symptoms between Black, Hispanic, and White children.

**4 of 5**  
Quality Improvement benchmarks surpassed

**61** new clinical staff were trained to deliver TF-CBT

Caregivers reported a **53% reduction** for their own depressive symptoms



Caregivers (**96%**) and children (**92%**) reported **very high satisfaction** with treatment

Children who completed TF-CBT had excellent outcomes; they reported a decrease in post-traumatic stress symptoms (>68%) and depressive symptoms (50%)

The caregiver participation rate was **38.1%** of all sessions, which exceeded the benchmark of **33%** caregiver participation.

**6** virtual new clinician trainings and **7** consultation call groups were held this year



## KEY RECOMMENDATIONS:

- **Expand access to TF-CBT** for children and caregivers by enrolling new providers, increasing utilization of TF-CBT beyond contract minimum standards, and supporting providers with retention strategies.
- **Provide additional training opportunities** or to increase access to TF-CBT for underserved children or special populations, including young children (ages six and below), males, those involved with CSSD, and youth with problem sexual behaviors (TF-CBT PSB). Expand access for these communities to alternative EBTs and/or other best practices, such as ARC, CBITS/BB, MATCH-ADTC, and/or CPP.
- **Increase** trauma screening and referrals from the juvenile justice system.
- **Advocate for permanent telehealth** session reimbursement through Medicaid and private insurance to continue hybrid treatment within TF-CBT.
- **Use virtual platforms** for quality improvement and supporting agency needs with implementation during COVID-19 including addressing workforce concerns and implementation of TF-CBT in hybrid formats.

## II. INTRODUCTION

**T**F-CBT is an evidence-based treatment for children aged 3-18 experiencing posttraumatic stress (PTS) symptoms from exposure to violence, abuse, and other forms of trauma. To present, 21 randomized control trials have shown the success of this short-term, family-centered model.

The Connecticut Trauma Focused Cognitive Behavioral Therapy (TF-CBT) Coordinating Center (“Coordinating Center”) is funded by the Connecticut Department of Children and Families (DCF) and the Judicial Branch’s Court Support Services Division (CSSD). Located at the Child Health and Development Institute (CHDI) of Connecticut, the Coordinating Center works to improve access to evidence-based outpatient behavioral health treatment for children experiencing posttraumatic stress (PTS) symptoms from exposure to violence, abuse, and other forms of trauma. Since 2007, the DCF, CSSD, and Coordinating Center advanced TF-CBT and trauma-informed care across the state through a series of Learning Collaboratives and The Connecticut Collaborative on Effective Practices for Trauma (CONCEPT) grant, a federally funded effort to improve trauma-informed care for children in the child welfare system. The figure below illustrates the goals and primary activities of the Coordinating Center.<sup>1</sup>



1. A detailed accounting of these activities during FY21 can be found in Appendix A.

This report is framed around these three goals. The first two sections describe progress on ensuring Connecticut children have access to TF-CBT (goal 1). The first section presents information on agency providers, training activities, and workforce development. The second section describes trends in service over time as well as a description of the population of children served in FY21. The third section details the clinical implementation, fidelity monitoring, and quality improvement activities that took place to ensure children received high-quality services (goal 2). The fourth section then describes symptom reduction and functional improvements for children who receive TF-CBT with a careful consideration of demographic characteristics that might influence outcomes (goal 3). The final section provides conclusions and recommendations to guide the work in future years.

ACCESS



**Increase Access to TF-CBT**

**Activities:** Maintaining a statewide network of provider agencies, training new clinicians in TF-CBT supporting systems screening for trauma.

**Measured by:** Children receiving TF-CBT overtime and across the state.

QUALITY



**Ensure Quality of TF-CBT**

**Activities:** Credentialing and certification of clinicians, site-based implementation and consultation, data collection and reporting.

**Measured by:** Clinicians meeting credentialing requirements; performance on quality improvement (QI) indicators and fidelity measures.

OUTCOMES



**Improve Outcomes for Children Receiving TF-CBT**

**Activities:** Ongoing quality improvement work with agencies and periodic collection of assessment measures to monitor child symptom and track changes.

**Measured by:** Children experiencing reliable and significant reduction in PTSD symptoms, depression, anxiety, problem severity or increases in child functioning.

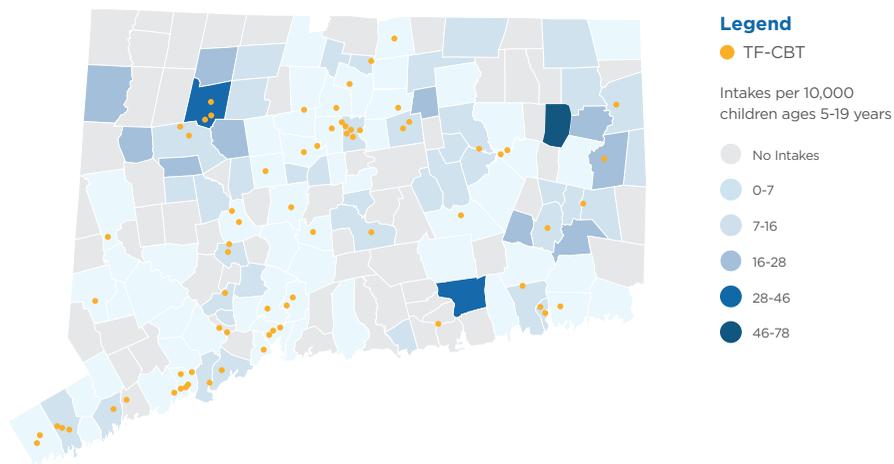
### III. ACCESS TO TF-CBT IN CONNECTICUT

The first goal of the Coordinating Center and the statewide TF-CBT initiative is to increase access to TF-CBT in Connecticut. This begins with ensuring TF-CBT is available by maintaining a provider network that serves many areas of the state and training new clinicians in the model. The total number of children and families receiving TF-CBT, along with their demographics and characteristics, is a way of monitoring the reach of the model and the state’s progress in providing TF-CBT to the children who most need treatment.

#### Availability Across the State

Fifty-one providers offered TF-CBT this year. Figure 1 below shows the location of TF-CBT sites across the state and Table 1 shows the trends in access over the past three years as well as cumulative totals. There were 320 clinicians on a TF-CBT team during at least some part of FY21 and 243 (76%) of clinicians saw at least one TF-CBT case. In terms of average team size, outpatient agency teams average 8.6 clinicians with a range of 1-21 clinicians providing TF-CBT on staff.

Figure 1. Map of TF-CBT Providers in CT.



#### Clinician Training and Credentialing

Given DCF’s interest in supporting TF-CBT in DCF-funded OPCCs and the number of agencies already providing TF-CBT, the primary focus of new clinician training is to address attrition due to staff turnover to maintain implementation capacity across the state. Of the 320 clinicians on a TF-CBT team during FY21, 63 (~20%) left their TF-CBT teams during the fiscal year. Clinician attrition trends are consistent with previous fiscal years. Ongoing training and support to help agencies address attrition resulted in 61 clinicians newly trained in TF-CBT. To support high-quality treatment by clinicians who attended the basic

TF-CBT training, we continued to facilitate one day TF-CBT Booster training sessions. The booster training is designed to provide newer clinicians supplementary training while they are implementing the model and to further assist any clinician who has not successfully started their TF-CBT practice. Sixty-nine clinicians participated in booster trainings this year. Seven clinician consultation call groups were completed this year. Sixty-four clinicians attended the 79 clinical consultation calls. Additionally, 15 clinicians met the Connecticut TF-CBT Credential criteria in FY21.

**Table 1. Trends in TF-CBT Provider Network**

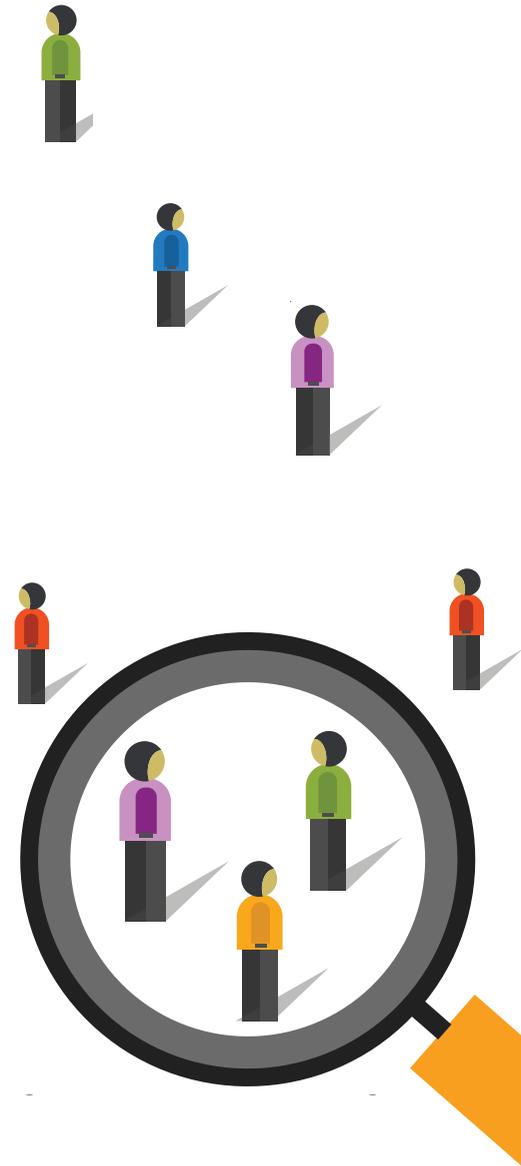
	FY 2019	FY 2020	FY 2021	Cumulative Since 2007
TF-CBT Providers/Agencies	46	48	51	71
New TF-CBT Clinicians	56	54	61	936
TF-CBT Clinicians Leaving	86	84	63	-
Clinicians Providing TF-CBT	294	253	320	927 <sup>2</sup>
# Newly Credentialed/Certified	22	19	15	359

### Clinician Demographics

The demographic characteristics of the 320 clinicians offering TF-CBT this year are presented in Table 2. TF-CBT clinicians were primarily female (89.7%) and more than half (53.1%) were White. In terms of languages spoken, 20% spoke Spanish.

**Table 2. TF-CBT Clinician Demographic Characteristics (n=320)**

Characteristic	%
Sex (Male)	9.4%
<b>Race/Ethnicity</b>	
Black or African American	9.4%
White	53.1%
Other Race/Ethnicity	2.8%
Hispanic, Latino, or Spanish (Any Race)	20.9%
Missing	13.8%
<b>Languages Spoken</b>	
Spanish	20.0%
Other <sup>3</sup>	5.0%



### Integrating Multiple EBTs

TF-CBT clinicians often are trained in and practicing other evidence-based treatment (EBT) models. In FY21, clinicians were most likely to be trained in MATCH-ADTC with 68 clinicians (21.3%) active in both models. The next most common model TF-CBT clinicians were also implementing was ARC (40 clinicians, 12.5%). Relatively few TF-CBT clinicians additionally practiced CPP (14 clinicians), CBITS (13 clinicians), and Bounce Back (6 clinicians). As both agencies and clinicians provide multiple EBTs, the Coordinating Center has shifted to providing consultation and support recognizing the complexity of managing multiple models with fidelity.

2. Clinicians included from FY16 and prior were included based on training records.

3. Other languages include Portuguese, Mandarin, Serbo-Croatian, French, and French Creole.

## Children Receiving TF-CBT

In FY21, 1,034 children received TF-CBT; this number included 536 children who began TF-CBT during the year. To date, 10,956 children have received TF-CBT in Connecticut since 2007. TF-CBT remained the most common EBT used in the outpatient setting.

### Child Demographics

Table 3 on the next page provides descriptives for children receiving TF-CBT in FY21, as well as comparisons to those served in outpatient services [as reported in DCF’s Provider Information Exchange (PIE) system] and the general CT population. Social and community context is highly related to service receipt and outcomes. Racism is part of that context that research has shown leads to inequities. Recognizing this, special consideration is given in this report to comparisons across racial and ethnic groups. TF-CBT and general outpatient care both served higher rates of Hispanic children and lower rates of White children compared to the overall CT population. Males, accounting for 34% of TF-CBT cases, were relatively underrepresented compared to the outpatient and general CT population.

The mean age of children receiving TF-CBT is 12.11 years (SD=3.57). Children receiving TF-CBT and general outpatient services tend to be older compared to the CT population. While the percentage of children in outpatient care under six was small (10.4%) it was even smaller for those receiving TF-CBT (3.5%). TF-CBT can be used with children as young as three, but it is used much less frequently with the youngest children.

While comparisons to the general child population of CT were not available for DCF-involvement, 29.6% of children who received TF-CBT were involved in the child welfare system. This rate is more than double that of children who received general outpatient services and were involved with the child welfare system, 12.5%.

**Table 3A. Characteristics of Children Receiving TF-CBT, with Comparisons (n=1,034)**

	TF-CBT		OPCC	CT Child Pop <sup>4</sup>
	n	%	%	%
Sex (Male)	352	34.0	50.5	51.1
<b>Race</b>				
American Indian or Alaska Native	1	0.1	0.4	1.0
Asian	-	-	0.9	4.8
Black or African American	118	11.4	15	13.9
Native Hawaiian or Pacific Islander	2	.2	.1	0.2
White	588	56.9	53.7	66.6
Other Race/Ethnicity (Includes multiracial/ethnic)	38	3.7	2.8	13.4
Did not Disclose/Missing	287	27.8	27	-
Hispanic, Latino, or Spanish (Any Race)	430	41.6	35.7	25.5



**Table 3B. Characteristics of Children Receiving TF-CBT, with Comparisons (n=1,034)**

	TF-CBT		OPCC	CT Child Pop <sup>4</sup>
	n	%	%	%
<b>Age (Years)</b>				
Under 6 Years	35	3.5	10.4	32.0
6-11 Years	393	38.8	44.1	33.4
12-17 Years	585	57.7	45.5	34.6
Child welfare involvement during treatment	306	29.6	12.5	N/A
JJ involvement during treatment	18	1.7	0.8	N/A
<b>Child Primary Language<sup>4</sup></b>				
Spanish	44	8.2	11.1	16.0
Neither Spanish or nor English	2	0.4	1.8	6.5

### Children Involved in the Juvenile Justice System

The Coordinating Center also works to ensure access to TF-CBT for youth involved in the juvenile justice system. Since 2014, CHDI has worked with the Juvenile Court Support Services Division (CSSD) of the Judicial Branch and the Department of Children and Families (DCF) to improve trauma-informed services for youth involved in Connecticut’s justice system by increasing the identification of youth’s trauma history and symptoms, and engaging youth evidence-based trauma treatments. One component of this work is the use of the Child Trauma Screen (CTS) which is administered by Juvenile Probation Offices and staff at the Linking Youth to Natural Communities (LYNC) programs; CHDI receives these screens and produces monthly and quarterly reports.

Additionally, CHDI provides reports on children who receive TF-CBT and also have involvement with the juvenile justice system.

During FY21, 457 youth were screened for trauma by probation officers and LYNC staff using the CTS. CHDI and CSSD streamlined CTS data collection and secure transmission for probation officers, which strengthens quality improvement of trauma screening at CSSD sites. Of those screened, 65.4% reported exposure to traumatic events, underlining the high rates of trauma exposure among youth in the justice system and the importance of trauma screening for this population. Of those youth with identified trauma exposure, only 27% were referred for treatment services including TF-CBT, MDFT, individual therapy, other mental health services,

4. American Community Survey 2019 1 year estimates. Caution should be used with comparison to OPCC and TF-CBT child demographics. Census race categories exclude Hispanic ethnicity only for White children while TF-CBT and OPCC race categories exclude Hispanic regardless of race. Census language is only available by language spoken, not primary language. Age is percentage of children 0-17 years. We recognize there are alternate terms for describing ethnicity. This report uses “Hispanic” and “Latino” to remain consistent with the way it is reported in the data system, which reflects the terminology in the U.S. Census.

and LYNC (based on CSSD staff reports). During the fiscal year, 18 youth in the justice system received TF-CBT services, with 46% of discharges successfully completing treatment and 89% reporting satisfaction with treatment.

The CTS screening documents the need for trauma-informed services, but relatively few TF-CBT cases have juvenile justice involvement. Unlike children with DCF involvement, which make up ~30% of those receiving TF-CBT, only ~2% are involved with the Juvenile Justice system.

Important to note, children served by TF-CBT providers may not disclose their JJ involvement, thereby estimates may be conservative.

There is more capacity for these youth to receive TF-CBT and CHDI will continue to collaborate with CSSD and DCF to find ways to build partnerships between Juvenile Probation officers, LYNC program staff, and local behavioral health providers to ensure a clear process for screening, referral and treatment.

## Clinical Characteristics at Treatment Start

Information on baseline assessments for children receiving TF-CBT is found in Table 4. Each assessment was also evaluated to determine if there were demographic factors that influenced reports of trauma exposure or scores on symptom measures at treatment start. Most of the measures reflect the child's experience or symptoms. The exception is the measure of caregiver depression; 46.5% of caregivers reported clinically high depression scores at baseline.

**TRAUMA EXPOSURE.** Children report experiencing an average of 7.2 types of potentially traumatic events; caregivers report that their children have experienced ~6 types of potentially traumatic events. Regression analyses were performed to determine if reports of exposure to potentially traumatic events was associated with demographic factors of the child. The full results are report in Table B1 in Appendix B. Child age was a positive and significant predictor of trauma exposure for both child ( $\beta=.329$ ,  $p <.01$ ) and caregiver reports ( $\beta= .102$ ,  $p <.01$ ). For caregiver report only, males had higher trauma exposure compared to females ( $\beta= .662$ ,  $p <.01$ ). There were no differences in trauma exposure by race or ethnicity.

**BASELINE SYMPTOMS.** Most children (~91%) receiving TF-CBT in the fiscal year had a measure of baseline symptoms. A summary of intake scores is presented in Table 4. Most children (77.9%) had clinically high symptoms in at least one symptom area (depression, posttraumatic stress, internalizing/externalizing behaviors) or impairments in functioning. In general, children were more likely to be in the clinical level of trauma (41.4% to 56.7%) and depression symptoms (58.8% to 62.3%), and less likely for problem severity (39.7% to 47.4%) or functioning (21.6% to 27.9%). On average, children were clinically high in 1.62 (SD=1.25) out of the four symptom areas.



Multiple regression analyses were used to look for demographic differences in baseline scores. Full results are reported in Tables B2 and B3 in Appendix B. Child-reported symptoms of both trauma ( $\beta=-6.341, p<.05$ ) and depression ( $\beta=-5.433, p<.01$ ) were significantly lower for males compared to females, while functioning for males was higher ( $\beta=4.680, p<.05$ ). Higher child-reported trauma exposure predicted higher baseline trauma ( $\beta=1.104, p<.05$ ) and depression ( $\beta=-0.425, p<.05$ ) symptoms as well. Interestingly, child reported trauma exposure predicted decreased caregiver-reported PTSD symptoms ( $\beta=-1.120, p <.05$ ) and caregiver-reported depression symptoms ( $\beta=-0.473, p <.05$ ) at baseline. Caregivers in general had reported lower levels of child trauma exposure compared to their child's own report, a trend that is common in reports of trauma history when collected from both caregiver and child.

Furthermore, binary logistic regressions were also used to assess elevation differences in broadband and narrowband symptom measures at baseline. Broad measures provide information on a wide range of domains (i.e. psychological, social, behavioral, etc.) and narrow measures focus on a specific domain (e.g., PTSD symptoms or depression). Full results are reported in Tables B4 and B5 in Appendix B. For narrowband measures, males were less likely to have elevated baseline scores ( $\beta=-0.472, p = <.05$ ). Older age ( $\beta=-0.086, p = <.01$ ), and greater trauma exposure measured by child ( $\beta=0.087, p = <.05$ ) and caregiver ( $\beta=-0.076, p = <.05$ ) predicted increased narrowband elevation. There were no significant demographic differences in elevated broadband measures at baseline.

**Table 4. Child and Caregiver Clinical Assessment Scores at Intake**

Measure	Construct	Child Report				Caregiver Report			
		N	Mean	SD	Elevated* n (%)	N	Mean	SD	Elevated* n (%)
<b>THS Sum</b>	<b>Exposure to potentially Traumatic Events</b>	<b>940</b>	<b>7.24</b>	<b>3.40</b>	-	<b>841</b>	<b>5.96</b>	<b>2.92</b>	-
<b>CPSS-IV Total Score</b>	<b>Traumatic Stress Symptoms</b>	<b>35</b>	<b>22.86</b>	<b>9.74</b>	<b>26 (74.3)</b>	<b>31</b>	<b>27.13</b>	<b>12.39</b>	<b>25 (80.7)</b>
Re-experiencing Subscore		-	6.63	3.78	-	-	8.32	4.39	-
Avoidance Subscore		-	8.24	4.34	-	-	9.65	5.86	-
Arousal Subscore		-	8.23	3.7	-	-	9.16	4.12	-
<b>CPSS 5 Total Score</b>	<b>Traumatic Stress Symptoms</b>	<b>891</b>	<b>34.35</b>	<b>16.25</b>	<b>505 (56.7)</b>	<b>763</b>	<b>28.75</b>	<b>15.47</b>	<b>316 (41.4)</b>
Re-experiencing Subscore		-	8.78	4.71	-	-	7.41	4.62	-
Avoidance Subscore		-	4.85	2.37	-	-	4.26	2.38	-
Cognition & Mood Swings		-	11.18	6.72	-	-	9.7	6.33	-
Hyperarousal Subscore		-	10.66	5.13	-	-	8.91	4.92	-
<b>SMFQ Total Score</b>	<b>Depressive Symptoms</b>	<b>416</b>	<b>10.62</b>	<b>6.51</b>	<b>259 (62.3)</b>	<b>352</b>	<b>9.85</b>	<b>6.22</b>	<b>207 (58.8)</b>
<b>Ohio Problem Severity</b>	<b>Severity of Child Behaviors</b>	<b>576</b>	<b>24.96</b>	<b>14.15</b>	<b>273 (47.4)</b>	<b>844</b>	<b>23.58</b>	<b>14.69</b>	<b>335 (39.7)</b>
Internalizing		-	13.89	9.94	-	-	11.61	9.02	-
Externalizing		-	8.72	6.624	-	-	11.64	9.263	-
<b>Ohio Functioning</b>	<b>Child's Adjustment and Functioning</b>	<b>579</b>	<b>53.94</b>	<b>12.73</b>	<b>125 (21.6)</b>	<b>846</b>	<b>51.46</b>	<b>14.22</b>	<b>236 (27.9)</b>
<b>CESD-R</b>	<b>Caregiver's Own Depressive Symptoms</b>	-	-	-	-	<b>198</b>	<b>17.42</b>	<b>13.32</b>	<b>92 (46.5)</b>

## IV. QUALITY: CONSULTATION AND CLINICAL IMPLEMENTATION

CHDI, in collaboration with DCF, works closely with agency providers and meets regularly with each agency to review agency performance data and provide implementation consultation. The focus of these site visits varies based on the needs of individual agencies but generally focus on building internal capacity to sustain TF-CBT and providing strategies to ensure fidelity and outcome benchmarks are met. In addition to site-based consultation, the Coordinating Center helps maintain a database to collect TF-CBT data. To support clinicians and ensure we have timely, accurate, and usable data the Coordinating Center maintains a HelpDesk that has fielded thousands of requests from users since it was opened at the start of FY19. EBP Tracker also provides reports intended to be used by clinicians and teams to help them monitor and track their progress toward goals in between contacts with CHDI. The data collected in the system and used in site visits provides information on how teams are performing on Quality Improvement (QI) indicators detailed below.

### TF-CBT Data Systems

Most of the data used in consultation with sites is collected through a secure, web-based system. Originally, TF-CBT data were collected in EBP Tracker. In October 2019, EBP Tracker functionality was integrated into DCF's Provider Information Exchange (PIE) system. Most episodes (approximately 94%) were successfully transferred from EBP Tracker to PIE. This integration resulted in two primary changes to EBT data: (1) EBT episodes data can now be linked to the rest of a child's outpatient episode including the use of date-based activity information to count TF-CBT sessions rather than monthly report and (2) EBT episodes now include identifying information (such as first and last name) to be entered into the PIE system.

Several improvements and additions were made to the PIE system in FY21. Two enhancements include the Clinical Global Impressions (CGI) scale and the collection of telehealth information. The CGI scale is a two-question instrument used to measure severity of symptoms (CGI-Severity) and degree of improvement in symptoms (CGI-Improvement). The CGI-Severity data collection occurs at the start and end of a TF-CBT episode; clinicians answer the CGI-Improvement at the end of the episode. These scales allow a broad measure

of acuity and improvement within TF-CBT as well as to make comparisons across other EBT models and treatment as usual. Additionally, with the increase of telehealth sessions it was desirable to collect information on format. The date-based activity information entered for all outpatient cases will now include an option for the clinician to indicate if it was in-person or through telehealth. These new data fields, CGI and telehealth, were phased in as requirements during the year. As the number of episodes including this information increases, these fields will be added to reports and used in consultation work with the agencies.

Despite these initial challenges, having EBT data collected in PIE has many advantages. It is now possible to better understand how EBTs contribute to overall outcomes in outpatient care. An EBT episode might only be a small portion of an overall episode; now with the data connected in the system there are opportunities to understand how and when EBTs are used, the dosage of EBT sessions relative to treatment as usual, and examine if there are group-level differences in who receives EBTs and the experiences they have in a particular model relative to treatment as usual.



## Implementation Consultation

CHDI Project Coordinators completed 115 Zoom site meetings in FY21. The typical agenda for these site meetings is to review the agency performance on recent reports (e.g., QI report, monthly dashboards). This year, a focus on implementation sustainability, shifts in agency culture, staff burnout and changes received special attention per agency request. From this review of data, SMARTER (specific, measurable, action-oriented, realistic, timed, evaluated, reviewed) goals are developed with the agency to address any QI indicator that did not meet the established benchmark.

In Q3, guidance was provided to agencies on the Clinical Global Impressions scale to the TF-CBT intake and discharge process including instruction on data collection. To further ensure high-quality TF-CBT implementation, CHDI convened regular statewide meetings for agency Coordinators to focus on strategies related to sustainability and TF-CBT team management. CHDI convened 3 statewide meetings for agency Coordinators to support agencies in implementation amidst changes to service delivery during the pandemic, including the adoption of a hybrid approach to offer in-person treatment and telehealth services. Rather than the specific agency focus of site visits, these were opportunities for sites to co-learn with each other, and bring best practices for TF-CBT and other EBTs back to their agencies. Additionally, three bilingual clinician meetings were held during the year for clinicians offering TF-CBT to clients in Spanish.



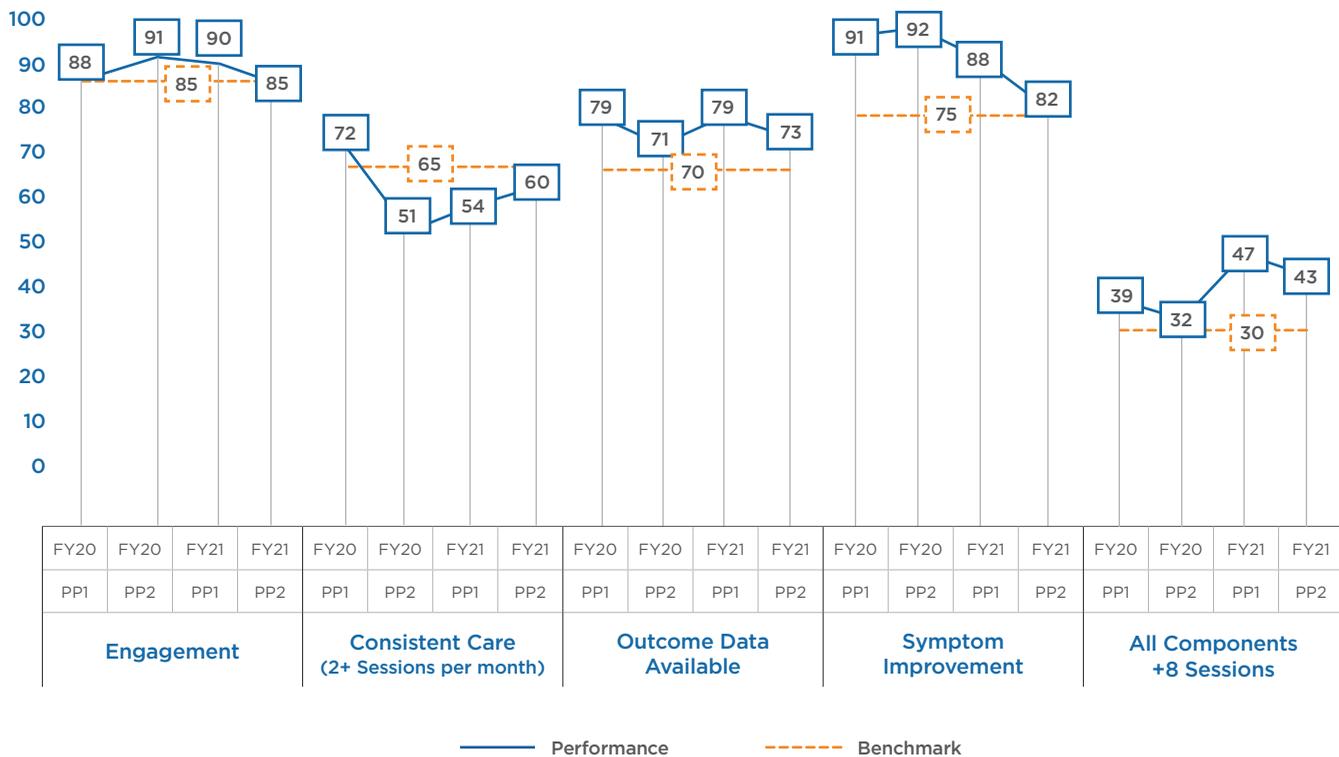
## Quality Improvement and Model Implementation

Children completing TF-CBT attended a mean of 15.56 (SD=16.62) sessions with a mean treatment episode length of 9.47 (SD=6.17) months. This is in line with the recommended expectation of completing TF-CBT in 12 to 16 sessions. In the fiscal year, 61.8% of sessions were completed with the child only, 22.9% were with caregiver and child together, and 15.2% were with caregiver only. TF-CBT stresses the importance of establishing a strong caregiver partnership and involvement in the treatment process. The Coordinating Center has set a benchmark of 33% of session time should be spent with the caregiver (either alone or together with the child). The data reflect that 38.1% of sessions had caregiver involvement, exceeding the benchmark.

## Quality Improvement Indicators

CHDI reports on TF-CBT quality improvement (QI) indicators twice annually. These QI indicators guide the work CHDI Project Coordinators do with the sites and are the focus of the SMARTER goals set during consultation visits. The definition and explanations of each of the five QI indicators and the prepared reports showing each provider's results over the two FY21 performance periods are included in Appendix E. Quality improvement indicators have mostly remained consistent across the performance periods, including consistent care (2+ sessions/per month), completing all components, and engagement.

**Figure 2.** QI indicators in FY21





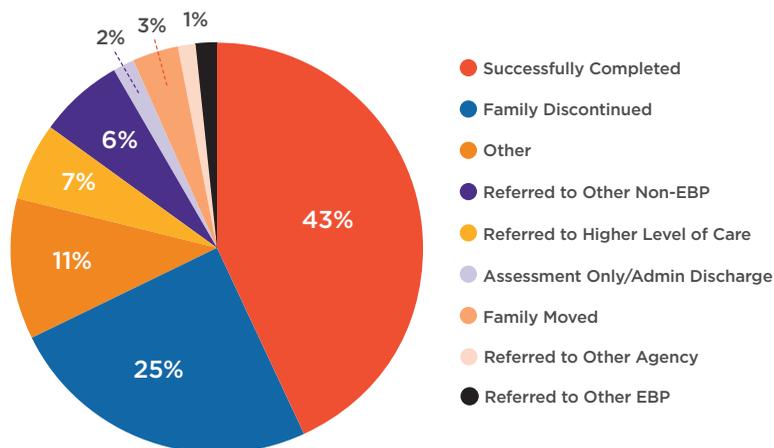
### Discharge Reason

During the fiscal year, 589 children ended their TF-CBT treatment episode. Clinicians rated 43% of children ending treatment as “completing all EBT requirements.” Children who did not complete all EBT requirements were most likely to not complete due to family discontinuation (see Figure 3). Binary logistic regression analyses were conducted to determine which factors were associated with successful discharge. Results are reported in Table B6 in Appendix B. Overall, there were no significant differences in successful discharge by race/ethnicity. However, higher child-reported trauma exposure at baseline predicted a decrease in successful discharge ( $\beta=-0.075, p<.05$ ).

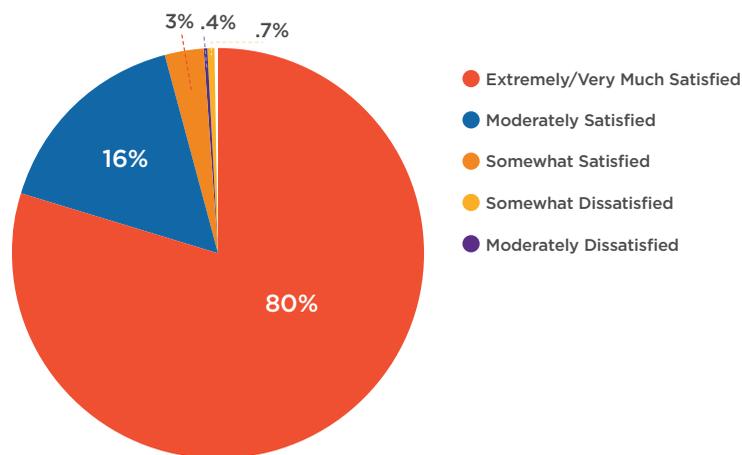
### Satisfaction

Caregivers report high levels of satisfaction with TF-CBT treatment. In FY21, there were 272 Ohio Caregiver Satisfaction forms completed. The responses are illustrated in Figure 4 with 96% of those completing indicating they were moderately to extremely satisfied with treatment. 254 children completed the Ohio Child Satisfaction measure; 92% of these children indicated that they were moderately to extremely satisfied with treatment. Child responses are demonstrated in Figure 5.

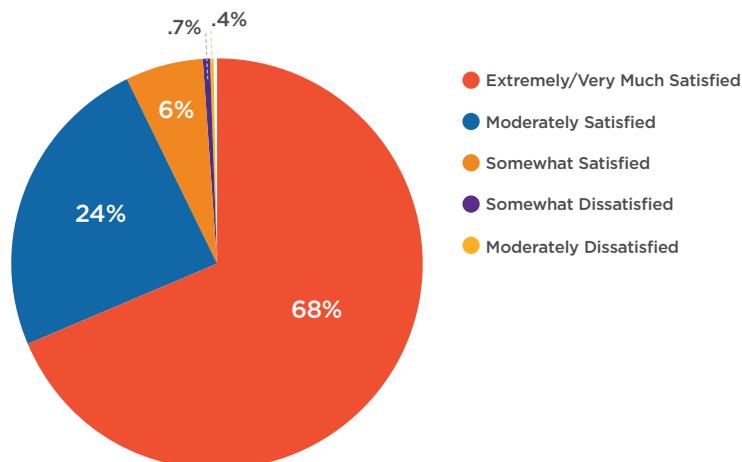
**Figure 3.** Reasons for discharge in FY21



**Figure 4.** Caregiver satisfaction with their child’s TF-CBT treatment



**Figure 5.** Child satisfaction with their TF-CBT treatment



## V. OUTCOMES: IMPROVEMENT FOR CHILDREN RECEIVING TF-CBT

Children receiving TF-CBT are assessed with a variety of measures selected to provide information on trauma history and severity of symptoms at intake and to measure change at discharge. Change cannot be calculated unless there are two data points for an assessment, so the availability of outcome data (having a first and last) is an important indicator in considering outcomes. Of those who do have sufficient data, trends in symptom change both overall and across groups are presented.

### Rates of Outcome Data

Of children discharged from TF-CBT in the fiscal year, 67.4% had at least one first and last version of a child symptom assessment (child or caregiver reporter) and 12.9% had data on caregiver symptoms. Binary logistic regression analyses were conducted to determine which factors were associated with having outcome data. Results are reported in Table B7 in Appendix B. Findings show that children were less likely to have assessment outcome data if they were discharged unsuccessfully. No statistically significant differences in rates of outcome data by race/ethnicity were found.

### Symptom Improvement

Children experienced significant reductions in trauma, depression, and problem severity symptoms as well as significant gains in functioning (Table B8 in Appendix B). Caregivers experienced significant reductions in their own depression symptoms. For children who received TF-CBT, the highest rates of reliable change and remission were in PTS and functioning.

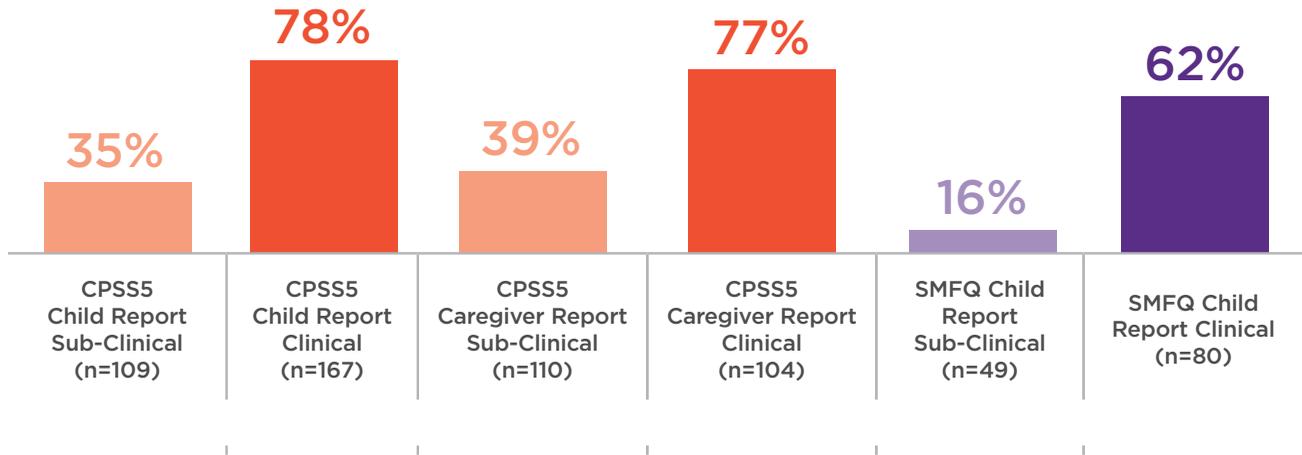
### Children Improve Across Multiple Domains

Children receiving TF-CBT were assessed initially on four domains, each with available child and caregiver report versions. Caregivers were additionally assessed with a measure of their own depression. Clinicians then selected measures to use periodically; this means not every child was re-assessed on every measure. When children were assessed at two or more time points, change scores were calculated and the Reliable Change Index (RCI) values were used to determine the percentage of children who experienced reliable change (see Appendix C). Figures 6 through 8 shows the relative rates of improvement across the measures. **The greatest improvements were in post-traumatic stress symptoms and functioning.**

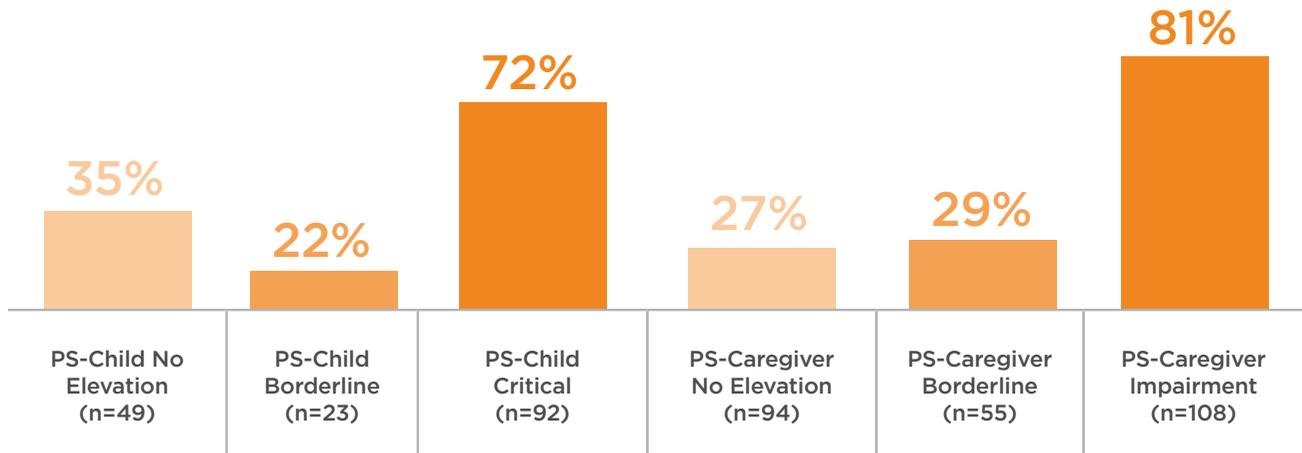
Children who entered TF-CBT with clinically high symptoms have higher rates of reliable symptom change after treatment. This trend was seen across all symptom categories (PTSD, depression, externalizing/internalizing behaviors, and functioning). For PTSD symptoms, 78% of children with elevated child-report at baseline and 77% of children with elevated caregiver-report at baseline experienced reliable change in this symptom category. Comparatively, for those children who did not have elevated PTSD symptoms, 35% and 39% experienced reliable change, respectively. Similar trends were seen for children with elevated depressive symptoms, problem severity (externalizing and internalizing) symptoms, and functioning impairments.



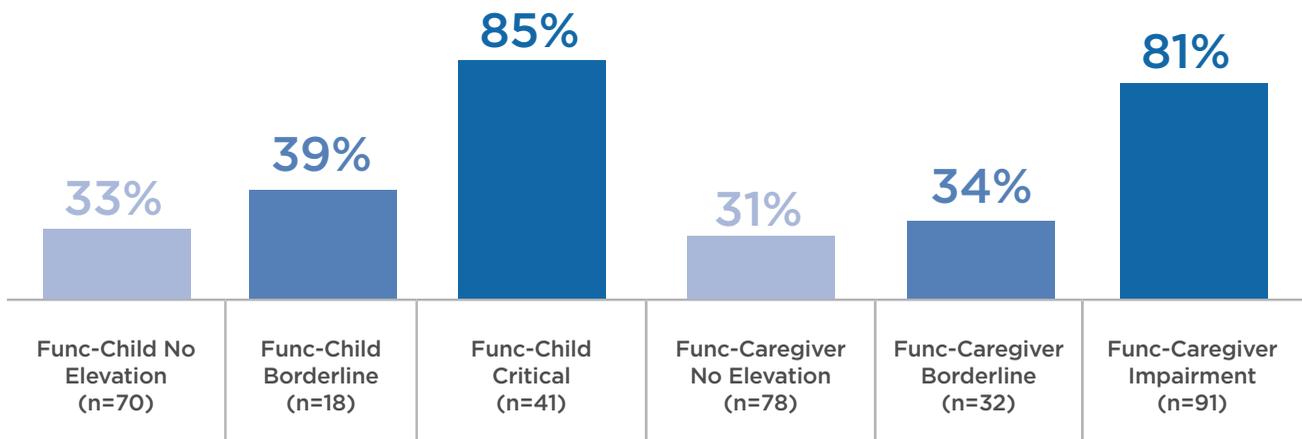
**Figure 6.** Percentage of Children that Show Reliable Change in PTS and Depression Symptoms Based on Baseline Symptom Severity



**Figure 7.** Percentage of Children that Show Reliable Change in Ohio Problem Severity Based on Baseline Symptom Severity



**Figure 8.** Percentage of Children that Show Reliable Change in Ohio Functioning Based on Baseline Symptom Severity





## Clinical Improvements Across Groups

In addition to the overall rates of symptom reduction and functional improvement, there were no disparate outcomes across subgroups. Multiple regressions were performed to explore the effect of race categories, age, and sex on discharge scores<sup>5</sup> (PTS, depression, problem severity, and functioning), controlling for initial scores, successful completion of the model, and trauma exposure.

Details of the tests are in Appendix B (Tables B9 and B10), results are highlighted here. Overall, results show consistent outcomes for all children who received TF-CBT. Trauma exposure, successful discharge, and baseline scores were shown to have the largest effect on outcomes. Most importantly, across all reporters and symptom domains, having a successful discharge was associated with a decrease in discharge symptom scores. For the individual outcome scores, there were no significant difference by race, ethnicity, age, or sex.

Again, binary logistic regressions were utilized to assess symptom reduction across grouped narrowband and broadband measures. Details can be found in Appendix B (Tables B11 through B13). For narrowband measures, other non-Hispanic children were less likely to have symptom reduction ( $\beta=-1.361$ ,  $p < .05$ ) compared to White non-Hispanic children. Child reported trauma exposure also positively predicted narrowband symptom reduction ( $\beta=0.157$ ,  $p < .01$ ). For broadband measures, child age was a positive predictor of symptom reduction ( $\beta=0.089$ ,  $p < .05$ ). For both broad and narrowband analyses, successful discharge continues to play a significant role in predicting symptom reduction. See Figure 9 below for a general regression overview. Details of the tests can be found in Appendix B.

**Figure 9.** Clinical improvements across groups

Measures	Demographic Values				
	Black Comparison	Hispanic Comparison	Other Non-Hispanic Comparison	Age at Intake	Sex(m) Comparison
Baseline Score Elevated - Narrowband <sup>1</sup>	● -0.268	● -0.1880	● -0.171	▲ 0.086**	▼ -0.472*
Baseline Score Elevated - Broadband <sup>1</sup>	● -0.20	● 0.105	● 0.410	● 0.049	● -0.082
Trauma Exposure - Child	● 0.059	● 0.059	● 1.058	▲ 0.329**	● 0.239
Trauma Exposure - Child Caregiver	● -0.301	● -0.301	● 0.396	▲ 0.102**	▲ 0.662**
Measures Available at Discharge <sup>1,3</sup>	● 0.276	● 0.056	● 0.561	● -0.014	● 0.245
Successful Discharge <sup>1</sup>	● -0.165	● -0.0420	● -0.226	● -0.037	● -0.322
Outcome Score CPSS5 Child <sup>1,2,3</sup>	● 0.893	● 1.019	● 5.608	● 0.22	● -1.862
Outcome Score CPSS5 Caregiver <sup>1,2,3</sup>	● 0.027	● -0.038	● 11.317	● 0.006	● 0.772
Outcome Score SMFQ Child <sup>1,2,3</sup>	● -1.285	● 1.755	● 2.407	● 0.221	● -1.845
Outcome Score SMFQ Child Caregiver <sup>1,2,3</sup>	● -1.946	● 1.24	● 4.237	● -0.018	● -1.217
Outcome Score Ohio Child <sup>1,2,3</sup>	● 1.337	● -1.322	● 2.682	● -0.114	● -2.208
Outcome Score Ohio Child Caregiver <sup>1,2,3</sup>	● -2.170	● -1.352	● 5.299	● -0.19	● 1.527
Any Child Symptom RCI - Narrow Broadband <sup>1,3</sup>	● -0.782	● -0.2720	▼ -1.361*	● 0.070	● 0.074
Any Child Symptom RCI - Broadband <sup>1,3</sup>	● -0.446	● 0.102	● -0.386	▲ 0.089*	● -0.058
Any Child Symptom RCI <sup>1,3</sup>	● -0.538	● -0.0500	● -0.367	● 0.043	● 0.019

\* $P < .05$ , \*\* $P < .01$  Compared to White Females  
 Note: Other Non-Hispanic removed due to low n.  
 Numbers represent regression coefficients

<sup>1</sup>Controlled for trauma exposure.  
<sup>2</sup>Controlled for baseline score.  
<sup>3</sup>Controlled for discharge reason.

▲ Comparison is significantly higher compared to reference group.  
 ▼ Comparison is significantly lower compared to reference group.  
 ● Comparison is not significantly different than reference group.

5. The term discharge score is used, but periodic data was used when discharge data was not available.

## VI. SUMMARY AND CONCLUSIONS

TF-CBT is available across the state for children suffering from trauma symptoms and their caregivers. TF-CBT providers maintained high quality service and fidelity despite the increased stress amid COVID-19, and children receiving TF-CBT and their caregivers exhibited progress over multiple clinical domains. Despite these outcomes, the total number of children served by TF-CBT decreased this year. Agencies remained flexible in their TF-CBT delivery by offering hybrid formats (in-person and telehealth sessions), and their workforce was supported through virtual consultation, training, and network spaces to discuss problems and solutions.



Children who began TF-CBT treatment had significant exposure to potentially traumatic events as reported by caregivers and children—an average of six or seven events, respectively. Clinicians assess symptoms across multiple domains, and approximately 78% of children were above the clinical cut-off on at least one domain, most common were depression or trauma symptoms. Children who received TF-CBT are similar to children served in the broader outpatient setting in terms of sex and race/ethnicity; however, they were nearly twice as likely to have DCF involvement.

In FY21, 85% of children who engaged in TF-CBT completed at least four treatment sessions. The average number of sessions was 15.6 across an average of 9.47 months, which is consistent with the recommended range (12 to 16 sessions) and signals high engagement with youth and families. Caregivers were involved in approximately 38% of sessions, exceeding benchmark expectations (33%). The percentage of children who completed all model components in 8 or more sessions exceeded the 30% benchmark throughout FY21, and children (92%) and caregivers (96%) reported very high rates of satisfaction with treatment. Improvement in symptoms, particularly for traumatic and depressive symptoms, were high for children who received TF-CBT. Of children who began treatment with clinically elevated trauma symptoms, more than 78% of children and caregivers reported improvement. Reductions in depressive symptoms and problem severity, as well as increases in functioning, were of similar magnitude. Caregivers also experienced significant reductions in their own depressive symptoms.

Despite the steady progress on numerous quality indicators, areas for improvement exist. A focus over the past two years has been the consistency of visits, and 60% of TF-CBT cases in the most recent reporting period averaged at least two sessions per month during the course of treatment. Though this was the only QI indicator to have fallen below the desired benchmark, additional investigation will help determine practice-level and data-related issues are areas of attention. Approximately one of every four children (25%) discontinued treatment due to family reasons, and more youth with higher reports of trauma exposure discharged unsuccessfully. Despite this, children who started TF-CBT with clinically high symptoms had higher rates of reliable symptom change after treatment.



clinicians and children served improved in FY21. Workforce recruitment and retention of TF-CBT clinicians from Black, Indigenous, and People of Color communities are essential to combat systemic racism in service delivery.

Given the longstanding impact of the COVID-19 pandemic on services, virtual training and consultation remain top priorities. Agency leaders reported that staff are experiencing higher amounts of burnout, need for flexibility and leaves, and turnover. Though agency staff attrition was similar to previous years (~20%), the full effects of COVID-19 on workforce retention may not yet be

One statistical difference in race and ethnicity was in baseline and outcome functioning, problem severity, and trauma exposure for children who received TF-CBT. Other, non-Hispanic children were less likely to have narrowband symptom reduction (e.g., trauma symptoms, depression symptoms) compared to White non-Hispanic children. Further, no other racial differences existed in factors that affect clinically successful discharges. Though these findings may suggest that TF-CBT was equitably effective across diverse racial and ethnic youth, which supports the role of EBTs in confronting institutional racism<sup>6</sup>. An ongoing area of focus includes adding measures that detect how racial discrimination may cause and/or affect symptoms of trauma will help further guide TF-CBT provision coupled with an anti-racist framework<sup>7</sup>. Racial concordance between TF-CBT

realized. These workforce issues compounded challenges in higher caseloads for and reduced availability of TF-CBT clinicians. These concerns are not isolated to front clinicians, experienced supervisors and managers remain invaluable in cultivating and expanding the TF-CBT workforce. Ongoing demand for new clinician TF-CBT training remained high, though virtual training seat caps mandated by model developers remained modest—12 seat maximum per training. In comparison to previous years, more established TF-CBT clinicians expanded their model training in MATCH or ARC models. While having a highly trained workforce has benefits, it also means that clinicians doing multiple EBPs will likely have a reduced capacity to see clients in each model.

6. Alang, S. M. (2019). Mental health care among blacks in America: Confronting racism and constructing solutions. *Health Services Research, 54*(2), 346-355. doi: 10.1111/1475-6773.13115

7. Williams, M. T., Printz, D. M. B., & DeLapp, R. C. T. (2018). Addressing racial trauma with the Trauma Symptoms of Discrimination Scale. *Psychology of Violence, 8*(6), 735-747. doi: 10.1037/vio0000212

In order to increase TF-CBT access and service utilization, there are opportunities to expand treatment to underserved populations. Children as young as three may benefit from TF-CBT; however, only 3.5% of all episodes targeted children six and under. Older age of children was a predictor of symptom reduction in broadband measures, which may suggest a high level of clinician competence with older children and warrant more specialized training with younger children. Additionally, males accounted for only 35% of TF-CBT cases. Child reported symptoms for trauma and depression were lower for males and functioning was higher, but males had higher trauma exposure based on caregiver report. This may indicate that male children may be less aware of their trauma exposure and under-report these events, and additional training may help clinicians engage male children into treatment. Of youth involved in the Juvenile Justice (JJ) system who were screened,

65.4% were exposed to trauma and only 27% were referred to any treatment. Further, only about 2% of children receiving TF-CBT were JJ-involved, indicating a significant gap. Of additional note, 76% of JJ-involved youth screened were male suggesting that engagement of JJ-involved youth may also increase access for male children in TF-CBT. Further collaboration with CSSD and LYNC providers will expand successful referral to treatment and potential diversion of these youth further into the JJ system. Finally, TF-CBT has not served an Asian child in the past two FYs, only one identified American Indian or Alaska Native child, and two Native Hawaiian or Pacific Islander youth. Given the smaller proportions of youth representation in Connecticut, it is unclear the exact barriers that exist, if any. These areas of advancing model implementation and priorities for clinical attention will strengthen TF-CBT access and service delivery for future years.



## VII. RECOMMENDATIONS

The following recommendations are made for continued support of the TF-CBT statewide network:

### Coordinating Center:

- Train new providers and assist current participating agencies to increase the number of children and families served and engage them in treatment by focusing on clinician retention and encouraging all trained clinicians to have a minimum of two cases. Expand number of TF-CBT virtual trainings to minimally accommodate provider workforce requests.
- Expand access to TF-CBT for children and caregivers by enrolling new providers and expanding TF-CBT utilization for existing providers by encouraging all trained clinicians to have a minimum of two cases or more depending on agency performance in the SMARTER framework during consultation, and expanding the number of TF-CBT virtual trainings to accommodate provider workforce requests, if needed.
- Continue to analyze data to monitor equitable TF-CBT treatment across age, gender, sexual orientation, gender identity and race after COVID-19 restrictions are lifted, removing access barriers that may exist for certain groups. Offer training opportunities, as needed.
- Provide additional training opportunities or to increase access to TF-CBT for underserved children or special populations, including young children, males, those involved with CSSD, and youth with problem sexual behaviors (TF-CBT PSB). Expand access for these communities to alternative EBTs and/or other best practices, such as ARC, CBITS/BB, MATCH-ADTC, and/or CPP.
- Continue to offer virtual consultation to meet benchmarks with a focus on supporting agency needs during COVID-19 including addressing workforce concerns and implementation of TF-CBT in hybrid formats
- Monitor TF-CBT caseloads for credentialed clinicians and clinicians implementing multiple evidence-based practices and review during site visits annually.
- Continue to convene the group of bilingual clinicians implementing TF-CBT and provide the support and resources they recommend; consider having identified Senior Leaders and Coordinators from that group provide feedback and serve as liaisons to the broader EBP Coordinators meeting.
- Utilize telehealth data to advocate for meaningful TF-CBT telehealth session reimbursement.
- Advocate for the implementation and expansion of innovative data-informed approaches to help agencies collect more client data and use outcomes to inform care as hybrid treatment continues.
- Continue working with CSSD and LYNC providers to strengthen accurate CTS data collection for reporting to ensure effective recommendations for system coordination.
- Develop a plan with CSSD, LYNC providers, and TF-CBT providers to increase access to TF-CBT for youth involved in the juvenile justice system.
- Examine data and work with providers regarding the QI Consistent Care benchmark.

### Providers:

- Use site meetings to develop sustainability plans that reach or exceed established QI benchmarks.
- Develop and implement strategies for staff hiring and retention (e.g., flexible organization policies, regular supervision, staff wellness, etc.).
- Hire and retain clinicians who align demographically with the children and families served.
- Ensure clinical staff maintain appropriate caseload sizes, productivity expectations, and supervision needed to increase number of children receiving TF-CBT and manage workforce burden.

- Support clinical staff with dedicated flexibility in space, technology, and schedules needed to improve implementation of TF-CBT via hybrid approach.
- Expand investment into TF-CBT hybrid formats to strengthen TF-CBT implementation and access.
- Provide clinical staff supervision for implementing multiple evidence-based treatment models while maintaining recommended TF-CBT caseload sizes.
- Participate in trainings on underserved groups or special populations, and develop plans within the teams to implement and use the knowledge from the trainings to improve care for children receiving TF-CBT.
- Agency Senior Leaders monitor and report the adequacy of provider incentives to supplement the cost of providing TF-CBT.

#### System:

- Continue funding performance-based sustainment funds to improve capacity, increase access, and ensure quality of care; incentives partially offset the increased agency costs of providing an EBT.
- Expand staff survey questions on agency culture and commitment to health equity.
- Provide ongoing education and outreach to child welfare staff, CSSD staff and LYNC providers about the value of EBTs and TF-CBT for children with behavioral health needs including, what treatments are available in the state, how to determine the type of treatment a child is receiving, and how to advocate for EBTs.
- Offer Portuguese language versions of assessments in electronic format within the PIE database system.
- Make adaptations to PIE report to support enhanced clinical work including putting the number of sessions in the monthly session forms, creating a monthly quality report for agency coordinators and adding RCI to the score profile report.
- Determine a more specific definition to providers for “successful completion” of TF-CBT cases.



- Advocate for policies and funding that support agency staff retention and training.
- Advocate for the implementation and expansion of electronic systems to improve data collection and utilization in treatment.
- Continue the work of the Coordinating Center to disseminate, support, and integrate EBTs and best practices. This work includes OPCC quality improvement support and data-informed care strategies that may have a broader impact on the children’s behavioral health system.
- Advocate for the continued full reimbursement of providing TF-CBT sessions via telehealth.
- Advocate for the cross-system work of TF-CBT, along with data on utilization and outcomes, within relevant statewide committees and councils, including but not limited to: the Behavioral Health Plan Advisory Board; the Juvenile Justice Policy and Oversight Committee (JJPOC); and the Behavioral Health Partnership Quality Access and Policy Subcommittee.

## VIII. APPENDIX A: ACTIVITIES AND DELIVERABLES

The Coordinating Center has worked to support the TF-CBT implementation goals through the following activities carried out in FY21.

### 1. Training, Consultation, & Credentialing

- Provided six clinical trainings in July 2020, August 2020, October 2020, November 2020, and two in March 2021. Sixty-one new clinicians were trained.
- Four TF-CBT Booster trainings were conducted and attended by 69 previously trained clinicians.
- Completed 7 series of clinical consultation calls (79 total calls) for 64 clinicians.
- Coordinated registration, attendance, and CEUs for New Clinician Training (61 participants) and the consultation call groups (64 registrations).
- Established requirements and maintained a statewide TF-CBT clinician credentialing process to increase the number of clinicians that complete all training and case requirements; 126 (47%) of active clinicians were either Connecticut credentialed or nationally certified by the end of FY21.
- Maintained a training record database to track training and consultation attendance of all TF-CBT providers as well as the additional credentialing requirements for all TF-CBT clinicians; in FY21 there were 320 active clinicians.
- Convened annual statewide EBP Conference virtually; 588 unique participants and 1,361 total participants across DCF, CSSD and community providers attended 17 individual Zoom conference sessions.

### 2. Implementation Support, Quality Improvement, & Technical Assistance

- Produced reports for two QI performance periods based on developed TF-CBT QI Indicators and Benchmarks (Appendix E).
- Produced quarterly QI performance reports that highlighted progress towards the TF-CBT QI indicators and benchmarks.
- Utilized a QI process of implementation consultation based on emerging implementation science field and needs of agencies.
- Developed agency-specific QI plans using SMARTER Goals focused on agency performance on QI benchmarks and strategies to improve access, quality and service delivery.
- Provided 115 Zoom implementation consultation visits to ensure sustainment of high quality services.
- Three new providers joined the TF-CBT network.
- Convened three Coordinator meetings focusing on sharing implementation and successful meeting strategies.
- Convened three meetings for bilingual TF-CBT clinicians.
- Provided updates to all TF-CBT participants through a monthly Data Dashboard.
- Distributed additional TF-CBT books, materials, and resources to all TF-CBT teams including new resources to be used with bi lingual or Spanish speaking children and families and multiple TF-CBT telehealth resources.



### 3. Data Systems

- Continued maintenance of a secure, HIPAA compliant, online database that meets the needs of the increasing number of TF-CBT providers and the children and families they serve.
- Oversaw the migration of EBP Tracker to DCF's servers, which reduced hosting costs for the system and brought EBP Tracker onto the same platform as Provider Information Exchange (PIE).
- Maintained a public directory site that provides a searchable, public listing of TF-CBT providers through EBP Tracker ([tinyurl.com/ebpsearch](http://tinyurl.com/ebpsearch)).
- Monitored, maintained, and provided technical assistance for online data entry for all TF-CBT providers.

### 4. Agency Sustainment Funds

- Administered performance-based financial incentives to improve capacity, access, and quality care.
- While these financial incentives are intended to partially offset the increased agency costs of providing an evidence-based practice, agency leadership reports that they do not adequately cover the costs of providing TF-CBT.
- Developed, executed, and managed contracts with each of the 33 TF-CBT providers eligible for financial incentives to detail implementation expectations, data sharing, and financial incentive details.
- Analyzed and reported financial incentives for each agency for two 6- month performance periods.
- Distributed \$408,710 in performance-based sustainment funds to agencies (37.2% of total contract funds).

## IX. APPENDIX B: REGRESSION TABLES

**Table B1. Multiple regression analyses of selected demographic variables on Trauma History Screen, Child, and Trauma History Screen, Caregiver, assessments.**

Predictors	Trauma Exposure - THS, Child			Trauma Exposure - THS, Caregiver		
	$\beta$	SE	95%CI	$\beta$	SE	95%CI
Intercept	2.909**	0.527	(1.874, 3.943)	4.716**	0.482	(0.377, 5.662)
Hispanic	0.059	0.256	(-0.445, 0.562)	-0.301	0.235	(-0.762, 0.159)
Other Non-Hispanic	1.058	0.679	(-0.276, 2.392)	0.396	0.621	(0.824, 1.616)
Black Non-Hispanic	0.167	0.413	(-0.645, 0.978)	-0.598	0.378	(-1.340, 0.144)
Age at Intake	0.329**	0.038	(0.255, 0.404)	0.102**	0.035	(0.034, 0.170)
Sex (Male)	0.239	0.254	(-0.260, 0.738)	0.662**	0.232	(0.205, 1.118)
$R^2$	0.102			0.026		
$F$	15.694			3.700		

\*p<.05 As compared to White Females \*\*p<.01

**Table B2. Multiple regression analyses of selected demographic variables on child reported baseline scores.**

Predictors	1 <sup>st</sup> Total Score, Ohio FX Child			1 <sup>st</sup> Total Score, Ohio PS Child			Overall Severity, CPSS 5 Child			1 <sup>st</sup> Depression Score, SMFQ Child		
	$\beta$	SE	95%CI	$\beta$	SE	95%CI	$\beta$	SE	95%CI	$\beta$	SE	95%CI
Intercept	32.664**	8.776	(15.301, 50.026)	26.981**	9.353	(8.475, 45.487)	56.085**	10.336	(35.634, 76.536)	9.487*	4.393	(0.796, 18.178)
Hispanic	-0.387	2.284	(-4.905, 4.131)	0.347	2.434	(-4.468, 5.163)	-1.136	2.69	(-6.457, 4.186)	0.259	1.143	(-2.003, 2.52)
Other Non-Hispanic	-7.365	6.456	(-20.138, 5.408)	1.05	6.881	(-12.564, 14.664)	5.055	7.604	(-9.99, 20.1)	1.872	3.232	(-4.522, 8.265)
Black Non-Hispanic	1.188	4.184	(-7.089, 9.466)	-1.514	4.459	(-10.336, 7.309)	-2.535	4.928	(-12.284, 7.215)	0.106	2.094	(-4.038, 4.249)
Age at Intake	1.571**	0.572	(0.439, 2.703)	-0.55	0.61	(-1.756, 0.656)	-1.266	0.674	(-2.599, 0.066)	0.117	0.286	(-0.449, 0.684)
Sex (Male)	4.68*	2.326	(0.079, 9.282)	-6.502	2.479	(-11.406, -1.598)	-6.341*	2.739	(-11.761, -0.922)	-5.433**	1.164	(-7.736, -3.13)
Trauma Exposure, THS Child	-0.193	0.379	(-0.943, 0.556)	0.805*	0.404	(0.006, 1.604)	1.104*	0.446	(0.221, 1.986)	0.425*	0.190	(0.05, 0.8)
Trauma Exposure, THS Caregiver	-0.158	0.421	(-0.992, 0.676)	0.456	0.449	(-0.433, 1.344)	-0.817	0.496	(-1.799, 0.165)	-0.22	0.211	(-0.638, 0.197)
$R^2$	0.104			0.107			0.110			0.181		
$F$	2.131			2.203			2.288			4.064		

\*p<.05 As compared to White Females \*\*p<.01

**Table B3. Multiple regression analyses of selected demographic variables on caregiver reported baseline scores.**

Predictors	1st Total Score, Ohio FX Caregiver			1st Total Score, Ohio PS Caregiver			Overall Severity, CPSS5 Caregiver			1st Depression Score, SMFQ Caregiver		
	$\beta$	SE	95%CI	$\beta$	SE	95%CI	$\beta$	SE	95%CI	$\beta$	SE	95%CI
Intercept	48.107**	10.283	(27.761, 68.452)	21.55*	9.062	(3.62, 39.479)	42.54**	9.957	(22.84, 62.24)	12.901**	4.172	(4.646, 21.156)
Hispanic	-0.499	2.676	(-5.793, 4.795)	-4.064	2.358	(-8.73, 0.601)	3.694	2.591	(-1.433, 8.82)	0.975	1.086	(-1.173, 3.123)
Other Non-Hispanic	-5.363	7.565	(-20.33, 9.604)	8.711	6.667	(-4.479, 21.901)	8.718	7.325	(-5.774, 23.211)	5.524	3.069	(-0.549, 11.597)
Black Non-Hispanic	-7.986	4.902	(-17.685, 1.713)	4.266	4.32	(-4.281, 12.814)	6.576	4.747	(-2.816, 15.967)	3.280	1.989	(-0.656, 7.215)
Age at Intake	0.632	0.67	(-0.694, 1.958)	-0.315	0.591	(-1.484, 0.853)	-0.824	0.649	(-2.108, 0.46)	-0.08	0.272	(-0.618, 0.458)
Sex (Male)	1.401	2.725	(-3.991, 6.792)	-2.564	2.402	(-7.315, 2.188)	-3.056	2.639	(-8.277, 2.164)	-1.185	1.106	(-3.373, 1.002)
Trauma Exposure, THS Child	-0.27	0.444	(-1.149, 0.608)	0.309	0.391	(-0.465, 1.083)	-1.12*	0.43	(-1.97, -0.27)	-0.473*	0.18	(-0.829, -0.117)
Trauma Exposure, THS Caregiver	-0.742	0.494	(-1.719, 0.236)	0.788	0.435	(-0.073, 1.649)	1.532**	0.478	(0.586, 2.478)	0.347	0.2	(-0.05, 0.743)
R <sup>2</sup>	0.061			0.105			0.145			0.105		
F	1.206			2.151			3.131			2.154		

\*p<.05 As compared to White Females \*\*p<.01

**Table B4. Logistic regression analyses for predicting elevated baseline narrowband measures from selected background characteristics.**

Predictors	N	$\beta$	SE	Wald	e <sup><math>\beta</math></sup> (95% CI)
Hispanic	308	-0.1880	0.195	0.935	0.829 (0.566, 1.213)
Other Non-Hispanic	23	-0.171	0.511	0.111	0.843 (0.309, 2.297)
Black Non-Hispanic	72	-0.268	0.303	0.783	0.765 (0.423, 1.385)
Sex (Male)	251	-0.472*	0.187	6.374	0.624 (0.432, 0.9)
Child Age	694	0.086**	0.03	8.412	1.09 (1.028, 1.155)
Trauma Exposure - THS Child	694	0.087*	0.035	6.239	1.091 (1.019, 1.168)
Trauma Exposure - THS Caregiver	694	0.076*	0.038	4.018	1.079 (1.002, 1.162)
Constant		-0.712	0.412	2.992	0.491

\*p<.05 As compared to White Females \*\*p<.01

**Table B5. Logistic regression analyses for predicting elevated baseline broadband measures from selected background characteristics.**

Predictors	N	$\beta$	SE	Wald	e <sup><math>\beta</math></sup> (95% CI)
Hispanic	308	0.105	0.167	0.39	1.11 (0.8, 1.542)
Other Non-Hispanic	23	0.410	0.459	0.799	1.507 (0.613, 3.703)
Black Non-Hispanic	72	-0.2	0.268	0.554	0.819 (0.484, 1.386)
Sex (Male)	251	-0.082	0.166	0.243	0.921 (0.665, 1.277)
Child Age	694	0.049	0.026	3.604	1.051 (0.998, 1.105)
Trauma Exposure - THS Child	694	0.04	0.029	1.905	1.041 (0.983, 1.101)
Trauma Exposure - THS Caregiver	694	0.059	0.032	3.429	1.061 (0.997, 1.129)
Constant		-1.014**	0.369	7.563	0.363

\*p<.05 As compared to White Females \*\*p<.01

**Table B6.** Logistic regression analyses for predicting elevated baseline broadband measures from selected background characteristics.

Predictors	N	$\beta$	SE	Wald	$e^{\beta}$ (95% CI)
Hispanic	169	-0.0420	0.226	0.035	0.959 (0.616,1.492)
Other Non-Hispanic	16	-0.226	0.542	0.174	0.798 (0.276,2.306)
Black Non-Hispanic	44	0.165	0.348	0.225	1.18 (0.596,2.334)
Sex (Male)	146	-0.322	0.22	2.151	0.724 (0.471,1.115)
Child Age	390	-0.037	0.034	1.192	0.963 (0.901,1.03)
Trauma Exposure - THS Child	390	-0.075*	0.038	3.795	0.928 (0.861,1.00)
Trauma Exposure - THS Caregiver	390	0.095*	0.043	4.989	1.1 (1.012,1.196)
Constant		0.485	0.481	1.016	1.625

\*p<.05 As compared to White Females \*\*p<.01

**Table B7.** Logistic regression analyses for predicting first and last measure available for any measure of child or caregiver symptoms except CAGE-AID from selected background characteristics

Variable	N	$\beta$	SE	Wald	$e^{\beta}$ (95% CI)
Hispanic	169	0.056	0.284	0.039	1.058 (0.607, 1.845)
Other Non-Hispanic	16	0.561	0.719	0.609	1.752 (0.428, 7.166)
Black Non-Hispanic	44	-0.276	0.43	0.413	0.759 (0.327, 1.761)
Sex (Male)	146	0.245	0.275	0.797	1.278 (0.746, 2.189)
Child Age	390	-0.014	0.043	0.107	0.986 (0.907, 1.073)
Trauma Exposure - THS Child	390	-0.006	0.046	0.015	0.994 (0.909, 1.088)
Trauma Exposure - THS Caregiver	390	0.065	0.053	1.477	1.067 (0.961, 1.185)
Child Discharged "Unsuccessful"	201	-2.354**	0.325	52.311	0.095 (0.05, 0.18)
Constant		2.357**	0.643	13.457	10.561

\*p<.05 As compared to White Females \*\*p<.01



**Table B8. Multiple regression analyses of selected demographic variables on child reported outcome scores.**

Assessment Name	Construct	Above Cutoff	Intake Mean (S.D.)	Last Mean (S.D.)	Change Score	T-Score	Remission
THS Child (n=940)	Count of child exposure to potentially traumatic events	N/A	7.24 (3.4)	N/A	N/A	N/A	N/A
THS Caregiver (n=841)		N/A	5.96 (2.92)	N/A	N/A	N/A	N/A
CESD-R (n=61)	Caregiver Depression	36 59.0%	19.89 (12.83)	13.15 (11.28)	-6.73**	4.15	19/36 53%
CPSS IV Child (n=10)	Trauma Symptoms	9 90.0%	26.20 (9.94)	20.60 (8.42)	-5.60**	2.61	3/10 30.0%
CPSS IV Childgiver (n=10)		6 100.00%	36.17 (11.70)	21.50 (10.76)	-14.67	2.50	2/6 33.3%
CPSS V Child (n=311)		167 53.70%	33.34 (15.99)	18.84 (15.31)	-14.49**	15.24	115/167 68.9%
CPSS V Caregiver (n=255)		104 40.8%	29.05 (15.49)	15.93 (13.59)	-13.12**	12.84	71/104 68.3%
SMFQ Child (n=129)	Depression Symptoms	80 62.0%	10.7 (6.81)	7.26 (6.26)	-3.44**	5.75	40/80 50%
SMFQ Caregiver (n=99)		N/A	9.74 (5.74)	6.29 (5.56)	-3.44**	4.87	N/A
Ohio Problem Severity Child (n=193)	Severity of internalizing externalizing behaviors	92 47.60%	26.09 (15.02)	17.84 (14.41)	-8.25**	8.23	50/92 54.30%
Ohio Problem Severity Caregiver (n=296)		108 36.50%	23.58 (15.14)	15.74 (12.36)	-7.85**	8.92	69/108 63.90%
Ohio Functioning Child (n=196)	Child's adjustment and functioning	41 21.90%	53.95 (11.37)	60.78 (12.43)	+6.83**	7.55	31/41 78%
Ohio Functioning Caregiver (n=298)		91 30.50%	50.45 (14.84)	58.73 (12.35)	+8.28**	10.03	63/91 69.20%

\*p<.05 As compared to White Females \*\*p<.01

**Table B9. Multiple regression analyses of selected demographic variables on child reported outcome scores.**

Predictors	Last Total Score, Ohio FX Child			Last Total Score, Ohio PS Child			Last Overall Severity, CPSS 5 Child			Last Depression Score, SMFQ Child		
	$\beta$	SE	95%CI	$\beta$	SE	95%CI	$\beta$	SE	95%CI	$\beta$	SE	95%CI
Constant	39.174**	5	(29.304, 49.045)	10.427**	3.935	(2.659, 18.196)	9.072**	3.468	(2.244, 15.9)	1.358	2.019	(-2.646, 5.363)
Trauma Exposure-THS, Child	-0.802**	0.251	(-1.297, -0.306)	0.262	0.281	(-0.293, 0.817)	0.100	0.257	(-0.406, 0.605)	0.278	0.147	(-0.014, 0.57)
Baseline Score	0.406**	0.066	(0.275, 0.537)	0.458**	0.063	(0.333, 0.583)	0.318**	0.054	(0.212, 0.423)	0.285**	0.075	(0.137, 0.434)
Child discharged as "Successful"	6.154**	1.618	(2.96, 9.349)	-8.934**	1.773	(-12.436, -5.433)	-10.626**	1.602	(-13.78, -7.472)	-4.388**	0.942	(-6.256, -2.52)
Hispanic	-0.122	1.733	(-3.544, 3.3)	-1.322	1.877	(-5.028, 2.384)	1.019	1.706	(-2.339, 4.378)	1.755	1.015	(-0.259, 3.769)
Other Non-Hispanic	0.467	3.978	(-7.385, 8.32)	2.682	4.295	(-5.798, 11.163)	5.608	3.901	(-2.072, 13.289)	2.407	2.325	(-2.205, 7.019)
Black Non-Hispanic	0.474	2.675	(-4.807, 5.754)	1.337	2.899	(-4.386, 7.061)	0.893	2.636	(-4.298, 6.084)	-1.285	1.569	(-4.398, 1.829)
Sex (Male)	0.673	1.722	(-2.726, 4.072)	-2.208	1.896	(-5.95, 1.535)	-1.862	1.725	(-5.259, 1.535)	-1.845	1.017	(-3.863, 0.173)
Child Age	0.21	0.24	(-0.262, 0.683)	-0.114	0.26	(-0.627, 0.399)	0.22	0.239	(-0.25, 0.691)	0.221	0.14	(-0.057, 0.498)
R <sup>2</sup>	0.306			0.410			0.309			0.446		
F	9.312			14.32			14.790			10.16		

\*p<.05 As compared to White Females \*\*p<.01

**Table B10. Multiple regression analyses of selected demographic variables on caregiver reported outcome scores.**

Predictors	Last Total Score, Ohio FX Caregiver			Last Total Score, Ohio PS Caregiver			Last Overall Severity, CPSS 5 Caregiver			Last Depression Score, SMFQ Caregiver		
	$\beta$	SE	95%CI	$\beta$	SE	95%CI	$\beta$	SE	95%CI	$\beta$	SE	95%CI
Constant	40.63**	3.667	(33.41, 47.851)	11.506**	3.065	(5.471, 17.541)	7.889*	3.561	(0.87, 14.907)	5.833*	2.397	(1.063, 10.603)
Trauma Exposure - THS, Child	-0.461*	0.228	(-0.91, -0.013)	0.506*	0.232	(0.049, 0.963)	0.098	0.291	(-0.475, 0.671)	0.071	0.195	(-0.317, 0.458)
Baseline Score	0.376**	0.044	(0.29, 0.462)	0.298**	0.044	(0.211, 0.385)	0.314**	0.053	(0.211, 0.418)	0.194*	0.091	(0.013, 0.375)
Child discharged as "Successful"	6.417**	1.289	(3.879, 8.954)	-7.493**	1.314	(-10.08, -4.906)	-7.717**	1.612	(-10.894, -4.541)	-3.945**	1.098	(-6.13, -1.76)
Hispanic	0.546	1.396	(-2.203, 3.294)	-1.352	1.426	(-4.16, 1.455)	-0.038	1.744	(-3.475, 3.399)	1.24	1.186	(-1.121, 3.601)
Other Non-Hispanic	-6.018	3.165	(-12.251, 0.215)	5.299	3.22	(-1.041, 11.639)	11.317	3.976	(3.481, 19.152)	4.237	2.738	(-1.212, 9.687)
Black Non-Hispanic	0.367	2.149	(-3.864, 4.598)	-2.170	2.191	(-6.485, 2.145)	0.027	2.681	(-5.257, 5.311)	-1.946	1.826	(-5.58, 1.688)
Sex (Male)	-0.857	1.376	(-3.566, 1.852)	1.527	1.396	(-1.221, 4.276)	0.772	1.713	(-2.603, 4.148)	-1.217	1.165	(-3.537, 1.102)
Child Age	-0.07	0.182	(-0.428, 0.287)	-0.19	0.185	(-0.554, 0.175)	0.096	0.229	(-0.355, 0.547)	-0.018	0.156	(-0.328, 0.293)
R <sup>2</sup>	0.304			0.537			0.252			0.238		
F	14.346			13.16			9.244			3.128		

\*p<.05 As compared to White Females \*\*p<.01

**Table B11. Logistic regression analyses for predicting any narrowband measures RCI from selected background characteristics.**

Predictors	N	$\beta$	SE	Wald	e <sup><math>\beta</math></sup> (95% CI)
Child Discharged as "Unsuccessful"	165	-1.346**	0.317	18.076	0.26 (0.14, 0.484)
Hispanic	117	-0.2720	0.351	0.602	0.762 (0.383, 1.516)
Other Non-Hispanic	13	-1.361*	0.67	4.129	0.256 (0.069, 0.953)
Black Non-Hispanic	28	-0.782	0.525	2.221	0.457 (0.163, 1.28)
Sex (Male)	102	0.074	0.328	0.051	1.077 (0.566, 2.049)
Child Age	266	0.07	0.053	1.779	1.073 (0.967, 1.19)
Trauma Exposure - THS Child	266	0.157**	0.063	6.225	1.17 (1.034, 1.324)
Trauma Exposure - THS Caregiver	266	-0.003	0.064	0.002	0.997 (0.879, 1.131)
Constant		0.171	0.748	0.052	1.187

\*p<.05 As compared to White Females \*\*p<.01

**Table B12.** Logistic regression analyses for predicting any broadband measures RCI from selected background characteristics.

Predictors	<i>N</i>	$\beta$	<i>SE</i>	<i>Wald</i>	$e^{\beta}$ (95% CI)
Child discharged as "Unsuccessful"	167	-0.544*	0.274	3.927	0.581 (0.339, 0.994)
Hispanic	113	0.102	0.297	0.118	1.108 (0.618, 1.983)
Other Non-Hispanic	10	-0.386	0.692	0.311	0.68 (0.175, 2.639)
Black Non-Hispanic	29	-0.446	0.449	0.989	0.64 (0.265, 1.543)
Sex (Male)	98	-0.058	0.284	0.041	0.944 (0.541, 1.647)
Child Age	267	0.089*	0.045	3.995	1.094 (1.002, 1.194)
Trauma Exposure - THS Child	267	0.056	0.054	1.082	1.057 (0.952, 1.174)
Trauma Exposure - THS Caregiver	267	0.016	0.056	0.076	1.016 (0.909, 1.134)
Constant		-0.55	0.637	0.746	0.577

\*p&lt;.05 As compared to White Females \*\*p&lt;.01

**Table B13.** Logistic regression analyses for predicting any child symptom RCI from selected background characteristics.

Predictors	<i>N</i>	$\beta$	<i>SE</i>	<i>Wald</i>	$e^{\beta}$ (95% CI)
Child Discharged as "Unsuccessful"	189	-2.095**	0.256	66.804	0.123 (0.074, 0.203)
Hispanic	169	-0.0500	0.261	0.037	0.951 (0.57, 1.586)
Other Non-Hispanic	16	-0.367	0.603	0.37	0.693 (0.212, 2.259)
Black Non-Hispanic	44	-0.538	0.404	1.774	0.584 (0.264, 1.289)
Sex (Male)	146	0.019	0.25	0.006	1.019 (0.624, 1.664)
Child Age	390	0.043	0.04	1.184	1.044 (0.966, 1.128)
Trauma Exposure - THS Child	390	0.07	0.043	2.602	1.072 (0.985, 1.167)
Trauma Exposure - THS Caregiver	390	0.053	0.049	1.182	1.055 (0.958, 1.161)
Constant		0.527	0.559	0.888	1.694

\*p&lt;.05 As compared to White Females \*\*p&lt;.01

## X. APPENDIX C: RELIABLE CHANGE INDEX

Reliable change index (RCI) values were proposed by Jacobson and Traux (1991) as a way to identify when a change in scores is likely not due to chance. The value for a given instrument is calculated based on the standard deviation and reliability of the measure. Change scores are then calculated and when the change exceeds the RCI value, it is considered to be reliable and significant. When values exceed half of the RCI value, but do not meet the RCI value, that is considered partial RCI.

A review of available literature was conducted for the assessments included in this manual, which are used in EBP Tracker. If articles did not include an explicit RCI value, one was calculated using the equation proposed by Jacobson and Traux (1991) with the appropriate values indicated in the research. Values used in the calculation were drawn from literature on the assessment unless noted otherwise. The following table includes a summary of the appropriate RCI values for the assessments.

Measure		Full RCI	Partial RCI
Child Assessments	CPSS IV (retired)	11	6
	CPSS V	15	8
	PROMIS	6	3
	SMFQ	7	4
	UCLA	16	9
Ohio Scales	Ohio Problem Severity* (Child, Caregiver, & Worker versions)	10	5
	Ohio Functioning (Child, Caregiver, & Worker versions)	8	4
Caregiver Assessments	CESD-R	9	5
	CPSS IV (retired)	10	5
	CPSS V	15	8
	PCL-5	10	5
	PROMIS	6	3
	PSS	11	6
	SMFQ	6	3
	UCLA	11	6
	YCPC	18	9

## Acknowledgements

**We wish to acknowledge the following CHDI staff that have worked on this report:**

Christine Hauser, Jason Lang, Ashley Loser, Jack Lu, and Kellie Randall. We also wish to thank others who have contributed to the TF-CBT Coordinating Center initiative including Sharon Bailey, Lori DiPietro, Tiffany Franceschetti, Amanda Kach, Alice Kraiza, Leah Lord, Jessica Mahon, Carol O'Connor, Diana Perry, Carrie Shaw, Heather Solak, and Jeff Vanderploeg.



Child Health and  
Development Institute  
of Connecticut, Inc.

TF-CBT FY 2021 Annual Report

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