Connecticut MATCH Coordinating Center

Evaluation Report
SFY 2016-2018

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Table of Contents

Executive Summary

The goal of the Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, and Conduct Problems (MATCH) Coordinating Center at The Child Health and Development Institute (CHDI) is to expand access to high quality, evidence-based outpatient behavioral health treatment for children experiencing anxiety, depression, trauma, and/or conduct problems. Funded by DCF, CHDI disseminated and supported sustainment of MATCH through (1) MATCH training plus ongoing clinical consultation; (2) MATCH Learning Collaboratives with a total of up to twenty (20) Outpatient Psychiatric Clinics for Children (OPCCs), which includes MATCH training, monthly clinical case consultation from MATCH experts*;* and (3) development of a statewide data collection system and data collection, analysis, and reporting for ongoing quality improvement of MATCH services.

During the fiscal years 2016 to 2018, CHDI provided MATCH training to a total of 198 clinical staff, coordinated and implemented 9 learning sessions as part of the Learning Collaborative Model, collaborated with Harvard University to develop a statewide MATCH clinician certification process, provided statewide training on the use of the Evidence-Based Practice Tracker (EBP Tracker) database, introduced a public directory site of MATCH agencies, developed a statewide monthly dashboard report for outpatient clinics to monitor progress overtime and collaborated with Harvard University to launch a new clinical training to MATCH Supervisors to assist in long- term sustainability of the MATCH treatment model. These efforts resulted in 182 clinicians from 20 agencies being trained to deliver MATCH, and 1,349 children receiving MATCH treatment statewide. MATCH providers successfully engaged 83% of all children in treatment (e.g. attending at least four sessions), which is much higher than the usual rates for children's outpatient behavioral health. Approximately 47% of the children served completed MATCH successfully, which is also higher than usual treatment completion rates. Most importantly, reports from both children and their caregivers demonstrate that children receiving MATCH had significant improvements in problem severity and PTSD symptoms and significant increases in functioning. Specifically, an average of 81% of children with outcome data experienced a partial or reliable improvement in symptoms.

Clinicians participating in the MATCH learning collaborative reported positive attitudes toward evidence based treatments generally and high satisfaction with the MATCH model specifically. Of the 20 agencies that implemented MATCH, 18 (90%) continued to offer MATCH as of June 2018, a rate of sustainment much higher than is generally found in EBT initiatives. The primary challenges to sustaining MATCH include the lack of an enhanced reimbursement rate or other policy and fiscal incentives to support the additional agency and staff requirements for delivering EBTs, as well as high rates of clinician attrition. Recommendations for sustaining and expanding MATCH include offering more training opportunities for new agencies and clinicians, offering enhanced reimbursement rates or other funding for high-quality delivery of MATCH and other EBTs, and building in-state capacity for MATCH expertise in training and consultation. In addition, it is recommended that DCF continue to pursue a comprehensive and integrated approach to improving the use of MATCH and other EBTs in outpatient settings, including more

robust data analysis and reporting, quality improvement approaches, and additional EBT and other trainings for outpatient providers.

Overview

Introduction

This report summarizes the work of the MATCH Coordinating Center, funded by the Connecticut Department of Children and Families (DCF) for state fiscal years 2016 to 2018 (July 1, 2015 through June 30, 2018). The MATCH project encompassed two parallel but integrated efforts to disseminate and sustain MATCH across Connecticut. The first was a Randomized Control Trial of the MATCH model led by Harvard University. The second was a series of year-long, expanded trainings, called "Learning Collaboratives." CHDI functioned as the Coordinating Center for both of these efforts. CHDI integrates knowledge about implementation science, evidence-based treatments, childhood trauma, and children's mental health to coordinate and sustain this project, together with the treatment developers, community-based agencies, and state systems.

Background

Nationally, there has been a growing emphasis on the use and implementation of evidence-based treatments (EBTs). While children's mental health treatment is thought to lag behind other fields in the uptake of applying research to practice, a large number of EBTs for child and adolescent mental health problems have been developed. However, most are limited to specific disorders or homogeneous clusters (e.g., treatments exclusively for depressive disorders), resulting in limited applicability or implementation. In Connecticut, only a few of these outpatient evidence-based practices are available and most children do not receive an EBT.

Children and adolescents seeking treatment often experience a variety of co-occurring problems, and the course of treatment may need to shift over time, requiring a flexible and integrative approach. MATCH, developed by Drs. John Weisz and Bruce Chorpita, has been identified as an evidence-based treatment that can respond to the diverse needs of Connecticut's children.

MATCH is an evidence-based treatment designed for children ages 6 - 15. Unlike most treatment approaches that focus on single disorders, MATCH is designed to treat four common behavioral health concerns among children, including anxiety, depression, posttraumatic stress, and behavior problems.

MATCH 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 is designed to address broad practitioner caseloads, youth comorbidity, and changes in treatment needs during episodes of care, creating a foundation for successful outcomes.

CHDI, the Department of Children and Families (DCF) and Harvard University (HU; with Dr. John Weisz) established a partnership in July 2013 to carry out a five-year, $5 million project to

implement, replicate and evaluate MATCH. This 5-year project provides MATCH to children served through selected outpatient clinics, and enhances access to evidence-based treatments across Connecticut.

Grant Project Activities

The primary focus of this contract was to support the MATCH developer at Harvard University to conduct a Randomized Control Trial (RCT) comparing MATCH training only to MATCH training plus clinical consultation in four Connecticut provider agencies. The first two years of the contract focused almost exclusively on this RCT. Years three to five of the grant involved continuation of the RCT and the addition of three, one-year LCs to train and support an additional 16 agencies in their implementation of MATCH. A full RCT report was submitted separately by Harvard University, and the focus of the current report is on the MATCH learning collaboratives which began in September 2015 and ended in June 2018.

Goals

The Primary Goals of the MATCH Learning Collaboratives are:

1. Train new agencies and clinicians in the MATCH treatment model
2. Complete learning collaborative activities
3. Clinicians and supervisors trained in MATCH will complete consultation and case requirements
4. Children receiving MATCH will show improved functioning

Activities and Deliverables

The LC is an intensive year- long quality improvement model that has been used to disseminate EBTs. To build the capacity of outpatient providers to implement MATCH with children, agencies received the following support during the learning collaborative years 2016- 2018:

1. **Training, Consultation, & Credentialing**
    - Contracted with Harvard University to provide a total of 16 days of clinical training to 20 agencies and 198 clinical staff, which includes the RCT agencies.
    - Contracted and coordinated with Harvard University to provide 9 clinical consultation telephone calls to clinical staff each fiscal year providing a total of 27 calls.
    - 80% of clinical staff completed clinical consultation calls requirements during FY2016 -2018
    - Planned, coordinated and implemented a total of 9 learning sessions, as part of the Learning Collaborative. Coordinated with Harvard University to provide clinical training components in each of the learning sessions. 79% of clinical staff successfully completed the learning sessions FY2016 – FY2018.
    - Coordinated and implemented 2 statewide MATCH Associate Consultant (AC) trainings to ensure on-going MATCH supervision and support long term

sustainability of the MATCH treatment model. 26 people completed AC training in the grant period.
- Developed statewide MATCH credentialing criteria and process to ensure that clinicians meet minimum quality requirements and that fidelity to the model is maintained. A total of 44 Clinicians received Connecticut MATCH Certification.
- Provided training to 198 clinical staff on the use of EBT Tracker, a statewide database which tracks demographic and treatment data on all children receiving TF-CBT, MATCH, ARC and CBITS in Connecticut.
- Provided 12 on-site EBP Tracker booster training sessions.
- Prepared regular training and case data tables for each provider with updates on individual clinician credentialing status.

2. **Implementation Support, Quality Improvement, & Technical Assistance**
   - Collaborated with Harvard University to conduct Senior Leader consultation calls monthly or as needed. These consultations provided additional support to agency administrators to integrate and sustain MATCH at their respective agencies.
   - Conducted consultation with TF-CBT project coordinators (CHDI) to begin developing QI standards for MATCH.
   - Developed and reported a monthly dashboard with timely data to provide to agency Senior Leaders.
   - Conducted monthly (or as needed) consultation calls with agency coordinators during the learning collaborative to support MATCH implementation.
3. **Data Systems**
   - Continued development and maintenance of a secure, HIPAA compliant, online database (EBT Tracker) that meets the needs of MATCH providers and the children and families they serve
   - EBT Tracker provides real-time scoring and reports of individual client assessments and progress, more timely and accurate data for agencies and stakeholders, and has the capacity for additional EBT models to be included
   - Continued improvements to EBT Tracker have been made based upon agency feedback and as possible with available funding
   - Launched a public directory site that provides a searchable, public listing of MATCH agencies through EBT Tracker (tinyurl.com/EBTsearch)
   - Integrated all MATCH agencies, including RCT agencies, and clinical staff into EBT Tracker system
   - Reported monthly data on MATCH to DCF and implementing agencies.
   - Reported quarterly process and outcome data to DCF in Results Based Accountability (RBA) reports.
   - Provided ad hoc site-based data assistance and reports as requested
   - Continued oversight of the EBP Tracker system and collaborated with DCF on EBP Tracker and PIE integration

MATCH implementation has expanded

Nearly 200 people from 20 agencies received MATCH training during the project period. Of the 198 people trained, a total of 182 people successfully completed all five days of MATCH training. Most of those completing training (168 of 182) were clinicians. A large majority of clinicians trained in MATCH were female (92%), white (71%), and English-speakers (98%), while 13% spoke Spanish. These clinicians were provided Spanish-language MATCH materials and assessments at trainings.

Clinicians started MATCH with an average of 5.56 (range: 1-34) years of clinical experience, a majority of which (81% on average) was with children. MATCH clinicians have an average caseload size of 31.3 (range: 0-100) children and receive 1.38 (range 0- 12) hours of clinical supervision a week. Prior to MATCH training, clinicians were most likely to say they use cognitive behavioral (41%), behavioral (24%), or systems (22%) approaches during treatment.

Table 1. MATCH Agencies & Children Served by Fiscal Year

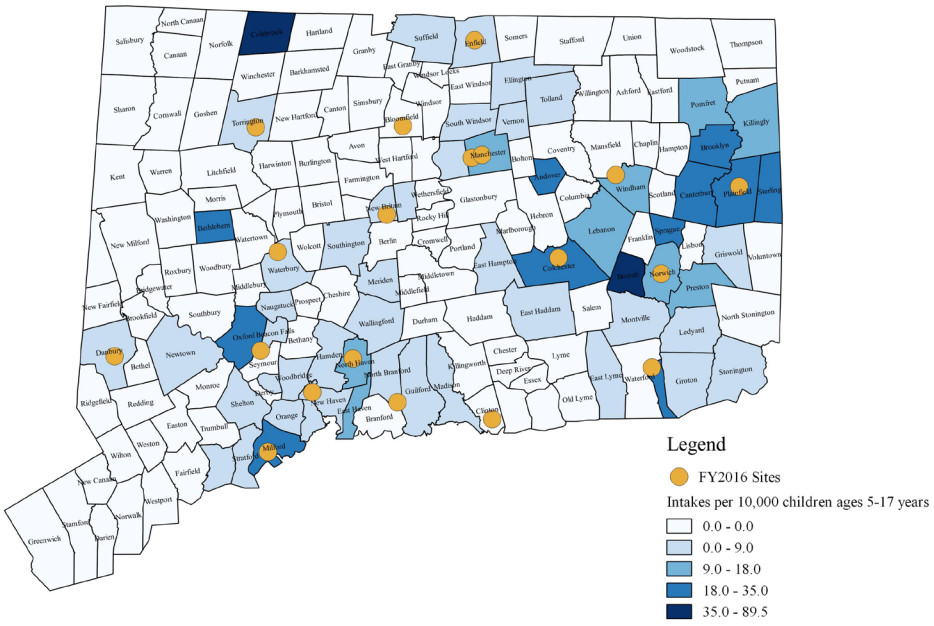
	FY2015 (RCT)	FY2016	FY2017	FY2018*
Agencies	4	10	15	18
Children Served via LC	-	211	501	759
Children Served via RCT	112	87	-	-

*Two FY2016 agencies left during this time period

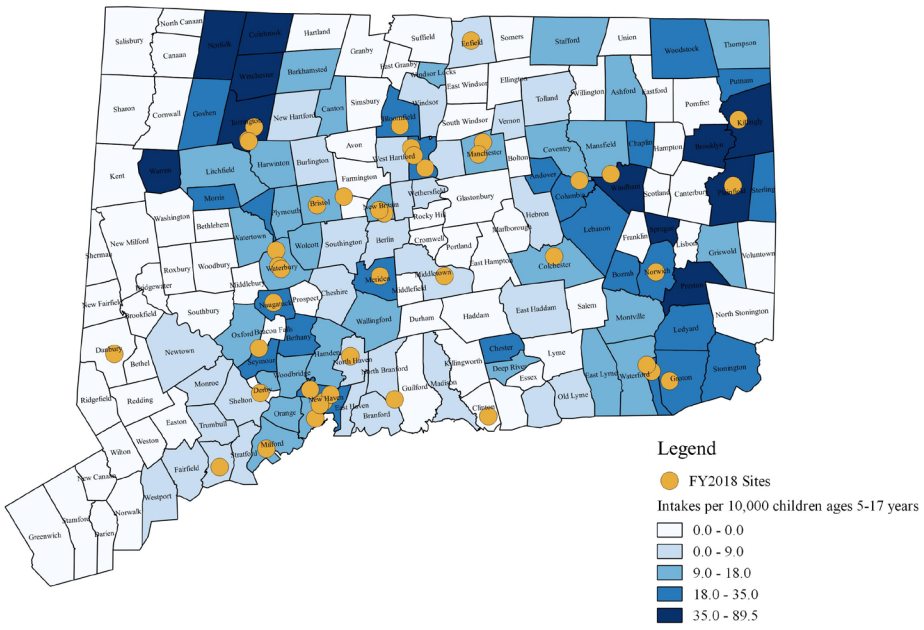
A total of 1,349 children received MATCH over the three year period. Most children who received MATCH were white (non-Hispanic) (53%) or Hispanic (32%), English-speakers (95%) and living with at least one relative (96%). Males (48%) and females (52%) were served equally. Few (15%) had DCF involvement and even fewer (1.5%) had juvenile justice involvement during MATCH treatment. Most families were referred by themselves (54%) or within the agency they received services (34%). (See Appendix A for more demographic data).

With each learning collaborative year, MATCH implementation has expanded throughout Connecticut, particularly in Windham, New London, Litchfield, and New Haven counties.

MATCH-ADTC State Fiscal Year 2016



MATCH-ADTC State Fiscal Year 2018



Learning Collaborative Outcomes

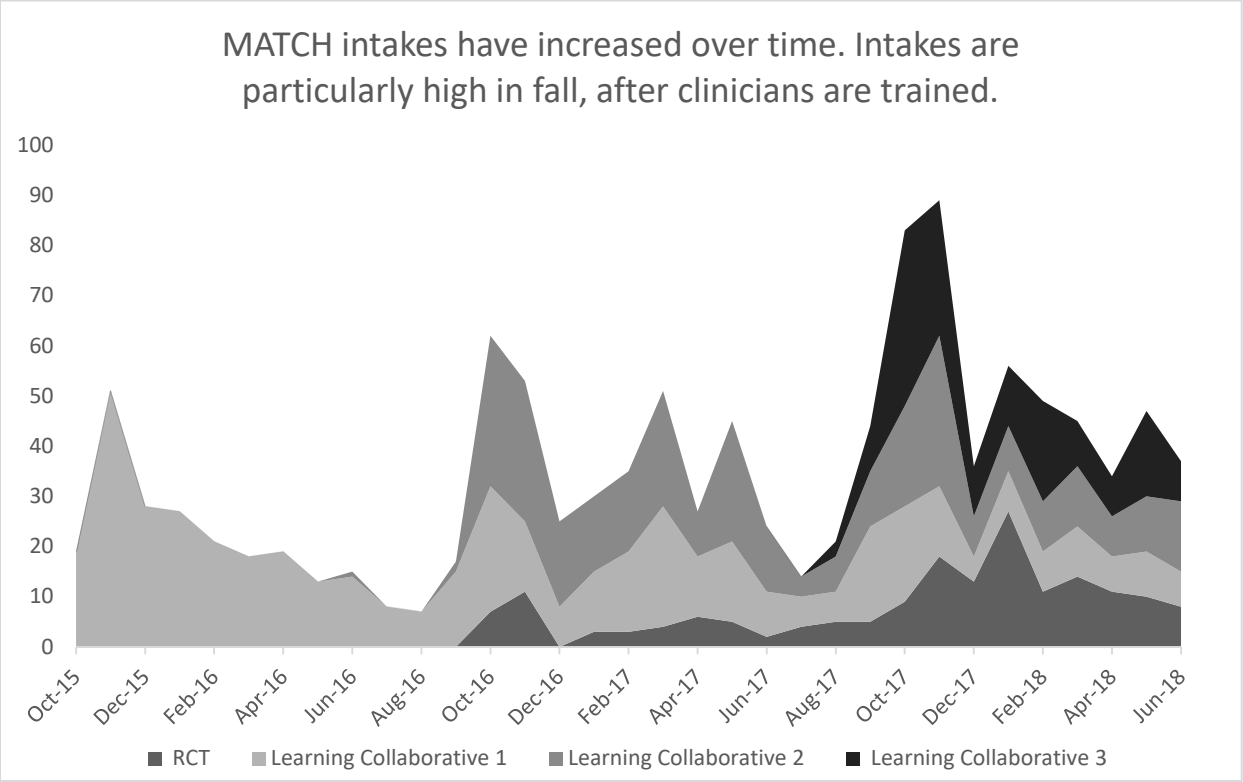
Learning Collaborative Participation has Helped Agencies Implement and Sustain MATCH

One hundred and eight (108) staff from 16 agencies participated in a LC. Of those, 79% (85) met the learning session requirement of attending two out of three learning sessions. Almost all people who did not complete the learning session requirements were senior leaders (7), who were invited but not required to attend every learning session, or left the MATCH team or agency during the learning collaborative (11).

Provider Quote

"To be able to utilize the collaborative to discuss challenging or successful cases is beneficial to building skills and gain a new perspective."

Chart 1. Intakes by Agency Cohort



After participating in the learning collaborative, attitudes about the MATCH model improved (28.6 vs. 34.5). Specifically, clinicians were more likely to feel that the MATCH model fit within their practice. Attitudes towards evidence-based treatments remained unchanged, yet high, however most LC participants entered the learning collaborative with experience with EBT training (86%) and practicing EBTs clinically (84%). Learning collaborative participants

reported fewer limitations to EBTs and greater acceptance of manualized therapy (A list of measures is included in Appendix B: Methods).

Clinical staff identified the following learning collaborative aspects as most helpful:

- Clinical trainings, consultation calls, and training refreshers
- Working w/Harvard (specifically Lauren)
- Inter-agency collaboration
- Group discussion about clinical cases

Staff identified the following ways that the learning collaborative experience could be improved:

- Small consultation call groups
- More interactive and clinically focused learning sessions
- Full-day trainings and learning sessions
- MATCH boosters beyond the learning collaborative

Clinician attrition has been a significant barrier to sustaining MATCH throughout Connecticut. Over the course of the three year period, 46 of the 168 clinicians trained (27%) left their MATCH teams and/or agency. In particular, RCT agencies experienced challenges retaining clinicians on MATCH teams during the transition between the RCT and sustainability phase, with 55% of MATCH RCT clinicians leaving MATCH teams during the transition period. Given the stage of implementation MATCH was in, there were only three clinical trainings provided over the course of the three year period. The MATCH agencies request for more training opportunities remains as a high need to address attrition in agencies to maintain capacity.

Sustainability funds are helpful in addressing barriers to MATCH implementation

Each agency submitted an annual narrative report. This report included a description of what the learning collaborative funds ($12,000) provided by CHDI to support the additional agency costs of implementing MATCH were used for. Summarized below are the findings as they relate to the financial incentives agencies received during the learning collaborative.

Some LC agencies were able to address certain barriers endured during MATCH implementation and provide a productivity credit toward the extra time involved in using MATCH such as data entry, participation on consultation calls and attended clinical trainings.

Several agencies were able to approach anticipated challenges early on in the learning collaborative due to prior experience from practicing and sustaining other

Provider Quote

"The funding has been essential in allowing the staff to participate in the 5 days of required training. The commitment of time, lost productivity, and travel has been the primary use of the project funding."

evidence based treatments within their clinic. The main area of concern that emerged was the need to enhance financial resources to support the MATCH clinical teams and improve the ability to serve the children and families they serve. Some agencies sought supplemental funds to assist with the implementation of the MATCH program to pay for expenses not covered by the MATCH initiative.

The learning collaborative agencies indicated that MATCH implementation is replicable in other sites at their agencies with continued performance-based sustainability funding from the MATCH initiative. This would help support sustainability, providing additional staff time, administrative overhead and additional MATCH resources.

Clinical Implementation & Quality Improvement

Clinicians primarily use MATCH to treat anxiety, depression, and conduct clinical problems.

On average, children attend 5.4 months before ending MATCH treatment and 47% successfully completed MATCH treatment based on therapist report. Following MATCH treatment, clinicians recommended additional therapy for 62% completing successfully. One in four children end MATCH treatment due to family dropout.

Clinicians primarily use MATCH to treat anxiety, depression, and conduct problems, and are less likely to use the model to address trauma. Children in the trauma protocol were much more likely to be assigned to an additional protocol (20% vs. 5% of those not in the trauma protocol?).

Provider Quote

"Clinicians like MATCH and its directness. The model provides hands-on tools for clinicians to use and it is easy to teach and understand with parents."

Chart 2. Primary Protocol Area Utilization

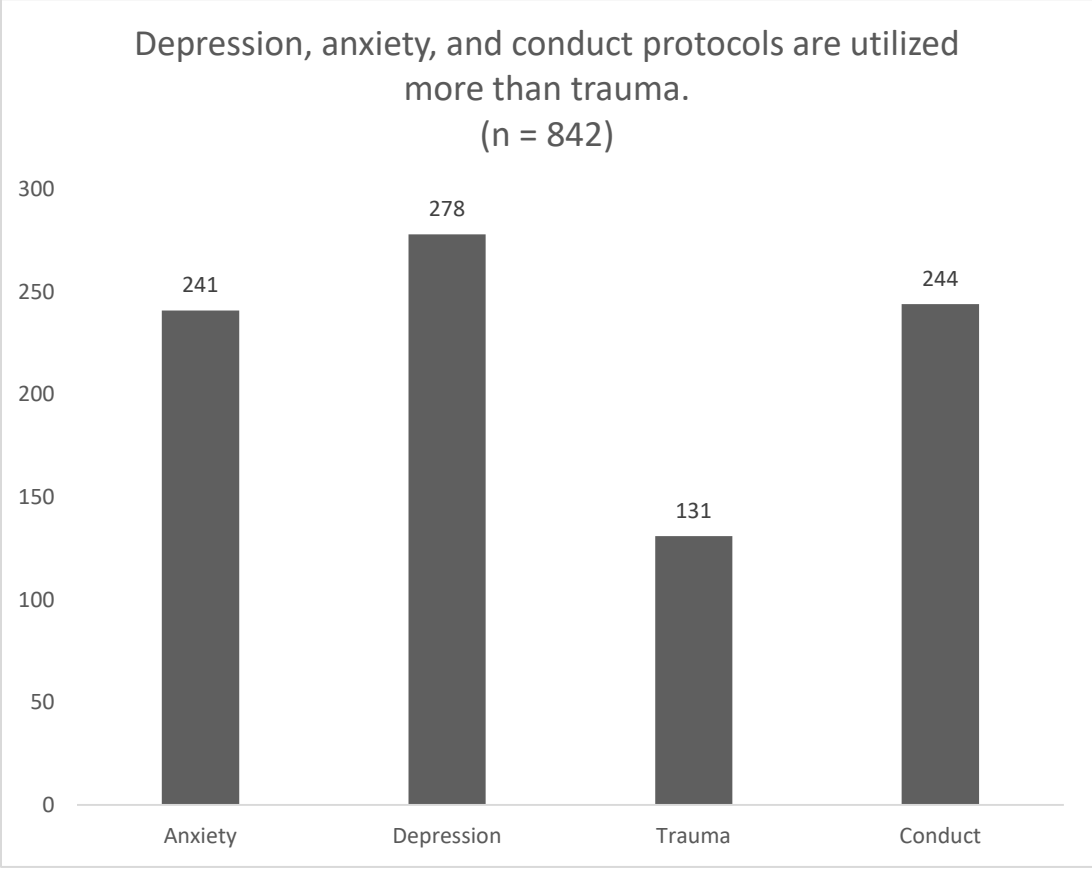
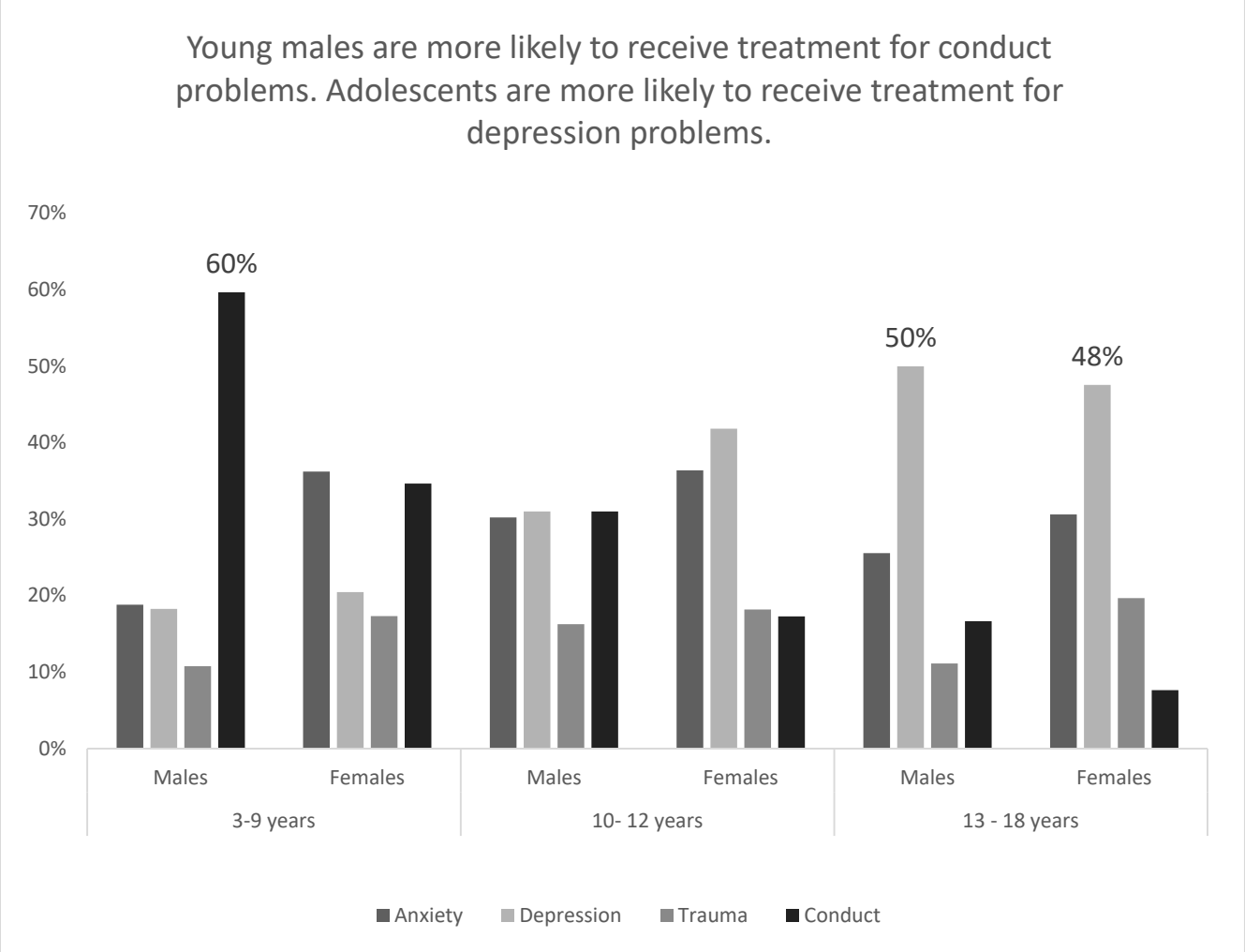


Chart 3. Primary Protocol Area by Age and Sex



Most of the top-ten utilized modules within primary protocol areas (see table 2 on next page) matched the primary protocol, except for a few depression modules which were used in the anxiety and trauma protocols. Quick Calming, a depression module, was utilized frequently in the anxiety and trauma protocol areas. Clinicians were also likely to use the problem solving (depression protocol) module in the trauma protocol and the learning to relax (depression protocol) module in the anxiety protocol.

Table 2. Top Ten Modules by Primary Protocol Area

Anxiety	Depression	Trauma	Conduct
Getting Acquainted Anxiety	Learning Depression Child	Getting Acquainted Anxiety	Engaging Parents
Fear Ladder	Getting Acquainted Depression	Learning Anxiety Child	Learning about Behavior
Learning Anxiety Child	Problem Solving	Fear Ladder	One on One Time
Learning Anxiety Parent	Activity Selection	Learning Anxiety Parent	Praise
Practicing	Learning Depression Parent	Safety Planning	Active Ignoring
Cognitive STOP	Positive Self	Trauma Narrative	Effective Instructions
Maintenance	Learning to Relax	Quick Calming (D)	Rewards
Quick Calming (D)	Quick Calming	Learning to Relax	Making a Plan
Learning to Relax (D)	Plans for Coping	Problem Solving (D)	Time Out
Anxiety Wrap Up	Cognitive BLUE	Practicing (A)	Looking Ahead

Child Outcomes

Methods

Symptom change is measured using three indicators:

- Reliable Change Index (see Appendix B, table 5)
- Remission Rate - % of children with critically high baseline who no longer have critically high symptoms at follow-up
- Paired Samples t-tests

Children who receive MATCH demonstrate positive clinical outcomes

Children discharged from MATCH treatment have significant, positive outcomes for problem severity and post-traumatic stress symptom reduction. They have also demonstrated significant, positive increases in functioning (see Appendix C for paired-samples t-test results).

Provider Quote

"Parents like the results. This really shows that their child is making progress."

Chart 4. MATCH Remission Rates (n = 842)

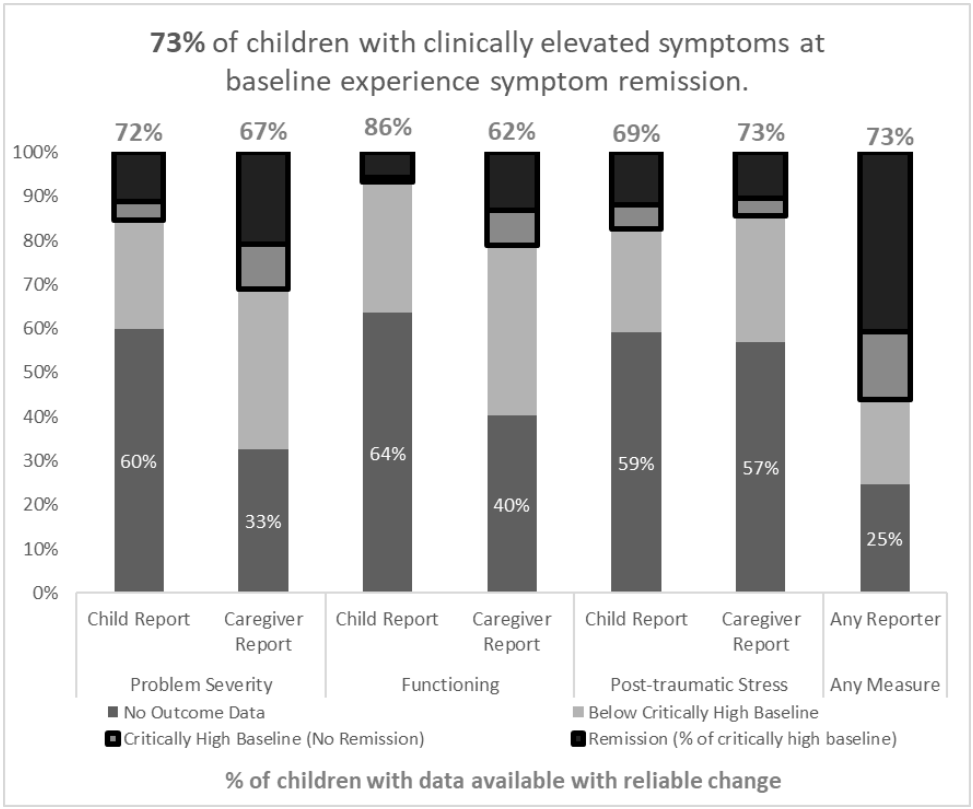
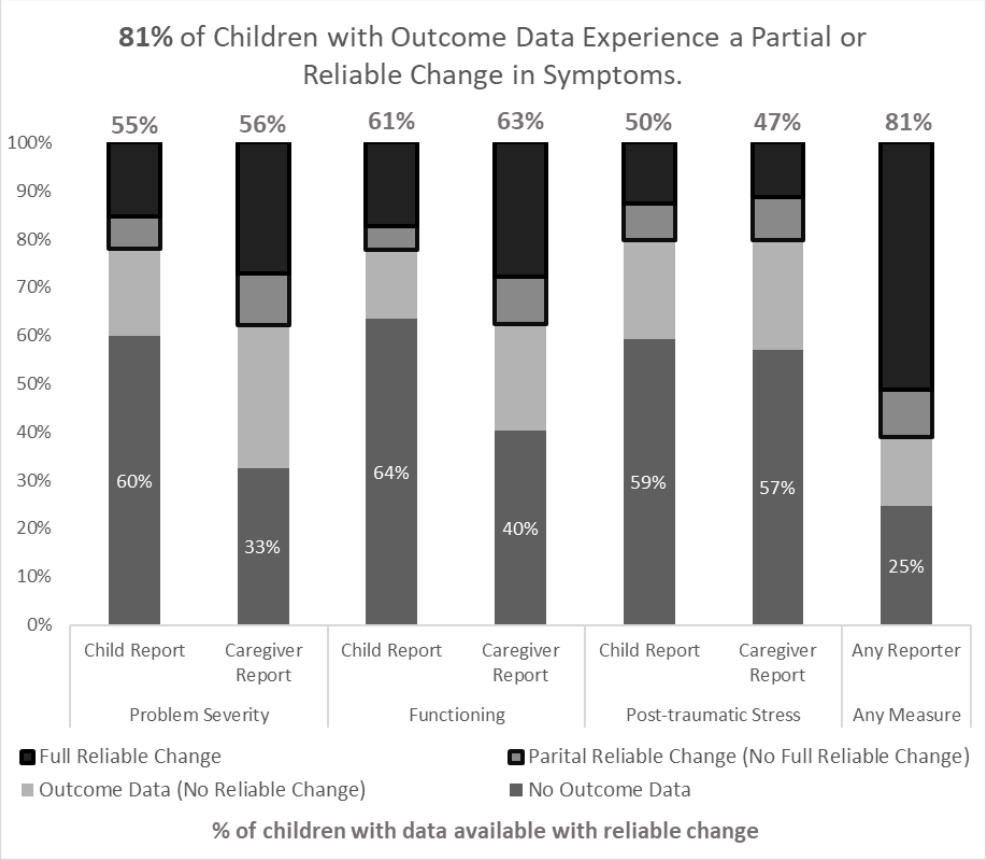


Chart 5. MATCH Reliable Symptom Change (n = 842)



A table of process and outcome indicators by agency is located in Appendix D.

Differences in Baseline Symptoms by Race, Sex, and Age Group

Looking at differences in all baseline symptoms by race and sex yielded one significant difference by sex, and one difference by race:

Problem Severity Symptoms – According to child report, **females** (M=24.97, SD=14.29) **have higher baseline scores than males** (M=19.85, 12.62), *p*= 0.00, however the effect size was small (partial eta = .029). According to caregiver report, **males have higher baseline scores** (M=25.14, 22.67**) than females** (M=22.67, SD=13.31), *p*= .032, however the effect size was small (partial eta = .005). (See charts 6 and 7).

Methods

Differences in baseline symptoms by race and sex were analyzed by a series of two-way ANOVAs. One-way ANOVAs were used to test for differences by age group. Main effects for race and age group were tested using the Tukey HSD statistic.

ANOVA tables are available upon request.

Functioning – According to caregiver report, **females** (M=51.19, SD=13.98) **have higher baseline scores than males** (M=47.09, SD=13.48), *p*=.032, however the effect size was small (partial eta = .005). (See charts 8 and 9).

Post-traumatic stress – According to child report, **females** (M=16.23, SD=11.30) **had higher symptoms than males** (M=11.86, SD=9.84), *p*=.000, however the effect size was small (partial eta = .032). Also, **Hispanic children** (M=15.79, SD=10.05) **had higher symptoms than white children** (*M*=13.24, SD=10.28), *p*=.025. However, the effect of race overall was not significant (*p*=.063), and the effect size of race was very small (partial eta =.007). (See charts 10 and 11).

Child-reported baseline symptoms had no significant differences between age groups. There were two significant differences in caregiver-reported baseline scores by age:

Problem Severity – **children 5-9 years** (*M*=26.289, *SD*=13.676) **had significantly higher baseline symptom scores than children 13-18 years** (*M*=21.750, *SD*=13.712), *p*=.000, however the effect size was small, (partial eta = 0.037).

Functioning – **children 13-18 years** (*M*=51.134, *SD*=13.6804) **had better baseline functioning compared to children ages 5-9** (*M*=47.519, *SD*=14.107), *p*=.022, however the effect size was small (partial eta=.015).

Differences in Clinical Outcomes by Race, Sex, Age Group, and Primary Protocol Area

Methods

Differences in symptom outcomes by race, sex, age group, and primary protocol area were analyzed by a series of mixed between-within ANOVAs. Main effects were tested using the Tukey HSD statistic for race, age group, and primary protocol area.

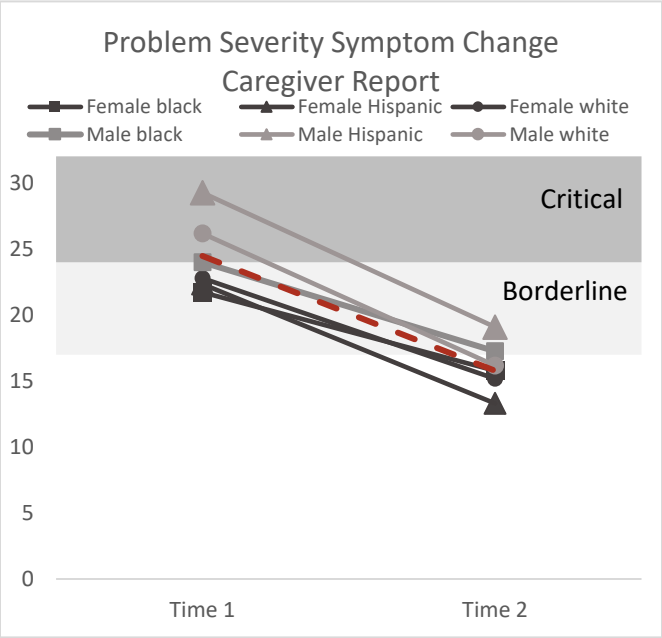
ANOVA tables are available upon request.

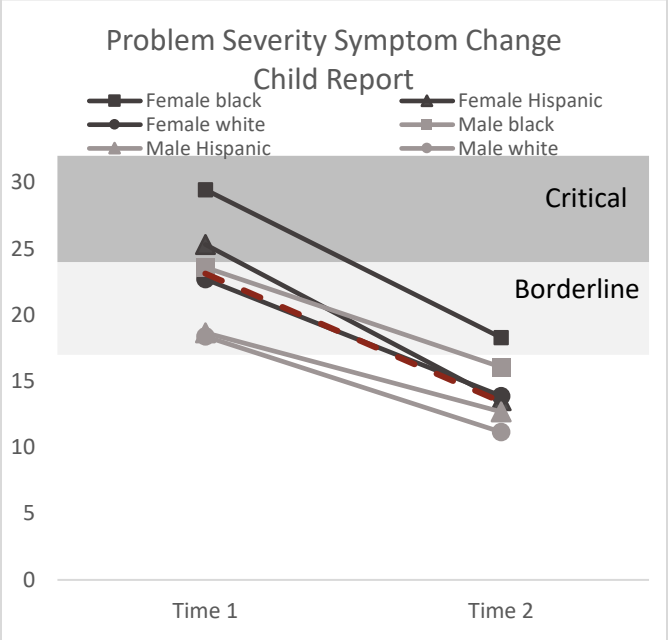
When looking at differences in outcomes (functioning, problem severity, and post-traumatic stress symptoms) by sex and race, only time was significant, **meaning a child's race or sex did not have an effect on their symptom change outcomes**.

Looking at differences in outcomes (functioning, problem severity, and post-traumatic stress symptoms) by age group (5-9 years, 10-12 years, 13-18 years) yielded only one significant finding. **Children ages 5-9 years had a greater reduction in child-reported problem severity symptoms (p = 0.001) compared to children in other age groups**, however the effect size was small (partial eta = 0.044).

Differences in symptom outcomes by assigned primary protocol area yielded only one significant outcome. **Children only assigned the trauma primary protocol area had a greater reduction in child-reported trauma symptoms** (*p*=0.02), however the effect was small (partial eta = 0.049)**.**

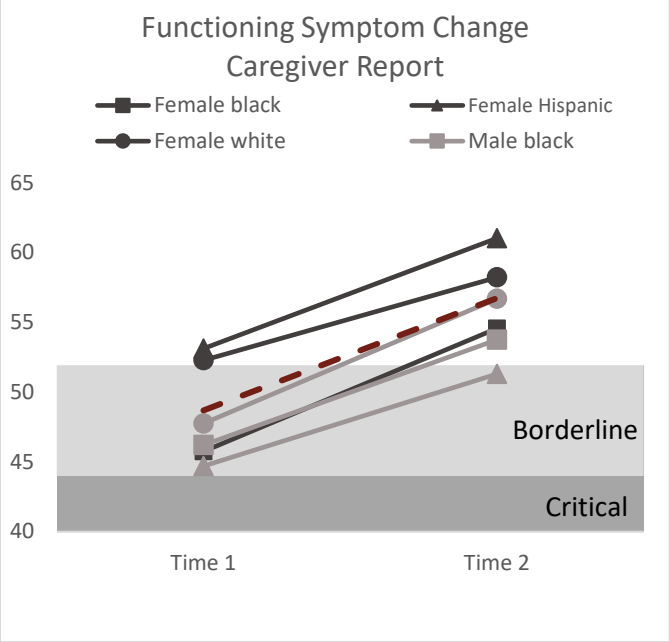
Charts 6 and 7. Problem Severity Symptom Outcomes by Race and Sex

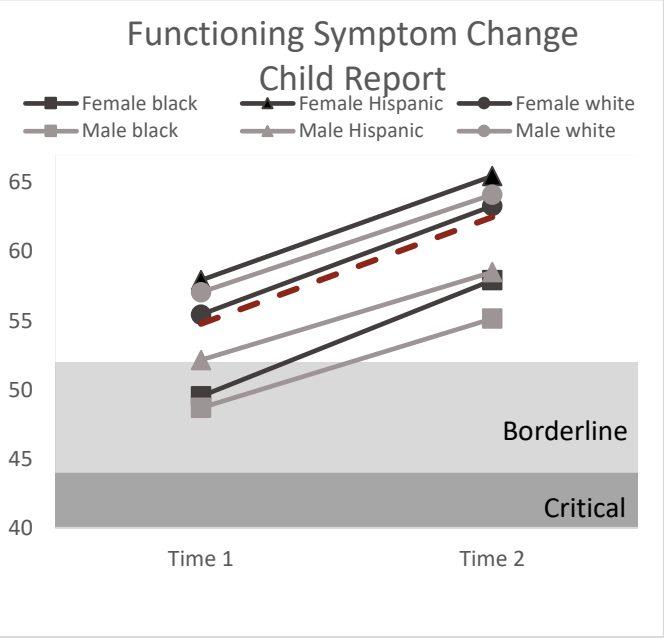




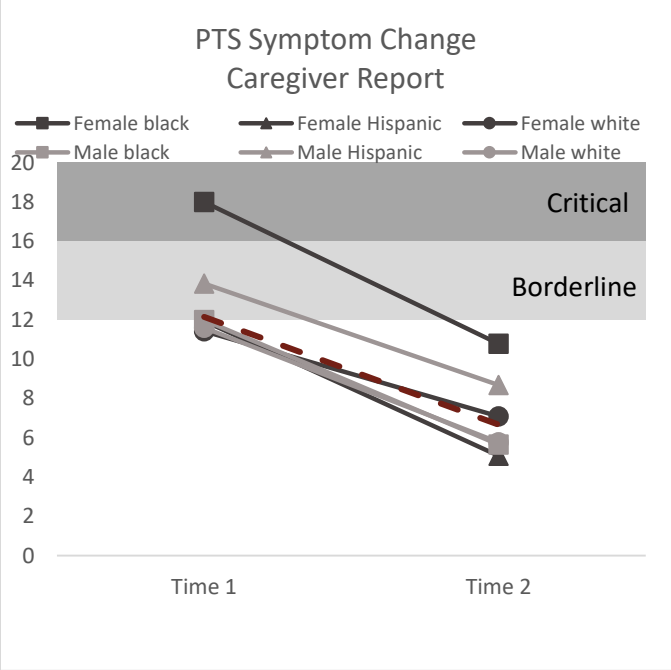
**Dotted line is mean for all children.

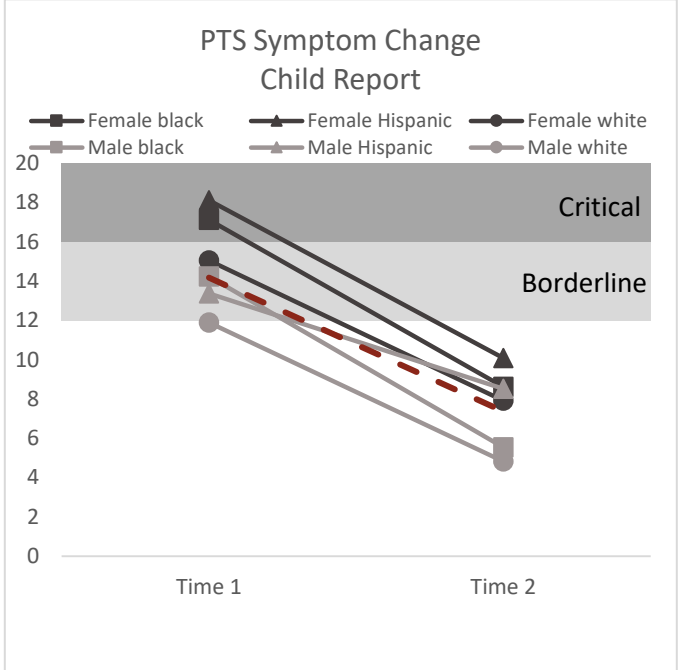
Charts 8 and 9. Functioning Symptom Outcomes by Race and Sex





Charts 10 and 11. Post-Traumatic Stress Symptom Change by Race and Sex





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Recommendations

The following recommendations are made for continued support of the MATCH statewide network:

- Continue to integrate and align MATCH with other EBTs, as well as with outpatient services more broadly, in terms of data reporting, consultation, and support in order to improve efficiencies.
- Provide more on-going training opportunities to increase capacity and/or fill clinician positions lost to attrition for all clinicians statewide.
- Coordinate the process by which clinicians at existing agencies, new agencies and clinicians in clinical settings other than outpatient clinics such as private practice, and school-based clinics, to become trained in MATCH, receive consultation, and become MATCH certified.
- Expand training opportunities and consultation for clinicians to include advanced training and/ or booster training.
- Develop a web-based training or learning course with online materials as an additional resource to support the delivery of MATCH.
- Expand on reporting functions available to OPCCs in EBP Tracker for feedback and agency performance.
- Improve consultation provided to agencies by developing the capacity to integrate multiple evidence based models and identify organizational strategies, reports and QI activities that are relevant to the multiple evidence based treatments provided in the OPCCs.
- Develop and implement performance- based sustainability funding for sustaining high-quality and effective services for MATCH (and other EBTs).
- Continue to provide ongoing consultation and quality improvement to sustain and expand the network of MATCH providers in the state.
- Develop in-state expertise for clinicians who can train and provide clinical consultation in MATCH at their agency and within the state network of MATCH providers (e.g. Associate Consultants and a train-the-trainer program)
- Utilize EBP Tracker and PIE reports to monitor case data entry as well as receive more timely feedback on agency performance.
- Develop QI benchmarks using EBP Tracker and PIE data that will focus on child outcomes, symptom reduction and successful completion of treatment for MATCH and outpatient services that are consistent with other EBTs.
- Support additional data analysis and reporting of PIE data (including with EBP Tracker data) to identify sub-populations of children for whom MATCH and other EBTs are and are not working, to examine disparities in service utilization and outcomes, and to inform future training or EBT implementation activities.
- Create and distribute monthly, quarterly and annual reports for MATCH, other EBTs and outpatient services to measure agency performance.
- Develop sustainability plans beyond the learning collaborative and provide clinical staff the needed resources for implementation of multiple evidence based treatment models

- Communicate the benefits of and availability of MATCH and other EBTs to those referring children for behavioral health services in Connecticut (e.g. child welfare, juvenile probation officers, family advocates, medical providers, schools)

Appendix A: Child Demographics

	Percentage of Children Served
Sex	N=1150
Male	48.3%
Female	51.5%
'Other'	0.1%
Intersex	0.1%
Age At Intake	N=1150
Under 3	0.3%
3 – 9 years	36.6%
10 – 12 years	29.1%
13 – 18 years	34.0%
Race	N=1097
Asian	0.5%
Black/African American	11.2%
Hispanic/Latino	32.0%
Multiracial (non-Hispanic/Latino)	2.1%
Native Hawaiian or Pacific Islander	0.1%
'Other' race	0.9%
Unreported/Unknown	0.2%
White	53.0%
Primary Language (Child)	N=593
English	95.3%
Spanish	4.6%
N/A or Unknown	0.2%
Primary Language (CG)	N=1149
English	87.5%
Spanish	11.1%
N/A or Unknown	1.0%
'Other' language	0.4%
DCF or JJ involvement	N=885, N=852
DCF	19.8%
JJ	2.0%

Appendix B: Methods

Clinician data were collected via a pre-post survey. This survey includes questions about clinician: demographics, theoretical orientation, supervision, caseload size, experience with EBTs, attitudes towards EBTs, satisfaction with MATCH treatment model, and their experience with the learning collaborative. This survey included the following validated measures:

- Experience with Evidence-Based Treatments Survey
- Evidence Based Practices Attitudes Scale (EBPAS)
- Implementation Outcome Scale
- Therapist Background Questionnaire
- Therapist Satisfaction Index

Data on children were collected from the online data system EBT Tracker. Data were pulled for this report on July 16, 2018. It includes children who received at least one visit of MATCH at any point from October 1, 2015 to June 30, 2018 unless otherwise specified.

Table 3 below displays the measurement collection schedule during MATCH treatment. Descriptions for each measure are below the table.

Table 3. MATCH Measurement Schedule

Measure	Intake	Monthly	Periodic	Discharge
Clinician Forms				
Primary Protocol Area	X[1]			
Facesheet (Child Demographics)	X			X
Monthly Session Form		X		
Child & Caregiver Measures				
Trauma History Screen	X			
Top Problems Assessment	X	X		X
Ohio Problem Severity Scale	X	X[2]		X
Ohio Functioning Scale	X		X	X
CPSS – IV	X		X	X
Youth Service Satisfaction for Families			X	X

Facesheets

Includes child demographic data, EBT treatment dates and questions about the child's school, legal, and medical status in the past 3 months. The discharge facesheet includes reason the child was discharged from treatment.

[1] At minimum, clinicians assign a primary protocol area at intake. They can change the primary protocol area at any point during treatment.

[2] Monthly collection of the Ohio Problem Severity scale started September 2016 and ended July 2018. Prior to, and after that time period collection was on a periodic (3 month) schedule.

Trauma History Screen
19 item measure that assesses a child's exposure to potentially traumatic events, and how often those events occurred. Child and caregiver versions are completed.

Ohio Problem Severity Scale
20-item measure that assesses problems a child is experiencing. The measure has two subscales: internalizing and externalizing. Child and caregiver versions are completed.

Ohio Functioning Scale
20-item measure that assesses the degree a child's problems affect daily activities. Child and caregiver versions are completed.

Top Problems Assessment (TPA)
1-3 item measure with child and caregiver versions. At the beginning of treatment, the child and caregiver develop separate issues for the child to work on during treatment. The child and caregiver rate how problematic those issues are throughout treatment.

Child PTSD Symptom Scale – Version 4 (CPSS- IV)
17 item measure that assesses child PTSD symptoms. The measure has three subscales: re-experiencing, avoidance, and arousal. Child and caregiver versions are completed.

Youth Service Satisfaction for Families (YSSF)
26 item measure completed by a caregiver. It assesses caregiver satisfaction with their child's treatment.

Reliable Change Index

In FY16, CHDI began using the Reliable Change Index (RCI: Jacobson & Traux, 1991) as a metric for reporting outcomes. The approach uses the properties of an assessment measure to calculate an RCI value; when a change score[3] exceeds that value it is considered to be reliable change and not due to chance. The RCI can be used with a measure's clinical cut-offs to identify both reliable and clinically significant changes. The RCI values for the Ohio Problem Severity and Functioning scales were identified in a previous validation report of the measures (TX DMHMR, 2003). The RCI and partial RCI values used in this report are given in Table 4 below.

Table 4. RCI Values

Measure	Full RCI	Partial RCI
Ohio Problem Severity (All Reporters)	11	6
Ohio Functioning (All Reporters)	8	4
CPSS Child Report	11	6
CPSS Caregiver Report	10	5

[3] The change in score

Appendix C: T-Tests

Table 5. Overall Symptom Scores – Child Report

	Time 1 - Mean(SD)	Time 2 - Mean(SD)	df	t	*p*
Problem Severity	22.48(13.88)	13.45(10.32)	336	12.22	0.00
Functioning	55.00(13.06)	62.51(12.07)	306	-10.09	0.00
PTS Symptoms	14.43(10.25)	7.37(8.37)	342	13.40	0.00

Table 6. Post-Traumatic Stress & Problem Severity Subscores – Child Report

		Time 1 - Mean(SD)	Time 2 - Mean(SD)	df	t	*p*
Post-Traumatic Stress	Re-experiencing	3.84(3.46)	1.78(2.48)	342	11.21	0.00
	Arousal	5.59(3.94)	3.08(3.44)	342	12.38	0.00
	Avoidance	5.00(4.52)	2.51(3.57)	342	10.21	0.00
Problem Severity	Externalizing	10.00(7.21)	6.57(5.51)	336	9.25	0.00
	Internalizing	11.78(8.80)	6.48(6.44)	336	11.37	0.00

Table 7. Overall Symptom Scores – Caregiver Report

	Time 1 - Mean(SD)	Time 2 - Mean(SD)	df	t	*p*
Problem Severity	24.60(13.71)	15.78(12.02)	567	17.90	0.00
Functioning	49.33(13.98)	56.73(14.46)	501	-13.43	0.00
PTS Symptoms	12.15(9.23)	6.67(7.36)	361	11.53	0.00

Table 8. Post-Traumatic Stress & Problem Severity Subscores – Caregiver Report

		Time 1 - Mean(SD)	Time 2 - Mean(SD)	df	t	*p*
Post-Traumatic Stress	Re-experiencing	3.21(3.29)	1.71(2.50)	361	8.96	0.00
	Arousal	5.12(3.74)	2.95(3.09)	361	10.96	0.00
	Avoidance	3.82(4.00)	2.02(3.06)	361	8.44	0.00
Problem Severity	Externalizing	13.05(8.55)	8.80(7.33)	567	1.35	0.00
	Internalizing	10.81(7.73)	6.54(6.39)	567	14.76	0.00

Appendix D: MATCH Outcomes by Provider

Table 9. MATCH Outcomes by Provider

Provider Name	# of Clinicians (w/ cases)	# of Children	# Discharged	% Successfully Discharged*	% Attending 4 or more sessions*	Child Report			Caregiver Report		
						CPSS Symptom Reduction*	Ohio Problem Severity Symptom Reduction*	Ohio Increase in Functioning Ability*	CPSS Symptom Reduction*	Ohio Problem Severity Symptom Reduction*	Ohio Increase in Functioning Ability*
MATCH RCT Agencies:											
Clifford Beers Clinic**	5	21	15	40%	80%	-24%	18%	1%	32%	9%	1%
The Village for Families & Children, Inc.	9	64	34	12%	65%	68%	-2%	-12%	86%	22%	35%
Wellmore Behavioral Health	7	65	39	46%	62%	9%	79%	23%	27%	53%	16%
Wheeler Clinic**	9	26	14	43%	86%	42%	51%	8%	45%	38%	34%
Total	**30**	**176**	102	33%	69%	22%	31%	7%	37%	36%	22%
Match Learning Collaborative Agencies: 2015- 2016											
Bridges, A Community Support System	6	95	77	44%	88%	48%	41%	12%	46%	28%	18%
Community Health Resources	10	102	92	46%	68%	59%	45%	23%	60%	45%	28%
Community Mental Health Affiliates, Inc.	7	69	59	53%	80%	17%	46%	8%	54%	30%	16%
Family & Children's Aid, Inc.**	4	18	18	28%	83%	31%	10%	-5%	31%	23%	6%
Integrated Wellness Group LLC**	7	45	45	51%	82%	63%	40%	12%	46%	43%	17%
United Community and Family Services	12	165	131	53%	93%	48%	41%	11%	42%	30%	12%
Total	**46**	**494**	422	49%	83%	45%	42%	13%	47%	34%	17%

*Data reported only include cases closed within the time period (n=842).

**Family & Children's Aid and Integrated Wellness Group ended MATCH in fall 2017.

Provider Name	# of Clinicians (w/ cases)	# of Children	# Discharged	% Successfully Discharged*	% Attending 4 or more sessions*	Child Report			Caregiver Report		
						CPSS Symptom Reduction *	Ohio Problem Severity Symptom Reduction*	Ohio Increase in Functioning Ability*	CPSS Symptom Reduction*	Ohio Problem Severity Symptom Reduction*	Ohio Increase in Functioning Ability*
Match Learning Collaborative Agencies: 2016-2017											
Child and Family Agency of Southeastern Connecticut, Inc.	8	105	76	50%	83%	70%	52%	24%	44%	36%	16%
The Child and Family Guidance Center	5	20	19	32%	89%	34%	39%	6%	51%	36%	9%
Connecticut Junior Republic	6	34	30	60%	93%	57%	57%	15%	55%	43%	27%
United Services, Inc.	6	110	91	63%	92%	48%	39%	10%	29%	34%	10%
Yale Child Study Center	7	50	43	44%	95%	14%	38%	10%	13%	35%	17%
Total	**32**	**319**	259	53%	90%	55%	47%	15%	38%	36%	15%
Match Learning Collaborative Agencies: 2017-2018											
Charlotte Hungerford Hospital	6	38	13	23%	62%	69%	5%	56%	49%	42%	41%
Community Child Guidance Clinic	4	15	7	43%	71%	49%	-31%	-18%		34%	2%
Cornell Scott Hill Health Center	8	54	12	50%	100%	53%	-57%	17%	100%		16%
Parent Child Resource Center	5	21	9	44%	78%	76%	7%	25%	49%	41%	11%
The Child Guidance Clinic for Central CT	4	33	18	28%	78%	73%	30%	20%	85%	39%	16%
Total	**27**	**161**	59	36%	78%	65%	11%	22%	64%	41%	14%
State Total for all MATCH agencies	**135**	**1150**	**842**	**47%**	**83%**	**48%**	**42%**	**14%**	**45%**	**36%**	**17%**

*Data reported only include cases closed within the time period (n=842).