Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, or Conduct Problems

CONNECTICUT'S MATCH-ADTC
COORDINATING CENTER

Child Health and Development Institute

DCF CONNECTICUT

FY 2023 ANNUAL REPORT

Connecticut MATCH-ADTC Coordinating Center

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This report was developed for the Connecticut Department of Children and Families (DCF) by the Child Health and Development Institute (CHDI).

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I. EXECUTIVE SUMMARY

Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, and Conduct problems (MATCH-ADTC) is an evidence-based treatment for four common behavioral health concerns among children: anxiety, depression, posttraumatic stress, and behavior problems. The MATCH-ADTC Coordinating Center ("Coordinating Center"), is located at the Child Health and Development Institute (CHDI). Funded by the Connecticut (CT) Department of Children and Families (DCF), the goal of the Coordinating Center is to expand access to high-quality, evidence-based outpatient behavioral health treatment for children experiencing anxiety, depression, trauma, and/or conduct problems. The Coordinating Center supports a network of 23 MATCH-ADTC 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 and MATCH-ADTC provider network during state fiscal year 2023 (July 1, 2022 through June 30, 2023) and includes some trends across previous years of the initiative. This year, MATCH-ADTC providers continued to be impacted by the longstanding effects of COVID-19 on mental health needs and services, including high rates of staff turnover and workforce shortages. Despite the challenges, providers demonstrated strong results with MATCH-ADTC in access, quality, and outcomes.

HIGHLIGHTS FY23:

683 children received MATCH-ADTC, a **35% increase** from last year **(505)**. This is the first year with an increase in the number of children served since the start of the pandemic in FY20.

Anxiety continued to be the most common treatment protocol used in FY23 **(36%)** with rates similar to last year **(38%).** This trend is a significant increase compared to FY21 when anxiety accounted for only **29%** of episodes.

Black youth accounted for **12.6%** of children receiving MATCH-ADTC, an increase from last fiscal year **(9.9%)**, but still short of their representation in the overall OPCC population **(15.1%)**.

80.1% of children had improvement on at least one assessment measure. Clinicians reported improvement on the Clinical Global Impressions (CGI) scale for **85.5%** of children completing MATCH-ADTC.

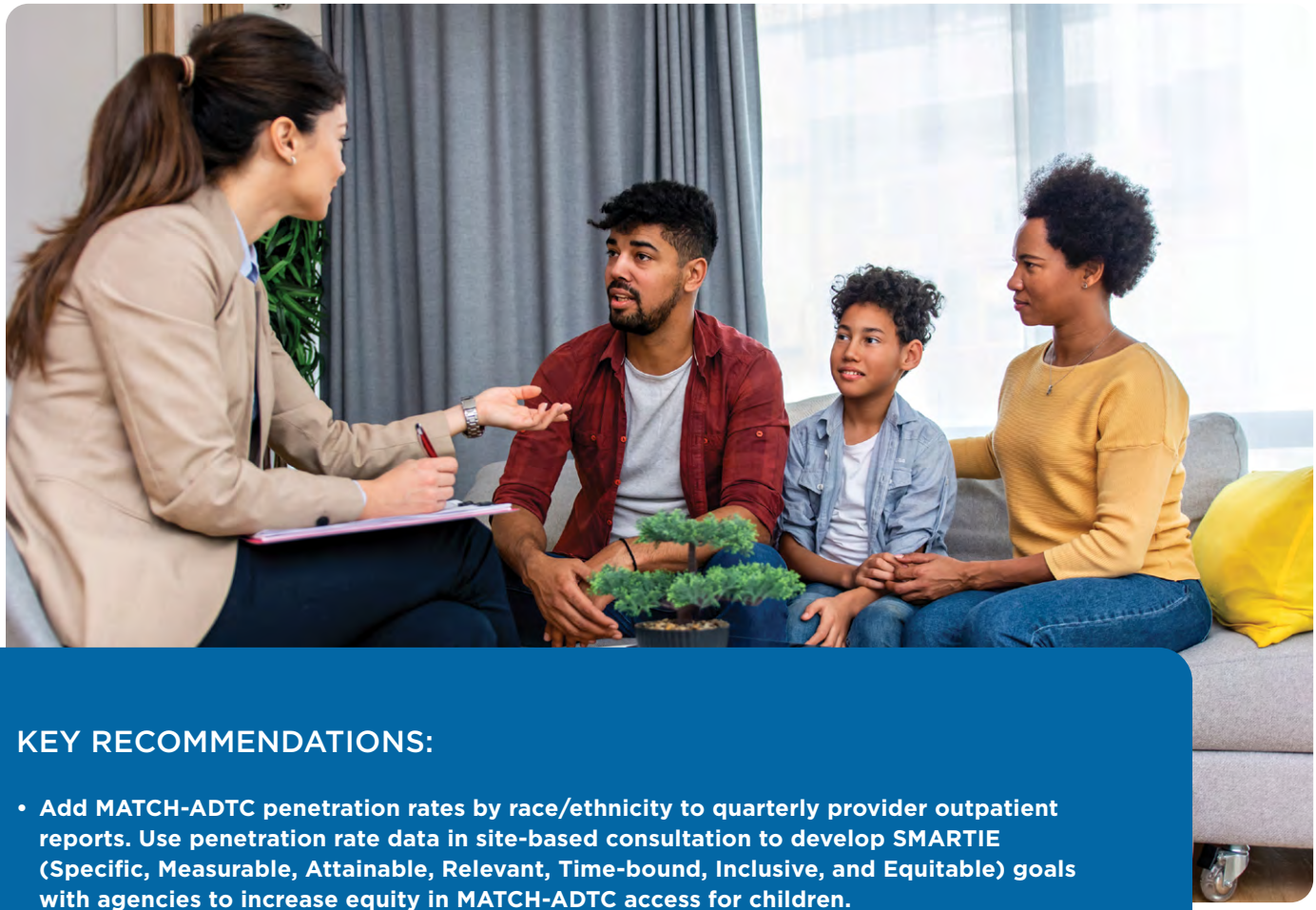
Like the previous FY, a lower percentage of Spanish-speaking youth were served in **MATCH-ADTC (2.9%)** compared to the OPCC population **(9.9%),**

Clinician attrition continues to be a challenge. Nearly one third **(29.2%)** of clinicians left their MATCH-ADTC teams, which was an increase from last year when **19.8%** of clinicians left. To address this attrition, more new clinical staff (55) were trained to deliver MATCH-ADTC compared to the previous FY (38).

Children receiving **MATCH-ADTC** generally had similar rates of completing treatment and improvement on any measure regardless of race, ethnicity, and sex.

Caregivers **(100%)** and children **(97%)** reported high satisfaction with treatment.

79% of children with critical levels of symptoms or impaired functioning on any measure showed enough improvement to no longer be in the critical range at discharge.



KEY RECOMMENDATIONS:

- **Add MATCH-ADTC penetration rates by race/ethnicity to quarterly provider outpatient reports. Use penetration rate data in site-based consultation to develop SMARTIE (Specific, Measurable, Attainable, Relevant, Time-bound, Inclusive, and Equitable) goals with agencies to increase equity in MATCH-ADTC access for children.**

- **Incorporate strategies within the consultation framework to identify inclusive and equitable goals in site-based consultation to better address disparities and improve access.**

- **Develop advanced training opportunities in partnership with Harvard University, provided to certified associate consultants to support quality supervision, MATCH-ADTC implementation, and adaptation of protocols to effectively address complexities in treatment.**

- **Identify and implement brief treatment interventions, such as Single Session Consultation (SSC), that complement MATCH-ADTC. Briefer interventions can reduce the burden of training and consultation on staff. They also can expand access by providing a briefer treatment option for families that may want less intensive treatment options.**

- **Provide consultation and review of previous findings to support clinicians in making data-driven decisions in treatment, particularly with use of the symptom-specific assessments (e.g., PROMIS, SMFQ) to measure anxiety and depression symptoms. Increased use of these assessment tools supports better understanding of symptom changes and the course of treatment.**

- **Continue discussion of CGI Severity and Improvement scales within the consultation framework to continue to measure outcomes; explore using CGI as a systems-level metric to help understand treatment and outcomes not only in MATCH-ADTC but across levels of care.**

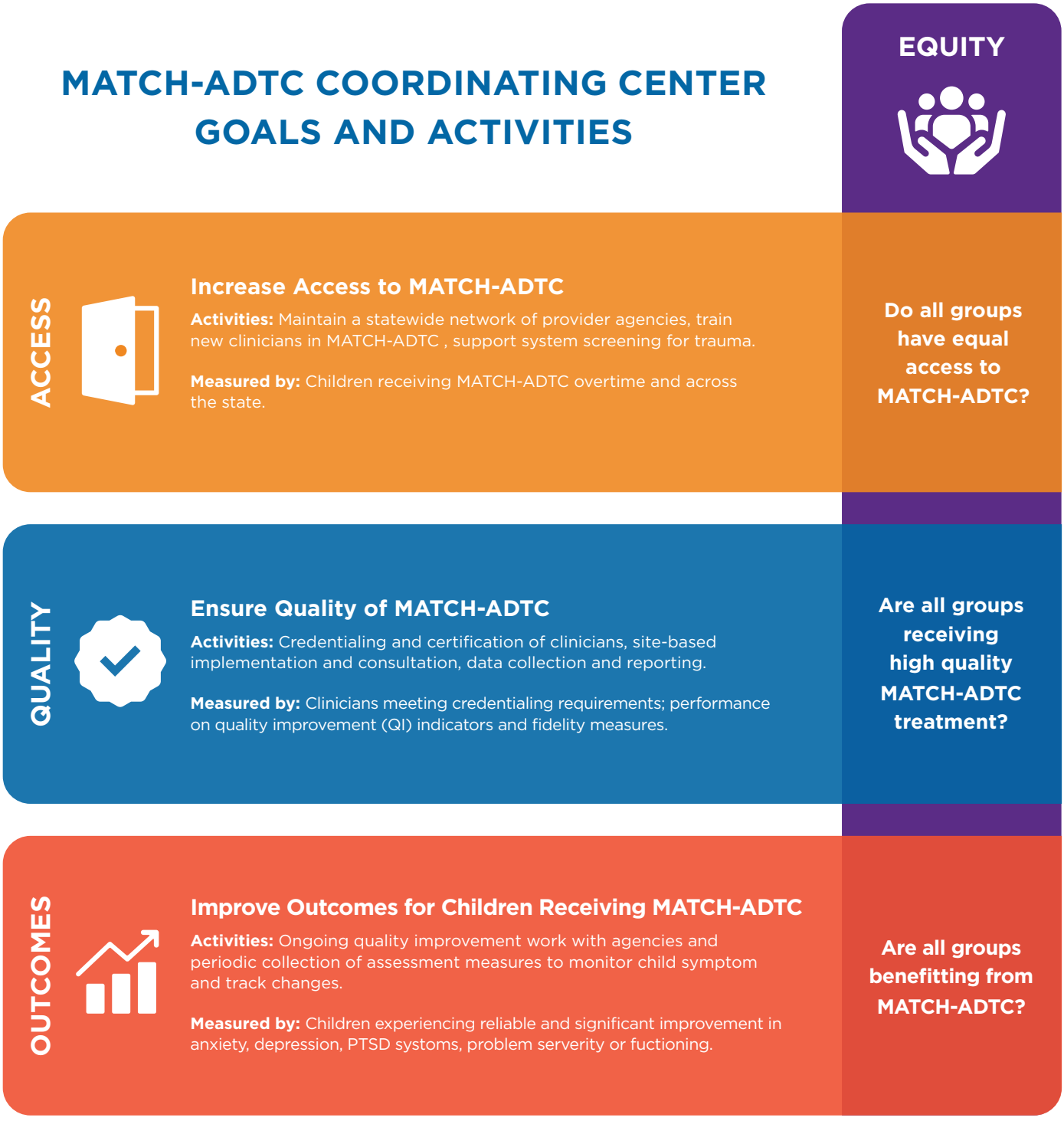
II. INTRODUCTION

Children and adolescents seeking treatment often experience a variety of co-occurring problems and the course of treatment may need to change over time. Most treatments address one problem area at a time, although comorbidity and changing clinical needs commonly occur in practice. MATCH-ADTC is an evidence-based treatment to treat four common behavioral health concerns among children: anxiety, depression, posttraumatic stress, and behavior problems. Appropriate for children 6-15 years of age, MATCH-ADTC is comprised of 33 modules (e.g., praise, rewards, etc.) representing treatment components that are frequently included in cognitive behavioral therapy (CBT) protocols for depression, anxiety (including post-traumatic stress), and behavioral parent training for disruptive behavior. MATCH-ADTC is designed to address broad practitioner caseloads, comorbidity, and changes in treatment needs during episodes of care, creating a foundation for successful outcomes.

The MATCH-ADTC Coordinating Center ("Coordinating Center") is funded by the Connecticut Department of Children and Families (DCF) and located at the Child Health and Development Institute (CHDI) of Connecticut. Beginning in 2013 in a partnership with the model developers at Harvard University, MATCH-ADTC has been disseminated across the state through a series of Learning Collaboratives. The Coordinating Center provides centralized support for the statewide network of 23 MATCH-ADTC providers. The figure below illustrates the goals and primary activities of the Coordinating Center. This report focuses on performance during FY23 and is framed in that context.

1. A detailed accounting of these activities during FY23 can be found in Appendix A.

Figure 1. Goals and Activities of the Coordinating Center



III. ACCESS TO MATCH-ADTC IN CONNECTICUT

The first goal of the Coordinating Center and the statewide MATCH-ADTC initiative is to increase access to MATCH-ADTC in Connecticut. This begins with ensuring MATCH-ADTC 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 MATCH-ADTC, along with their demographics and characteristics, is a way of monitoring the reach of the model and the state's progress in providing MATCH-ADTC to the children who most need treatment.

Availability Across the State

In FY23, Connecticut's MATCH-ADTC network consisted of 21 provider agencies and two private practices. Figure 2 shows the location of MATCH-ADTC sites across the state and Table 1 shows the trends in access over the past four years as well as cumulative totals. Since FY14, there have been 316 clinicians that have provided MATCH-ADTC . There were 212 clinicians on a MATCH-ADTC team during FY23; of these, 135 (63.7%) saw at least one MATCH-ADTC case, which is a small decrease from last FY (66.3%). On average, outpatient providers had 8 clinicians (range 1 – 35) on their MATCH-ADTC clinical teams.

During FY23 there were 58 MATCH-ADTC credentialed clinicians who were active in the model. Of the 212 clinicians on a MATCH-ADTC team, 62 (29.2%) left in the fiscal year, an increase from last FY (19.8%). To address attrition there were 64 new MATCH-ADTC clinicians in FY23 (55 newly trained and 9 previously trained who took on a clinical role). To support high quality delivery of services, 26 clinical staff attended booster training and 8 clinicians were credentialed. Additionally, 7 staff completed MATCH-ADTC Associate Consultant training to be able to provide in-house consultation to newly trained MATCH-ADTC clinicians.

Figure 2. Map of MATCH-ADTC sites and children served

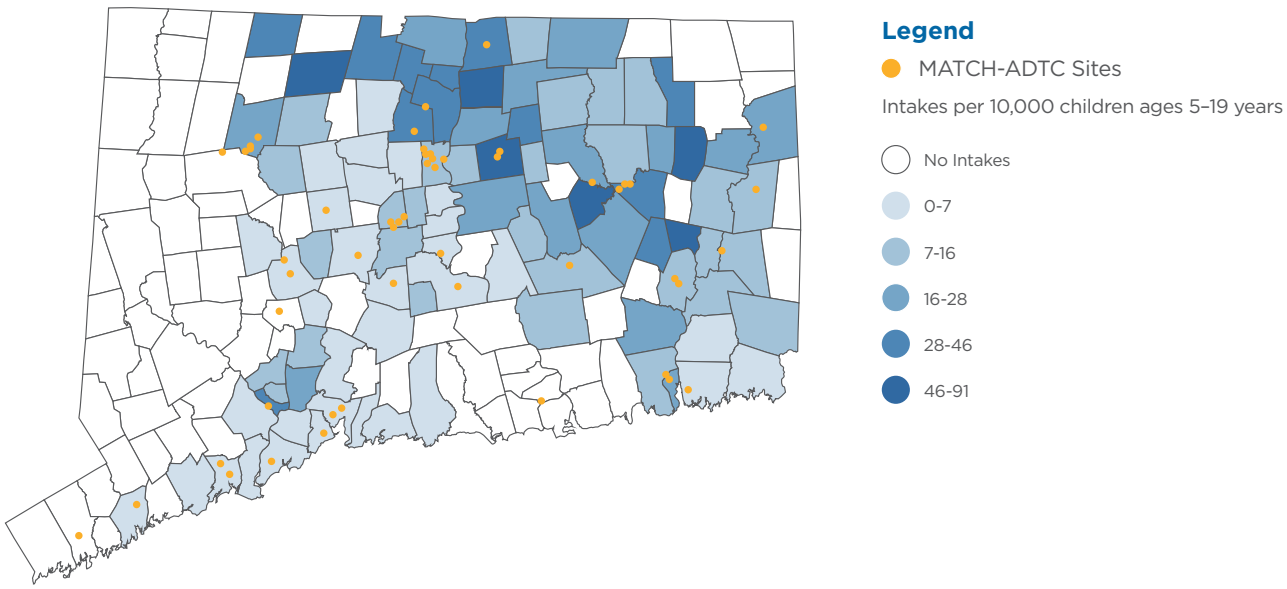


Table 1. Trends in MATCH-ADTC Provider Network

	FY20	FY21	FY22	FY23	Cumulative Since 2014
Providers of MATCH-ADTC	23	23	24	23	25
New MATCH-ADTC Clinicians	40	37	38	64	427
Clinicians Providing MATCH-ADTC *	116	132	120	135	316
# Newly Credentialed/Certified	5	9	12	8	127

*Clinicians with an open role who saw at least one child in the year

Children Receiving MATCH-ADTC

In FY23, 683 children received MATCH-ADTC. This year had the largest number of children served since the COVID-19 pandemic started in FY20, despite continued recruitment and retention challenges in the behavioral health workforce. To date, 3,378 children have received MATCH-ADTC since FY14.

Child Demographics

Throughout this report, indicators of access, quality, and outcomes are reported by demographic groups. 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.

Table 3 contains demographic information for children receiving MATCH-ADTC in FY23, as well as comparisons to those served in outpatient services (as reported by the Provider Information Exchange [PIE] system) and the general CT population. Comparing OPCC and MATCH-ADTC demographics, we see that **a greater percentage of Black youth received MATCH-ADTC in FY23 (12.6%) compared to the previous year (9.9%), however that percentage is still lower compared to general OPCC services (15.2%)**. Like the previous FY, **a lower percentage of Spanish-speaking youth were served in MATCH-ADTC (2.9%) compared to OPCC (9.9%)** and the overall state population (13.8%). These differences were not tested for statistical significance but are helpful to get a general sense of the comparison between those served in MATCH-ADTC and overall OPCC. Race data was missing for 26.2% of children which limits interpretation of these trends; efforts continue in consultation to increase collection of accurate demographic data.

Figure 3. Children Served by Fiscal Year

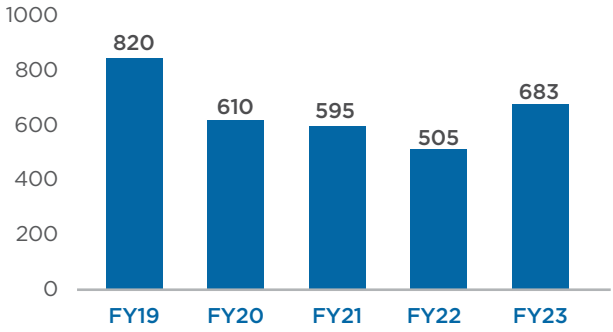


Table 3. Characteristics of children receiving MATCH-ADTC, with comparisons (n=683)				
	MATCH-ADTC		OPCC	CT pop[2]
	N	%	%	%
Sex (Male)	280	41.0	49.0	51.2
Race				
American Indian or Alaska Native	*	*	0.4	0.4
Asian	*	*	1.1	4.9
Black or African American	86	12.6	15.2	11.7
Native Hawaiian or Pacific Islander	*	*	0.2	0.0
White	380	55.6	49.2	53.5
Another Race (Includes Multiracial/Ethnic)	35	5.1	14.7	29.4
Did Not Disclose/Missing	179	26.2	19.2	N/A
Hispanic, Latino, or Spanish (Any Race)	250	36.6	33.1	26.5
Age (Years)				
Under 6 Years	18	2.6	9.6	29.8
6–11 Years	290	42.5	43.1	33.2
12–17 Years	373	54.6	47.3	37.0
Child Welfare Involvement During Treatment				
JJ involvement During Treatment	81	11.9	10.4	2.9
Caregiver's Language				
Spanish	20	2.9	9.9	13.8
Neither Spanish nor English	0	0.0	1.7	7.8
Caregiver speaks English (No)	61	8.9	N/A	N/A

ACCESS AND EQUITY:

683 children received MATCH-ADTC, the largest number served since the onset of the COVID-19 pandemic of those served.

11.9% had child welfare involvement

36.6% HISPANIC
12.6% BLACK
55.6% WHITE

Race and ethnicity data were missing for **26.2% of youth**. More complete data is needed to fully understand who MATCH-ADTC is- and is not- reaching.

2. American Community Survey 2021 1-year estimates. Caution should be used with comparison to OPCC and MATCH-ADTC child demographics. Census race categories do not exclude Hispanic, therefore OPCC and MATCH-ADTC racial demographics mirror the Census. Census language is only available by language spoken, not primary language. Age is percentage of children 0–17 years.

* = < 5 with numbers suppressed to protect privacy

IV. QUALITY: CONSULTATION AND CLINICAL IMPLEMENTATION

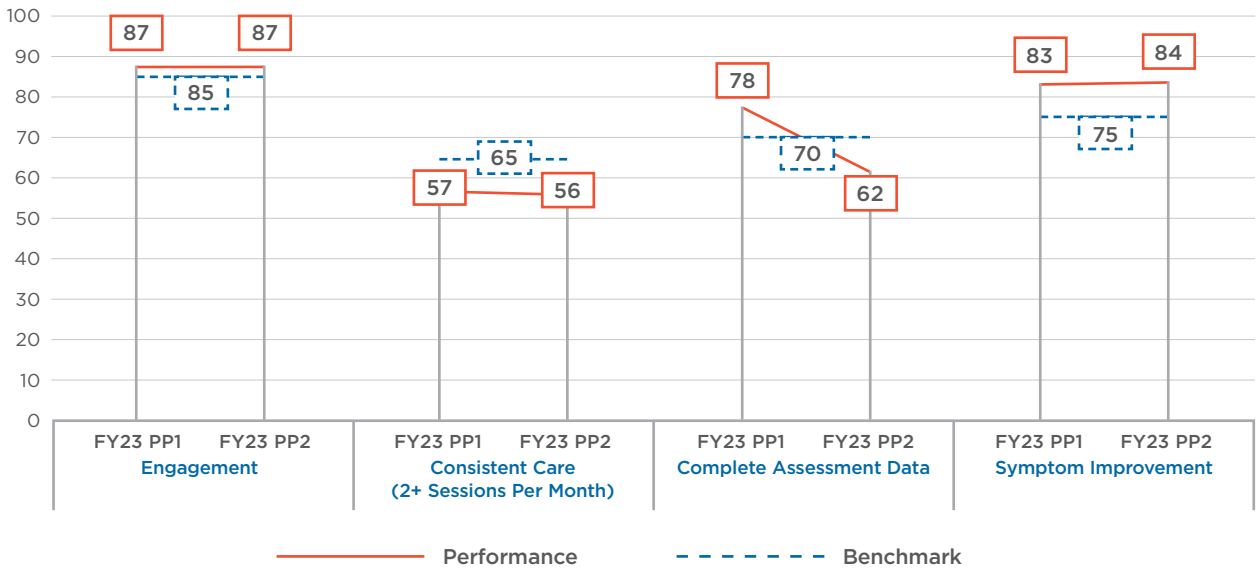
Quality Improvement & Model Implementation

Episodes are reported on while they are active and open, but most of the QI reporting and fidelity monitoring is calculated based on children that complete treatment in each period. In FY23, 383 children had a MATCH-ADTC episode that ended. For children discharged from MATCH-ADTC in FY23, the mean number of visits was 14.13 (SD=10.73) and the average length of stay was 7.40 months (SD=6.66). For those completing MATCH-ADTC , on average, clinicians spent 58.6% of time with children alone, 17.6% of time with caregivers alone, and 23.9% of time with children and caregivers together. Most children (94.3%) receiving MATCH-ADTC in the fiscal year had a measure of baseline symptoms, 60.8% had at least one first and last version of a child symptom assessment, and 3.9% had data on caregiver symptoms.

Quality Improvement Indicators

The MATCH-ADTC quality improvement (QI) indicators are all percentage-based: engagement (% attending four or more session), consistent care (% averaging 2 visits per month), complete assessment data (% with data at two time periods), and symptom improvement (% with reliable change from first to last assessment). They are calculated over six-month performance periods as shown in Figure 4. Two statewide QI benchmarks were met throughout FY23: engagement and symptom improvement. Children completing MATCH-ADTC did not meet the consistent care benchmark in either performance period, which mirrors findings from previous years. There was a marked decrease in the percentage of children completing MATCH-ADTC with at least one first and last measure available between performance period 1 (78%) and performance period 2 (62%). Looking at QI indicators (engagement, available measures, measurement change, and consistent care) by sex and race yielded only one significant finding by race where Hispanic children (77.4%) were significantly more likely to have a measure available compared to White children (61.8%).

Figure 4. Quality Improvement in FY23



Top Problem Assessment

Of the 683 MATCH-ADTC treatment episodes open in FY23, 67.3% of caregivers identified at least one top problem to work on during treatment, and 73.4% of children identified at least one top problem. About a quarter (25.7%) of children enrolled in MATCH-ADTC in FY23 did not have child or caregiver top problems identified. Figures 5 and 6 below show the general topic areas of top problem areas for children and caregivers.

Figure 5. Child Reported Top Problems

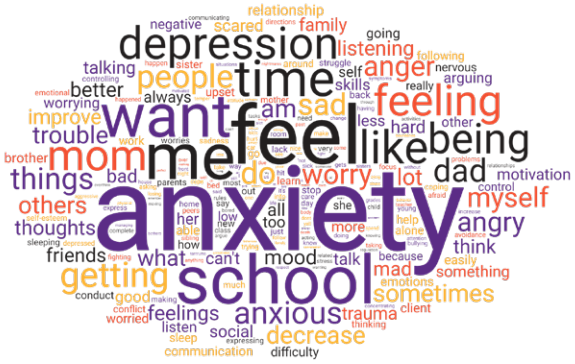
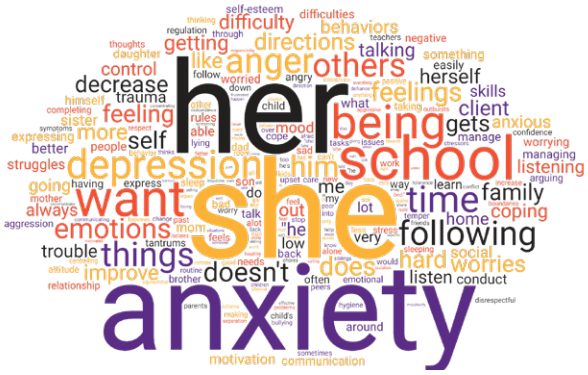


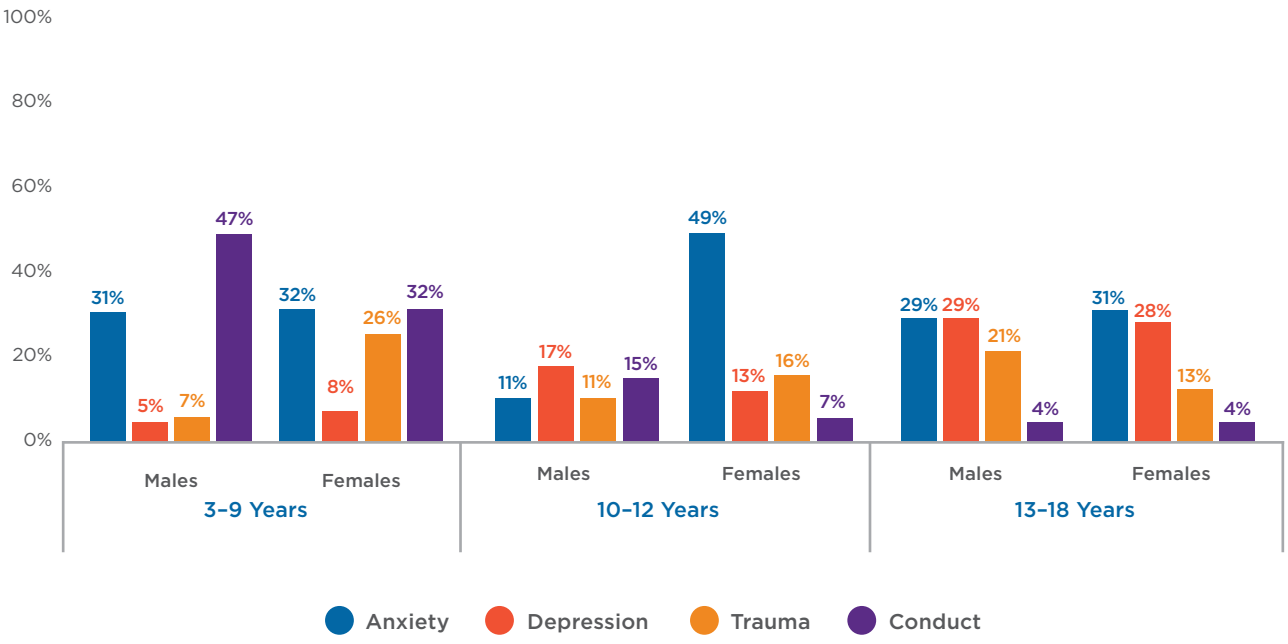
Figure 6. Caregiver Reported Top Problems



Primary Protocol Area

Approximately one in five (19.3%) children completing MATCH-ADTC treatment in FY23 (n=383) did not have an identified primary problem area. Children completing MATCH-ADTC were most often treated with the Anxiety (139) primary protocol area (see Figure 7 below). Depression, (71) Trauma (57) and conduct (56) were less common.

Figure 7. Primary Protocol Area (PPA) by Age and Sex (n=383)



Satisfaction

Satisfaction data were collected from 40.7% of children and 48.0% of caregivers. Caregivers (100%, n = 184) and children (97.1%, n=156) report high levels of satisfaction with MATCH-ADTC treatment. **There were no significant differences in treatment satisfaction by race/ethnicity or sex.**

QUALITY AND EQUITY:

Families are highly satisfied with MATCH-ADTC **(97% to 100%)** and this is consistent across racial/ethnic groups.

Consistent care continues to be an area for improvement; overall rates are below the benchmark for all groups.

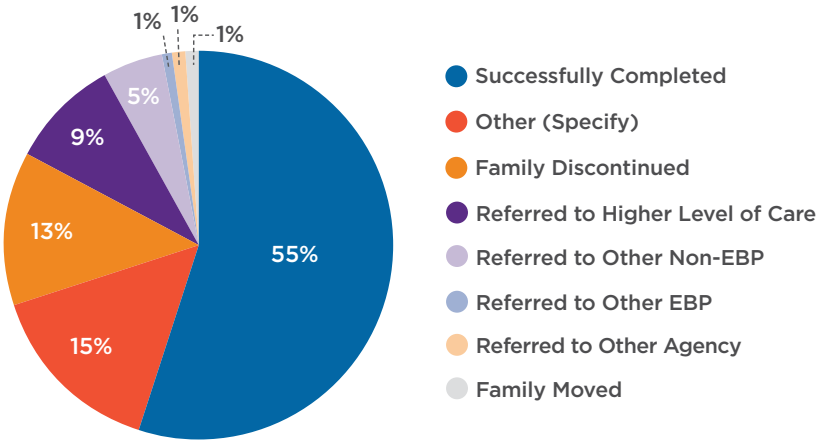
Quality Indicator benchmarks were met for engagement and symptom improvement, again consistent across racial/ethnic groups.

V. OUTCOMES: IMPROVEMENT FOR CHILDREN RECEIVING MATCH-ADTC

Discharge Reason

During the fiscal year, 383 children ended their MATCH-ADTC treatment episode. Clinicians rated half of children (55%) ending treatment as "completing all EBP requirements." Children who did not complete all EBP requirements were most likely to not complete due to family discontinuing treatment (see Figure 10). **No differences were found across demographic groups (age, sex, or race/ethnicity) in rates of successful completion.**

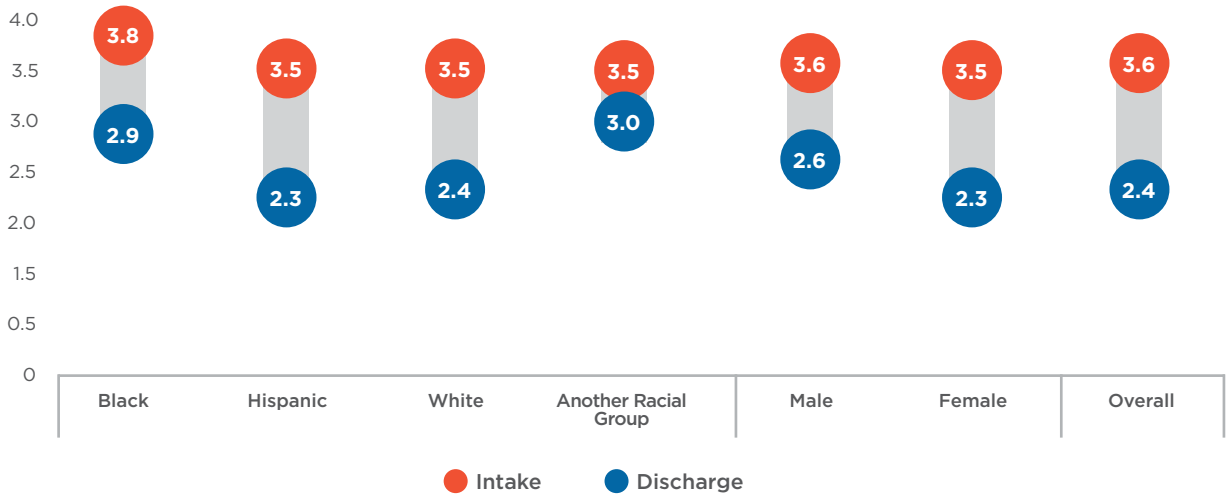
Figure 8. Reasons for Discharge in FY23



Clinical Global Impressions Scale

The Clinical Global Impressions Scale (CGI) Severity and Improvement scales are brief items that rate the child's overall severity at the start and end of treatment as well as amount of overall improvement at the end of treatment. They are not symptom-specific, and they are completed by the clinician, unlike the assessments presented in the next section that measure specific symptoms by child and caregiver report. The CGI provides a high-level measure of changes in severity and overall improvement. On the CGI-Severity, 69.6% of clients with scores at intake and discharge (n=211) changed from a more severe to a less severe category during treatment (see Figure 11). **There were no differences in severity improvement by sex or race. Further, clinicians reported (n=303) improvement for 85.5 percent of MATCH-ADTC clients** using the CGI.

Figure 9. CGI Severity at Intake and Discharge by Subgroup



Symptom Improvement

Children receiving MATCH-ADTC were assessed initially on problem severity, functioning, and one other symptom category (e.g., anxiety, depression), each with available child and caregiver report versions. Clinicians then selected the most appropriate 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. Children completing MATCH-ADTC demonstrated significant reductions in anxiety, post-traumatic stress, and problem severity symptoms, and improvements in functioning. The details on the change scores, effect sizes, and rates of remission are shown for all measures in Table 4. **For children receiving MATCH-ADTC with measures (n=233), 80.1% experienced reliable change on at least one measure. For children with initial scores exceeding the clinical cutoff on any measure, 78.9% achieved remission by discharge.**

QUALITY AND EQUITY:

85.5%

Clinicians reported general improvement for **85.5% of children.**

On child and caregiver report of symptoms, **80.1% experienced improvement.**

There were **no differences** across racial and ethnic groups in likelihood of experiencing some level of improvement.

Table 4. Descriptives and change scores for all assessment measures

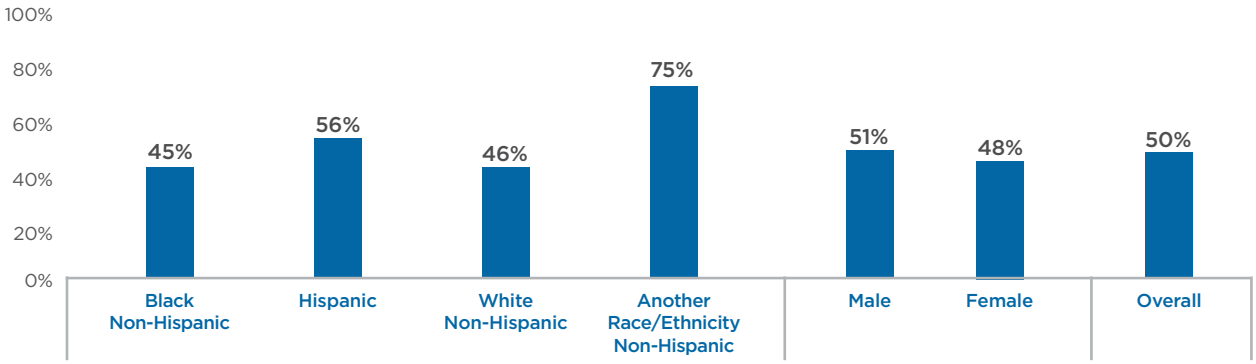
Assessment Name	Construct Measured	Above Cutoff	Intake Mean (S.D.)	Last Mean (S.D.)	Change Score	T-Score	Effect Size (Cohen's d)	Remission
CPSS V Child	Trauma Symptoms	30	24.50	15.26	**-9.33****	-6.19	Medium	19/30
(n=101)		29.7%	(16.23)	(13.98)			0.62	63.3%
CPSS V Caregiver		19	20.78	11.30	**-9.48****	-7.38	Medium	18/19
(n=94)		20.2%	(12.82)	(8.42)			0.76	94.7%
PROMIS Child	Anxiety Symptoms	7	22.15	14.35	**-7.80****	-5.06	Large	–
(n=26)		26.9%	(7.34)	(7.05)			0.99	–
PROMIS Caregiver		11	24.26	14.83	**-9.43****	-5.13	Large	10/11
(n=23)		47.8%	(6.91)	(6.83)			1.07	90.9%
SMFQ Child	Depressive Symptoms	12	10.28	4.77	**-5.64****	-4.88	Large	7/12
(n=25)		48%	(7.03)	(3.40)			0.98	58.3%
SMFQ Caregiver		10	10.05	5.00	**-4.90***	-2.95	Medium	–
(n=20)		50.0%	(6.62)	(4.28)			0.66	–
Ohio Problem Severity Child	Severity of Internalizing/ Externalizing Behaviors	44	22.41	14.42	**-7.91****	-7.15	Medium	29/44
(n=113)		38.9%	(12.35)	(11.07)			0.67	65.9%
Ohio Problem Severity Caregiver		72	21.66	13.67	**-7.67****	-9.14	Medium	49/72
(n=187)		38.5%	(12.50)	(9.93)			0.67	68.1%
Ohio Functioning Child	Child's Adjustment and Functioning	19	54.78	60.07	**5.24****	5.33	Medium	11/19
(n=115)		16.5%	(10.99)	(11.53)			0.50	57.9%
Ohio Functioning Caregiver		47	52.48	58.60	**6.08****	7.12	Medium	28/47
(n=193)		24.4%	(13.22)	(12.63)			0.51	59.6%

**p < .001, * p < .01
Effect sizes were derived using Cohen's d as follows: .2 = small, .5 = medium, .8 = large
Some PROMIS Child and SMFQ Caregiver statistics suppressed due to low n
Outliers were found and corrected for the following first scores: Ohio PS (child and caregiver), Ohio Functioning (child and caregiver)
Outliers were found and corrected for the following last scores: CPSS 5 (child and caregiver), SMFQ caregiver, Ohio PS (child and caregiver), Ohio Functioning (child and caregiver)
Outliers were found and corrected for the following change scores: CPSS 5 (child and caregiver), Ohio PS (child and caregiver), Ohio Functioning (child and caregiver)

Clinical Improvements Across Groups

In addition to documenting the overall rates of symptom reduction and functional improvement, it is important to monitor if any subgroups are experiencing disproportionate outcomes. An analysis was done to look at the effect of demographics (age, race/ethnicity, sex) on any reliable symptom improvement across all measures. This is shown in Figure 13. **Consistent with the previous two fiscal years, for overall symptom improvement, there were no significant differences across subgroups.**

Figure 10. Reliable Change on Any Measure, Across Groups



While there were no differences across groups in overall likelihood of experiencing change, it is still important to explore if there are differences in the magnitude of change. To analyze this, multiple regressions were done on Problem Severity and Functioning change scores, controlling for age, trauma exposure, and discharge reason. There were two significant interactions found. Hispanic male children reported less functional improvement compared to their Hispanic female counterparts (7.0 points), with a medium effect (.079). Caregivers reported significantly more reduction in problem severity scores for Hispanic females compared to Non-Hispanic White females by approximately 9.2 points with a medium effect (.055). No differences were found for child-reported Ohio Problem Severity score and caregiver-reported Functioning score outcomes.

VI. SUMMARY AND RECOMMENDATIONS

MATCH-ADTC is available across the state for children living with anxiety, depression, trauma, and/or conduct symptoms. Despite high clinician turnover (29.2%) and continued workforce challenges, this year we saw an increase in children's access to MATCH-ADTC (683), the first increase since the COVID-19 pandemic began in FY20. We also see progress in access equity for Black children (12.6% FY23 vs. 9.9% FY22). Although there is still work to be done to ensure that Black youth and Spanish-speaking youth receive MATCH-ADTC in proportion to general outpatient care. Comparing the population served in OPCCs to those receiving MATCH-ADTC , lower percentages of Black youth and Spanish-speaking youth received MATCH-ADTC in FY23, a trend we have seen in previous fiscal years. Training clinicians who represent communities of color is important in engaging children and families of color who may benefit from MATCH-ADTC . Developing a deeper understanding of the specific needs and cultural values to engage and sustain diverse families in treatment should remain a focus for engaging across cultures.

With increased access, we also see a decrease in the percentage of children with data available. Nearly 1 in 5 children were missing a reported primary problem area, a quarter were missing top problems, and 39.2% were missing child symptom measures at two time points. Data burden is likely a factor as a combination of high rates of staff turnover combined with increased efforts to enter data on more children receiving MATCH-ADTC into PIE may lead to incomplete data entry.

Despite these challenges, MATCH-ADTC demonstrated strong outcomes. Children with critically high symptoms at baseline experienced high levels of remission for the following symptom types: post-traumatic stress (63% child-report, 95% caregiver report) and problem severity (66% child, 68% caregiver). Children with anxiety measures experienced high levels of remission (91% caregiver), though rates of using the anxiety measure continue to be low. Continuing to encourage clinicians to utilize the PROMIS with children with anxiety will give a better picture of symptom improvement in MATCH-ADTC .

It is important to examine outcomes by race/ethnicity and other demographic differences where longstanding inequities in behavioral health services exist. Once children are enrolled in MATCH-ADTC treatment, analyses reveal MATCH-ADTC completion and change on any child symptom measure overall is consistent across sex and race. Looking within specific measures, however, we see Hispanic males had less improvement on the child-reported Ohio Functioning scale compared to Hispanic females, although this trend was not observed for the caregiver-reported scale. We also see that caregivers of Hispanic female children reported more improvement on the Problem Severity scale compared to Non-Hispanic white female children, although this trend was not observed for the child-reported scale.

Recommendations

Based on the trends notes in this report, the following goals and recommendations are made for continued support of the MATCH-ADTC statewide network in FY23:

Increase the number of children receiving MATCH-ADTC:

- Establish expectations on the number of children agencies clinicians should use MATCH-ADTC with each year, taking into consideration other EBTs they might be practicing.
- Monitor MATCH-ADTC caseloads for clinicians to ensure those trained are maintaining their MATCH-ADTC clinical skills and continuing to deliver the model with children and families.
- Develop strategies to assist agencies in entering data into PIE to reduce data burden and improve clinical workflow. Data burden is often identified as a reason why children are not receiving MATCH-ADTC or not being counted in the system; these efforts will ensure that all children being seen in MATCH-ADTC are entered and an accurate number of MATCH-ADTC cases is reported.
- Identify and implement brief treatment interventions, such as Single Session Consultation (SSC), that complement MATCH-ADTC. Briefer interventions can reduce the burden of training and consultation on staff. They also can expand access by providing a briefer treatment option for families that may want it less intensive treatment options

Ensure equitable access to and experiences in MATCH-ADTC treatment for all children:

- Explore cultural considerations in identifying children with anxiety: Given that there are often disparities in diagnoses (children of color more likely to have externalizing diagnoses, females having higher rates of anxiety), as the use of the anxiety protocol continues to increase, the processes for identifying and selecting children for MATCH-ADTC treatment need to be evaluated to ensure they are used fairly and consistently.
- Increase race data collection that was missing for nearly a quarter of children; accurate and robust data is needed to better understand equitable access to MATCH-ADTC and if quality and outcomes are consistent across groups. Efforts already underway should be continued with monitoring of rates by agencies and specific goals set for agencies with high omission rates.
- Expand the options for collecting gender identity data in intake processes and the PIE database to better align with best practices and enhance equitable client care.
- Establish strategies to increase access in implementing MATCH-ADTC in all regions of Connecticut
- Add MATCH-ADTC penetration rates by race/ethnicity to quarterly provider outpatient reports. Use penetration rate data in site-based consultation to develop SMARTIE (Specific, Measurable, Attainable, Relevant, Time-bound, Inclusive, and Equitable) goals with agencies to increase equity in MATCH-ADTC access for children.
- Incorporate changes to EBT monthly dashboard demographic reporting, disaggregating service by race, sex, and age. Continue to report annual MATCH-ADTC service disproportionality by race and sex statewide. Utilizing information from both reports, develop and implement statewide strategies for addressing access issues for underserved groups.
- Incorporate strategies within the consultation framework to identify inclusive and equitable goals in site-based consultation to better address disparities and improve access.
- Continue to offer bilingual clinicians implementing MATCH-ADTC resources and opportunities to collaborate and discuss engagement of Hispanic children and families in treatment.
- Explore consultation strategies to better understand and address client experiences of racism and discrimination in the MATCH-ADTC model

Maintain high-quality in MATCH-ADTC service delivery:

- Continue to refine the agency roll-out plan for new clinicians joining the MATCH-ADTC team to ensure those trained are familiarized on the use of the PIE database, use of assessments, data collection, clinical consultation process, resources, and overall MATCH-ADTC implementation to support quality care to the children and families served.
- Develop advanced training opportunities in partnership with Harvard University, provided to certified associate consultants to support quality supervision, MATCH-ADTC implementation, and adaptation of protocols to effectively address complexities in treatment.
- Continue discussion of CGI Severity and Improvement scales within the consultation framework to continue to measure outcomes; explore using CGI as a systems-level metric to help understand treatment and outcomes not only in MATCH-ADTC but across levels of care.

Conclusions

As MATCH-ADTC access increased, a growing number of children receiving MATCH-ADTC treatment experienced positive outcomes, as evidenced by the high level of symptom improvement. Race and sex remain equitably represented in behavioral health improvement among children completing MATCH-ADTC. While progress in providing services equitably has increased, efforts to ensure MATCH-ADTC access to all youth, particularly black children and Spanish-speaking youth continue to be a focus of service delivery. Although community behavioral health providers continue to experience turnover in the workforce, these challenges have not impacted quality of client care. Children and caregivers receiving MATCH-ADTC treatment report high levels of satisfaction. The length of stay for youth receiving this flexible treatment approach decreased without compromising its effectiveness. Using MATCH-ADTC, providers are able to target top problem areas that can be addressed to meet the treatment needs of children and families while demonstrating strong outcomes.

VII. APPENDIX A: ACTIVITIES AND DELIVERABLES

The Coordinating Center has worked to support the MATCH-ADTC implementation goals through the following activities carried out in FY23.

1. Training, Consultation, & Credentialing

- Connecticut Associate Trainers provided two MATCH-ADTC trainings (10 days) in FY23 (43 new clinicians trained). One MATCH-ADTC agency conducted an in-house training for 12 clinical staff.
- Held a one day MATCH-ADTC Booster Training for previously trained clinicians and 26 clinicians attended
- In December 2022, 2 virtual sessions were provided to (7) MATCH-ADTC supervisors to be trained as an in-house MATCH-ADTC Associate consultants
- MATCH-ADTC Associate Consultant Consultation started was initiated in January 2023 and (6) consultation meetings were conducted; consultation is scheduled to complete in the fall of FY23
- MATCH-ADTC (15) consultation calls were led by MATCH-ADTC Associate Trainers to newly trained MATCH-ADTC clinicians
- The Connecticut Associate Trainers conducted both the new MATCH-ADTC trainings in the Fall and Spring of FY23.
- Coordinated registration, attendance, and CEUs for MATCH-ADTC and OPCC trainings
- Maintained a statewide MATCH-ADTC clinician credentialing process and requirements to increase the number of clinicians that complete all training and case requirements; 58 active clinicians were Connecticut credentialed by the end of FY23
- Maintained a training record database to track training and consultation attendance of all MATCH-ADTC staff, as well as other credentialing requirements for all MATCH-ADTC clinicians; in FY23 there were 212 active clinicians.
- Convened fifteenth annual statewide EBP Conference for 356 unique attendees from community providers, DCF, CSSD staff, and other partners in the initiative.

2. Implementation Support, Quality Improvement, & Technical Assistance

- Produced reports for two QI performance periods based on developed MATCH-ADTC 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 86 implementation consultation support meetings with providers to ensure sustainment of high-quality services
- Implemented and convened 2 Coordinator meetings focusing on sharing implementation and successful meeting strategies
- Provided updates to all MATCH-ADTC participants through a monthly Data Dashboard
- Distributed additional MATCH-ADTC books, materials, and resources to all MATCH-ADTC teams

3. Data Systems

- Provided enrollment assistance to providers when MATCH-ADTC clinicians registered for the new clinician training
- Continued improvements to the PIE system have been made based upon agency feedback and as possible with available funding
- Maintained a public directory site that provides a searchable, public listing of MATCH-ADTC providers through EBP Tracker (tinyurl.com/ebpsearch)
- Maintained a map, public listing of MATCH-ADTC providers on CHDI's website
- Monitored, maintained, and provided technical assistance for online data entry for all MATCH-ADTC providers in PIE
- Provided site-based data assistance and reports as requested

4. Agency Sustainment Funds

- Administered and distributed $349,232.00, in performance-based sustainment funds to agencies (34.9% of total contract funds) 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 MATCH-ADTC
- Developed, executed, and managed contracts with each of the 23 MATCH-ADTC providers eligible for financial incentives to detail implementation expectations, data sharing, and financial incentive details

VIII. APPENDIX B: REGRESSION TABLES

Table B1. Logistic regression analyses for predicting successful discharge from selected background characteristics.

Variable	*N*	β	*SE*	*Wald*	e^{B}*(95% CI)*
Hispanic	67	0.219	0.356	0.378	1.245 (.619, 2.502)
Black Non-Hispanic	24	-0.209	0.489	0.183	0.811 (.311, 2.115)
Sex (Male)	66	0.042	0.354	0.014	1.043 (.521, 2.087)
Child Age	176	0.052	0.067	0.593	1.053 (.923, 1.200)
Trauma Exposure-THS Child	176	**-0.149***	0.069	4.637	0.861 (.752, 0.987)
Trauma Exposure-THS CG	176	0.006	0.082	0.005	1.006 (.857, 1.181)
Constant		0.691	0.817	0.715	1.995

*p<.05 As compared to White Non-Hispanic Females
**p<.01 Another race/ethnicity non-Hispanic group removed due to low n
***p<.001

Table B2. Multiple regression analyses of selected demographic variables on change in outcome scores.

Predictors	Change in Ohio Child Functioning			Change in Ohio Caregiver Functioning		
	β	*SE*	*95% CI*	β	*SE*	*95% CI*
Constant	-16.659	12.96	(-42.549, 9.23)	5.996	4.613	(-3.130, 15.123)
Trauma Exposure	-0.525	0.501	(-1.525, 0.475)	-0.753	0.400	(-1.545, 0.039)
Hispanic	5.594	3.245	(-0.889, 12.077)	2.769	2.178	(-1.541, 7.078)
Black Non-Hispanic	3.224	5.281	(-7.325, 13.773)	1.525	3.158	(-4.724, 7.773)
Sex (Male)	9.237	4.838	(-0.429, 18.903)	1.702	2.118	(-2.489, 5.893)
Sex (Male)* Hispanic	**-16.516****	5.532	(-27.568, -5.464)	-	-	-
Sex (Male)* Black Non-Hispanic	2.170	7.754	(-13.319, 17.659)	-	-	-
Child Age	1.366	0.905	(-0.442, 3.173)	-0.065	0.328	(-0.713, 0.584)
Child Discharged As "Successful"	3.867	3.107	(-2.339, 10.073)	3.652	2.031	(-0.365, 7.670)
R^2	0.246			0.075		
F	-			1.75		

*p<.05 As compared to White females
**p<.01 Another race/ethnicity non-Hispanic group removed due to low n
***p<.001 Outliers were found and corrected for child and caregiver-reported trauma exposure and Ohio Functioning change scores
Robust standard errors were used to address heterogeneity of variance

Table B3. Multiple regression analyses of selected demographic variables on change in outcome scores.

Predictors	Change in Ohio PS Child			Change in Ohio PS Caregiver		
	β	*SE*	*95% CI*	β	*SE*	*95% CI*
Constant	-4.286	5.530	(-15.289, 6.717)	-1.964	6.685	(-15.217, 11.289)
Trauma Exposure	-0.532	0.406	(-1.340, 0.277)	0.557	0.469	(-0.373, 1.487)
Hispanic	0.967	2.662	(-4.330, 6.263)	**-9.179****	3.311	(-15.744, -2.614)
Black Non-Hispanic	1.320	3.876	(-6.392, 9.033)	-1.514	4.872	(-11.173, 8.144)
Sex (Male)	-2.210	2.605	(-7.392, 2.973)	**-5.828***	2.744	(-11.268, -0.389)
Sex (Male)* Hispanic	-	-	-	**11.121***	4.824	(1.557, 20.686)
Sex(Male)* Black Non-Hispanic	-	-	-	-1.384	7.528	(-16.309, 13.541)
Child Age	0.316	0.421	(-0.522, 1.154)	0.182	0.518	(-0.845, 1.209)
Child Discharged As "Successful"	**-7.522****	2.525	(-12.545, -2.498)	**-7.419***	3.097	(-13.559, -1.279)
R^2	0.122			0.209		
F	1.873			-		

*p<.05 As compared to White females
**p<.01 Another race/ethnicity non-Hispanic group removed due to low n
***p<.001 Outliers were found and corrected for child and caregiver-reported trauma exposure and Ohio PS change scores
Robust standard errors were used to address heterogeneity of variance for caregiver-reported Ohio PS change

Table B4. Logistic Regression analyses for predicting any child symptom RCI from selected background characteristics.

Predictors	*N*	β	*SE*	*Wald*	e^B*(95% CI)*
Hispanic	67	0.343	0.353	0.944	1.409 (0.705, 2.816)
Black Non-Hispanic	24	0.216	0.507	0.181	1.241 (0.46, 3.349)
Sex (Male)	66	-0.005	0.354	0.00	0.995 (0.497, 1.993)
Child Age	176	-0.027	0.066	0.172	0.973 (0.855, 1.107)
Trauma Exposure-THS Child	176	0.004	0.072	0.002	1.004 (0.872, 1.155)
Trauma Exposure-THS Caregiver	176	0.081	0.084	0.944	1.085 (0.921, 1.278)
Child Discharged as "Unsuccessful"	64	**-1.270*****	0.341	13.838	0.281 (0.144, 0.548)
Constant		0.652	0.819	0.634	1.919

*p<.05 As compared to White females
**p<.01 Outliers were found and corrected for caregiver and child reported trauma exposure
***p<.001

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