Appendices

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Appendices

Appendix A: Child First

Appendix A: Child First

Child First is a national, evidence-based two-generation model that works with young children and families, providing intensive, home-based services.

Child First is delivered by a two-person team consisting of a Master's prepared mental health clinician, with experience in early childhood development, and a family support partner who works with the entire family unit on the sources of stress that impact their family and to connect them with resources. The program is unique because it combines two complementary approaches to healing from trauma and adversity: it directly decreases the stressors experienced by the family by connecting them to needed services and supports, and it also facilitates a nurturing, responsive parent-child relationship. Research has demonstrated that this approach protects the young developing brain and metabolic systems from the damaging effects of high stress environments such as poverty, homelessness, domestic violence, and trauma.

Child First works with parents and young children together in their homes because that provides the best opportunity to strengthen families. In Colorado, Child First programming, as delivered by local affiliate agencies, is coordinated and supported by a Colorado-based intermediary agency, Invest in Kids (IIK).

PROGRAM SELECTION AND OUTCOMES

The three overarching domains for Child First in Colorado are:

- Child Well-Being: Behavioral and emotional functioning
- Adult well-being: Family functioning
- Adult well-being: Parent/caregiver mental or emotional health

Child Well-Being: Behavioral and emotional functioning

Colorado will be targeting and tracking decreased externalizing behaviors in this domain. This outcome is measured by providers using the Brief Infant-Toddler Social & Emotional Assessment (BITSEA), which is administered within the first 30 days, at 6 months, and at the end of the designated age range (35 months). Providers have the option of administering the more comprehensive Infant-Toddler Social & Emotional Assessment (ITSEA) as well. Statistically significant effect sizes were found in Clearinghouse "highly rated" studies, as measured by the ITSEA.[1]

This outcome specifically links back to Colorado's candidacy definition by targeting parents' inability, or need for additional support, to address serious needs of a child/youth or related to the child/youth's behavior or physical or intellectual disability.

Adult Well-Being: Family Functioning

Colorado will be targeting and tracking parenting stress in this domain. This outcome is measured by providers using the Parenting Stress Index-4th Edition Short Form (PSI-4-SF) at intake, 6 months, and at the conclusion of services. Statistically significant effect sizes were found in Clearinghouse "highly rated" studies, as measured by the PSI Total Score, Difficult Child, Parent-Child Dysfunction and Parent Distress.[2]

This outcome targeted through Child First specifically links back to Colorado's candidacy definition by addressing parents' lack of

1 Lowell, D. I., Carter, A. S., Godoy, L., Paulicin, B., & Briggs-Gowan, M. J. (2011). A randomized controlled trial of Child FIRST: A comprehensive home-based intervention translating research into early childhood practice. Child Development, 82(1), 193-208. https://doi.org/10.1111/j.1467-8624.2010.01550.x

2 Lowell, D. I., Carter, A. S., Godoy, L., Paulicin, B., & Briggs-Gowan, M. J. (2011). A randomized controlled trial of Child FIRST: A comprehensive home-based intervention translating research into early childhood practice. Child Development, 82(1), 193-208. https://doi.org/10.1111/j.1467-8624.2010.01550.x

parenting skills and limited capacity or willingness to function in parenting roles.

Adult Well-Being: Parent/caregiver mental or emotional health

Colorado will be targeting and tracking parent/caregiver depression in this domain. This outcome is measured by providers using the Center for Epidemiology Scale-Depression (CESD-R) at intake, 6 months, and at the conclusion of services. Statistically significant effect sizes were found in Clearinghouse "highly rated" studies, as measured by the CESD-R.[3]

This outcome targeted through Child First specifically links back to Colorado's candidacy definition by targeting parent/caregiver mental illness.

SERVICE DESCRIPTION AND OVERSIGHT

a. Implementation Manual:

Lowell, D., Parilla, R., Soliman, S., & DiBella-Farber, K. (2019). Child First training manual. Child First, Inc., in conjunction with Lowell, D., Parilla, R., Quieroga, S., Theriault, A., & Davino, A. (2020). Child First toolkit. Child First, Inc. Supporting materials from Child First National.

Implementation of Child First

The Child First National Service Office (NSO) along with IIK, follow an extensive protocol to launch and sustain Child First affiliate agencies. Components of the protocol are as follows:

Learning Collaborative

Child First uses the Learning Collaborative methodology for start-up training at agencies new to Child First, or for major expansion of capacity. The training is provided by the Child First Clinical Faculty and is a 6-8 month process that brings together staff from multiple new affiliate sites in a single location to learn together. This includes current members of the National Service Office Clinical Training Leadership Team, Child First Clinical Faculty (who are guest presenters), and Colorado's Statewide Program Director (an IIK employee). The components of the Child First Learning Collaborative include:

Child First Affiliate Site Clinical Supervisor Training

This training is designed to help new Child First Clinical Supervisors learn the skills necessary to lead a Child First affiliate site. Training includes Fundamentals of the Child First model and underlying theory of change; roles of the Statewide Program Director and Site Clinical Supervisor; reflective clinical supervision; use of video in intervention and supervision; implementation of distance learning with on-site discussions, activities and observations; the referral process and prioritization; accessing community services; staff safety within the community; and the development of the Child First Community Advisory Board.

Learning Sessions

i. Learning Session 1: This is a 2-day training designed for new Child First providers to learn the basic components of the model, gain foundational knowledge around toxic stress and Adverse Childhood Experiences (ACEs), understand the importance of early relationships, and understand how Child First is integrated into the local early childhood system of care. It also provides training in the use of distance learning tools.

ii. Learning Session 2: This is an intensive 2-day session that follows a 3-week period of online learning (see Online Section 1 below) in which the staff learn fundamental content. This is a highly interactive training that includes attachment theory and the relationship-based, psychodynamic approach used in infant- and child-parent psychotherapy. It covers the use of video in intervention with families, therapeutic and interactive play, executive functioning, mental health consultation in early care and education, understanding the strengths

3 Lowell, D. I., Carter, A. S., Godoy, L., Paulicin, B., & Briggs-Gowan, M. J. (2011). A randomized controlled trial of Child FIRST: A comprehensive home-based intervention translating research into early childhood practice. Child Development, 82(1), 193-208. https://doi.org/10.1111/j.1467-8624.2010.01550.x

and vulnerabilities of families, and the development of the formulation and treatment plan. It also includes working with caregivers affected by depression, substance abuse, and interpersonal violence, with strategies to help them with emotional regulation.

iii. Learning Sessions 3 and 4: Reinforcement of basic model tenets and procedures, plus additional technical and theoretical didactic and experiential sessions constitute the core of these sessions.

Child-Parent Psychotherapy

Child-Parent Psychotherapy (CPP) is taught by a certified CPP trainer. There are three sessions (the first lasting four days and two "boosters" lasting two days each) which are embedded within a Learning Collaborative model of training over a 12-month period. The first day of the first session is provided for all staff and the subsequent training is for Clinicians and Clinical Supervisors only. The training also includes 18 months of phone consultation with the CPP trainer.

Distance Learning

Child First has developed a blended training model that incorporates distance learning using web-based technology between on-site Child First training Learning Sessions. During each Online Training Period, staff will utilize narrated powerpoints, videos, guided discussions, observations, exercises, activities, process notes and readings.

The Online Training Periods occur between Child First training Learning Sessions. These provide foundational knowledge that prepares all staff for the subsequent Learning Session and for the direct work with children and families. All modules are able to be reviewed at any future time to reinforce learning or when the topic is especially relevant to a specific family.

i. Online Training Period 1 is completed between Learning Sessions 1 and 2. It covers the Child First process, the roles of the Mental Health Clinician and Family Support Partner, infant and early childhood development and normal developmental challenges, the psychological transition into parenthood, attachment, executive functioning, psycho-social risk and protective factors, and the Child First Assessment Protocol.

ii. Online Training Period 2 is completed between Learning Sessions 2 and 3. Training Period 2 will be covered immediately after Learning Session 2, prior to beginning work with families. It includes the Child First Fidelity Framework, quality enhancement, and safety for both staff and family.

Child First Reflective Clinical Consultation and Technical Assistance

Reflective, Clinical, Site-based Consultation: Each new Child First affiliate site receives reflective, clinical consultation by the Statewide Program Director weekly for 6 months and then biweekly for 6 months. After 12 months, the affiliate Clinical Supervisor assumes full responsibility for the ongoing group reflective supervision at their site. They will continue to receive biweekly individual consultation from the Statewide Program Director.

Clinical Supervisors' Network Meeting

All Clinical Supervisors meet on a monthly basis for a combination of clinical consultation around their own cases and the reflective supervisory process, and administrative consultation around the Child First implementation process. This is an opportunity for the Clinical Supervisors to share both their challenges and successes with their colleagues, in order to facilitate peer learning and quality enhancement. This meeting is facilitated by the Statewide Program Director.

Staff Accelerated Training (STAT)

The STAT program was developed to provide a comprehensive accelerated training curriculum for new staff of existing Child First agencies. With the support of experienced Clinical Supervisors and team partners, staff can access four trainings with the critical elements of each component of the Child First model. Using a combination of didactic and experiential activities, video review and case examples, staff acquire core knowledge in four distinct phases that mirror the Learning Session content, but are

delivered in 1-2 day sessions over a period of 4 consecutive months.[4]

c. Target Population in Colorado

In Colorado, Child First serves a broad array of families with children from the prenatal stages up to the child's sixth birthday at enrollment. Specifically, the programming is designed for children who have experienced trauma, have challenging behaviors, learning problems, are living with chronic stress, and are in need of mental health support. Delinquent/justice-involved youth who are pregnant or are young parents may also be eligible if they meet the other eligibility criteria.

Child First is also designed for families whose caregivers are managing mental illness, substance use, incarceration, intimate partner violence or housing instability. Families referred to Child First are at risk of becoming, or already have been, involved in the child welfare system.

d. Sites in Colorado

Child First is currently available in the following counties: Alamosa, Conejos, Costilla, Mineral, Rio Grande, Saguache, Douglas, Boulder, Broomfield, Jefferson, El Paso, Adams, Arapahoe. Programming is provided through the following organizations:

1. San Luis Valley Behavioral Health Group
2. Aurora Mental Health Center
3. Tennyson Center for Children
4. Savio House

e. Fidelity Monitoring

IIK is the intermediary agency for the provision of Child First services across the state of Colorado. All Child First affiliate sites report to the NSO on two types of data:

1. Process data or metrics
2. Outcome data

The Child First NSO has a tool called the "Child First Benchmarks (2018 version)", which consists of 10 bencharks encompassing both process and outcome data. This data is used for ongoing assessment of implementation at the affiliate sites and for Child First Accreditation.

Monthly Metrics:

- The Child First NSO has established Metric Benchmarks, which include: the number of families served, the number of visits/week, the number of missed appointments, ages of children, assessments completed, connection to community resources, early care mental health observations, supervision hours, length of service, goal completion, and prioritization of waitlist.
- Metric reports are made available to each Child First site on a monthly basis. Colorado's Statewide Program Director reviews these reports with each site to promote problem solving and the development of program-based quality enhancement strategies. Successful and innovative strategies are frequently shared with the Child First Network.

Assessment Data Collection and Analysis:

- All Child First sites must collect baseline, 6 month, and outcome assessment data according to the Child First Assessment Protocol. All assessment data must be entered into the Child First cross-site, web-based data collection system (or another system approved by the Child First NSO). Assessment data must be entered within one week of collection to promote use of scores in formulating treatment.
- Outcome reports are provided to all Child First affiliate sites (which include both site-level and team-level data) on a quarterly basis.
- Analysis of data by the Child First NSO provides opportunities for identifying challenges and problem solving, with enhanced training

4 Child First: Model Structure - Affiliate Agencies, Child First National Program Office, 9 Aug. 2018, www.childfirst.org/about-us/model-structure.

provided by the NSO, if needed. Effectiveness of variations in implementation across program sites are explored, leading to shared quality improvement strategies across the Child First Network.[5]

CDHS will coordinate with IIK to receive relevant fidelity data which will then be translated into the standardized statewide metrics of fidelity and moved into the Colorado Fidelity Monitoring Platform. See the Colorado 5-year Prevention Plan for more details on the Platform.

CONTINUOUS QUALITY IMPROVEMENT (CQI)

As part of the CQI process, Child First sites collect and monitor data such as:

- Child Functioning in areas of language, cognition, gross motor, fine motor, and personal-social skills.
- Child's social-emotional development
- Child's emotional/ behavioral competencies/ challenges.
- Traumatic events in the life of the child.
- Caregiver-Child relationships.
- Psycho-social risk factors for the child & family.
- Stress that parents experience from the parenting role.
- Parental depressive symptoms
- Traumatic events in the life of the parent.
- Parental PTSD symptoms.
- Conditions of the home environment.
- Health status of the child and family.
- Service Needs for the family.

For further details, please see the Child First assessment protocol.

CQI data is collected through the Child First Comprehensive Clinical Record and the Assessment Scoring Database, which is operated by the National Service Office. This data is shared with the Child First Affiliate Agencies on a quarterly basis.

A Quality Enhancement (QE) Team from the NSO works with IIK as the intermediary agency to provide CQI guidance to affiliate agencies. The QE team is responsible for working with IIK to ensure timely and accurate data collection and entry and to provide monthly metric and quarterly assessment outcome reports to all Child First sites.

Reflective Clinical Consultation: Reflective clinical consultation is provided to each affiliate agency site on an ongoing basis. IIK's Child First Program Director meets with each site's Clinical Supervisor every other week to discuss issues around specific clinical challenges, clinical fidelity and staff supervision.

Continuous Quality Improvement: IIK's Child First Program Director consults with each site on a monthly basis so that the staff understand the significance of their data and create strategies to continuously improve implementation and outcomes.

Performance Improvement Plans: If the monthly data review identifies difficulties in reaching appropriate benchmarks or lack of fidelity to the clinical model at a program site, a full meeting with the QE Team, IIK's Child First Program Director, the site's Clinical Supervisor and Senior Leader is held. At this time, a Performance Improvement Plan is created by the QE Team in collaboration with IIK and the affiliate agency, with specific goals and timelines. Progress in meeting the goals of this plan is monitored on a monthly basis. Success of this process is a critical element in the accreditation process.

Technical assistance: IIK's Child First Program Director conducts group meetings and conference calls with Child First Network Senior Leaders. Technical assistance from the Child First NSO may be requested at any time.[6]

5 Child First: Data & Quality Enhancement, Child First National Program Office, 19 Feb. 2016, www.childfirst.org/our-work/data-and-quality-enhancement.

6 Child First: Data & Quality Enhancement, Child First National Program Office, 19 Feb. 2016, www.childfirst.org/our-work/

ELIGIBILITY FOR FEDERAL CLAIMING

For Family First IV-E claiming purposes, only children and families in an open child welfare case are eligible for federal reimbursement to the Colorado's Children's Trust Fund.

RESEARCH AND ONGOING RIGOROUS EVALUATION

Existing Research

Child First is rated "Supported" in the Title IV-E Prevention Services Clearinghouse. In 2001, Child First received a Starting Early Starting Smart federal grant from the Center for Substance Abuse Prevention (CSAP) of the Substance Abuse and Mental Health Services Administration (SAMHSA) of the U.S. Department of Health and Human Services (HHS), to support a randomized controlled trial of the Child First model. This is one of the few randomized controlled trials to test the effectiveness of an integrated home-based, psychotherapeutic, family intervention embedded in an early childhood system of care with young, vulnerable children from high risk families. Funding for data analysis was provided by the Robert Wood Johnson Foundation.

A summary of the results of this trial can be found in an article published in the January/February 2011 issue of the journal Child Development. There is an addendum to the initial publication that includes follow-up analyses, which can be found at the Child First website.[7]

Plans for Ongoing Rigorous Evaluation

Pre-pandemic and publication of the Title IV-E Prevention Services Clearinghouse Handbook, MDRC launched a randomized controlled trial of Child First in two states. The trial is currently paused and random assignment will not restart until at least 80 percent of the Child First services are being delivered in home (i.e., not a telehealth adaptation). This pandemic-induced pause is providing time for the analysis plan to be revised for alignment to Title IV-E Clearinghouse Standards and the goal of determining if Child First can move from a "supported" to a "well-supported" practice.

Colorado plans to onboard to this randomized trial, and a rigorous evaluation strategy was finalized in January 2022. Randomization is expected to begin once Colorado sites have demonstrated delivery of Child First with fidelity (i.e., adherence to the model). The rigorous evaluation strategy can be found on page 9.

CHILD SAFETY AND INDIVIDUAL PREVENTION PLANS

As described in Colorado's five-year prevention plan, child safety is an important component of the implementation plan. With all open child welfare cases, the county department is responsible for ongoing safety monitoring.

In all Colorado Child First affiliate sites, child safety is assessed at intake, at six months and again at termination of the program. This may vary slightly depending on how long the family is engaged in the program. Assessment protocols are in place for all Child First programs that include key components to help staff monitor child safety, such as:

i. Gathering information from the parents/caregivers through discussion
ii. Observation of the child in interaction with caregiver(s) and other significant others
iii. Interactive play with the clinician and child
iv. Observations in the early care or school setting
v. Developmental observations and assessments
vi. Gathering health information
vii. Gathering important information from other important service providers in the life of the child and family

Rigorous assessment protocols are also in place for all Child First programs, which ensure child safety is being monitored throughout the child and family's involvement in the program. The Child First Toolkit contains details on assessment tools and schedules

data-and-quality-enhancement.

7 Child First: Research, Child First National Program Office, 18 Dec. 2020, www.childfirst.org/our-impact/research.

for assessments based on child development and age.[8]

WORKFORCE SUPPORT & TRAINING

Child First training is administered through a Learning Collaborative model, as well as via distance learning. Clinical Supervisors at each Child First site are available to support staff and IIK's Child First Program Director is available for additional support when needed. Full details of the training process can be found in the Implementation of Child First section of this document.

Through the intensive training process, Child First site staff are trained to identify individual child and family needs using the SNIFF (Service Needs Inventory for Families) tool. This tool allows families to guide the identification of services that would be most appropriate for them and their individual needs. Families are asked to complete the SNIFF on their own or offered support via an interview/ survey style discussion with their care coordinator/ family resource partner. The SNIFF is completed on a quarterly basis to ensure that newly identified needs are included in the families' plan of care.

IIK and all Child First site staff will be held to the trauma-informed care prevention service provider requirements designed by the Colorado Department of Human Services and included in Colorado's 5-year Prevention Plan. In addition to meeting those requirements, the Child First model was specifically developed for populations who have experienced trauma and adversity. Trauma-informed care and service delivery is embedded in all training curriculums for clinicians and for the family support partner. Specific trainings on trauma are available, and all clinicians who work in Child First are trained in Child-Parent Psychotherapy. The Child First NSO also received a grant to be part of the National Child Traumatic Stress Network, a national trauma training center around early childhood mental health and trauma.

PREVENTION CASELOADS

The intensity of family needs and distance traveled are important factors that go into caseload size determinations. There are requirements under the Child First model that the clinical staff complete a specific number of home visits each week (the goal is 12 home visits per week). Based on that requirement, site staff in Colorado average a caseload of one to ten families per team. To determine appropriate caseload size, the site Clinical Supervisor, in coordination with IIK, considers factors such as:

i. Family need

ii. Distance of travel from site office to family home

iii. Staff capacity threshold.

8 Child First Toolkit. Child First National Program Office, 2013.

Randomized Control Trial of Child First
Pre-Analysis Plan

Revised January 4th, 2022

Note: The current study builds off an existing RCT which began enrolling families and which was halted in March 2020 due to the COVID-19 pandemic. The study will re-start in summer 2022 and will proceed with minor revisions to the original pre-analysis plan, reflected here. Sites will begin randomization once they have demonstrated fidelity to the Child First model and generated a waitlist.

I. Treatment

In 2015, there were over 700,000 children in the U.S. who were abused and/or neglected, and 3.4 million families were involved in some way with child welfare systems. About 15 to 20 percent of children nationally are estimated to have significant social-emotional or behavioral problems. According to the Centers for Disease Control, 15% of young children currently experience delays or disabilities in critical skills which increase the likelihood of experiencing academic problems when they begin school. Rates of abuse, neglect, and social-emotional/behavioral problems are elevated for low-income children. Given linkages between early behavioral problems and mental health problems in adulthood, and the high societal cost of parental depression and involvement in the child welfare system, there is a strong policy interest in supporting scaled interventions that can effectively reduce the prevalence of these issues during early childhood.

One intervention that seeks to accomplish these goals is Child First, a comprehensive, home-based, therapeutic intervention targeting multi-risk young children and families, embedded in a coordinated system of care. The current study aims to estimate the impacts of the Child First treatment on outcomes for children, parents, and families.

The Child First program has two components that act synergistically:

1. a system of care approach to provide comprehensive, integrated services and supports
2. a relationship-based approach, rooted in parent-child psychotherapy, to promote nurturing, responsive parent-child interactions as well as positive social-emotional and cognitive development.

The program is implemented in the field by teams of staff made up of mental health clinicians and care coordinators, supervised by clinical directors. Clinicians have master's degrees in developmental/mental health and care coordinators have associate's or bachelor's degrees. Clinical directors have at least a master's degree and experience in managing clinicians and providing mental health services to clients. Staff reflect the ethnic diversity of the families enrolled in the Child First program and speak the language of the family's choosing. Engagement and building trust are fundamental goals of the intervention.

Families with children ages 6 months to 6 years old are identified as being eligible for Child First services if the target child has shown evidence of developmental delays, or a parent or caregiver in the family has screened high for psycho-social risk. Therapeutic services are delivered predominantly in the home, which provides an opportunity to respond to identified

problems as they arise in their natural setting and eliminates barriers of transportation, child care, and stigma. The clinician and care coordinator partner with the parent(s) in a comprehensive assessment of the child and family, identifying and involving all other service providers. The result is a family driven plan of broad, integrated supports and services for all family members, which reflect family priorities, strengths, culture, and needs.

Clinicians take primary responsibility for therapeutic assessment and intervention with the target child and parent. The care coordinator, with expertise in community resources, facilitates family engagement in community services. Weekly visits are 45–90 minutes each and made jointly or individually with the clinical and/or care coordinator, as needed by the family. A major goal of the therapeutic relationship is to help the parent(s) reflect on his or her child's experiences and the motivations and feelings underlying the child's behavior and, in turn, on their own feelings and responses to the behavior. This often involves exploring connections between the parent's past and current relationships and feelings toward the child. Together, parents and clinicians explore alternate interpretations of the meaning of the child's behavior and develop more effective responses. In addition, educational materials for the child are shared by the Child First staff with the family.

The overall goal of the Child First intervention is to help parents internalize a process for future responses to child communications rather than teaching specific strategies for problem behaviors. Additionally, clinicians are trained to reinforce positive maternal behaviors directed to the child and child behaviors that are indicative of the importance of the mother to the child. A central goal is to facilitate mutual delight through reciprocal parent–child play, as well as positive interactions through reading, play, and family routines. Play is also used to help the child master and rework difficult challenges and to promote language development.

The Child First Assessment and Intervention Manual is used to teach and guide the intervention. The Assessment and Intervention Fidelity Checklist focus on the core elements of the intervention and include: observation of the child's emotional, cognitive, and physical development; observation of parent–child interaction and play; psychoeducation including developmental stages, expectations, and meaning of typical behaviors; reflective functioning to understand the child's feelings and meaning of the child's unique and challenging behaviors; psychodynamic understanding of the mother's history, feelings, and experience of the child; alternate perspectives of child behavior and new parental responses; and positive reinforcement of both parents' and children's strengths to promote parental self-esteem. A parent–child interaction rubric helps to guide observations of parent–child interactions.

II. Study Design

The purpose of the study is to estimate the impacts of the scaled Child First program on child, parent, and family outcomes 15- and 36-months after study enrollment and random assignment. The study design is a family-level randomized controlled trial in which 600 families split across Connecticut, eastern North Carolina, and Colorado will be randomly assigned to either the Child First program or to a Usual Care control group. Following the collection of baseline data, 60% of eligible families will be randomly assigned to receive the Child First treatment and the remaining 40% of families will not receive Child First but will be allowed to access any other services available to them in their community. Follow-up data used to estimate impacts of the program will first be collected 15-months after families enroll in the study. We will use caregiver surveys and administrative records to measure study outcomes. Administrative

data will also be used to estimate impacts of the Child First program on families' involvement in child welfare systems 36-months after study enrollment. The current study builds off the existing RCT infrastructure implemented prior to the start of the COVID-19 pandemic in March 2020. The research team worked with sites to enroll 226 families into the original version of the study between June 2019 and March 2020. The team made the decision to stop random assignment and re-start again after the end of the pandemic due to significant changes to the Child First program model during the pandemic (i.e., a shift to remote services) and the difficulty of obtaining follow-up data in 2020. The current pre-analysis plan builds off that existing study infrastructure but seeks to enroll an additional 600 families in the study with enrollment set to begin in summer 2022. A supplementary, exploratory study described in more detail in Appendix B will examine outcomes for the 226 families who originally enrolled in the Child First RCT prior to the start of the pandemic.

III. Research Questions

This study will examine three primary research questions that correspond to two high priority outcomes for Child First. More specifically, the study will examine the impact of Child First on: 1) parental psychological functioning[1] 15 months post-random assignment; 2) family involvement in child welfare systems 15 months post-random assignment; and 3) family involvement in child welfare systems 36 months post-random assignment (see all primary and secondary outcome measures in Appendix A). We chose these primary outcomes because they represent the domains in which the original study identified sizeable and statistically significant impacts of Child First. We are slightly adjusting the follow-up time period for the parent survey from the original study from 12- to 15-months to ensure that the new study design aligns with the requirements of the Title IV-E Prevention Services Clearinghouse for estimating post-treatment impacts after the end of service receipt. Because Child First does not have a defined length of treatment and families can be discharged from the program between 6 and 14 months post-enrollment, this adjustment ensures that the follow-up time point will align with the requirement that the outcomes be measured after the end of treatment for all families assigned to the Child First condition. These outcomes are considered confirmatory measures and are aligned with the broader goals of the proposed study to replicate earlier findings.

We will also ask a series of secondary research questions to capture a more varied set of outcomes that are of interest to the Child First program developer and are also relevant to policymakers. These analyses will consider impacts of Child First on children's social-emotional outcomes 15 months post-random assignment, family and child emergency room visits and hospitalizations, parental education and employment, parental income, parenting stress, and children's emotional regulation. In another set of secondary analyses, we will test whether effects of Child First vary by: 1) caregiver baseline depression; 2) child behavior problems at baseline; 3) evidence of child welfare involvement at baseline; 4) caregivers' evidence of baseline substance abuse; 5) caregivers' race and ethnicity; and 6) state. These have been identified by the program developer as subgroups whose impact findings would contribute to future targeting and refinement of the program.

IV. Sample

[1] These measures align with the Adult Well-Being, Parent/Caregiver mental or Emotional Health Outcomes listed in the Title IV-E Prevention Services Clearinghouse Handbook of Standards and Procedures, Version 1.0.

The primary locations for the study will be a subset of Child First sites in CT, the Child First site in Wilmington, NC, and two Child First sites located in the Denver, Colorado metro area. The research team is working closely with the Child First national program office to identify sites to participate in the study that: 1) have fully trained teams of staff who are implementing the Child First program with fidelity; 2) are in locations where the control group is unlikely to have access to services similar to Child First; and 3) are able to recruit and serve a sufficient sample to meet study enrollment goals. Following this procedure and after engagement in site recruitment activities through the national office, MDRC will enroll approximately 12 Child First sites into the study. We expect that the bulk of these sites will be those that already participated in the original study before the start of the pandemic. Prior to recruiting families for research activities, participating Child First staff will receive training from the MDRC research team on how to assess study eligibility, ask families for written consent to participate in the study, and collect baseline data on study participants. The sample will be made up of the children (ages 6 months to 6 years at enrollment – as per Child First eligibility guidelines) and their families that: 1) are referred to the Child First sites; 2) screen as eligible for Child First services; 3) screen as eligible for the study (e.g., families in which there is risk of suicide would be ineligible for the study because they would need appropriate services immediately); and 4) provide written consent to participate, and assent for their child to be participate as well. Due to the COVID-19 pandemic, some site staff already received training on these procedures in the spring of 2019. However, all site staff will be retrained completely prior to the launch of random assignment again, in order to ensure that baseline data collection and random assignment are aligned with the team's established practices for generating equivalent groups prior to randomization.

On average, across the three locations, we expect the sample to be largely economically disadvantaged and racially/ethnically diverse. For example, we expect about half of the sample to be Hispanic, a quarter to be Black, and a quarter to be White. Based on current statistics we also assume that about two thirds of the children in the sample will be boys and that about 20% of families in total will speak Spanish as their primary language.

Families and children participating in the study will be followed longitudinally for up to three years (with the possibility of seeking future follow-up if early impacts are detected). Because this is an intent-to-treat study, all families randomly assigned to participate in the RCT will be included in the analytic sample for both the primary and secondary research questions. The treatment status (assignment to Child First vs. Usual Care) that children are assigned at enrollment will be maintained throughout the study.

V. Data Sources

Baseline data. Prior to recruiting families for research activities, participating Child First staff will receive training (and re-training for staff with prior experience working on the study) from the MDRC research team on how to assess study eligibility, ask families for written consent to participate in the study, and collect baseline data on study participants. In addition to the information that the Child First staff already collect when enrolling new families in the program, the study baseline data collection activities will include additional measures on parents and children relevant to the impact analyses. The core goals of collecting baseline data are: 1) to increase the statistical power of the RCT design (as discussed in more detail below); 2) to

accurately describe the study sample at baseline relative to the broader group of families receiving Child First services and to establish baseline equivalence; and 3) to identify subgroups of interest based on information provided prior to random assignment. In choosing baseline and follow-up study measures, the team has built off the prior evidence from the Child First evaluation, as well as a more contemporary understanding of available measures for assessing primary and secondary outcomes. Importantly, Child First staff will collect baseline data before the randomization process begins. As such, staff will not know families' study condition when collecting these data at baseline.

Parent survey collected 15-months post-random assignment. Data used to estimate shorter-term impacts will come from a parent survey collected 15 months post-random assignment. The survey will ask parents to report on their own psychological well-being, depression, parenting stress, economic well-being, involvement in child welfare services, and their child's behaviors and emotional regulation (see full list of measures in Appendix A). All field-based data collectors will be trained and managed by a survey research firm and *will be blind to study condition* when conducting the follow-up survey. All study participants will be asked about their receipt of Child First and other services at the 15-month follow-up to document treatment contrast. However, because collecting this information could reveal information to the assessor/interviewer about the treatment status of the family, these questions about receipt of Child First will be asked after all other assessments and outcome data are collected. There is currently no planned parent survey after the 15-month follow-up. Due to the experimental design of the study we do not foresee encountering any problems with confounding variables when assessing outcomes.

*Administrative records on families' involvement in child welfare systems **15-months** and **36-months** post-random assignment.* Data on families' involvement in child welfare systems will be accessed through requests to state and county agencies. We will access the data retrospectively and then estimate impacts on involvement in child welfare services at two time-points – one shorter-term (15-months post enrollment) and one longer-term (36-months post enrollment). Due to the experimental design of the study we do not foresee encountering any problems with confounding variables when assessing outcomes.

Possible longer-term follow-up. If we find impacts of Child First on 15- month outcomes, we will pursue funding to access additional administrative data, such as Medicaid and school records, to estimate longer-term impacts on parents, families, and children. If we were to collect additional parent survey data in the longer-term, there would be a completely different person who would conduct that survey than the person who did the original 15-month follow-up survey.

Implications of follow-up timing for Title IV-E Prevention Clearinghouse. The current study is designed to ensure that any positive impacts detected in this randomized trial would help to establish Child First as a well-supported program as rated by the federal Title IV-E Prevention Clearinghouse. Child First is already a supported program because it has been evaluated before in one well-conducted randomized controlled trial and detected impacts on at least one outcome within an established domain (involvement in the child welfare system as an indicator of child safety) more than 12-months after the end of service receipt. To be well-supported, it now needs to demonstrate at least one statistically significant impact on a target outcome within one of the clearinghouse's domains (child safety, child permanency, adult well-being, or child well-being). The current design stands to meet this requirement if impacts are detected.

VI. Methods

A family-level RCT will be used to estimate impacts on primary and secondary outcomes. The earlier RCT of Child First demonstrated average impacts on the magnitude of 0.45 standard deviations (SDs) (range .33 - .53) across all examined primary and secondary continuous outcomes, and a 17% percentage point reduction in child welfare system involvement for families who had not previously been involved with the child welfare system. Given research demonstrating that larger-scale replication studies typically find substantially smaller effects than the original trial,[2] we have aimed to power the current study to detect minimum detectable effects (MDEs)[3] of less than 0.20 SDs on continuous outcomes of interest and 10 percentage points on binary outcomes. These MDEs are considered to be of practical and policy significance (Hill et al., 2008).

In doing so, we first calculated MDEs for the primary binary outcome of interest – involvement with the child welfare system since study enrollment. We built off work from Bloom (1995) and based calculations on the following formula:

$$MDE = 1.96 * \sqrt{\frac{\pi(1-\pi)(1-R^2)}{T(1-T)n}},$$

Using this equation and corresponding assumptions,[4] we calculated the MDEs for child welfare system referral to be 7 percentage points for a follow-up sample of 600 families (see Table 1). Anticipating that we will also consider this outcome for the subgroup of families who had no prior child welfare system involvement at baseline, we then calculated the MDE for a subgroup sample size of 300 to be 10 percentage points. In the original evaluation of Child First, within the group of families without any prior history of child welfare system involvement, 32% of the control group had been involved with the child welfare system by the time of the 36 month follow-up, relative to 15% of the program group (for the group of families *with* child welfare system involvement, 65% of control group members were involved with child welfare system post-random assignment, relative to 55% of program group members). Assuming similar control group take-up rates, the proposed study should be well-powered to detect impacts on child welfare system involvement at 36 months.

Table 1. *MDEs for Primary Outcomes (Administrative Records and Survey)*

Baseline sample size	Follow-up sample size	R^2 assumption	MDE for full sample at follow-up	MDE within subgroups (subgroup = 50% of sample)
Child welfare system records collected at 15- and 36-month follow-ups				
600	600	.20	7%	10%
Full 15-month follow-up survey sample				
600	480	.50	.19	.26

Notes: Power calculations were done in Power Up!. We assumed an alpha level of 0.05 using a two-tailed test, set power equal to

[2] See Gelman & Carlin, 2014; Nuijten et al., 2015.

[3] The MDE is the smallest true program effect that can be detected with a reasonable degree of power, for a particular study design, sample size, and level of statistical significance.

[4] In this equation 1.96 is the appropriate multiplier for a two-tailed test with 80 percent power and a .05 significance level; π is the proportion of the study population that would have a value of 1 for the binary outcome in the absence of the program; R^2 is the explanatory power of the baseline covariates in the regression (conservatively assumed to be 20% based on data in the original trial used to predict a binary outcome of interest – involvement in the child welfare system). Note that this R^2 is smaller than we are assuming for the continuous outcomes because baseline involvement in the child welfare system assessed through administrative records is not as predictive of later child welfare system involvement as assessed skills and psychological functioning are of later assessments of those outcomes; T is the proportion of the study sample randomly assigned to the program group (assumed to be 60%), and n is the total number of sample members.

0.80, and assumed no adjustments for multiplicity of statistical tests. We assumed that 60% of the sample would be randomly assigned to the Child First treatment and 40% would be randomly assigned to the control group. Subgroup power analyses assume we would examine impacts within subgroups rather than using interactions. R^2 assumptions draw upon findings from the original trial of Child First. To get an accurate estimate for R^2, the MDRC team used the data from the earlier RCT and regressed the outcomes from the original trial on a set of baseline demographic characteristics and baseline levels of the assessments that we also plan to collect in the current study. Taken together, we found R^2 values of .52 and .63 for parent psychological functioning and children's social-emotional skills, respectively. In line with these findings, we decided to use an R^2 of .5 across power analyses for all continuous outcomes. 15-month follow-up samples assume an 80% response rate for the parent survey.

With respect to field-based data collection activities, the study aims to collect 15-month parent survey data on 80% of the 600 families enrolled at baseline, with limited differential attrition between the research groups. The MDEs presented in Table 1 are smaller than the impacts detected in the original evaluation of Child First (0.53 SDs on children's social-emotional outcomes; 0.49 SDs on parental psychological functioning), suggesting that the study should have sufficient power to detect program effects.

Baseline equivalence. We will examine baseline equivalence between the families randomly assigned to the treatment and control groups by comparing them across a series of individual characteristics assessed at enrollment. Specifically, we will use a series of independent samples t-tests to examine whether there are any statistically significant differences between the groups with respect to child gender, caregiver race/ethnicity, caregiver marital status, caregiver work status, caregiver education, household income, family's receipt of public assistance, caregiver substance abuse, families' involvement in child welfare services, history of homelessness, caregiver psychological well-being, child behavior problems, and parenting stress. In addition, as recommended by the What Works Clearinghouse and used in prior work with BPS lottery data, we will also examine whether there were *systematic* differences between the treatment and control groups when all baseline characteristics are taken into account together. This is otherwise known as an omnibus test. We will regress the indicator for treatment assignment on all of the baseline characteristics. The *F* test from the regression will be used to examine whether the characteristics on their own predicted whether students were assigned to the program or control group, when examined as a set. If the *F* test is not statistically significant, there is evidence of no systematic differences between the treatment and control groups.

Data analysis and dissemination. Multivariate OLS regressions adjusting for baseline covariates and including fixed effects for site will be used to estimate impacts of Child First on continuous outcomes, and multivariate logit models controlling for the same covariates and including fixed effects for site will be used to estimate effects on involvement in child welfare systems. All outcomes and their type – continuous or binary – as well as whether they are primary or secondary are listed in Appendix A. The key variable of interest will be the dummy variable indicating whether the family was randomly assigned to the treatment (Child First) or to the control group (business as usual services) at enrollment. Families' designation as treatment or control group members begins at enrollment and does not change over time. This is a best practice for ensuring high levels of internal validity. The covariates – all measured at baseline prior to randomization – will be as follows: caregiver age at enrollment, child age at enrollment, child gender, caregiver race/ethnicity, caregiver marital status, caregiver employment status, caregiver education level, whether the family received any financial assistance (SNAP, TANF, SSI, WIC) in month prior to enrollment, caregiver substance abuse at enrollment, any past or current involvement in the child welfare system, household size, indicator for whether the caregiver speaks a language other than English, and the level of the outcome measured at baseline or corresponding proxy. We will fit a different impact model for each outcome. As such, we will fit separate models for each 15-month follow-up and 36-month follow-up outcome.

Our current MDE estimates do not assume that we will adjust the impact results to account for multiple comparisons.[5] We argue that this is acceptable because the primary outcomes are assessed either at different time points, in different outcome domains, and/or using different data sources (e.g., administrative records vs. parent reports). In addition, multiple comparisons adjustments are typically not required for secondary analyses (Schochet, 2008).

Before running impact analyses we will first assess the extent to which there is missingness on baseline covariates (race/ethnicity categories, gender, baseline level of the outcome, score on Child First's composite risk index, child age, parent age, parent education, household size, household income, parental marital status). Based on our experience collecting baseline and follow-up data on the sample of families enrolled before the pandemic (see Appendix B), we feel confident that we will have fairly complete baseline data on our covariates of interest and limited study attrition (i.e., not more than 20%). However, we will examine missing data on all characteristics used to check baseline equivalence, used as covariates, and used as primary and secondary outcomes to understand whether any missingness on baseline or outcome data is systematically missing. In line with recommendations from the What Works Clearinghouse (2018), we will use dummy-variable adjustment only for baseline covariates if we find that missingness across cases is less than 40% (which is the threshold that WWC used in their simulations to produce current recommendations). Our current plan is not to impute outcomes, but to ensure adequate response rates over time and limit attrition to the extent possible. We were successful in using this approach for the sample of families that we enrolled before the pandemic and collected survey follow-up data for 12 months post random assignment. Our ultimate imputation strategy will be finalized when baseline covariate data are available and before we examine any outcome data. This analysis plan will be updated at that time to reflect our final decision.

Subgroup analyses. We will also conduct a number of exploratory subgroup analyses which are of particular interest to the Child First program development. Specifically, we will examine whether impacts vary by 1) caregiver baseline depression; 2) child behavior problems at baseline; 3) evidence of child welfare involvement at baseline; 4) caregivers' evidence of baseline substance abuse; 5) caregivers' race and ethnicity; and 6) state. These are subgroups based in theory and understanding of model implementation that may have critical implications for program delivery and program targeting.

VII. Human Subjects Protections

As a nonprofit, nonpartisan research organization, MDRC has a 40-year history of conducting large-scale demonstrations and evaluations. Our IRB follows all federal regulations for the protection of human subjects and we have robust data confidentiality plans and data security protections in place. MDRC is also experienced in working with non-profit organizations that serve vulnerable populations, including any human subjects provisions they may require.

[5] This strategy of limiting primary outcomes to key domains has been argued for by Schochet (2008) and Porter (2018).

Appendix A

Measures to be Collected in Child First RCT

Outcomes of interest	Illustrative measures[1]	Baseline	15-month FUP	36-month FUP	Outcome Type	Continuous or binary
Parent-level measures						
Parental psychological functioning	Brief Symptom Inventory (BSI)		✓		Primary	Continuous
Parental depression	Center for Epidemiological Studies Depression Scale (CES-D)	✓	✓		Secondary	Continuous[3]
Parent education	Parent report	✓	✓		Secondary	Binary
Parent employment	Parent report	✓	✓		Secondary	Binary
Residential stability	Parent report	✓	✓		Secondary	Binary
Parental substance abuse	Parent report	✓	✓		Secondary	Binary
Parenting stress	Parenting Stress Index (PSI) total score and subdomain scores	✓	✓		Secondary	Continuous
Participation in community services outside Child First	Measure to assess service receipt used	✓	✓		Secondary	Binary
Child-level measures						
Social-emotional skills & behaviors[2]	Brief Infant Toddler Social-Emotional Assessment (BITSEA) for children younger than 4 at follow-up & the Preschool & Kindergarten Behavior Scales (PKBS) for children older than 4 age follow-up	✓	✓		Secondary	Continuous
Emotional regulation	Behavior Rating Inventory of Executive Function – Preschool Version (BRIEF-P)	✓	✓		Secondary	Continuous
Family-level measures						
Involvement w/ child welfare systems	Collected from child welfare system administrative records	✓	✓	✓	Primary	Binary
Family ER visits/hospitalizations	Parent report	✓	✓		Secondary	Continuous

[1] Time has been allocated to the beginning of the project period to finalize a set of measures for the study that will work for the partner organizations and with the project budget. The current analysis plan will be updated once the specific set of measures for baseline and follow-up are finalized.

[2] Due to the wide age range of children in the study we will need to administer different measures for younger and older children. Given that this is an secondary outcome, we will fit models for child outcomes in three ways: 1) by estimating impacts within age groups; 2) by standardizing scores within age groups and then pooling the data across age groups to estimate impacts on externalizing behaviors for the child sample; and 3) by identifying the subset of items across the measures that are conceptually similar and estimating impacts for the full sample on just that subset of items. We used this approach in the impact analysis we did on children enrolled before the start of the pandemic and will thus build off that earlier work and precedent.

3 We may also fit an exploratory impact model estimating impacts on the clinical cut point for the depression scale, which would require use to binarize the outcome.

Appendix B

COVID-19 Exploratory Study
Addendum to Pre-Analysis Plan

Rationale for the COVID-19 exploratory study. As noted in the full pre-analysis plan, the research team originally began enrolling families into the Child First RCT in June 2019. In early March 2020, prior to the start of COVID-19 shut-downs, the team had enrolled 226 families into the study across the participating sites. As of March 15th, 2020, the research team made the decision in partnership with the study's funders and the sites themselves to halt random assignment. Later, during the summer of 2020, the team made a further decision with partners and funders to re-start enrollment into the study from scratch, in order to be able to estimate impacts of Child First on outcomes when all families would get the opportunity to experience the in-person, in-home version of the model. In addition, there were further concerns that because child welfare referrals declined dramatically at the start of the pandemic, two of the primary outcomes for the current study would be biased and we would lack the data needed to establish any impact of Child First on involvement in child welfare, should an impact exist. Even as we continued to plan to begin enrollment again, the team did think there was value in continuing to collect some data from the 226 families who enrolled in the study prior to the start of the pandemic. We had limited funds but decided to conduct a web-based follow-up survey with these families in order to at least describe their experiences during the pandemic and potentially support strengthening of virtual and other services for families in the future.

Examining impacts of Child First during COVID-19. The research team was much more successful in conducting the web-based survey that we originally expected. We were able to generate an 81% response rate on the web-based, self-reported survey, reflecting 183 completed surveys (out of a target 226). There was very limited differential attrition by study condition. Treatment group members – 60% of the baseline sample – make up 61% of the web-based survey respondent sample. Control group members – 40% of the baseline sample – make up 39% of the web-based survey respondent sample. We shared this information with the Child First National Program Office and they indicated interest in the research team estimating impacts of Child First during this time on outcomes for parents, families, and children. The goal of conducting an impact analysis would be to learn about whether the program achieved its targeted objectives during this uniquely challenging time, to understand the extent to which the program was able to help families access needed economic services, and to consider whether the pattern of impacts – if detected – differed from patterns seen during normal operating conditions.

Research aims. All the research questions for the supplementary COVID-19 study are exploratory. As noted below, we have limited statistical power to detect impacts of Child First on targeted outcomes given the small sample size of 183 total families (N = 72 control group; N = 111 treatment group). As such, we will use an exploratory approach to estimate impacts of Child First on parents' psychological well-being (using the CESD-R and the BSI, as outlined in Appendix Table A for the full-study pre-analysis plan), parenting stress (using the Parenting Stress Index), parental employment, food insecurity, residential stability, involvement in child welfare, receipt of virtual and Child First services, receipt of mental health services, receipt of parenting services, receipt of financial assistance, receipt of support to access material supports

(e.g., internet, telephone, PPE, food, household items), receipt of domestic violence services, and substance abuse.

Statistical power. We initially used similar assumptions as noted in the main pre-analysis plan to calculate statistical power for the current study. Assuming an alpha of .05, a two-tailed test, power set to .80, an R^2 of .5, and 61% of the sample assigned to treatment, we found that we have the power to detect impacts of .30 standard deviations on outcomes of interest. Given this large minimum detectable effect (MDE) and the purely exploratory nature of the study, we argue that it is appropriate to consider an alpha of .10 in this supplementary work, particularly because we are using a two-tailed test and an alpha of .10 is often used in large-scale, federally-funded projects of policy relevant interventions. After making this adjustment, our revised MDE for continuous outcomes is .27. We will thus use a .10 alpha level when conducting our exploratory impact analyses for the COVID-19 supplementary study.

Baseline equivalence. We have examined baseline equivalence across the treatment and control group for the COVID-19 study on demographic characteristics assessed at study intake. Below we present these for the sample who participate in the follow-up research activities.

As illustrated in Table 1, our randomization appears to have worked fairly well and there were few, statistically significant observable differences between the groups on these characteristics. When conducting our impact analysis, we will explore parents' reports of psychological well-being, parenting stress, and children's social-emotional skills as other measures for which to assess baseline equivalence.

Impact models. We will follow the same approach for fitting impact models for the supplementary study as we outlined in the main pre-analysis plan. We anticipate fitting impact models for the *full sample only* as we will have very limited ability to detect statistically significant subgroup impacts. We will adjust for the following baseline characteristics in our impact models – the level of the outcome assessed at baseline, child age at intake, child gender, caregiver age, caregiver race, caregiver education, caregiver marital status, receipt of public assistance, caregiver substance abuse, family history of homelessness and the family's previous or current involvement with child welfare. We used prior work from large-scale studies of home visiting (e.g., MIHOPE) and past impact work on Child First (Lowell et al., 2011) to identify this list of covariates. If we identify any further differences between the treatment and control groups at baseline we will include those variables as covariates in the impact models to account for those observable differences. The bulk of our outcomes come from the web-based parent survey. However, we will later request access to child welfare records for this sample of families and further explore impacts using those administrative data as well.

Missing data analysis. We have limited missing data at baseline for this supplementary study sample (5% or less across planned baseline covariates) and will restrict the sample to the families for whom we have complete data at follow-up. Our review of the impact data thus far suggest that for individuals who completed the follow-up survey, missingness on items is minimal (5% or less). We will conduct a descriptive analysis to describe whether there are any observable characteristics that may help explain any missingness on outcomes. However, in line with our

approach for dealing with missing data in the main study, we do not plan to impute outcomes in this supplementary study.

Multiple comparisons. Because all of our study aims are entirely exploratory, we do not plan to conduct any adjustments for multiple comparisons.

Table 1

Sociodemographic Characteristics of the Analytic Sample at Baseline

Characteristic	Program %	Control %	
Child			
Female	33.33	38.89	
Caregiver			
Race/ethnicity			
Hispanic	33.64	29.17	
White	44.55	43.06	
Black	18.18	22.22	
Other	3.64	5.56	
Marital status			
Married or living with partner	38.18	44.44	
Divorced or separated	23.64	12.50	†
Single, never married	37.27	43.06	
Widowed	0.91	0.00	
Work status			
Unemployed	35.14	39.44	
Part-time employed	30.63	28.17	
Full-time employment	34.23	32.39	
Education			
Less than high school degree	13.64	11.43	
High school degree or GED	22.73	34.29	
Some college	46.36	44.29	
Bachelor's degree or higher	17.27	10.00	
Birth mother			
Education			
Less than high school degree	20.41	16.67	
High school degree or GED	28.57	42.42	†
Some college	37.76	34.85	
Bachelor's degree or higher	13.27	6.06	
Household			
Low-income, earnings less than $2,000	79.80	74.19	
Low-income, based on TANF receipt, Medicaid receipt, and earnings less than $500	74.76	70.59	
Family			

Receiving public assistance	73.64	76.06	
Ever homeless	13.33	24.29	†
Substance abuse	17.14	21.43	
Involvement in child welfare system	59.63	56.34	
Number of families enrolled	111	72	

Note: N = 183 families. Sample has limited missing data.
*** p < .001, ** p < .01, * p < .05, † p < .10

Limitations. The evaluation plan for Child First is a multi-state randomized controlled trial. Although this is a strength of the study design, there are also limitations associated with this approach. There may be systematic differences in child welfare practice that affect the outcomes of interest, resulting in heterogeneity of impacts across states. However, the target sample size for the study is likely underpowered to detect statistically significant impacts *within* states. The research team will collect robust baseline measures across all states in order to compare characteristics of the study samples in CO, CT, and NC and understand potential variation in contexts that could affect findings. In addition, the control group will be able to access alternative services in the community. Availability and quality of services will differ by site. This practical limitation will be noted in the written reports as a study limitation. The research team has also specifically selected sites for the study where control group families would be unlikely to access services that are very similar to Child First in order to maximize the treatment contrast.

The treatment length of Child First can vary from 6 to 14 months. The follow-up time periods for the study are anchored off of random assignment with data collected/accessed 12 and 36 months post enrollment. This is best practice from a research design perspective and aligns with IV-E Clearinghouse standards. Yet, anytime an invention varies in length there is a practical limitation that for some families the follow-up time period will be closer to the end of treatment and for others the follow-up time period will reflect a longer term measure of sustained effects. This context will be provided in the written reports associated with the study. Finally, the study aims to enroll children across a relatively large age range – 0 to 6 years. Given rapid changes in development in infancy, toddlerhood, and early childhood, there are no reliable and validated measures that capture children's social-emotional development across this full period. As such, the team will use different age-specific measures to capture key constructs of interests that span ages 0 – 6 and can be combined across developmental periods. The analysis will incorporate numerous sensitivity checks to ensure that key findings are robust to measurement decisions.

Appendix B: Fostering Healthy Futures - Preteen

Appendix B: Fostering Healthy Futures - Preteen

Fostering Healthy Futures - Preteen (FHF-P) is a mentoring and skills group program for pre-adolescent children with current or previous child welfare involvement due to one or more adverse childhood experiences (ACEs). These ACEs may include the experience of maltreatment, out-of-home placement, housing, caregiver or school instability, violence exposure and/or parental substance use, mental illness, or incarceration. FHF-P uses a combination of structured individual mentoring and group-based skills training to promote prosocial development and to address the consequences of ACEs.

PROGRAM SELECTION AND OUTCOMES

Colorado conducted an independent systematic review, with a determination of FHF-P as a well-supported practice in a review by the CO Lab (see documentation starting on page 6 of this Appendix for full documentation of this review), and found that FHF-P has a medium positive effect on child well-being outcomes (behavioral and emotional functioning) and a large positive effect on child permanency in Colorado. Since this review, the Title IV-E Clearinghouse has also completed their review and has rated the program as a "supported" practice, with favorable outcomes observed in child well-being (behavioral and emotional functioning) and permanency.

For Family First, the eligible target outcome domain for FHF-P in Colorado is:

- Permanency

Colorado will be tracking the stability of and any changes in each youth's living situation both throughout the service period and 12 months following the service end date. Statistically significant effect sizes for this domain were found in Colorado's independent systematic review.

This domain specifically links back to Colorado's overall goals for Family First prevention services by decreasing the number of children/youth entering out-of-home care as measured by state data.

SERVICE DESCRIPTION AND OVERSIGHT

a. Implementation Manuals

Taussig, H.N., Wertheimer, R., Corvinus, J, & Malen, A. (2021). Fostering Healthy Futures - Preteen Pre-Implementation Documents.

Taussig, H.N., Wertheimer, R., Raviv, T., Fireman, O., Malen, A., & Culhane, S. (2021). Fostering Healthy Futures - Preteen Implementation and Mentor Orientation Manual.

Hettleman, D., Wertheimer, R., Holmberg, J., Gennerman-Schroeder, R., Hambrick, E., Malen, A., & Taussig, H.N. (2021). Fostering Healthy Futures - Preteen Skills Group Manual.

b. Implementation

The Kempe Center for the Prevention and Treatment of Child Abuse and Neglect (Kempe) serves as the state intermediary to help scale the program, select sites and providers, provide training and ongoing technical assistance, and monitor fidelity to the models.

Kempe follows an extensive protocol to launch and sustain FHF partner agencies. Each agency that is considering implementing the FHF programming completes an FHF Readiness Assessment. After completing the assessment, agencies will discuss the ratings with the FHF Program Developers to see if their agency is a good fit for the program.

FHF-P consists of two main components:

- Skills Groups: Skills groups consist of eight children each and meet for 1.5 hours/week. The groups follow a manualized curriculum and are facilitated by mental health clinicians and graduate trainees. Topics addressed include emotion recognition, problem solving, anger management, cultural identity, change and loss, and peer pressure.
- Mentoring: Children are paired with graduate student mentors and receive 3-4 hours per week of 1:1 mentoring. Mentors help youth generalize the skills learned in a skills group to real-world settings. They focus on engaging

children in their communities and teaching them advocacy skills. Mentors also interface with other adults in the child's life and create a network of support.

c. Target Population in Colorado

FHF-Preteen enrolls children ages 9 - 11 who have previous or current child welfare involvement due to one or more adverse childhood experiences

Referral sources may include schools, child welfare and juvenile justice agencies, as well as community agencies.

Children must meet the following enrollment criteria in order to participate in FHF Preteen programming:

- Children are at least 9 and not more than 11 years of age by the first week of group
- Children and their families have current or past child welfare involvement (defined broadly) due to maltreatment
- Children's involvement with child welfare must be a result of maltreatment prevention/ intervention and not due solely to their own emotional/behavioral issues.
- Children have one or more of the following adverse childhood experiences (ACEs):
  - Maltreatment
  - Placement in out-of-home care
  - Exposure to violence
  - Parent/caregiver with severe mental illness, substance use, and/or incarceration
  - Parental death or abandonment
  - Multiple caregiver changes, moves and/or homelessness
  - Multiple school changes
- Children live less than 35 minutes away from location of skills groups at the start of program
- Children have behavioral control to be safe during transport to, and participation in, group and mentoring activities
- Children are cognitively able to participate in, and benefit from, group
- Children with sexual behavior problems, those in residential placements, and those with very mild developmental delays can be enrolled, assuming they meet all other criteria
- Children have age-appropriate adaptive and self-care skills. Children with physical disabilities are eligible for participation provided that they do not have to be lifted in and out of a wheelchair, are not incontinent, can feed themselves, and can otherwise fully benefit from participation in the program. Eligibility for children with visual and hearing impairments, as well as those with chronic illnesses, is evaluated on a case-by-case basis.
- Children speak enough English to benefit from group (caregivers can be monolingual speakers in another language as long as there are mentors and program staff who speak their language)
- Child can continue in the program for the full duration even if they change living situations (e.g., reunify, are placed in out-of-home care), or have a change in child welfare case status (open/closed)

d. Sites in Colorado

In September 2019, FHF hired a Director of Dissemination to identify the need for FHF-Preteen across the state and to increase the reach of programming. Part of this dissemination work is to enhance Kempe's role as an intermediary—to train local agencies in the program model and provide ongoing coaching and technical assistance. The FHF-P program was offered by the Kempe Center from 2002-2012 and 2018-2021 and by Aurora Mental Health Center from 2013-2018. In 2021-22 FHF-P is being implemented by Lutheran Family Services, Ariel Clinical Services and Adoption Options in four geographic areas (Denver Metro, El Paso County, Larimer County, and Mesa County).

FIDELITY MONITORING

Kempe, as the FHF intermediary, in conjunction with agencies implementing the FHF-P program, track multiple fidelity indices including children's

program attendance, engagement and satisfaction, and implementing staff's adherence to the program model components. Program activities, including skills groups and mentor supervision are videotaped, and Kempe reviews the videotapes and provides feedback on a regular basis. Kempe also talks with the Agency Administrative Lead on a monthly basis to discuss program implementation strengths and challenges. See Appendix 22 (Implementation Consultation and Fidelity Tracking Materials) in the Preteen Implementation and Mentor Orientation Manual[1] for the fidelity tracking instruments (Intern Supervisor Fidelity Form, Group Supervisor Fidelity Form, Skills Group Topics Fidelity Form) and a schedule of training consultation activities (Implementation Consultation Schedule).

CDHS will coordinate with Kempe to receive relevant fidelity data which will then be translated into the standardized statewide metrics of fidelity and moved into the Colorado Fidelity Monitoring Platform. See the Colorado 5-year Prevention Plan for more details on the Platform.

CONTINUOUS QUALITY IMPROVEMENT (CQI)

As part of the CQI process, Fostering Healthy Futures for Preteens sites collect and monitor data such as:

- Children's program attendance, including skills groups to develop social skills in engaging in prosocial relationships, resisting antisocial relationships, reducing stigma associated with experiencing major life stressors and child welfare involvement, processing of challenging emotions with trauma and transition, and coping with difficult emotions
- All stakeholders' engagement and satisfaction, with a focus on positive behavioral changes in child, ability to cope with difficult emotions, and child relationships
- Staff and intern adherence to the program model components and competence in implementing the program
- Staff and intern adherence to the program model components and competence in implementing the program

CQI data for the FHF-P program includes the following:

- Program sites' staff complete the following weekly forms in an online database: Intern Supervisor Fidelity Form, Group Supervisor Fidelity Form and Skills Group Form to track all program activities and attendance.
- Kempe Trainers review videotapes of skills groups and mentor supervision to provide regular feedback to staff.
- Kempe trainers complete weekly fidelity forms for the Group Supervisor and Intern Supervisor after watching videos and meeting with each staff member.
- Kempe talks with each site's Agency Administrative Lead on a monthly basis to discuss program implementation strengths and challenges.
- Kempe talks with program staff and Agency Administrative leads when there are concerns about an agency's practice and also increases the frequency of video monitoring and consultation as needed.

ELIGIBILITY FOR FEDERAL CLAIMING

For Family First IV-E claiming purposes, only preteens in an open child welfare case are eligible for federal reimbursement to the Colorado's Children's Trust Fund. In order to receive FHF-P services, preteens may not be in current out-of-home placement.

EVALUATION STRATEGY

FHF-P is rated by the Title IV-E Clearinghouse as a "supported" practice. As such, it requires ongoing rigorous evaluation. Colorado is working with Dr. Heather Taussig at the University of Denver and Kempe Center at the University of Colorado to conduct an evaluation for the Fostering Healthy Futures-Preteen (FHF-P) Program. This evaluation will be conducted as a follow-up to these trials,

1 https://drive.google.com/file/d/1IyiIXImDCsgrF5vGv3LPPrwc0ZyakfW6/view?usp=sharing

with clinical trial registries found here and here. This follow-up RCT analysis will evaluate the program's potential impact on child well-being, specifically suicide rates (behavioral and emotional functioning) and substance use. This will help contribute to evidence-building on FHF-P with a goal of a study design that meets standards of the Title IV-E Prevention Services Clearinghouse and can contribute to Clearinghouse review and evidence ratings for this program/service

The rigorous evaluation strategy for FHF-Preteen can be found on page 76.

All FHF s research to-date, including the proposed evaluation strategy, is conducted in Colorado; as such, the findings that FHF-P positively affects child well-being outcomes and permanency are relevant to Colorado youth, and there is a track record of driving these outcomes in Colorado.

Furthermore, based on the needs assessment data in Colorado, it is clear that there is a need for this particular intervention. For example, Colorado's state department of public health does an annual survey of kids and found that only 3.4% of school-aged children and adolescents would go to a teacher or other adult within schools for help, which suggests there is a need for mentoring programs.

CHILD SAFETY AND INDIVIDUAL PREVENTION PLANS

As described in Colorado's five-year prevention plan, child safety is an important component of the implementation plan. With all open child welfare cases, the county department is responsible for ongoing safety monitoring.

FHF works to build relationships with all professionals involved in the preteen's life to support preteens and their families. Throughout the program delivery, mentors are meeting with youth two times per week. Mentors are trained to observe behaviors and assess verbal responses, as safety protocols are embedded in program activities. All interactions are documented in progress notes, and FHF collects data through a HIPAA-compliant web-based system (REDCAP) that tracks data as part of the individualized prevention plans for youth. Program staff and Kempe intermediaries capture data such as demographic data, children's, mentors' and program staff's attendance at program activities, and and permanency indices throughout the duration of FHF service delivery. Monthly summary of interactions and progress are shared with the assigned caseworker in open child welfare involvements. Mentors also meet with the youth's supportive/involved adults, such as parents/ caregivers, teachers, coaches and therapists, on a regular basis.

Concerns that do not raise suspicion of abuse or neglect are often discussed with the family and caseworker to focus on constructive solutions. In cases where abuse or neglect is suspected, reports are made both to the caseworker (in open child welfare involvements) and to the child abuse and neglect statewide hotline.

WORKFORCE SUPPORT & TRAINING

FHF has implementation manuals, in-person training, and weekly ongoing training and coaching throughout the implementation year. Pre-implementation training is a 3-day in-person training. Ongoing training and consultation during the program year ranges from 1-3 hours/week depending on the staff position in the first year of program implementation.

Mentors complete 24 hours of training and orientation before meeting with children. Mentors receive one hour of individual supervision, one hour of group supervision (during their mentees' skills group), and one hour of didactic seminar per week. Mentors also participate in a team meeting for one hour every other week.

All FHF site staff will be held to the trauma-informed care prevention service provider requirements designed by the Colorado Department of Human Services and included in Colorado's 5-year Prevention Plan. Individual sites will be responsible for ensuring compliance with the standards.

PREVENTION CASELOADS

Each mentor is assigned no more than two to four preteens, and prevention caseloads are tracked and monitored by Kempe staff.

UNIVERSITY of DENVER
COLORADO EVALUATION AND ACTION LAB

To: Colorado Department of Human Services (CDHS)

From: Elysia Clemens, Deputy Director/COO, Colorado Evaluation and Action Lab

Date: February 2, 2021

Subject: Colorado FFPSA Technical Review Submission for Fostering Healthy Futures for Preteens

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Independent reviewers Courtney Everson and Stephanie Rogers assigned a rating of "Well-supported" for the Fostering Healthy Futures for Preteens program.

- "Well-supported" means that the program has at least two eligible, well-designed and well-executed studies with non-overlapping samples and that at least one of the studies, aligned to Title IV-E Prevention Services Clearinghouse standards, reported one or more sustained positive effects for at least 12 months beyond the end of treatment on a Family First-relevant outcome.
- Additional evidence on Fostering Healthy Futures is forthcoming via a journal publication currently under review. Once publicly available, it will be assessed and this technical review updated accordingly.

An overview of the technical review process and key findings are bulleted below:

- After conducting a comprehensive literature review, reviewers identified two potentially eligible studies across four publications. Reviewers concluded that two unique studies (three publications)[1,2,3] met handbook design and execution standards. One publication that did not examine a Family First-relevant target outcome was deemed ineligible for full review.

- The eligible studies were all randomized controlled trials (RCTs) with no known confounds. A total of 25 eligible contrasts across the two studies (three publications) were rated; 23 of the 25 met handbook design and execution standards, with 14 rated as moderate support of causal evidence and nine rated as high support of causal evidence. Reviewers calculated baseline equivalence and effect sizes using handbook standards and guidelines.

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[1] Taussig, H., Weiler, L., Garrido, E., Rhodes, T., Boat, A. & Fadell, M. (2019). A Positive Youth Development Approach to Improving Mental Health Outcomes for Maltreated Children in Foster Care: Replication and Extension of an RCT of the Fostering Healthy Futures Program. *Am J Community Psychol*, 64(3-4): 405-417.

[2] Taussig, H. and Culhane, S. (2010). Impact of a mentoring and skills group program on mental health outcomes for maltreated children in foster care. *Arch Pediatr Adolesc Med*, 164(8): 739-46.

[3] Taussig, H., Culhane, S., Garrido, E. & Knudtson, M. (2012). RCT of a Mentoring and Skills Group Program: Placement and Permanency Outcomes for Foster Youth. *Pediatrics*, 130(1): e33-e39.

- Of the 23 contrasts examined, four contrasts in the first study and two contrasts in the second study had favorable (statistically significant and in the desired direction) impact estimates. These included child well-being outcomes of behavioral and social functioning—as measured by the Mental Health Index, Disassociation Scale, and Quality of Life Scale—as well as the child permanency outcome of placement disruption. Of the favorable effects in the first study, one was sustained for zero months (immediate post-test measure), two were sustained for six months, and one was sustained for 12 months beyond the end of treatment. Of the favorable effects in the second study, both were sustained for six months beyond the end of treatment. There were no contrasts with unfavorable impact estimates, and the remaining 17 contrasts showed no statistical significance.

- The FHF-P program has a clearly defined 30-week end of treatment mark, and study authors were clear in the post-completion administration time points for outcome measures. It was thus possible to cleanly determine the length of effect beyond the end of treatment for all favorable effects.

The complete set of technical review documents is linked here.

Attachment B: Checklist for Program or Service Designation for HHS Consideration

Instructions:

Section I: The state must complete Section I (Table 1) once to summarize all of the programs and services that the state reviewed and submitted and the designations for HHS consideration.

Section II: The state must complete Section II (Tables 2 and 3) once to describe the independent systematic review methodology used to determine a program or service (listed in Table 1) designation for HHS consideration. Section II outlines the criteria for an independent systematic review. To demonstrate that the state conducted an independent systematic review consistent with sections 471(e)(4)(C)(iii)(I), (iv)(I)(aa) and (v)(I)(aa) of the Act, the state must answer each question in the affirmative. If the independent systematic review used the Prevention Services Clearinghouse Handbook of Standards and Procedures, the relevant sections must be indicated in the "Handbook Section" column. If other systematic standards and procedures were used, states must submit documentation of the standards and procedures used to review programs and services. States should determine the standards and procedures to be used prior to beginning the independent systematic review process. If the state cannot answer each question in Table 2 and Table 3 in the affirmative, ACF will not make transition payments for the program or service reviewed by the state using those standards and procedures.

Section III: The state must complete Section III (Tables 4 and 5) for each program or service listed in Table 1 and provide all required documentation. Section III outlines the requirements for the review of the program or service. States should complete Table 4 prior to conducting an independent systematic review to determine if a program or service is eligible for review. For a program or service to be eligible for review, the answer to both questions in Table 4 must be affirmative and the state must provide the required documentation. If a program or service is eligible for review, the state must conduct the review and identify each study reviewed in Table 5, regardless of whether a study was determined to be eligible to be included in the review.

Section IV: The state must complete Section IV (Tables 6-10) for each program or service (listed in Table 1) reviewed and submitted and provide all required documentation. Section IV lists studies the state determined to be "well-designed" and "well-executed" and outlines characteristics of those studies. Do <u>not</u> include eligible studies that were <u>not</u> determined to be "well-designed" and "well-executed" in Tables 6 -10. States should complete Table 6 with a list of all eligible studies determined to be "well-designed" and "well-executed." States should complete Table 7 to describe the design and execution of each eligible "well-designed" and "well-executed" study. States should complete Table 8 to describe the practice setting and study sample. States must answer in the affirmative that the program or service included in each study was not substantially modified or adapted from the version under review. States must detail favorable effects on target outcomes present in eligible studies determined to be "well-designed" and "well-executed." States must detail unfavorable effects on target and non-target outcomes present in eligible studies determined to be "well-designed" and

“well-executed.”

Section V: The state must complete Section V (Table 11) for each program or service reviewed and submitted. Section V lists the program or service designation for HHS consideration and verification questions relevant to that designation. The state must answer the questions applicable to the relevant designation in the affirmative.

Section I: Summary of Programs and Services Reviewed and their Designations for HHS Consideration

Section I. Summary of Programs and Services Reviewed

Table 1. Summary of Programs and Services Reviewed

To be considered for transitional payments, list programs and services reviewed and provide designations for HHS consideration.

Program or Service Name *(if there are multiple versions, specify the specific version reviewed)*	**Proposed Designations for HHS consideration** *(Promising, Supported, or Well-Supported)*
Fostering Healthy Futures (FHF) for Preteens	Well-Supported

Section II: Standards and Procedures for an Independent Systematic Review

Section II. Standards and Procedures for a Systematic Review

(*Complete Table 2 and Table 3 to provide the requested information on the independent systematic review. The same standards and procedures should be used to review all programs and services.)*

Table 2. Systematic Review

Sections 471(e)(4)(C)(iii)(I), (iv)(I)(aa) and (v)(I)(aa) of the Act require that systematic standards and procedures must be used for all phases of the review process. In the table below, verify that systematic (i.e., explicit and reproducible) standards and procedures were used and submit documentation of reviewer qualifications. If the systematic review used the Prevention Services Clearinghouse Handbook of Standards and Procedures, indicate the relevant sections in the "Handbook Section" column. If other systematic standards and procedures were used, submit documentation of the standards and procedures.

	❒ to Verify	Handbook Section
Were the same systematic standards and procedures used to review all programs and services?	☒	--
Were qualified reviewers trained on systematic standards and procedures used to review all programs and services?	☒	--
Were standards and procedures in accordance with section 471(e) of the Social Security Act?	☒	--
Were standards and procedures in accordance with the Initial Practice Criteria published in Attachment C of ACYF-CB-PI-18-09?	☒	--
Program or Service Eligibility: Were systematic standards and procedures used to determine if programs or services were eligible for review? At a minimum, this includes standards and procedures to:	☒	2
• Determine if a program or service is a mental health, substance abuse, in-home parent-skill based, or kinship navigator program; and	☒	2.1.1
• Determine if there was a book/manual or writing available that specifies the components of the practice protocol and describes how to administer thepractice.	☒	2.1.2
Literature Review: Were systematic standards and procedures used to conduct a comprehensive literature review for studies of programs and services under review? At a minimum, this includes standards and procedures to:	☒	3
• Search bibliographic databases; and Search other sources of publicly available	☒	3.1, 3.2
• Studies (e.g., websites of federal, state, and local governments, foundations, or other organizations).	☒	3.1, 3.2
Study Eligibility: Were systematic standards and procedures used to determine if studies found through the comprehensive literature review were eligible for review? At a minimum, this includes standards and procedures to:	☒	4
• Determine if each study examined the program or service under review (as described in the book/manual or writing) or if it examined an adaptation;	☒	4.1.6
• Determine if each study was published or prepared in or after 1990;	☒	4.1.1
• Determine if each study was publicly available in English;	☒	4.1.3
• Determine if each study had an eligible design (i.e., randomized control trial or quasi-experimental design);	☒	4.1.4
• Determine if each study had an intervention *and* appropriate comparison condition;	☒	4.1.4
• Determine if each study examined impacts of program or service on at leastone 'target' outcome that falls broadly under the domains of child safety, child permanency, child well-being, or adult (parent or kin-caregiver) well-being. Target	☒	4.1.5

outcomes for kinship navigator programs can instead or also include access to, referral to, and satisfaction with services; and		
• Identify studies that meet the above criteria and are eligible for review.	☒	4
Study Design and Execution: Were systematic standards and procedures used to determine if eligible studies were well-designed and well-executed? At a minimum, this includes standards and procedures to:	☒	5
• Assess overall and differential sample attrition;	☒	5.6
• Assess the equivalence of intervention and comparison groups at baseline and whether the study statistically controlled for baseline differences;	☒	5.7, 5.8
• Assess whether the study has design confounds;	☒	5.9.3
• Assess, if applicable, whether the study accounted for clustering (e.g., assessed risk of joiner bias[1]);	☒	5.5
• Assess whether the study accounted for missing data; and	☒	5.9.4
• Determine if studies meet the above criteria and can be designated as well-designed and well-executed.	☒	5.2
Defining Studies: Sometimes study results are reported in more than one document, or a single document reports results from multiple studies. Were systematic standards and procedures used to determine if eligible, well-designed and well-executed studies of a program and service have non-overlapping samples?	☒	4.1
Study Effects: Were systematic standards and procedures used to examine favorable and unfavorable effects in eligible, well-designed and well-executed studies? At a minimum, this includes standards and procedures to:	☒	5.10
• Determine if eligible, well-designed and well-executed studies found a favorable effect (using conventional standards of statistical significance) on each target outcome; and	☒	5.10
• Determine if eligible, well-designed and well-executed studies found an unfavorable effect (using conventional standards of statistical significance) on each target or non-target outcome.	☒	5.10
Beyond the End of Treatment: Were systematic standards and procedures used to determine the length of sustained favorable effects beyond the end of treatment in eligible, well-defined and well-executed studies? At a minimum, this includes standards and procedures to:	☒	6.2.3
• Identify (and if needed, define) the end of treatment; and	☒	6.2.3
• Calculate the length of a favorable effect beyond the end of treatment.	☒	6.2.3
Usual Care or Practice Setting: Were systematic standards and procedures used to determine if a study was conducted in a usual care or practice setting?	☒	6.2.2
Risk of Harm: Were systematic standards and procedures used to determine if there is evidence of risk of harm?	☒	6.2.1
Designation: Were systematic standards and procedures used to designate programs and services for HHS consideration (as promising, supported, well-supported, or does not currently meet the criteria)? At a minimum, this includes standards and procedures to:	☒	6.1
• Determine if a program or service has one eligible, well-designed and well-executed study that demonstrates a favorable effect on a target outcome and should be considered for a designation of promising;	☒	6.1
• Determine if a program or service has at least one eligible, well-designed and well-executed study carried out in a usual care or practice setting that demonstrates a favorable effect on a target outcome at least 6 months beyond the end of treatment and should be considered for a designation of supported; and	☒	6.1
• Determine if a program or service has at least two eligible, well-designed and well-executed studies with non-overlapping samples carried out in usual care or practice	☒	6.1

[1] If a cluster randomized study permits individuals to join clusters after randomization, the estimate of the effect of the intervention on individual outcomes may be biased if individuals who join the intervention clusters are systematically different from those who join the comparison clusters.

settings that demonstrate favorable effects on a target outcome; at least one of the studies must demonstrate a sustained favorable effect of at least 12 months beyond the end of treatment on a target outcome*;* and should be considered for a designation of well-supported.		
Reconciliation of Discrepancies: Were systematic standards and procedures used to reconcile discrepancies across reviewers? (applicable if more than one reviewer per study)	☒	7.3.1
Author or Developer Queries: Were systematic standards and procedures used to query study authors or program or service developers? (applicable if author or developer queries made)	☒	7.3.2

Table 3. Independent Review

The systematic review must be independent (i.e., objective and unbiased). In the table below, verify that an independent review was conducted using systematic standards and procedures by providing the names of each state agency and external partner that reviewed the program or service. States must answer all applicable questions in the affirmative. Submit MOUs, Conflict of Interest Policies, and other relevant documentation.

List all state agencies and external partners that reviewed programs and services.	
Colorado Evaluation and Action Lab: • Courtney Everson, PhD • Stephanie Rogers, MSW	
	❒ to Verify
Was the review independent (conducted by reviewers without conflicts of interest including those that authored studies, evaluated, or developed the program or service under review)?	☒
Was a Conflict of Interest Statement signed by reviewers attesting to their independence? If so, attach the statement.	☒
Was a Memorandum of Understanding (MOU) signed by external partners (if applicable)? If so, attach MOU(s).	☒

Sections III-V: Describe and Document Findings from Each Program and Service Reviewed and Submitted

Section III. Review of Programs and Services
(C*omplete Tables 4-5 for each program or service reviewed.)*

Table 4. Determination of Program or Service Eligibility

Fill in the table below for each program or service reviewed.

	❒ to Verify
Does the program or service have a book, manual, or other available documentation specifying the components of the practice protocol and describing how to administer the practice?	☒
Provide information about how the book/manual/other documentation can be accessed OR provide other information supporting availability of book/manual/other documentation. **The Kempe Center for the Prevention & Treatment of Child Abuse & Neglect houses the FHF program and has a set of available written manuals (Mentor Training Manual, Skills Group Manual, Implementation Manual) that, collectively, describe how to implement and administer the FHF program, thus meeting requirements under Section 2.1.2. The program is currently active and in use, meeting requirements of Section 2.2.2, and both fidelity supports/trainings and measures are in place through the Kempe Center's oversight of the program, thus meeting requirements in Section 2.2.3. All manuals, fidelity measures and trainings/supports can be accessed by contacting the FHF Program Staff, as listed on the FHF Website: https://www.fosteringhealthyfutures.org/programs/preteen**	
Is the program or service a mental health, substance abuse, in-home parent-skill based, or kinship navigator program or service?	☒
Identify the program or service area(s). **Mental Health Prevention & Treatment Program or Service**	

Table 5. Determination of Study Eligibility

Fill in the table below for each study of the program or service reviewed. Provide a response in every column; N/A or unknown are not acceptable responses. The response in columns iii, v, vi, vii, and ix must be "yes" or "no." The response in column ix is "yes" only when the responses in columns iii, v, vi, and vii are "yes."

i. Study Title/Authors	ii. Publicly Available Location	iii. Is the study in English? (Yes/No)	iv. Design (RCT, QED, or other). If other, specify design.	v. Did the intervention condition receive the program or service under review in accordance with the book/manual/documentation? (Yes/No)	vi. Did the comparison condition receive no or minimal intervention or treatment as usual? (Yes/No)	vii. Did the study examine at least one target outcome? (Yes/No)	viii. Year Published	ix. Eligible for Review? (Yes/No)
A Positive Youth Development Approach to Improving Mental Health Outcomes for Maltreated Children in Foster Care: Replication and Extension of an RCT of the Fostering Healthy Futures Program/Taussig et al.	https://pubmed.ncbi.nlm.nih.gov/31468553/	Yes	RCT	Yes	Yes	Yes	2019	Yes
RCT of a mentoring and skill group program: Placement and permanency outcomes for foster youth/Taussig et al.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3382920/	Yes	RCT	Yes	Yes	Yes	2012	Yes
Impact of a Mentoring and Skills Group Program on Mental Health Outcomes for Maltreated Children in Foster Care/Taussig & Culhane	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3009469/	Yes	RCT	Yes	Yes	Yes	2010	Yes
Fostering Healthy Futures Child Welfare Cost Study/Winokur & Crawford		Yes	RCT	Yes	Yes	No	2014	No

Section IV. Review of "Well-designed" and "Well-executed" Studies (C*omplete Tables 6-10 for each program or service reviewed.)*

Table 6. Studies that are "Well-Designed" and "Well-Executed"[2]

Provide an electronic copy of each of the studies determined to be eligible for review and determined to be "well-designed" and "well-executed."

List all eligible studies that are "well-designed" and "well-executed' (Study Title/Author)
A Positive Youth Development Approach to Improving Mental Health Outcomes for Maltreated Children in Foster Care: Replication and Extension of an RCT of the Fostering Healthy Futures Program/Taussig et al. 2019
Impact of a Mentoring and Skills Group Program on Mental Health Outcomes for Maltreated Children in Foster Care/Taussig & Culhane 2010
RCT of a mentoring and skill group program: Placement and permanency outcomes for foster youth/Taussig et al. 2012

[2] For reference, the Prevention Services Clearinghouse Handbook Chapter 5 defines "well-designed" and "well-executed" studies as those that meet design and execution standards for high or moderate support of causal evidence. Prevention Services Clearinghouse ratings apply to contrasts reported in a study. A single study may have multiple design and execution ratings corresponding to each of its reported contrasts.

Table 7. Study Design and Execution

For each study eligible for review and determined to be "well-designed" and "well-executed," fill out the table below. Provide a response in every column; N/A or unknown are not acceptable responses for columns i, ii, iii, v, vi, and vii. The response in column ii must be "yes."

i. Study Title/Authors	ii. Verify the Absence of all Confounds? (Yes/No)	iii. List Measures that Achieved Baseline Equivalence	iv. List Measures that did NOT Achieve Baseline Equivalence but were Statistically Controlled for in Analyses	v. Overall Attrition[3] **(for RCTs only)**	vi. Differential Attrition[4] **(for RCTs only)**	vii. Does Study Meet Attrition Standards?	viii. Notes, as needed
A Positive Youth Development Approach to Improving Mental Health Outcomes for Maltreated Children in Foster Care: Replication and Extension of an RCT of the Fostering Healthy Futures Program/Taussig et al. 2019	Yes	-Mental Health Index -Posttraumatic Stress Scale	-Disassociation Scale -Quality of Life Scale	-Mental Health: 18.8% -Posttraumatic Stress: 12% -Disassociation: 12% -Quality of Life: 12%	-Mental Health: 3.6% -Posttraumatic Stress: 2.7% -Disassociation: 3.7% -Quality of Life: 4.6%	Yes (low attrition) for all four contrasts	Attrition was calculated per contrast for this study, wherein for RCTs, cases excluded in outcome analyses due to missing data were counted as attrition, in accordance with Clearinghouse standards in Sections 5.6 and 5.9.4.
Impact of a Mentoring and Skills Group Program on Mental Health Outcomes for Maltreated Children in Foster Care/Taussig & Culhane 2010	Yes	-Posttraumatic Stress Scale -Disassociation Scale -Quality of Life Scale -Negative Coping Scale	-Mental Health Index -Positive Coping Scale -Self-Worth Scale -Social Acceptance Scale	-T2 Posttraumatic Stress: 10.3% -T2 Disassociation: 10.3% -T2 Mental Health: 18.6% -T2 Quality of Life: 10.3% -T2 Positive Coping: 10.3% -T2 Negative Coping: 10.3% -T2 Self-Worth:	-T2 Posttraumatic Stress: 8.0% -T2 Disassociation: 8.0% -T2 Mental Health: 1.8% -T2 Quality of Life: 8.0% -T2 Positive Coping: 8.0% -T2 Negative Coping: 8.0% -T2 Self-Worth:	-T2 Posttraumatic Stress: No (high attrition) -T2 Disassociation: No (high attrition) -T2 Mental Health: Yes (low attrition) -T2 Quality of Life: No (high attrition) -T2 Positive	Attrition was calculated per contrast for this study, wherein for RCTs, cases excluded in outcomes analyses due to missing data were counted as attrition, in accordance with Clearinghouse standards in Sections 5.6 and 5.9.4. In this study, each contrast was measured at two follow-up periods: immediately at end of program completion (T2) and 6 months after program completion (T3). Attrition was thus calculated per contrast, per

[3] For reference, the Prevention Services Clearinghouse Handbook section 5.6 defines o*verall attrition* as the number of individuals without post-test outcome data as a percentage of the total number of members in the sample at the time that they learned the condition to which they were randomly assigned.

[4] For reference, the Prevention Services Clearinghouse Handbook section 5.6 defines *differential attrition* as the absolute value of the percentage point difference between the attrition rates for the intervention group and the comparison group.

i. Study Title/Authors	ii. Verify the Absence of all Confounds? (Yes/No)	iii. List Measures that Achieved Baseline Equivalence	iv. List Measures that did NOT Achieve Baseline Equivalence but were Statistically Controlled for in Analyses	v. Overall Attrition[3] **(for RCTs only)**	vi. Differential Attrition[4] **(for RCTs only)**	vii. Does Study Meet Attrition Standards?	viii. Notes, as needed
				10.3% T2 Social Acceptance: 10.3% -T3 Posttraumatic Stress: 7.7% -T3 Disassociation: 7.7% -T3 Mental Health: 15.4% -T3 Quality of Life: 8.3% -T3 Positive Coping: 8.3% -T3 Negative Coping: 8.3% -T3 Self-Worth: 8.3% T3 Social Acceptance: 8.3%	8.0% -T2 Social Acceptance: 8.0% -T3 Posttraumatic Stress: 7.9% -T3 Disassociation: 7.9% -T3 Mental Health: 5.5% -T3 Quality of Life: 9.2% -T3 Positive Coping: 9.2% -T2 Negative Coping: 9.2% -T3 Self-Worth: 9.2% -T3 Social Acceptance: 9.2%	Coping: No (high attrition) -T2 Negative Coping: No (high attrition) T2 Self-Worth: No (high attrition) T2 Social Acceptance: No (high attrition) -T3 Posttraumatic Stress: No (high attrition) -T3 Disassociation: No (high attrition) -T3 Mental Health: Yes (low attrition) -T3 Quality of Life: No (high attrition) -T3 Positive Coping: No (high attrition) -T3 Negative Coping: No (high attrition) T3 Self-Worth:	administration time point.

i. Study Title/Authors	ii. Verify the Absence of all Confounds? (Yes/No)	iii. List Measures that Achieved Baseline Equivalence	iv. List Measures that did NOT Achieve Baseline Equivalence but were Statistically Controlled for in Analyses	v. Overall Attrition[3] **(for RCTs only)**	vi. Differential Attrition[4] **(for RCTs only)**	vii. Does Study Meet Attrition Standards?	viii. Notes, as needed
						No (high attrition) T3 Social Acceptance: No (high attrition)	
RCT of a mentoring and skill group program: Placement and permanency outcomes for foster youth/Taussig et al. 2012	Yes	-# of Prior Placements	-Previous RTC Placement -Placement Type at Baseline	29.%	.08%	Yes (low attrition)	Attrition was calculated per contrast for this study, wherein for RCTs, cases excluded in outcomes analyses due to missing data were counted as attrition, in accordance with Clearinghouse standards in Sections 5.6 and 5.9.4. All contrasts had the same attrition.

Table 8. Study Description

For each study eligible for review and determined to be "well-designed" and "well-executed," fill out the table below to describe the practice setting and study sample as well as affirm that the program or service evaluated was not substantially modified or adapted from the version under review. Provide a response in every column; N/A or unknown are not acceptable responses. The response in column v must be "yes."

i. Study Title/Authors	ii. Was the study conducted in a usual care or practice setting? (Yes/No)	iii. What is the study sample size?	iv. Describe the sample demographics and characteristics of the intervention group	v. Describe the sample demographics and characteristics of the comparison group	vi. Verify that the program or service evaluated in the study was ***NOT*** substantially modified or adapted from the manual or version of the program or service selected for review (Yes/No)
A Positive Youth Development Approach to Improving Mental Health Outcomes for Maltreated Children in Foster Care: Replication and Extension of an RCT of the Fostering Healthy Futures Program/Taussig et al. 2019	Yes	N=426 (n=233 intervention, n=193 comparison)	Mean age 10.31 (.90 SD); 51.1% Male; 53.5% Hispanic; 31.0% African American; 51.4% White. All youth were between 9 and 11 years of age and placed in out-of-home care by court order due to maltreatment.	Mean age 10.25 (.90 SD); 52.8% Male; 49.2% Hispanic; 25.4% African American; 49.7% White. All youth were between 9 and 11 years of age and placed in out-of-home care by court order due to maltreatment.	Yes
Impact of a Mentoring and Skills Group Program on Mental Health Outcomes for Maltreated Children in Foster Care/Taussig & Culhane 2010	Yes	N=156 (n=79 intervention, n=77 comparison)	Mean age 10.4 (.90 SD); 52% Male; 44% Hispanic; 34% African American; 42% White. All youth were between 9 and 11 years of age and placed in out-of-home care by court order due to maltreatment.	Mean age 10.4 (.90 SD); 49% Male; 56% Hispanic; 25% African American; 44% White. All youth were between 9 and 11 years of age and placed in out-of-home care by court order due to maltreatment.	Yes
RCT of a mentoring and skill group program: Placement and permanency outcomes for foster youth/Taussig et al. 2012	Yes	N = 110 (n=56 intervention, n=54 control)	Mean age 10.38 (0.85 SD); 51.8% Male; 40.4% Hispanic; 42.3% African American; 52.8% White. All youth were between 9 and 11 years of age and placed in out-of-home care by court order due to maltreatment.	Mean age 10.54 (0.91 SD); 51.9% Male; 52.0% Hispanic; 26.9% African American; 55.8% White. All youth were between 9 and 11 years of age and placed in out-of-home care by court order due to maltreatment.	Yes

Table 9. Favorable Effects

*For each study eligible for review and determined to be "well-designed" and "well-executed," fill out the table below listing only target outcomes with **favorable effects**. Provide a response in every column; N/A or unknown are **not acceptable** responses.*

i. Study Title/Authors	ii. List the Target Outcome(s)	iii. List the Outcome Measures	iv. List the Reliability Coefficients for Each	v. Are Each of the Outcome Measures Valid?	vi. Are Each of the Outcome Measures Systematically Administered?	vii. List the P-Values for Each of the Outcome Measures	viii. List the Size of Effect for Each of the Outcome Measures	ix. Indicate the Length of Effect Beyond the End of Treatment (in months)
A Positive Youth Development Approach to Improving Mental Health Outcomes for Maltreated Children in Foster Care: Replication and Extension of an RCT of the Fostering Healthy Futures Program/Taussig et al.	Child Well-Being (behavioral and emotional functioning)	Mental Health Index (created based on principal components factor analysis of the child's mean TSCC scores and internalizing scales of the CBCL and TRF)	-TSCC mean clinical scale: α = .84 -CBCL scales: α = .63 to .97 -TRF scales: α = .72 to .95 -In this study, factor loadings were .71 for the TSCC, .67 for the CBCL, and .62 for the TRF	Yes	Yes	p = 0.04	g = 0.2209	6 months
	Child Well-Being (behavioral and emotional functioning)	Disassociation Scale (of the child self-report Trauma Symptom Checklist for Children, TSCC)	α = 0.83	Yes	Yes	p = 0.02	g = 0.2470	6 months
Impact of a Mentoring and Skills Group Program on Mental Health Outcomes for Maltreated Children in Foster Care/Taussig & Culhane	Child Well-Being (behavioral and emotional functioning)	T2: Quality of Life scale (measured via the Life Satisfaction Survey)	α = .81	Yes	Yes	p = .005	g = 0.4759	Immediate
	Child Well-Being (behavioral and emotional functioning)	T3: Mental Health Index (created based on principal components factor analysis of the child's mean TSCC scores and internalizing scales of the CBCL and TRF)	-TSCC mean clinical scale: α = .84 -CBCL scales: α = .63 to .97 -TRF scales: α = .72 to .95 -In this study, factor loadings	Yes	Yes	p = .003	g = 0.5310	6 months

i. Study Title/Authors	ii. List the Target Outcome(s)	iii. List the Outcome Measures	iv. List the Reliability Coefficients for Each	v. Are Each of the Outcome Measures Valid?	vi. Are Each of the Outcome Measures Systematically Administered?	vii. List the P-Values for Each of the Outcome Measures	viii. List the Size of Effect for Each of the Outcome Measures	ix. Indicate the Length of Effect Beyond the End of Treatment (in months)
			ranged from .59 to .70 for the three scales					
	Child Well-Being (behavioral and emotional functioning)	T3: Disassociation Scale (of the child self-report Trauma Symptom Checklist for Children, TSCC)	α = 0.83	Yes	Yes	p = 0.02	g = 0.3877	6 months
RCT of a mentoring and skill group program: Placement and permanency outcomes for foster youth/Taussig et al. 2012	Child Permanency (placement disruption)	Placement Changes	Administrative data assumed reliable per Section 5.9.2 of handbook	Yes	Yes	p = 0.03	g = 0.7486	12 months

Table 10. Unfavorable Effects

*For each study eligible for review and determined to be "well-designed" and "well-executed," fill out the table below listing only target outcomes with **unfavorable effects**. Provide a response in every column; N/A or unknown are not acceptable responses.*

i. Study Title/Authors	ii. List the Target or Non-Target Outcome(s)	iii. List the Outcome Measures	iv. List the Reliability Coefficients for Each	v. Are Each of the Outcome Measures Valid?	vi. Are Each of the Outcome Measures Systematically Administered?	vii. List the P-Values for Each of the Outcome Measures	viii. List the Size of Effect for Each of the Outcome Measures	ix. Indicate the Length of Effect Beyond the End of Treatment (in months)

Note: No unfavorable effects were found for any of the studies

Section V. Program or Service Designation for HHS Consideration

Table 11. Program or Service Designation for HHS Consideration

Fill out the table below for the program or service reviewed. Only select one designation. Answer questions relevant to the selected designation; relevant questions must be answered in the affirmative.

	❒ to Verify
There is ***NOT*** sufficient evidence of risk of harm such that the overall weight of evidence does not support the benefits of the program or service.	☒
	❒ the Designation and Provide a Response to the Questions Relevant to that Designation
Well-Supported	☒
• Does the program or service have at least two eligible, well-designed and well-executed studies with non-overlapping samples[55] that were carried out in a usual care or practice setting?	Yes
• Does one of the studies demonstrate a sustained favorable effect of at least 12 months beyond the end of treatment on at least one target outcome?	Yes
Supported	☐
• Does the program or service have at least one eligible, well-designed and well-executed study that was carried out in a usual care or practice setting and demonstrate a sustained favorable effect of at least 6 months beyond the end of treatment on at least one target outcome?	
Promising	☐
• Does the program or service have at least one eligible, well-designed and well-executed study and demonstrate a favorable effect on at least one 'target outcome'?	

[5] Samples across multiple sources of a study are considered overlapping if the samples are the same or have a large degree of overlap. Findings from an eligible study determined to be "well-executed" and "well-designed" may be reported across multiple sources including peer-reviewed journal articles and publicly available government and foundation reports. In such instances, the multiple sources would have overlapping samples. The findings across multiple sources with these overlapping samples should be considered **one** study when designating a program or service as "well-supported," "supported," and "promising."

An Ecological Model of Risk and Protection for Delinquency and Juvenile Justice Involvement among Maltreated Youth: A Longitudinal Study

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STATEMENT OF THE PROBLEM AND RESEARCH QUESTIONS

Purpose and Objectives

This new application is submitted in response to the solicitation, "Field-Initiated Research and Evaluation Program: Category 2: Small Studies and Analyses" to test the efficacy of a mentoring intervention (previously developed and shown efficacious for psychological and behavioral outcomes) as a delinquency prevention program for youth at risk for involvement with the juvenile justice system due to histories of childhood maltreatment and disruptions in caregiver custody. Despite significant research demonstrating the strong link from childhood adversity to crime, few studies have rigorously tested whether an evidence-based, positive youth development program can mitigate the effects of childhood adversity on juvenile justice involvement. Using a longitudinal sample of foster care youth, we will apply an ecologically-grounded model to examine: (1) how Fostering Healthy Futures (FHF) - a mentoring and skills group intervention delivered during the pre-adolescent years - can help reduce youth delinquent behavior and involvement in the juvenile justice system, (2) whether FHF protects youths from the negative effects of childhood adversity on delinquency/juvenile justice involvement, and (3) whether changes in psychosocial functioning operate as mediators of this intervention effect. Using a diverse sample, we also propose to examine gender and racial/ethnic differences in program efficacy and its mechanisms – an important issue given the diversity of youth placed in foster care across the country (Child Welfare Information Gateway, 2016). Funding for our proposal will permit us to abstract, code and analyze data from the juvenile justice records of youth between preadolescence and young adulthood, in order to examine the impact and cumulative effects of FHF on juvenile justice involvement over a 7-9 year period.

Defining the Problem: Child Adversity and Delinquency

Maltreated youth are particularly vulnerable to a host of adverse outcomes, including juvenile justice involvement. In 2014, 3.6 million children in the U.S. were referred to Child Protective Services, representing almost 5% of the child population, and a 14.6% increase since 2010 (US DHHS, 2016). Maltreated youth are at high risk for delinquency and are overrepresented in the justice system (Smith & Thornberry, 1995; Stouthamer-Loeber, Loeber, Homish, & Wei, 2001, Widom, 1992). In our 6-year longitudinal study of adolescents in foster care, 25% had been arrested, 25% had gang involvement, and 27% had used a weapon to attack someone by age 17 (Taussig & Culhane, 2005). Long-term studies suggest that those who emancipate from foster care continue to be at elevated risk; in a longitudinal study, over half of the males and 30% of the females were arrested and 29% had been incarcerated between the ages of 18 and 21 (Courtney et al., 2007).

In addition to abuse and neglect, maltreated youth are also likely to have experienced other adverse childhood experiences (ACEs), including witnessing intimate partner and community violence, changing homes and schools frequently, and being placed in foster care. Taken together, maltreatment and other ACEs may exert a powerful influence on youth delinquency, given that juvenile offenders are four times more likely to report four or more ACEs than samples of mostly college-educated adults (Baglivio et al., 2014). It is estimated that between 75% and 93% of youth entering the juvenile justice system have experienced some type of trauma (Costello, Erklani, Fairbank & Angold, 2003; Dierkhising et al., 2013; Evans-Chase, 2014). Cumulative childhood exposure to ACEs predicts youth aggressive behaviors, rule-breaking, general delinquency, and recidivism in adolescence (Appleyard, Egeland, van Dulmen, & Sroufe, 2005; Forehand, Biggar,

& Kotchick, 1998; Baglivio, Jackowski, Greenwald, & Howell, 2014). Furthermore, higher ACE scores appear to be associated with earlier and more chronic offending (Baglivio & Epps, 2015).

Although evidence-based delinquency prevention programs for high-risk populations exist, no known preventive interventions have demonstrated efficacy in reducing juvenile justice involvement among *maltreated youth with child welfare involvement*. These youths often require a more individualized and contextually-sensitive intervention approach, which is why mentoring may be a promising strategy. This application proposes to conduct a longitudinal analysis of a randomized controlled trial of a mentoring program for maltreated youth to determine whether this strategy prevents and/or reduces delinquency and juvenile justice involvement.

The Fostering Healthy Futures Program

Fostering Healthy Futures (FHF) is a 9-month intensive program designed for 9-11-year old children placed in court-ordered foster care as a result of maltreatment. The program consists of mentoring and skills groups that aim to promote positive youth development, thereby preventing and reducing delinquent behavior. Using a rigorous, randomized controlled trial design, the program has been successful in significantly reducing youth mental health symptoms (trauma, anxiety, and depression), reducing residential treatment facility placements, and reducing foster care placement changes (Taussig & Culhane, 2010; Taussig et al., 2012). Given that mental health functioning (Kerig, Ward, Vanderzee, & Moeddel, 2009; Ruchkin, Henrich, Jones, Vermeiren, & Schwab-Stone, 2007) may mediate the association between maltreatment and delinquency, FHF may also show efficacy in reducing adolescent delinquency.

Study Goals

The proposed study will test the model illustrated in Figure 1. Specifically, we aim to answer questions summarized under the following goals:

Goal 1: To test whether FHF intervention is associated with less delinquency and involvement with the juvenile justice system. We will examine whether, compared to control youth, youth in the FHF program had lower rates of self-reported delinquency, as well as lower adjudication rates, post program. Furthermore, we will examine trajectories of delinquent behavior until age 18 and test whether FHF youth continue to demonstrate lower rates of delinquency. We expect that the program will have the most profound effect on long-term trajectories of delinquency, as we anticipate a sharp increase in the rates of self- and official-reports of these behaviors during middle to late adolescence.

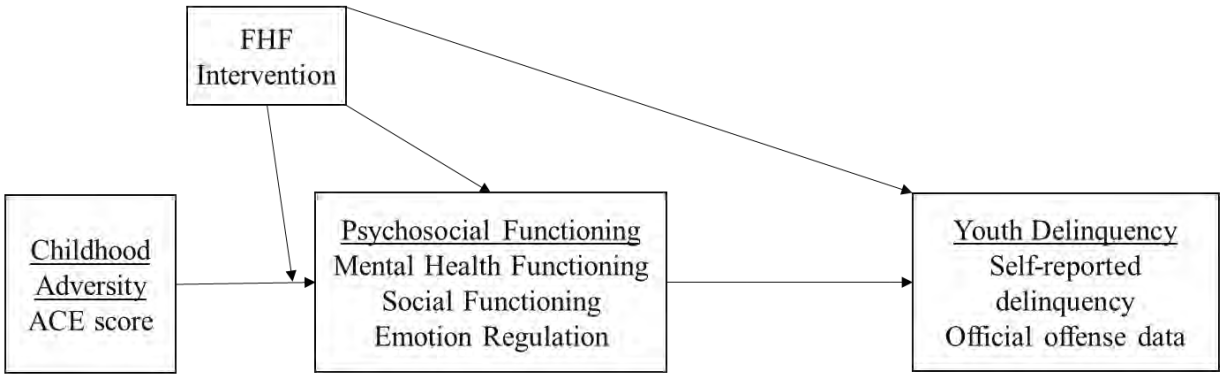


Figure 1. FHF Intervention Buffers the Effects of Childhood Adversity on Youth Psychosocial Functioning and Delinquency

Goal 2: To examine whether the FHF intervention buffers youth from the impact of ACEs on delinquent behavior. In line with previous literature, we expect that greater childhood adversity will be associated with more delinquent behavior. However, we also expect this association to be weaker among youth who received the FHF intervention than for control youth.

Goal 3: To examine the mechanisms of action for the FHF intervention across multiple domains of functioning. We will examine how youth psychosocial functioning may explain the effects of FHF on youth delinquency. Specifically, we propose that FHF participation

will be associated with better mental health functioning, social functioning, and emotion regulation and that these variables will be associated with lower youth delinquency, thus partially mediating the effects of the intervention on delinquency.

Goal 4: To explore gender and racial/ethnic differences in program efficacy and mediating mechanisms. We will conduct exploratory analyses to test whether the effects of the FHF intervention differ across gender and Hispanic/Latino, African American, American Indian, and Caucasian youth and/or whether the mediating mechanisms are invariant.

Review of Relevant Literature

Although the ecological risk factors for juvenile delinquency have been well researched, the mechanisms by which trauma exposure places youth at risk for delinquency are less well understood. Research suggests that trauma exposure may lead youth to be more emotionally reactive and oppositional, resulting in harsh parenting practices that are a known risk factor for delinquency (Snyder, Schrepferman, & Peter, 1997). The American Academy of Pediatrics published a 2012 technical report entitled, "The Lifelong Effects of Early Childhood Adversity and Toxic Stress" in which they posit that chronic childhood adversity impacts molecular biological mechanisms that alter gene expression. Trauma exposure activates the hypothalamic-pituitary-adrenocortical system which results in increased levels of stress hormones. The developing brain is particularly sensitive, and chronic exposure to stress leads to changes in brain structure and function that impact learning, behavior, and health. Behavioral dysregulation leading to delinquent behavior is thought to result from the interplay of these physiological mechanisms with ecological factors (Anda et al., 2006; American Academy of Pediatrics, 2012).

One potential mechanism that links childhood adversity to delinquency is mental health problems. Indeed, greater childhood adversity is robustly associated with heightened mental health

symptomatology, such as depressed mood (Singer, Anglin, yu Song, Lunghofer, 1995), anxiety (Grover, Ginsburg, & lalongo, 2005), and post-traumatic stress (Raviv, Taussig, Culhane, & Garrido, 2010) – mental health symptoms that are also highly comorbid with delinquency and externalizing problems (Hinshaw, 1987; Kerig & Becker, 2012). For example, Allwood, Baetz, DeMarco, & Bell (2012) report on the role of depression, hopelessness, and sense of foreshortened future in mediating the link from early trauma to delinquency. Thus, mental health symptoms associated with early childhood adversity may interfere with adolescents' positive engagement with their social context and thus contribute to higher rates of delinquency.

Social functioning is another potential mediator, given the increasing importance of peer relationships during adolescence. Studies have shown, for example, that peer rejection is associated with crime and delinquency (Ladd & Burgess, 2001; Ladd, Herald-Brown, & Reiser, 2008) and rejected children not only have higher rates of externalizing behaviors as early as kindergarten, but also exhibit more pronounced developmental increases in externalizing behavior, as compared to nonrejected children (Keiley, Bates, Dodge, & Pettit, 2000). One possible explanation for these findings is that peer rejection is a marker for undesirable child characteristics, such as anger and aggressive behavior, which in turn explains elevated trajectories of peer rejection and delinquency among rejected children. However, it is also possible that childhood adversity involves disruptions in early social context, thus interfering with the development of social functioning and resulting delinquent behavior.

Finally, poor emotion regulation is a key risk factor for delinquency and is also associated with childhood adversity. Emotion regulation refers to processes involved in individuals' conscious and unconscious efforts to modulate their emotions (Bargh & Williams, 2007; Rottenberg & Gross, 2003) and responses to stressful events (Campbell-Sills and Barlow, 2007;

Gratz & Roemer, 2004; Gross, 1998; Thompson, 1994). Research shows that exposure to acute and chronic stress has profound neurobiological consequences for prefrontal and limbic-striatal functioning involved in the processing and regulation of emotions (Ansell et al., 2012; Davidson et al., 2002; Seo et al., 2014) and reduces emotion regulation capacity (Dvir et al., 2014; Kim et al., 2013; McEwen, 2004, Sinha, 2001). In turn, deficits in emotion regulation, such as anger regulation and maladaptive regulation strategies, are associated with increased delinquent behavior (Roberton, Daffern, & Bucks, 2012).

We propose that mental health, social functioning, and emotion regulation are not only key modifiable factors that may mediate the effect of childhood adversity on delinquency, but are also putative mechanisms of action for the FHF program. FHF is a preventive intervention for 9-11-year-old children recently placed in foster care. As a positive youth development (PYD) intervention, it rejects deficit models that focus on reducing undesirable behaviors and focuses instead on the promotion of competencies. PYD programs hypothesize that the promotion of positive development will lead to reductions in problem behaviors and may also buffer high-risk children from the impact of prior adverse experiences (Bernat & Resnick, 2006; Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002; Lerner, 2005). Programs developed through a PYD framework vary considerably but all involve an intentional, prosocial approach. There have been recent calls for integrating a PYD approach into the juvenile justice system (Frabutt, DiLuca, & Graves, 2008).

FHF was designed to augment positive development by targeting many of the risk and protective factors associated with justice involvement. FHF is comprised of two components identified by the Blueprints Program as effective strategies for reducing violence: (1) one-on-one mentoring (based on a more intensive Big Brothers Big Sisters model), and (2) therapeutic skills

groups (based on the PATHS curriculum). FHF aims to: 1) increase involvement in extracurricular activities, 2) promote healthy coping strategies, 3) foster positive attitudes, and 4) support healthy and prosocial peer relationships (cf. Taussig, Culhane, & Hettleman, 2007, for a complete description of the program). FHF has demonstrated success in reducing mental health problems, residential placements, and increasing permanency (Taussig & Culhane, 2010; Taussig, Culhane, Garrido & Knudtson, 2012) and is listed on national registries of effective programs. Although delinquency and juvenile justice outcomes have not yet been examined for the program, we hypothesize that FHF's proven efficacy in improving psychosocial functioning will provide downstream effects for these outcomes.

This grant provides an opportunity for us to build upon previous research and understand the longitudinal relationship between childhood adversity and delinquency in a particularly vulnerable population – i.e., maltreated children in foster care. In addition, the large percentage of girls, Hispanic/Latino youth and American Indian youth in our study will enable us to examine the relationship between ACEs and justice involvement within these understudied subgroups. Despite recognition that juvenile justice involvement and experiences with the system differ by gender and racial/ethnic groups, only a few studies have examined ACEs in these subgroups. In a 2015 study of youth in the juvenile justice system, Baglivio and Epps (2015) found that White youth had a higher number of ACEs than Black or Hispanic youth and that females had more ACEs than males. Other studies have examined whether race/ethnicity and gender moderate the association between ACEs and negative outcomes. Two studies have found that the association between cumulative risk and mental health and behavior problems was stronger for White youth than for Black or Hispanic youth (Gerard & Buehler, 2004; Schilling, Aseltine, & Gore, 2007). Brown et al. (2015) found that the link between ACEs and early sexual behavior was stronger for females than males.

PROJECT DESIGN AND IMPLEMENTATION

Participants

Participants for the proposed project are youth enrolled in the randomized controlled trial of the Fostering Healthy Futures (FHF) program. Between 2002 and 2011, all 9-11-year-old children placed in foster care by participating departments of child welfare were recruited, in yearly cohorts, to participate in the FHF study provided that they were placed in court-ordered foster care as a result of maltreatment and lived within 35 minutes of a site where skills groups were conducted. In order to maximize generalizability, the FHF study did not exclude youth with significant mental health and behavior problems or youth with mild developmental delays. The minimal exclusion criteria used enhances the generalizability of study findings. Based on these inclusion criteria, we enrolled 426 youth and randomly assigned them to treatment (n=233) and control (n=193) groups. The sample included roughly equal numbers of females (47.4%) and males. The mean baseline age was 10.3 (*SD*=.90) years. Over half (53.0%) of the participants identified belonging to more than one racial/ethnic group: 50.2% identified as Hispanic/Latino, 30.3% as African American, 30.1% as American Indian and 44.4% as Caucasian. Despite the fact that participants in our program were at extremely high risk and highly mobile, we had excellent success in recruiting and retaining both treatment and control group participants. Our recruitment rate was 91.3%. Retention at 1.5 years post baseline (T2) was 89.2% (N=380) and retention 3 years post baseline (T3) was 85.9% (N = 366). We are currently completing recruitment for T4 (when participants are 18-22) and have an 85% retention rate (expected N = 225). Caregivers and teachers were also interviewed at T1-3, with similar rates of recruitment and retention (i.e., between 80-90%).

Procedure

Interviews with youth, caregivers and teachers. Youth and caregivers were interviewed at baseline (T1), 1.5 years post baseline (T2), 3 years post baseline (T3). Youth are also being interviewed as young adults, between the ages of 18-22 (variable length of time since baseline), called T4. Official adjudication data, providing history of offending through age 18, will be available for all participants, regardless of retention status at any of the post-baseline time points. Consent for youths' participation, and to abstract administrative records, including juvenile justice records, was obtained from their legal guardians. In many cases, the child's legal guardian was the applicable child welfare agency. The Colorado Department of Human Services and the University of Denver are parties to a memorandum of agreement (see attached copy) that authorizes county child welfare agencies to provide consent for children's participation in the FHF study. Caregivers also provided their own informed consent and youth provided assent (or consent at the T4 assessment). All procedures for the study were approved by the university IRB and information collected in the study is kept confidential per our federal Certificate of Confidentiality (attached) except as provided by law and explained in the consent/assent forms.

Measures

Youth and caregiver interviews included measures with sound psychometric properties that have been widely-used in other studies of adolescent delinquency, and have been used successfully with ethnically and racially diverse samples.

Delinquency. Delinquency will be measured in multiple ways at each time point, using youth, caregiver and teachers reports of delinquent behavior as well as official court records. Delinquency will be assessed based on youth-report data collected via *The Adolescent Risk Behavior Survey* (ARBS; Taussig, 1998), a measure of frequency of past-year and lifetime

engagement in 16 delinquent behaviors (e.g., shoplifting, physical assault, robbery, arson, stealing a motor vehicle). The ARBS is a compilation of scales from three risk behavior surveys that have shown adequate reliability and validity: the National and Denver Youth Surveys, The Problem Behavior Survey, and the National Adolescent Student Health Survey. The externalizing scales of the Achenbach measures (Youth, Caregiver and Teacher reports) will also be used (Achenbach, 1991; Achenbach & Rescorla, 2001; Achenbach, Dumenci, & Rescorla, 2003). A proportional variety score – a score that indicates the proportion of the total number of items endorsed by a participant - will be computed for use in analyses. Variety of offending scores are widely used in developmental criminology, given their high correlations with seriousness of offending and lower susceptibility to recall errors (Hindelang, Hirschi, & Weis, 1981; Piquero, MacIntosh, & Hickman, 2002). We will compute a total delinquency score, violent offending score, and nonviolent offending score.

Official court records of justice involvement will be obtained after receiving a no-cost download of administrative data from the State Court Administrator's Office (letter of approval attached). We will abstract data for the period between participants' baseline interviews and the age of 18. Records will be coded for offense type and age at offense. Similar to the self-, caregiver- and teacher-reported delinquency data, a summary variable will encode for proportional variety score at each age-period. Additionally, we will code placement in residential treatment and detention facilities. Given that offending is curtailed during these placements, proportion of time spent in them will be used as a control variable.

Adverse Childhood Experiences. To assess baseline ACEs, a 6-item measure of adverse childhood experiences, which was created and validated for maltreated children in foster care, will be used (Raviv, Taussig, Culhane, & Garrido, 2010). The scale demonstrates good predictive

validity. The items include: (1) *Physical Abuse;* (2) *Sexual Abuse;* (3) *Removal from a single parent household;* (4) *Exposure to community violence;* (5) *Caregiver Transitions;* and (6) *School Transitions*. Consistent with literature on cumulative risk (e.g., Appleyard et al., 2005), the measure employs conventional standards for dichotomizing and summing the six factors as follows. The abuse exposure and single parent household items were coded as "present" (1) or "absent" (0) from child welfare records. Exposure to community violence, caregiver transitions, and school transitions were dichotomized such that a score of 1 was assigned to scores in the upper quartile of the sample distribution, and a score of 0 was assigned for all others. Exposure to community violence was derived from an adapted 8-item version of the Things I Have Seen and Heard scale (Richters & Martinez, 1993). Children were asked the number of times in the past year they had seen or heard acts such as, "guns being shot" or "seeing someone getting arrested." Responses ranged from never (0) to four or more times (4). The upper quartile included children with mean scores above 1.63 (M=1.06, SD=.85). The number of caregivers since birth (range=2-12, M=4.35, SD=2.45) and number of schools since kindergarten (range=1-23, M=4.38, SD=2.76) were used for the final two items. Upper quartiles for both included children with six or more caregivers and schools. Upon dichotomizing all risk variables, the factors were summed to create an overall risk score. Higher scores indicate greater risk exposure.

Mental Health Functioning was assessed at each time point using a published multi-informant index created based on principal components factor analysis of the following variables: (1) mean score on the Trauma Symptom Checklist for Children (Briere, 1996; TSCC); (2) the Internalizing Scale of the Child Behavior Checklist completed by children's caregivers; and (3) Internalizing Scale of the Teacher Report Form at T3 (Achenbach & Rescorla, 2001).

Social Functioning was assessed using multiple measures and multiple informants: (1) ***Social Acceptance*** was assessed with youth report on the *Self-Perception Profile* (Social Acceptance scale) and the *Teacher Sociometrics Scale*, a measure of teacher-predicted peer nominations on the following indices: popular, aggressive, a preferred work and play partner, or a non-preferred work and play partner (Huesmann, Eron, Guerra, & Crawshaw, 1994); (2) ***Social Support*** was assessed with two youth-report measures, the *Social Support Scale for Children* (Harter, 1985) and the short-form scales of the *People in My Life* measure (Gifford-Smith, 2000); and (3) ***Social skills*** were assessed with caregiver and teacher reports using the normed *Social Skills Rating System* (Gresham & Elliott, 1990) to assess children's cooperation, assertion, responsibility, and self-control.

Emotion Regulation was assessed with (1) youth report of positive and negative coping skills using *The Life Events and Coping Inventory* (Dise-Lewis, 1988) and (2) parent and teacher report on the *Behavior Rating Inventory of Executive Function*, a normed measure of self-regulation and executive functioning (Gioia, Isquith, & Kenworthy, 1996).

Data Analysis Plan

Main analyses will utilize structural equation modeling, using Mplus software (Muthén & Muthén, 1998-2016). Before conducting data analyses, data will be cleaned (e.g., examined for outliers; distributional qualities will be examined, checking assumptions and transforming and recoding variables as needed). Confirmatory factor analyses (CFIs) will examine the optimal factors structure for the mental health, social functioning, and emotion regulation variables. In each case, the CFI models will combine different assessments instruments. These analyses will compare two-factor and one-factor models, while combining reports across different informants (youths, parents, and teachers). Once the best factor model is selected, item loading will be

examined - items with non-significant factor loadings and items that have problematic cross-factor loadings will be considered for deletion.

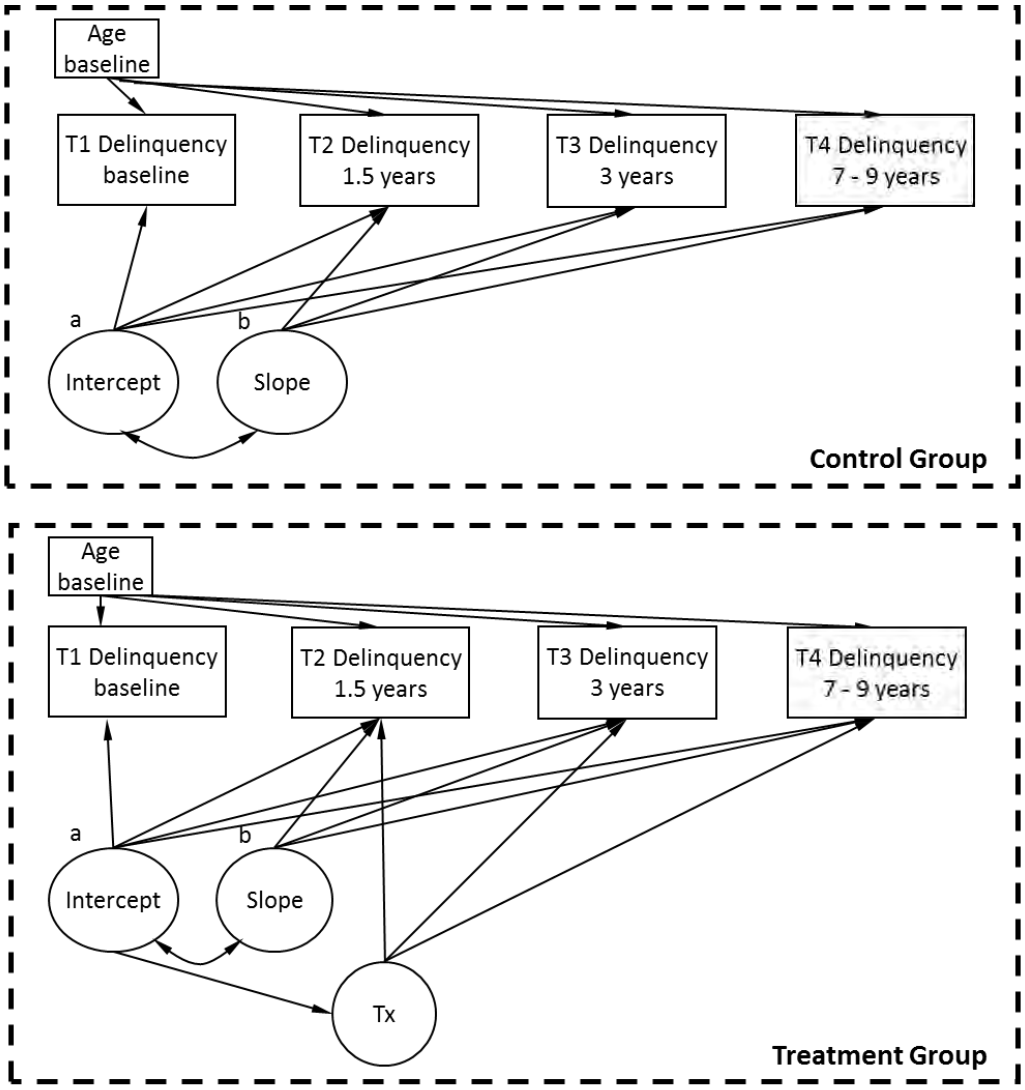


Figure 2: ***Multigroup Model Testing Treatment Effect on Trajectories of Delinquency.***

Goal 1: To test whether FHF intervention is associated with less delinquency and involvement with the juvenile justice system. Given the developmental nature of changes in delinquent behavior, we will use Latent Growth Treatment/Control Model (Muthen & Curran, 1997) to estimate individual growth trajectories, controlling for age. As can be seen in Figure 2, this set of analyses will estimate a linear growth trajectory for the control group, thus estimating

time-related changes in the outcome variables (such as developmental changes and regression to the mean). For the treatment group, intercept and slope from the control group will be used to estimate linear change, plus an added treatment factor will capture the incremental or decremental growth or decline that is associated with treatment. The effect of treatment will be allowed to vary over the course of the study by leaving the factor weights that link the treatment effect to each wave to be estimated by the model. Thus, we will be able to estimate changes in treatment effect through Time 4 for self-reported delinquent behavior and through age 18 (coded on yearly basis for 7-9 years post baseline, depending on the age at Time 1) for the official records of offending variables. The model will control for age differences at baseline. Finally, the model will estimate the effect of baseline levels of the outcome variable on treatment efficacy – evaluating whether the intervention has a stronger effect for those with higher levels of baseline involvement.

Overall treatment efficacy will be supported by a significant negative mean treatment effect (i.e., a significant negative intercept for the Tx latent variable). Significant variability in the Tx latent variable will suggest that there are individual differences in treatment efficacy. Finally, inspection of the factor weights for the Tx factor will reveal whether treatment effect is sustained over the course of the study.

Goal 2: To examine whether the FHF intervention buffers youth from the impact of ACEs on delinquent behavior. For this set of analyses, all participants (treatment and control groups) will be modeled together. Delinquency trajectories will be estimated with a Piecewise Latent Growth Model that specifies a latent intercept (Baseline level), short-term (Baseline to Time 2) change that reflects developmental changes in delinquency and changes that are due to short-term treatment effects, and long-term (Time 2 to Time 4, depending on the outcome measure) change that reflects developmental changes and long-term treatment effects. We will test whether

greater childhood adversity is associated with a higher delinquency intercept, as well as short-term and long-term increases (or less pronounced decreases) in delinquency. Treatment assignment will be tested as a moderator of the paths from childhood adversity to short- and long-term changes in delinquency.

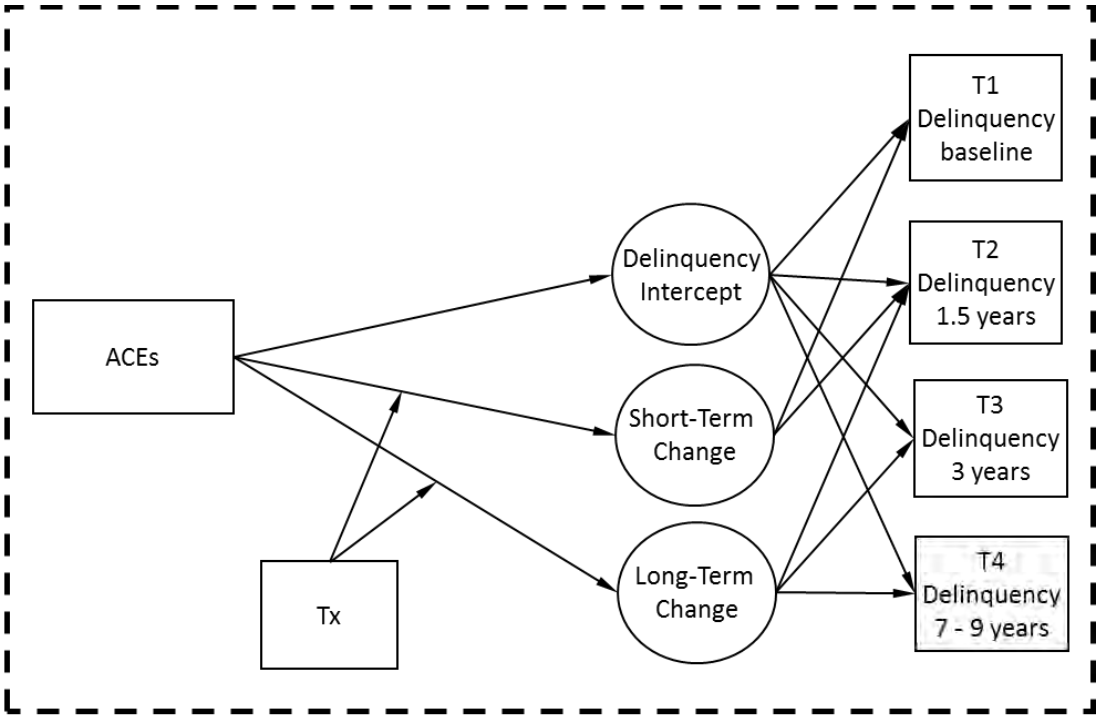


Figure 3: ***FHF Intervention Buffers Youth from the Negative Effects of Childhood Adversity.***

Goal 3: To examine the mechanisms of action for the FHF intervention across multiple domains of functioning. We will next test whether short- and long-term effects of the FHF intervention on delinquency are mediated by changes in psychosocial functioning. As illustrated in Figure 4, the model will estimate the intercept and short-term changes in psychosocial functioning variables (each psychosocial functioning variable in a separate model), as well as short- and long-term changes in delinquency. It is hypothesized that ACEs will be associated with poorer psychosocial functioning (both intercept and short-term changes) and delinquency (intercept, short-term changes, long-term changes). The impact of ACEs on delinquency is

anticipated to be partially mediated by the psychosocial functioning variables. Finally, it is hypothesized that the FHF intervention will reduce the effects of ACEs on psychosocial functioning (by moderating the path from childhood adversity to changes in psychosocial functioning), which in turn will predict improvements in delinquency. The model will permit a test of mediated moderation pathways (presented bold arrows in the figure), so that we will be able to ascertain whether changes in the psychosocial functioning variables mediate the role of the FHF intervention in buffering youth from the effects of ACEs on subsequent delinquency (Preacher, Zyphur, & Zhang, 2010).

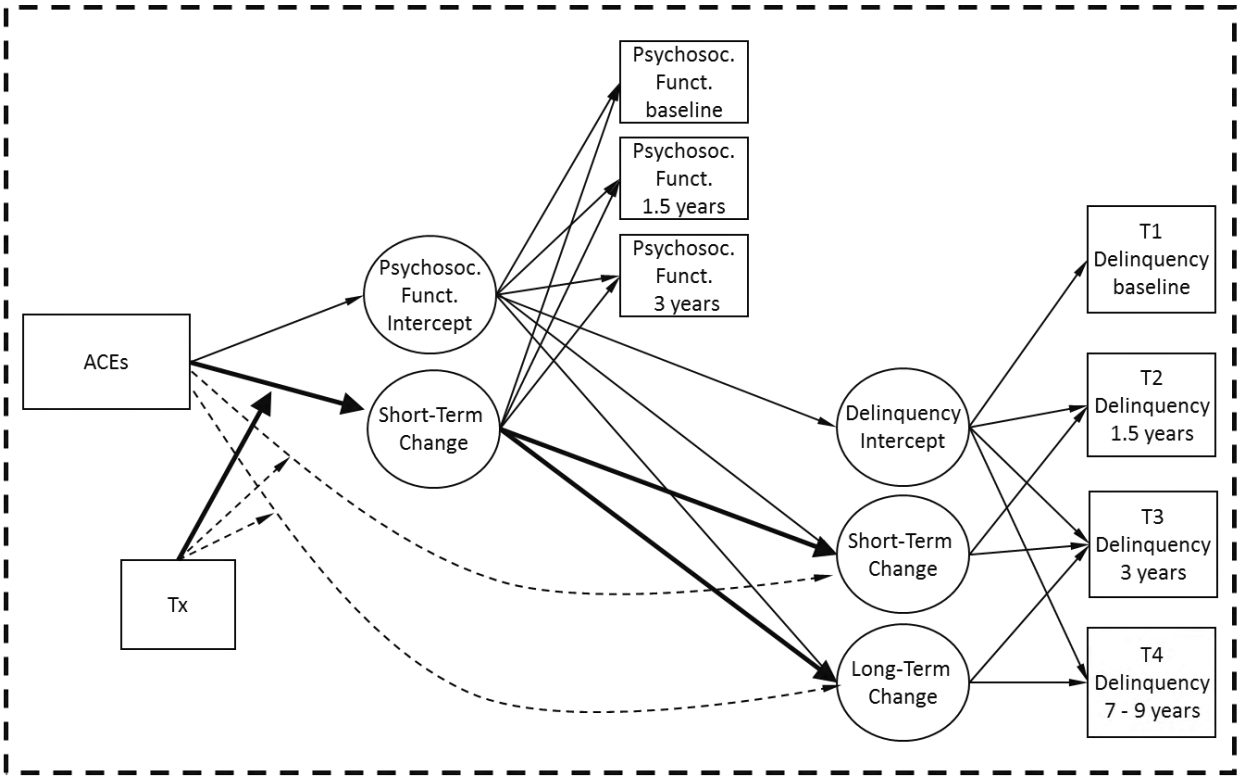


Figure 4: Effects of *FHF Intervention on Delinquency are Mediated by changes in Psychosocial Functioning*

Goal 4: To explore gender and ethnic differences in program efficacy and mediating mechanisms. This set of analyses will explore potential gender and racial/ethnic differences in our data. A binary gender variable will be added to all models to examine whether: (1) the latent FHF intervention effect is greater for boys or girls; (2) there is a three-way treatment × ACEs × gender

interaction on delinquency, with FHF providing a stronger buffering effect for boys or girls; (3) there is a three-way treatment × ACEs × gender interaction on psychosocial functioning, with FHF providing a stronger buffering effect for boys or girls. For analyses of racial/ethnic data, Hispanic/Latino, African American, American Indian, and Caucasian groups will be compared in a similar fashion, using dummy-coded ethnicity variables.

Missing Data Strategies. Whenever present, patterns of missing data will be analyzed to determine whether data are missing at random and to determine patterns of missing data (Little, 1988). We will utilize full information maximum likelihood (FIML) estimation within Mplus, which will allow for missing values and produces estimates that are less biased than those computed using listwise deletion and single-point data estimation (Enders, 2006).

Power Analyses and Sample Size. Power analyses were conducted to test whether the proposed sample size is adequate to detect treatment effects in the proposed models, with the effect size set at .30, alpha set at .05, and power of at least .80 (Cohen, 1988). Specifically, we conducted Monte Carlo simulations of the models discussed for Goals 1-3, with at least 4 assessment points for the delinquency variable; N = 426 at baseline, N = 380 at time 2, N = 366 at time 3, and N = 225 at time 4. The resulting parameter bias ranged from .003 to .006, standard error bias ranged from .002-.02, and coverage ranged from .943 - .952 – all satisfying the recommended criteria (Muthén & Muthén, 2002). Given the exploratory nature of Goal 4 and the more limited *N* among subgroups, we will look both at statistical significance and patterns of differences across the groups for this set of analyses.

POTENTIAL IMPACT

Implications for Policy and Practice

The proposed study is responsive to the priorities outlined in the solicitation to inform the field's understanding of developmental processes and juvenile justice involvement. It also will examine the impact of a preventive intervention in reducing delinquency among a high-risk population exposed to many adverse events. Finally, the proposed research will study many special populations that have been understudied in the juvenile justice system. The ultimate goal of this research is to develop knowledge that will help OJJDP and the field better understand how to achieve a trauma-informed justice system that meets the needs of *all* justice-involved youth, including understudied subgroups.

If a positive youth development program is found to buffer the effect of ACEs on juvenile justice involvement among a high-risk population, we will have additional evidence to share with the field about the use of such interventions for children involved in the child welfare system. As attention to youth dually involved with child welfare and juvenile justice systems increases, practices are needed to not only identify those youth, but also to adequately intervene. In addition, if differences in the impact of a prevention program on juvenile justice involvement are found for girls, Hispanic/Latino youth, and American Indian youth, it suggests that we may need to develop tailored programming for subgroups of youth at risk. Absent such knowledge, we are reliant on uniform interventions, which may not be as effective as tailored practices.

Youth of color are overrepresented at every stage of the child welfare intervention process, and these disproportionalities grow as children move deeper into the system (Chapin Hall, 2008). Such patterns of disproportionality extend to schools, where African American, Hispanic/Latino and American Indian youth are more likely to be suspended or expelled from school and become

involved in the juvenile justice system; a trajectory often referred to as the "school to prison pipeline." A recent article co-authored by two of the original ACE study architects (Felitti and Anda) discusses the implications of the ACEs research on practice and policy. Identifying family support, service system transformation, and evidence-based interventions as potential ways to mitigate the trauma-adverse outcomes link, they discuss the need for culturally relevant programs and practices to foster resilience and recovery from ACEs (Larkin, Felitti, & Anda, 2014). Although there have been successful initiatives demonstrated to ameliorate the link between violence exposure and negative sequelae, too few of these programs have been adapted for different cultural contexts, in part because the impact of ACEs across cultures is largely unknown. Larkin et al. (2014) also call for a focus on the cost-effectiveness of prevention and intervention activities across groups, as ultimately, fostering positive youth outcomes will bear a great return on investment. The current study aims to contribute substantially to this important research agenda.

Deliverables. As outlined in the solicitation, we are prepared to provide the following deliverables to OJJDP: (a) a practitioner-friendly overview document highlighting the project goals and objectives; (b) a draft implementation plan, (c) detailed progress report every 6 months, which will describe the status of the project, methodological issues, and progress toward goals, (d) practitioner-friendly interim and final reports highlighting the project's findings; (e) at least three scholarly articles submitted to peer-reviewed journals and two or more abstracts submitted for presentations to diverse audiences, (f) a final data set to archive with the National Archive of Criminal Justice Data and (g) final, detailed technical and non-technical reports documenting the research and findings. The PI and each of the co-investigators will be responsible for completing the deliverables per dates outlined in the Timeline. The advantage of including a team of three

researchers for this project is that each investigator can take the lead on different deliverables. This will maximize our time and impact over the 24-month project period.

Dissemination Strategy

As outlined in our CVs, our team has a strong track record for disseminating findings within the research community, both in peer-reviewed journals and at scientific conferences. Although we plan to publish findings from the proposed study in journals and present them at conferences, we have learned that many practitioners do not use these venues to obtain updated information about scientific advances in the field. For this reason, we regularly share our findings with non-scientific audiences using non-technical language and highlighting the practice implications of our work. We prioritize disseminating our work in outlets that target administrators, practitioners, and local government. Recently, we have given presentations to statewide practice organizations, community-based collaboratives, juvenile court and probation departments, mentoring practitioners, diversion programs, and the district attorney's office.

Our work has impacted policies and funding priorities that affect children's lives. We have been invited to share our research in mentoring with the Commissioner of the Administration on Children, Youth, and Families (ACYF) and to participate in the Longitudinal Data on Teen Dating Violence Research Meeting convened by the U.S. Department of Justice. Our work has been cited in congressional testimony, in the *Defending Childhood* Report of the Attorney General's National Task Force on Children Exposed to Violence (U.S. Department of Justice, 2012), as well as at the 2013 Institute of Medicine's *Forum on Global Violence Prevention*. Dr. Taussig also sat on the Colorado Governor's Task Force on Foster Care which made recommendations for several sweeping reforms. Our success in disseminating our intervention findings is evidenced by the listing of the Fostering Healthy Futures program on 8 evidence- and research-based registries. Dr.

Taussig serves on the Research Board of the National Mentoring Resource Center (funded by OJJDP) and is regularly invited to present at the annual Mentoring Summit in Washington, D.C., which is attended primarily by practitioners. She also reviews programs for The Office of Justice Programs' CrimeSolutions.gov, which uses rigorous research to determine "what works" in criminal justice, juvenile justice, and crime victim services. In addition, the investigators have presented their research findings to professional and academic audiences through conference presentations at the International Family Violence and Child Victimization Research Conference, the American Psychology Law Society Conference, the Society for Prevention Research Conference and the Society for Research on Child Development Conference. They have also published their work in relevant journals, including *Psychology of Violence*, *Law and Human Behavior* and *Journal of Research on Adolescence*.

Finally, the investigators regularly provide training to juvenile justice, child welfare, and mental health practitioners, and we will use the knowledge gained from this study to advance practitioners' understanding about the ways in which child welfare involvement leads to juvenile justice involvement, including potential differences by gender and racial/ethnic groups.

CAPABILITIES AND COMPETENCIES

As described below, the multidisciplinary investigative team has complementary experience working with youth involved in the child welfare and juvenile justice systems, developing interventions for youth with chronic exposure to trauma, and analyzing longitudinal data from a variety of data sources. We have published, or have under review, numerous papers related to the research proposed in the current application, including:

1. The cross-ethnic and gender equivalence of measures and whether relationships between predictive factors and outcomes are invariant across gender and different racial/ethnic

groups (Culhane & Taussig, 2009; Taussig & Talmi, 2001; Dmitrieva, Chen, Greenberger, & Gil-Rivas, 2004; Farruggia, Chen, Greenberger, & Dmitrieva, 2004)

2. The crossover between child welfare and juvenile justice populations (Litrownik, Taussig, Landsverk, & Garland., 1999)
3. Risk factors for youth delinquency and involvement in the juvenile justice system (Dmitrieva, Monahan, Cauffman, & Steinberg, 2012; Dmitrieva, Gibson, Steinberg, Piquero, & Fagan, 2014; Goldweber, Dmitrieva, Cauffman, Piquero, & Steinberg, 2011)
4. Risk behaviors, including substance use, sexual risk behaviors, self-destructive behaviors and delinquency in maltreated youth (Garrido, Weiler, & Taussig, in press; Nickoletti & Taussig, 2006; Taussig, 2002; Taussig, Clyman, & Landsverk, 2001; Taussig & Clyman 2011; Taussig, Harpin, & Maguire, 2014)
5. The relationship between ACEs and mental and physical health functioning (Hellyer, Garrido, Petrenko, & Taussig, 2013; Garrido, Culhane, Petrenko, & Taussig, 2011a,b; Garrido, Culhane, Raviv, Taussig, 2010; Garrido & Taussig, 2013; Garrido, Taussig, Culhane, & Raviv, 2011; Petrenko, Friend, Garrido, Taussig, & Culhane, 2012; Raviv et al., 2010; Mendoza, Dmitrieva, Perreira, Hurwich-Reiss, & Watamura, 2016)
6. The impact of PYD interventions on mental health and delinquent outcomes and the moderating impact of ACEs on PYD interventions (Taussig & Culhane, 2010; Taussig, Culhane, Garrido, & Knudtson, 2012; Weiler, Haddock, Henry, Zimmerman, Krafchick, & Youngblade, 2015; Weiler & Taussig, under review)

The research proposed in this application will enable us to build upon this prior expertise and contribute to the field, as described above.

Qualifications of Proposed Staff

Heather N. Taussig, Ph.D., Principal Investigator, is a clinical psychologist and a Professor and the Associate Dean for Research at the University of Denver's Graduate School of Social Work. She is the director of the Fostering Healthy Futures Program, which she and her colleagues developed at the Kempe Center for the Prevention and Treatment of Child Abuse and Neglect at the University of Colorado School of Medicine, where she maintains an adjunct appointment. Dr. Taussig has a strong background in prevention science, adverse childhood experiences, and longitudinal research on the developmental trajectories of children who have been maltreated and placed in foster care. She is currently the PI on a National Institute of Justice grant, examining dating violence outcomes for young adults with a history of foster care. She has also served as the PI on several studies funded by the National Institute of Mental Health, and the Edward Byrne Memorial Justice Assistance Grant (through the Colorado Division of Criminal Justice).

Dr. Taussig will be responsible for overseeing all aspects of the study. As the PI, she will: 1) maintain approvals to abstract data from juvenile justice, 2) maintain IRB approval to conduct the proposed research activities; 3) work with the co-investigators and statistician to develop the indices of putative mediators at each time point, 4) oversee the abstraction of juvenile justice data, 5) oversee the conduct and interpretation of statistical analyses and data archiving, 6) coordinate the work of each co-investigator and the graduate research assistant, 7) monitor the budget, 8) present research findings locally, nationally and internationally, 9) prepare manuscripts and reports for publication, and 10) write reports for OJJDP. Dr. Taussig will oversee grant reporting requirements as well as the dissemination and translation of research findings to all stakeholders.

Julia Dmitrieva, Ph.D., Co-Investigator, is a developmental psychologist and Associate Professor at the University of Denver. Her research focuses on the role of psychosocial and cultural

factors in adolescent delinquency. As part of this work, Dr. Dmitrieva have had over 15 years of experience conducting research that examines developmental changes in delinquency embedded in within a diverse bioecological model. As such, her work spans the role of biological (Dmitrieva et al., 2011), peer (Goldweber, Dmitrieva, Cauffman, Piquerro, & Steinberg, 2011), gang affiliation (Dmitrieva at al., 2014), romantic (Monahan, Dmitrieva, & Cauffman, 2014), school (Dmitrieva, Steinberg, & Belsky, 2007), and incarceration-related (Dmitrieva et al., 2012) factors on juvenile delinquency. In addition, Dr. Dmitrieva's work has focused on examining gender and ethnic differences in adolescent delinquency (Dmitrieva et al., 2004; Dmitrieva et al., 2011).

As a developmental psychologist, Dr. Dmitrieva has been extensively trained in and had ample opportunities to work with longitudinal data. In her published work, she has employed latent growth curve modeling, multilevel modeling, and mixture modeling, and has extensive experience of working with both normally distributed data as well as data that requires Bernoulli, zero-inflated Poisson, and other non-linear models. Most pertinent to this proposal, Dr. Dmitrieva has successfully consulted on and run analyses for numerous manuscripts, conference presentations, and dissertation projects that involved structural equation modeling and tested mediated moderation pathways. Given Dr. Dmitrieva's expertise and previous work, she will be involved in all aspects of the grant. Specifically, she will contribute to the developmental of the theoretical models tested in this proposal, conduct data analyses proposed for the grant, and take part in manuscript preparation and other dissemination activities.

Edward Garrido, Ph.D., Co-Investigator, is an Associate Professor of Pediatrics at the University of Colorado and a Visiting Teaching Assistant Professor at the University of Denver. As a social psychologist, Dr. Garrido's research focuses on understanding the impact of early-life trauma exposure on adolescent aggression and violence, including teen dating violence and

juvenile delinquency. He has published over 20 peer-reviewed manuscripts examing the impact of various early-life traumas including exposure to domestic and community violence, caregiver transitions, and physical abuse. In addition to his research, Dr. Garrido was also an evaluator on a federally-funded grant aimed at increasing the delivery of trauma-informed services to families in the child welfare system. Recently he served as Associate Director of SafeCare Colorado, a Colorado Department of Human Services-funded, statewide trial of a home visiting program targeted to families at risk of entering the child welfare system. In terms of his work involving justice-involved youth, Dr. Garrido was co-PI (with Dr. Taussig) on a Colorado Justice Assistance Grant examining correlates of delinquency in youth in foster care. He is also an investigator on a grant from the National Institute of Justice that is examining predictive factors of teen dating violence in a sample of maltreated youth formerly in foster care.

Given Dr. Garrido's previous work examining the impact of trauma on problem behaviors in high-risk youth, he will collaborate with the investigative team to devise measurement strategies for key study variables. He is proficient in managing large datasets and using a variety of analytical techniques to answer research questions of interest. Dr. Garrido will be responsible for data cleaning and for archiving data in accordance with the Data Archiving Plan, as he is currently doing this work on a National Institute of Justice Grant. Finally, Dr. Garrido will collaborate with the team to give presentations, submit reports and manuscripts for publication, as well as integrate the findings into his statewide dissemination of evidence-based practices.

Project Management and Organizational Structure

The complementary expertise of the investigative team in the areas of trauma, delinquency, juvenile justice, child welfare, intervention research and statistical analyses will ensure that the stated goals are achieved. Drs. Taussig and Garrido have worked together for over a decade and

Dr. Dmitrieva is a new colleague of theirs at the University of Denver. As described above, Dr. Taussig will assume responsibility for coordinating the research team's activities to ensure that the project stays on schedule and achieves its stated goals. The team will have bi-weekly meetings to identify and report on individual tasks and progress achieved and will co-supervise the Graduate Research Assistants (GRA). Given the three investigators' history of writing papers for publication and presenting findings, we are confident that we can work effectively and efficiently to produce the stated deliverables.

First, as shown in the attached Timeline, Dr. Taussig will work with our state partners to share consents & receive a download of data from the State Court Administrator's Office (see attached approval). The GRA, supervised by Dr. Garrido, will abstract, code and clean offending data for each year. Dr. Dmitrieva will then conduct analyses to operationalize the constructs, and the three investigators will then collaboratively examine: (1) trajectories of change in delinquency, (2) whether participation in FHF reduces delinquency, and (3) whether FHF moderates the effect of ACEs on delinquency. This will lead to the submission of the first manuscript. Next, the three investigators will examine trajectories of change in the mediator variables, test the mediated moderation models, and write and submit a second paper for publication on these findings. Finally, the investigators will examine gender and ethnic differences in the models, which will lead to the third manuscript submission. Although all investigators will collaborate on the manuscripts, Dr. Taussig will be primarily responsible for writing the methods and discussion sections, Dr. Garrido (with the support of the GRA) will draft the introduction sections and manage the data to be used in analyses, and Dr. Dmitrieva will take the lead on the statistical analyses and result sections. Each investigator will first author one of the three publications. Dr. Taussig will be responsible for the dissemination activities, including the practitioner-friendly overview of findings for OJJDP.

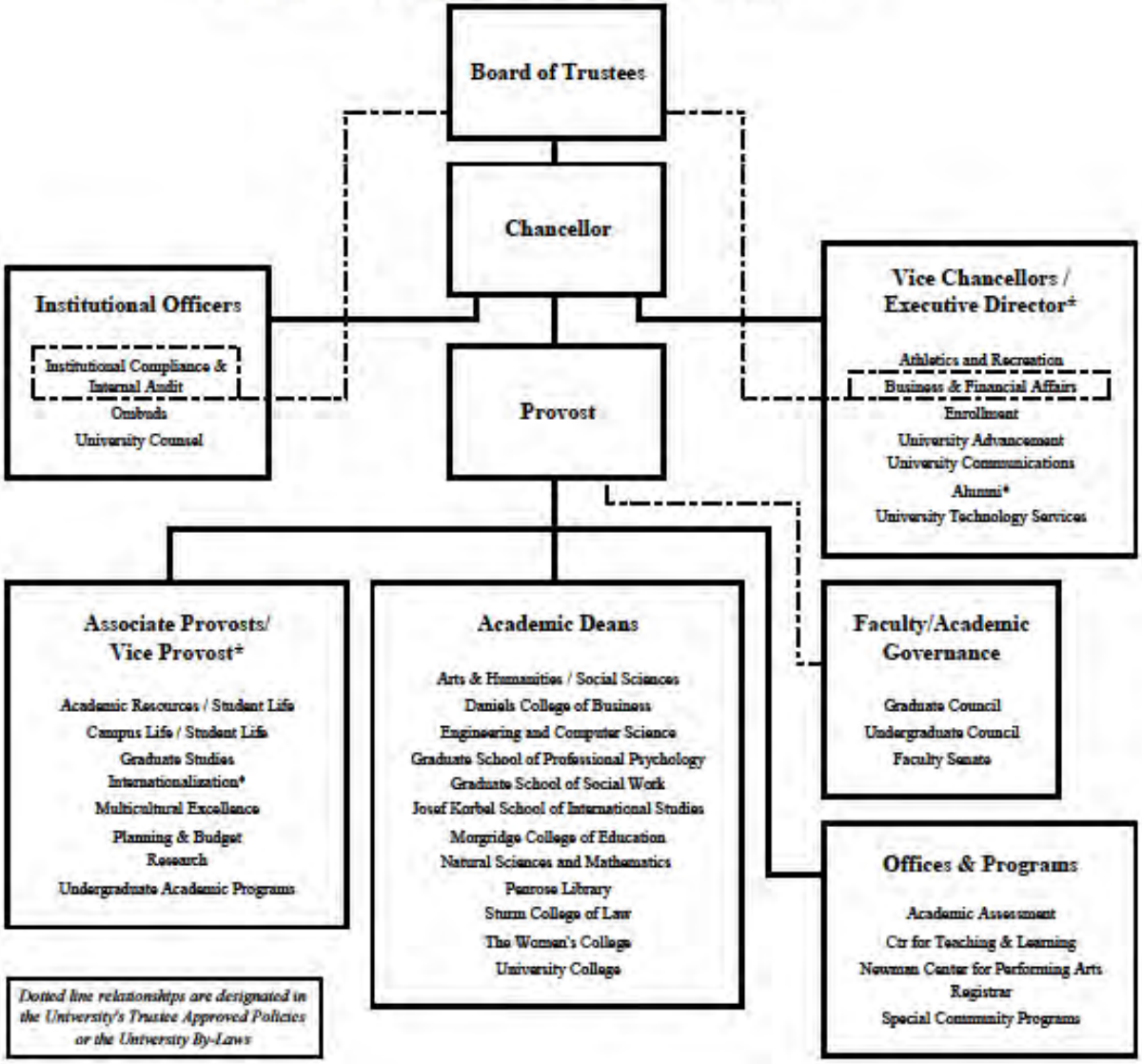
Dr. Garrido will take the lead throughout the project on the data archiving activities and will be responsible for submitting the final data set for archiving.

The University of Denver (DU), the applicant organization, has the experience and capacity to manage the award as described on the Office of Research and Sponsored Project's website: http://www.du.edu/orsp/grant-lifecycle/manage-award/index.html. DU has controls in place to ensure that Federal awards are used for authorized purposes in compliance with laws, regulations, and the provisions of the award and that performance goals are achieved. Please see the University of Denver's Organizational Chart on the following page.

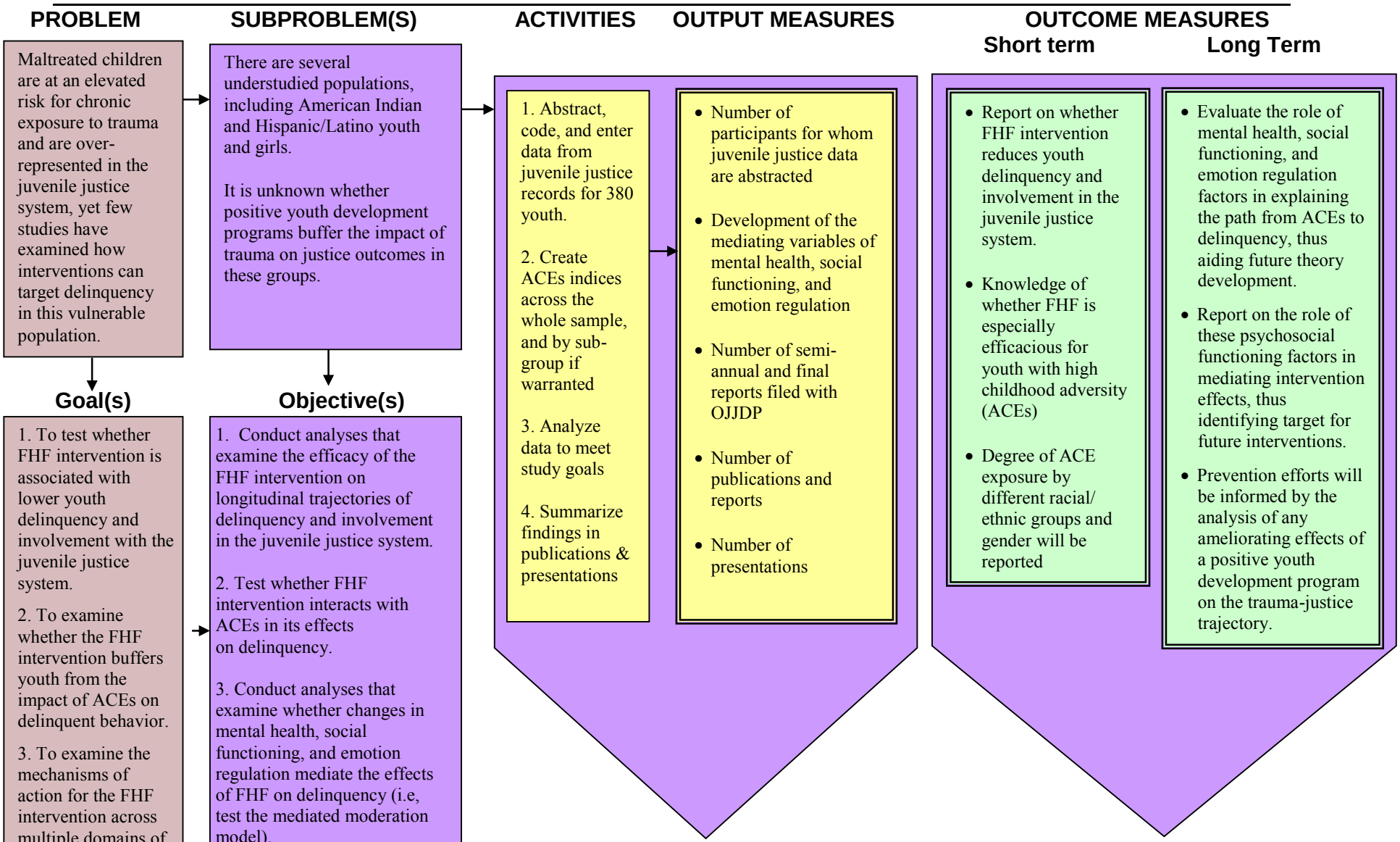
PERFORMANCE MEASURES

In order to demonstrate progress and success, we will provide data that measure the results of our work completed under this solicitation. Please see attached Logic model for a detailed description of the deliverables.

UNIVERSITY OF DENVER - ORGANIZATIONAL CHART



An Ecological Model of Risk and Protection for Delinquency and Juvenile Justice Involvement among Maltreated Youth: A Longitudinal Study



Appendices

1. References
2. Letter of Approval
3. Memorandum of Understanding
4. Curriculum Vitae
5. List of Project Staff, Affiliation and Roles
6. Timeline
7. List of Previous and Current OJJDP Awards
8. List of Other Agencies to Which this Application has been Submitted
9. Data Archiving Plan
10. Measures

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Colorado Submission of Fostering Healthy Futures for Preteens Designation for HHS Consideration

Colorado proposed a designation of Well-Supported for Fostering Healthy Futures for Preteens. The submitted technical review memo, Attachment B checklist, and accompanying documentation have been reviewed for face validity in accordance with the criteria outlined in section 471(e)(4)(C) of the Act and Attachment C to ACYF-CB-PI-18-09 as well as the requirements outlined in ACYF-CB-PI-19-06.

The following clarifications are requested:

1) **Table 3 indicates that conflict of interest statements were signed by reviewers attesting to their independence. Please attach these statements.**

   Response: Conflict of Interest statements can be found here.

2) **Table 3 indicates that a Memorandum of Understanding (MOU) was signed by external partners. Please attach the MOU.**

   Response: See contract linked here.

3) **Programs and services must have available written protocols, manuals, or other documentation that describes how to implement or administer the practice (see Handbook of Standards and Procedures, Section 2.1.2). Please identify the specific written protocol, manual, or other documentation that describes how to implement the version of the program or service reviewed. The materials provided reference documentation (e.g., (Mentor Training Manual, Skills Group Manual, Implementation Manual) available on the Fostering Healthy Futures website (https://www.fosteringhealthyfutures.org/programs/preteen). However, it is not clear which specific documentation on the website is considered essential to implement Fostering Healthy Futures for Preteens. Please provide a citation (including title and year of publication) for the specific written protocols, manuals, or other documentation.**

   Response: Citations for the Fostering Health Futures Preteen manuals and protocols used to implement the version of the program reviewed are listed below and are linked here.

   Citations:

   Taussig, H.N., Wertheimer, R., Corvinus, J, & Malen, A. (2021). Fostering Healthy Futures Preteen Pre-Implementation Documents.

   Taussig, H.N., Wertheimer, R., Raviv, T., Fireman, O., Malen, A., & Culhane, S. (2021). Fostering Healthy Futures Preteen Implementation and Mentor Orientation Manual.

   Hettleman, D., Wertheimer, R., Holmberg, J., Gennerman-Schroeder, R., Hambrick, E., Malen, A., & Taussig, H.N. (2021). Fostering Healthy Futures Preteen Skills Group Manual.

4) **Studies included in the review do not appear to cite a specific manual. The Handbook of Standards and Procedures notes that each study is reviewed to determine if the program or service implemented in that study was substantially modified or adapted from the version selected for review (see Section 4.1.6 for examples of adaptations that result in a different program or service). Please clarify how it was determined that studies reviewed were not substantially modified or adapted from the version selected for review.**

Response: The studies reviewed used the manuals and protocols cited in the response to Question 3. This was verified by the study author and program developer, Dr. Heather Taussig. None of the studies reviewed implemented FHF Preteen in a way that was substantially modified or adapted, as defined by criteria in Section 4.1.6. of *the Handbook of Standards and Procedures.*

5) **As noted in Attachment B, findings across multiple sources with overlapping samples should be considered one study. Please provide clarification on which, if any, of the following studies included in Table 6 had overlapping samples: Taussig et al., 2019; Taussig & Culhane, 2010; Taussig et al., 2012.**

   Response: The 2010 and 2012 studies had overlapping samples. The 2019 study reports data from 2 separate trials with non-overlapping samples. This was verified by the study author and program developer, Dr. Heather Taussig.

6) **In Table 9, for both Taussig et al., and Taussig and Culhane, it is noted that the Mental Health Index was created based on principal components factor analysis of the child's mean TSCC scores and internalizing scales of the CBCL and TRF. In accordance with the Handbook of Standards and Procedures, outcome measures must meet reliability standards (Section 5.9.2). Table 9 includes reliability coefficients for individual components of the subscales that comprise the Mental Health Index but not for the Mental Health Index itself. Please demonstrate the reliability of the Mental Health Index.**

   Response: The study authors used factor scores, not mean scores, and provided the percent of variance explained by the factor score. The authors did not run alpha statistics but instead used factor scores because they knew the mean would not adequately represent the construct. Factor loadings meet the standards for reliability specified in section 5.9.2, as delineated below.

   From the 2010 paper (see page 741) - *The factor score explained 42% of the variance in these measures, and factor loadings ranged from 0.59 to 0.70.*

   From the 2019 paper (see page 411). *The T1 factor score explained 62.8% of the variance and the factor loadings were .79; at Time 2, the factor score explained 44.8% of the variance and factor loadings were .71 for the TSCC, .67 for the CBCL, and .62 for the TRF.*

7) **Table 9 indicates a favorable outcome for "Placement Changes" in Taussig et al., 2012. However, an outcome called "Placement Changes" is not included in Table 7. Please clarify if "Placement Changes" is the same or a different outcome than the "# of Prior Placements" outcome included in Table 7.**

   Response: "Placement Changes" and "# of Prior Placements" are the same outcome. This was verified by the study author and program developer, Dr. Heather Taussig.

FOSTERING
Healthy Futures

Evaluation Plan for Fostering Healthy Futures for Preteens

Background

Two different 5-year randomized controlled trials (RCTs) of Fostering Healthy Futures for Preteens (FHF-P) have been conducted with demonstrated favorable impacts on child permanency, delinquency, and well-being (Taussig et al., 2010; 2012; 2019; 2021). FHF-P is currently rated as "supported" in the Title IV-E Prevention Services Clearinghouse as a mental health program/service.

This evaluation will be conducted as a follow-up to these trials, with clinical trial registries found here and here. This follow-up RCT analysis will evaluate the program's potential impact on child well-being, specifically suicide rates (behavioral and emotional functioning) and substance use. This will help contribute to evidence-building on FHF-P with a goal of a study design that meets standards of the Title IV-E Prevention Services Clearinghouse and can contribute to Clearinghouse review and evidence ratings for this program/service.

Intervention and Target Population

Youth with a history of maltreatment and foster care placement are at risk for a host of mental health, behavioral, and social problems, resulting in adverse life-course outcomes of great public health significance. FHF-P is an innovative, culturally-sensitive, trauma-informed, and multi-component intervention for children 9 to 11-years who have been maltreated and placed in foster care. Through a 9-month intervention that includes one-on-one mentoring and weekly skills groups, FHF-P targets cognitive, social, and behavioral domains in order to build competencies, improve mental health functioning and quality of life, and reduce problem behaviors and adverse life outcomes. Implementation, training, and fidelity measures are fully developed and available by contacting program staff.

Inclusion Criteria

Study recruitment for the first trial began in August 2002 in Denver, Colorado. For the second trial, started in 2007, recruitment expanded to four additional metro-area counties. Recruitment letters were sent to families of all children between the ages of 9 and 11 years who were living in out-of-home care within the participating counties. Children were eligible for the study if they (a) had been placed in any type of out-of-home care (i.e., foster care, congregate care, kinship care) by court order due to maltreatment within the preceding year, (b) had lived in their current placement setting for at least 3 weeks, (c) resided within a 35-minute drive to the intervention group sites at the time of recruitment, (d) did not have a developmental disability that would preclude them from participating in group, and (e) demonstrated adequate proficiency in English (caregivers, however, could be monolingual Spanish speaking). Participants were recruited in 10 cohorts over the course of 10 consecutive summers; the first five cohorts comprised the "pilot trial" and the second five cohorts comprised the "efficacy trial." Participation in this study was voluntary and could not be court-ordered.

Theory of Change
It is hypothesized that participation in the FHF program will result in better functioning in cognitive, social, and behavioral domains, and that these gains will result in improved mental health functioning, quality of life, and reductions in problem behaviors and adverse life-course outcomes.

Evaluation Design Overview
The outcome evaluation of the two trials is ongoing and includes:

1) Examining intervention effects on both proximal and distal outcomes
2) Examining potential moderators of the intervention
3) Conducting mediational analyses to identify the mechanisms by which the program may enhance outcomes

Rationale for Proposed Evaluation
Youth in foster care are significantly more likely than their same-age peers outside of the system to engage in suicidal behaviors (Almquist et al., 2020; Brown, 2020; Evans et al., 2017). This is likely due to the fact that they are at the center of a constellation of empirically-supported risk factors, including a history of maltreatment (U.S. Department of Health and Human Services, 2020), high rates of mental illness (McMillen et al., 2005; Braciszewski & Stout, 2012), and increased likelihood of identifying as LGBTQ+ (Fish et al., 2019). Further, the overrepresentation of youth of color in the United States foster care system has been well-established (McCroy, 2005; Putnam-Hornstein et al., 2013); ethnic and racial minority status may also enhance risk for suicidal behavior (Freedenthal, 2007; Lindsey et al., 2019; O'Keefe et al., 2015). In addition, foster care placement is also strongly associated substance use; a systematic review reported that rates of substance use and dependence are up to 4-5 times higher for young adults who aged out of foster care than their counterparts in the general population (Gypen et al., 2017).

Evaluation Aims
The proposed evaluation plan will examine whether there are (1) long-term program impacts on suicidal and self-harming behaviors, and (2) short- and long-term program impacts on substance use. These two target outcomes align with the Clearinghouse's target outcomes of behavioral and emotional functioning and substance use within the child well-being domain.

Participants
The data we propose to examine come from two RCTs with longitudinal follow-up: the Pilot Trial (enrollment in yearly cohorts from 2002-2006; *N*=156; recruitment rate of 91.4%) and the Efficacy Trial (enrollment in yearly cohorts from 2007-2011; *N*=270; recruitment rate of 89.5%). Across the two trials, ninety-two percent of children randomized to the intervention enrolled and 95% completed the program. The sample includes roughly equal numbers of females (47.4%) and males. The mean baseline age was 10.3 (*SD*=.90) years. Over half of the participants identified belonging to more than one racial/ethnic group: 50.2% identified as Hispanic/Latino, 30.3% as African American, 30.1% as American Indian and 44.4% as White.

Assessments with youth, caregivers, and teachers were conducted at baseline (pre-randomization) and at multiple follow-up timepoints. Data collected include child welfare, educational, and juvenile justice records. Although variable by trial and cohort, children and caregivers were re-interviewed in early adolescence (ages 10-13, *N*=424), adolescence (13-16, *N*=382), and young adulthood (18-22, *N*=215) through 2017. Retention was over 80% at each time point.

Measures

Outcome variables: The Adolescent Risk Behavior Survey (ARBS; Taussig, 1998), which includes items measuring suicidality and substance use, is a compilation of scales from two risk behavior surveys that have been used with racially and ethnically diverse samples and have shown adequate reliability and validity in their multiple subscales: the National and Denver Youth Surveys (Huizinga, 2017) and the National Adolescent Student Health Survey (American School Health Association, 1989).. The ARBS was used in both trials to assess lifetime and past-year history of suicidal ideation, plans, attempts, and methods. The ARBS was also used to assess lifetime and past year and past month frequency of use of each 14 substances at all interview time points. Operationalizing the suicidality and substance use constructs will be one of the first study objectives.

For participants' self-reports of suicidality and substance use, the follow-up time points differed between the pilot and efficacy trials, but all youth had the opportunity to participate in both a Time 2 follow-up interview (6 months post intervention) and a Time 3 follow-up interview (1.5 years post intervention for the pilot trial and 2.5 years post intervention for the efficacy trial). Finally, for a subgroup of participants, there was a long-term follow-up interview (called Time 4) that took place when participants were between the ages of 18-22 (with variable amounts of time post intervention). Items indexing suicidality and substance use from the Time 4 survey are shown in Appendix A following the references.

Control variables: A number of demographic variables (e.g. race, ethnicity, age, gender, sexual orientation), types of maltreatment (e.g., neglect, physical abuse), placement characteristics (e.g., kinship care, foster care, living at home), and other psychosocial variables (e.g., ACE exposure, baseline functioning) may be used as control variables in the outcome analyses.

Analysis Plan

In the initial stages of the study, we will attend to the operationalization and psychometric properties of the suicidality and substance use outcome variables. For all outcome variables, we will examine their distributional qualities at each time point and evaluate any evidence of skew or zero-inflation, which is typically observed when examining these constructs in younger adolescents. In creating composite scores for each construct, we will attempt to capture frequency and severity in youths' reports.

To examine the impact of the FHF intervention on suicidality and substance use outcomes, we will conduct statistical tests that are most appropriate for the dependent variables that have been operationalized. This may include logistic or linear regression as well as latent growth curve modeling, which allows for an investigation of intra- and inter-individual differences in change

over time as well as predictors of these individual differences, both of which are of great interest in prevention trials.

We will assess and use appropriate statistical controls for any baseline differences in demographic, maltreatment, placement and/or psychosocial variables and may also control for baseline factors that are strong predictors of the outcome, even if they do not differ by group. We may also examine whether the effects of the FHF-P program are moderated by gender, race/ethnicity, adverse childhood experiences, baseline mental health or behavior problems, and other baseline factors.

We will use an intent-to-treat (ITT) approach in all analyses. Although ITT has been upheld as the gold standard in analyzing effects of RCTs, some have critiqued the approach as contributing to Type II error, leading to missed effects among prevention programs. To address this criticism, we may also conduct additional analyses to determine treatment-on-the-treated effects.

Advisory Board
Fostering Healthy Futures has an Alumni Advisory Board comprised of young adults who participated in the program as preadolescents. Board members may advise both on the operationalization of constructs as well as the interpretation of findings, helping to ensure that interpretations of findings are culturally and contextually sensitive.

Dissemination
Dr. Taussig, principal investigator of FHF-P, has a strong track record for disseminating findings within the research community through peer-reviewed journal articles and chapters in books. However, we know that most practitioners do not have access to these outlets to stay abreast of the most recent research findings so that they can translate them into practice. For this reason, we regularly share our findings with non-profit leaders, practitioners, and governmental staff using non-technical language and highlighting the practice implications of our work.

Through varying outlets, research on FHF-P has directly impacted policies and funding priorities that affect children's lives. We have been invited to share our research with the Commissioner of the Administration on Children, Youth, and Families and at the *Longitudinal Data on Teen Dating Violence Research Meeting* convened by the U.S. Department of Justice. Our work has been cited in congressional testimony and in the *Defending Childhood* Report of the Attorney General's National Task Force on Children Exposed to Violence.

Our dissemination strategy will use similar, multiple strategies to share study findings. Specifically, this project will result in reports and/or publications designed to reach both researcher and practitioner audiences as well as webinars, white papers, and conference presentations, as relevant and feasible.

Study Limitations
The proposal is not without limitations. While the use of secondary data is a highly cost-effective strategy, it does not permit the collection of new data to answer emerging questions of interest. The sample sizes in the trials, while large for research with this highly mobile and vulnerable

population, may not permit more sophisticated analyses or moderating effects unless the samples are combined. To address this, samples can be combined to improve statistical power and detection of outcomes. However, combining samples may lead registries to consider the trials as having overlapping samples, which can limit evidence ratings. We will be sensitive to all of these issues, balancing the need for strong science and actionable results with the need to demonstrate impacts/effects in a way that contributes to rigorous evidence-building and evidence designations.

Institutional Review Board Approval

The Principal Investigator, Dr. Heather Taussig, currently has a primary faculty appointment at the University of Denver (DU). She was faculty at the University of Colorado School of Medicine (CU SOM) from 2000-2014, where the data described above were collected and stored. Dr. Taussig still maintains an appointment as an adjunct professor at the CU SOM and has active IRB protocols at CU. Dr. Taussig has a data share agreement so that she can analyze de-identified data (collected at CU) at DU.

For the proposed evaluation activities described above, she and her colleagues will analyze de-identified data from CU IRB Protocol #02-516. Dr. Taussig also has DU IRB approval for the proposed activities, with a protocol entitled "*Secondary data analysis of data from a randomized controlled trial of a preventive intervention for children in foster care: A longitudinal follow-up* (2017-JF-FX-0050; approved 12/3/17).

Data Security and Privacy

Dr. Taussig maintains access (through her appointment at CU) to the identifiable data through her CU login. Since Dr. Taussig is the PI of both protocols, she is able to transfer de-identified data from CU to DU for analysis. All hard copy data are secured in locked file cabinets within locked offices at CU, available only to program staff. Forms with identifying information are separated from the data collected and only subject numbers are retained in final data analysis files. Electronic data at both CU and DU are stored on a secured server, and only program staff with passwords are able to access the data.

A federal Certificate of Confidentiality was obtained to protect the disclosure of sensitive and confidential participant information.

Informed Consent

Active assent and consent were obtained for the original data collection at all time points.

Timeline

The evaluation is anticipated to span Fall 2022 through Spring 2023. At that time, the evaluation strategy for FHF-P will be revisited to ensure: (a) ongoing rigorous evaluation of the program continues; and/or (b) whether substantial new evidence for the program has been generated that would make FHF-P eligible for a re-review under Section 7.4.1 of the Handbook of Standards and Procedures (as used by the Title IV-E Prevention Services Clearinghouse). If FHF-P receives

a well-supported rating by the Clearinghouse, a waiver of evaluation request will be submitted by the agency.

	Sept-Oct, 2022	Nov-Dec, 2022	Jan-Feb, 2023	Mar-Apr, 2023	May-Jun, 2023
Objective 1: Clean and code suicide and self-harm data from two RCT trials	X				
Objective 2: Operationalize the suicide and self-harm construct and examine psychometric properties		X			
Objective 3: Analyze whether FHF reduces suicide and self-harm by young adulthood			X		
Objective 4: Write up and disseminate findings through multiple avenues				X	
Objective 5: Clean and code substance use data from two RCT trials			X		
Objective 6: Operationalize the substance use construct and examine psychometric properties				X	
Objective 7: Analyze whether FHF reduces substance use across adolescence					X
Objective 8: Identify opportunities for additional dissemination of findings					X

Research Team

Heather N. Taussig, Ph.D., Principal Investigator, is a Professor at the University of Denver's Graduate School of Social Work. She is the developer and director of the FHF-P Program, which is listed on 8 registries of promising and evidence-based programs. Dr. Taussig has a strong background in conducting rigorous RCTs of mentoring programs as well as longitudinal research on the developmental trajectories of children who have experienced maltreatment and child welfare involvement. She has served as the principal investigator on grants and contracts totaling over $7 million including awards from NIH, NIJ, OJJDP, and Arnold Ventures. Dr. Taussig has participated in numerous federal grant review panels and community collaboratives. She served on Colorado Governor Ritter's Task Force on Foster Care and is an awardee for her work on from the International Society for the Prevention of Child Abuse and Neglect.

Sarah J. Racz, Ph.D., Statistician, is a clinical psychologist and applied quantitative methodologist. She is an Assistant Clinical Professor at the University of Maryland and has been the primary statistical consultant for Dr. Taussig's FHF programs for the past two years. Dr. Racz has broad expertise in longitudinal data analysis, including data management, handling missing data, and latent growth modeling. Her substantive research focuses on examining the proximal (e.g., family, parenting, school) and distal (e.g., communities) factors implicated in the development of externalizing behavior problems and associated risk-taking behaviors across childhood and adolescence. As such, she has expertise in modeling rare-event outcomes (e.g., suicide attempts, substance use in younger adolescents) and in multi-informant assessments of youth behavior and adjustment.

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APPENDIX A

Suicidality and Substance Use Items used at the Time 4 Interview

INTERVIEWER 2 **ARBS – S**

5ARBS 15a	Have you ever *purposely* harmed yourself or self-mutilated (for example, cut yourself, burned yourself) when you were ***not*** trying to kill yourself?	Yes 1	No 0 ⇒ **Skip to ARBS16**
15e	How old were you the first time you harmed yourself or self-mutilated when you were not trying to kill yourself?	_____ years old	
15b	Approximately how many times in your life have you purposely harmed yourself when you were not trying to kill yourself?	1 1 time 2 2 to 5 times 3 6 to 10 times 4 11 to 20 times 5 >20 times	
15c	How many times in the past year?	_____	
15d	In what ways have you harmed yourself or self-mutilated?		
	15d1_____code_____		
	15d2_____code_____		
	15d3_____code_____		
	15d4_____code_____		
5ARBS 16a	Have you ever thought seriously about trying to kill yourself?	Yes 1	No 0 ⇒ **Skip to ARBS17a**
16b	How old were you the first time you ever thought seriously about trying to kill yourself?	_____ years old	
5ARBS 17a	Have you ever made a plan to kill yourself?	Yes 1	No 0 ⇒ **Skip to ARBS18a**
17e	How old were you the first time you made a plan to kill yourself?	_____ years old	
17b	Approximately how many times in your life have you made a plan to kill yourself?	_____	

17c How many times in the past year? _____

17d What plans have you made?

17d1_____code_____

17d2_____code_____

17d3_____code_____

17d4_____code_____

5ARBS

18a Have you ever tried to kill yourself? Yes 1 No 0 ⇒ **Skip to SU1**

18g How old were you the first time you tried to kill yourself? _____ years old

18b Approximately how many times in your life have you tried to kill yourself? _____

18c How many times in the past year? _____

18d In what ways have you tried to kill yourself?

18d1_____code_____

18d2_____code_____

18d3_____code_____

18d4_____code_____

18e Have any of your attempts required medical attention? Yes 1 No 0 ⇒ **Skip to SU1**

18f What kind of medical attention? _____

_____

_____code_____

5SU1 Are you thinking seriously about killing yourself right now? Yes 1 No 0 ⇒ **If NO, Skip to INT1a**

INTERVIEWERS: If participant responded "yes" to this question, say:

As we mentioned when we reviewed the consent form before we started this interview, we want to make sure you are safe and not at risk of harm. So at the end of this interview we will ask you more questions about this. Are you able to continue?

Yes 1 No 0 ⇒ **If NO, stop interview and complete SUI protocol**

INTERVIEWER 1

SU

5SU CIDI-SAM a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
1. Had a full drink of beer, wine, or other alcohol?	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

f. What has been your usual pattern of drinking in the past month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of drinking in the past year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

h. Thinking back over your life, when was your heaviest period of drinking? When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest drinking last(ed)?	_____ (months)

j. What was your usual pattern of drinking during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	k. How many drinks per day do/did you have during your period of heaviest use?	_____ (drinks/day)	l. How many days in your life have you had as much as 20 drinks in a day – that would be about a fifth of liquor, or 3 bottles of wine, or 3 six-packs of beer?	0 Never 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?	f. How many cigarettes do you currently smoke each day?
2. Smoked a cigarette, cigar, tobacco in a pipe, or chewed tobacco? 2a1. If yes, what are/were the most common type(s)? _____	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	_____

	g. What has been your usual pattern of tobacco use in the past month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	h. What has been your usual pattern of tobacco use in the past year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday
	i. Thinking back over your life, when was your heaviest period of tobacco use? When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	j. How many months did/has your period of heaviest tobacco use last(ed)?	_____ (months)
	k. What was your usual pattern of tobacco use during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	l. How many cigarettes did you smoke per day during your period of heaviest use?	_____

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
3. Used any prescription stimulants (e.g. Amphetamines, Diet Pills, Ritalin) when they were not prescribed for you, in larger amounts than prescribed, more often than prescribed, or for longer than prescribed? 3a1. If yes, what is/was the most common type(s)? _____	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

	f. What has been your usual pattern of use of **[this substance]** in the past month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of use of **[this substance]** in the past year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

	h. Thinking back over your life, when was your heaviest period of use of **[this substance]?** When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest use last(ed)?	_____ (months)

	j. What was your usual pattern of use of **[this substance]** during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
4. Used any prescription sedatives (e.g., Barbiturates, Librium, Seconal, sleeping pills, tranquilizers, Valium, Xanax) when they were not prescribed for you, in larger amounts than prescribed, more often than prescribed, or for longer than prescribed? 4a1. If yes, what is/was the most common type(s)? _____	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

f. What has been your usual pattern of use of **[this substance]** in the last month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of use of **[this substance]** in the last year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

h. Thinking back over your life, when was your heaviest period of use of **[this substance]?** When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest use last(ed)?	_____ (months)

j. What was your usual pattern of use of **[this substance]** during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
5. Used any prescription opioids (e.g., Codeine, Darvon, Demerol, Dilaudid, Methadone, Morphine, Percodan, Talwin) when they were not prescribed for you, in larger amounts than prescribed, more often than prescribed, or for longer than prescribed? 5a1. If yes, what is/was the most common type(s)? _____	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

	f. What has been your usual pattern of use of **[this substance]** in the last month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of use of **[this substance]** in the last year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday
	h. Thinking back over your life, when was your heaviest period of use of **[this substance]?** When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest use last(ed)?	_____ (months)
	j. What was your usual pattern of use of **[this substance]** during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday		

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
6. Used Marijuana or Hashish? 6a1. If yes, what is/was the most common type(s)? _____	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

	f. What has been your usual pattern of use of **[this substance]** in the last month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of use of **[this substance]** in the last year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday
	h. Thinking back over your life, when was your heaviest period of use of **[this substance]?** When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest use last(ed)?	_____ (months)
	j. What was your usual pattern of use of **[this substance]** during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	k. Has the legalization of marijuana changed your access to marijuana? 0 No 1 Yes k2. If yes, how? _____	
	l. Has the legalization of marijuana changed your use of marijuana? 0 No 1 Yes l2. If yes, how? _____		m. Have you ever received a prescription for medical marijuana? 0 No 1 Yes m2. For what was it prescribed? _____	

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
7. Used stimulants that are not prescribed (Methamphetamine, Speed, Ice, Khat, uppers)? 7a1. If yes, what is/was the most common type(s)? _____	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

	f. What has been your usual pattern of use of **[this substance]** in the last year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of use of **[this substance]** in the last month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

	h. Thinking back over your life, when was your heaviest period of use of **[this substance]?** When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest use last(ed)?	_____ (months)

	j. What was your usual pattern of use of **[this substance]** during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
8. Used Club Drugs (Ecstasy, MDMA, Molly, GHB, Ketamine, Rohypnol)? 8a1. If yes, what is/was the most common type(s)? _____	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

	f. What has been your usual pattern of use of **[this substance]** in the last year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of use of **[this substance]** in the last month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

	h. Thinking back over your life, when was your heaviest period of use of **[this substance]?** When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest use last(ed)?	_____ (months)

	j. What was your usual pattern of use of **[this substance]** during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
9. Used Cocaine or Crack? 9a1. If yes, what is/was the most common type(s)? _____	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

	f. What has been your usual pattern of use of **[this substance]** in the last year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of use of **[this substance]** in the last month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

	h. Thinking back over your life, when was your heaviest period of use of **[this substance]?** When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest use last(ed)?	_____ (months)

	j. What was your usual pattern of use of **[this substance]** during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
10. Used Heroin?	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

	f. What has been your usual pattern of heroin use in the last year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of heroin use in the last month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

	h. Thinking back over your life, when was your heaviest period of heroin use? When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest use last(ed)?	_____ (months)

	j. What was your usual pattern of heroin use during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
11. Used opioids that were not prescribed (Opium, T's & Blues)? 11a1. If yes, what is/was the most common type(s)? _____	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

	f. What has been your usual pattern of use of **[this substance]** in the last year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of use of **[this substance]** in the last month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

	h. Thinking back over your life, when was your heaviest period of use of **[this substance]?** When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest use last(ed)?	_____ (months)

	j. What was your usual pattern of use of **[this substance]** during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
12. Used PCP?	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

	f. What has been your usual pattern of PCP use in the last year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of PCP use in the last month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

	h. Thinking back over your life, when was your heaviest period of PCP use? When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest PCP use last(ed)?	_____ (months)

	j. What was your usual pattern of PCP use during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
13. Used Hallucinogens (DMT, LSD or Acid, Mescaline, Mushrooms, Peyote, Psilocybin)? 13a1. If yes, what is/was the most common type(s)? _____	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

	f. What has been your usual pattern of use of **[this substance]** in the last year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of use of **[this substance]** in the last month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

	h. Thinking back over your life, when was your heaviest period of use of **[this substance]?** When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest use last(ed)?	_____ (months)

	j. What was your usual pattern of use of **[this substance]** during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
14. Used Inhalants (Glue, Toluene, Gasoline, Paint, Paint thinner)? 14a1. If yes, what is/was the most common type(s)? _____	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

	f. What has been your usual pattern of use of **[this substance]** in the last year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of use of **[this substance]** in the last month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

	h. Thinking back over your life, when was your heaviest period of use of **[this substance]?** When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest use last(ed)?	_____ (months)

	j. What was your usual pattern of use of **[this substance]** during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	

5SU a. Have you ever . . .	Yes	No	b. How old were you the first time?	c. On how many **days** during the past month?	d. On how many **days** during the past year?	e. On how many **days** in your life?
15. Used any other drugs (Amyl nitrite or Poppers, Anabolic steroids, Nitrous oxide, bath salts, spice, or anything else)? 15a1. If yes, what is/was the most common type(s)? _____	1	0	_____	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days	0 None 1 1 day 2 2 to 5 days 3 6 to 10 days 4 11 to 20 days 5 >20 days

	f. What has been your usual pattern of use of **[this substance]** in the last year?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	g. What has been your usual pattern of use of **[this substance]** in the last month?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday

	h. Thinking back over your life, when was your heaviest period of use of **[this substance]?** When did it start?	2 Within the last 3 months 3 In the last 6 months, but not in the last 3mths 4 In the last year, but not in the last 6 months 5 In the last 2 years, but not in the last year 6 In the last 5 years, but not in the last 2 years 7 More than 5 years ago 88 Don't know	i. How many months did/has your period of heaviest use last(ed)?	_____ (months)

	j. What was your usual pattern of use of **[this substance]** during your period of heaviest use?	1 Less than 1 day/month 2 1-3 days/month 3 1-2 days/week 4 3-4 days/week 5 5-6 days/week 6 Everyday	

SU (Cont'd)

			Yes	No	
5SU CIDI-Sam	1a.	Have you ever needed alcohol, nicotine or drugs to help you function?	1	0	⇒ **If NO, skip to SU2a**

1b. If yes, which substance(s)? 1. _____ code _____
2. _____ code _____
3. _____ code _____

			Yes	No	
5SU CIDI-SAM	2a.	Have you frequently made special trips to a store, gone out of your way, or planned ahead so you wouldn't run out of alcohol, nicotine, or drugs?	1	0	⇒ **If NO, skip to SU3a**

2b. If yes, for which substance(s)? 1. _____ code _____
2. _____ code _____
3. _____ code _____

			Yes	No	
5SU CIDI-SAM	3a.	After using alcohol, nicotine, or drugs, did you find you needed to use much more in order to get the effect you wanted?	1	0	⇒ **If NO, skip to SU4a**

3b. If yes, which substance(s)? 1. _____ code _____
2. _____ code _____
3. _____ code _____

			Yes	No	
5SU CIDI-SAM	4a.	Have you often used more alcohol, nicotine, or drugs than you intended?	1	0	⇒ **If NO, skip to SU5a**

4b. If yes, which substance(s)? 1. _____ code _____
2. _____ code _____
3. _____ code _____

			Yes	No	
5SU CIDI-SAM	5a.	Has there ever been a period of time when you wanted to quit or cut down your use of alcohol, nicotine, or drugs?	1	0	⇒ **If NO, skip to SU6a**

5b. If yes, which substance(s)?

1. _____ code _____
2. _____ code _____
3. _____ code _____

5c. Were you able to quit or cut down on that/those substance(s)?	All	Some	None	
	2	1	0	⇒ **If ALL, skip to SU6a**

5d. If none or some, which substance(s) were you unable to quit or cut down usage of?

1. _____ code_____
2. _____ code_____
3. _____ code _____

			Yes	No	
5SU CIDI-SAM	6a.	Did your use of alcohol, nicotine, or drugs ever cause health or dental problems?	1	0	⇒ **If NO, skip to SU7a**

6b. If yes, which substance(s)?

1. _____ code _____
2. _____ code _____
3. _____ code _____

6c. Did you continue to use after realizing they caused these problems?	Yes	No
	1	0

			Yes	No	
5SU CIDI-SAM	7a.	Did your use of alcohol, nicotine, or drugs ever cause emotional or mental problems?	1	0	⇒ **If NO, skip to SU8a**

7b. If yes, which substance(s)?
1. _____ code _____
2. _____ code _____
3. _____ code _____

7c.	Did you continue to use after realizing they caused these problems?	Yes 1	No 0

			Yes	No	
5SU CIDI-SAM	8a.	In the past year, did you ever seek help from a doctor or other health professional for any problems related to alcohol, nicotine, or drug use?	1	0	⇒ **If NO, skip to SU9a**

8b. If yes, for which substance(s)?
1. _____ code _____
2. _____ code _____
3. _____ code _____

5SU CIDI-SAM	9.	Did you ever experience withdrawal symptoms (such as restlessness, anxiety, difficulty sleeping, sweating, irritability, etc.) after hours or days of not using alcohol, nicotine, or drugs?	Yes 1	No 0

5SU CIDI-SAM 10a. Did alcohol, nicotine, or drug use ever…

	Yes	No
1. Cause problems with family?	1	0
2. Cause problems with friends?	1	0
3. Cause problems with people at school or work?	1	0
4. Interfere with responsibilities at work, school, home, or with children?	1	0
5. Cause you to get into physical fights?	1	0
6. Cause legal problems?	1	0

5SU CIDI-SAM	11a.	What is the longest period of time that you have been off of every drug mentioned (not including alcohol and nicotine)?	_____ (months)

11b. Did you begin using again after that? Yes 1 No 0 ⇒ **If NO, skip to OD1**

11c. If yes, which substance(s)?

1. _____ code _____
2. _____ code _____
3. _____ code _____

OD

5OD RBQ	1a.	Have you ever unintentionally overdosed on alcohol or drugs?	Yes 1	No 0 ⇒ **Skip to IL**

1b. If yes, with which substance(s)? 1. _____ code _____
2. _____ code _____
3. _____ code _____

5OD RBQ	2.	How many times in your lifetime have you overdosed on drugs?	_____

5OD RBQ	3a.	Have you ever been to the emergency department or admitted to the hospital for an overdose?	Yes 1	No 0 ⇒ **Skip to OD4**

3b. If yes, for which substance(s)? 1. _____ code _____
2. _____ code _____
3. _____ code _____

3c. How many times in your lifetime have you been to the emergency department or admitted to the hospital for an overdose? _____

5OD RBQ	4.	When was the last time that you had to receive medical treatment for an overdose?	0 Never 1 Within the past 30 days 2 More than 1month but less than 6 months ago 3 6 or more months but less than 1 year ago 4 1 or more years but less than 3 years ago 5 3 or more years ago

Appendix C: Functional Family Therapy

Functional Family Therapy (FFT) is a short-term prevention program for at-risk youth and their families. FFT aims to address risk and protective factors that impact the adaptive development of youth between the ages of 11 to 18, who have been referred for behavioral or emotional problems. The program is organized in multiple phases and focuses on developing a positive relationship between the therapist and the family, increasing motivation for change, identifying specific needs of the family, supporting individual skill-building of youth and family, and generalizing changes to a broader context. Typically, therapists will meet weekly with families face-to-face for 60 to 90 minutes and by phone for up to 30 minutes, over three to six months. Typically Master's level therapists provide FFT. They work as a part of a FFT-supervised unit and receive ongoing support from their local unit and FFT training organization.[1]

The FFT model consists of 5 major components, each has its own goals, focus and intervention strategies and techniques.

1. Engagement: The goals of this phase involve enhancing family members' perceptions of therapist responsiveness and credibility.
2. Motivation: The goals of this phase include creating a positive motivational context by decreasing family hostility, conflict and blame, increasing hope and building balanced alliances with family members.
3. Relational Assessment: The goal of this phase is to identify the patterns of interaction within the family to understand the relational "functions" or interpersonal payoffs for individual family members' behaviors.
4. Behavior Change: The goal of this phase is to reduce or eliminate referral problems by improving family functioning and individual skill development.
5. Generalization: The primary goals in this phase are to extend the improvements made during Behavior Change into multiple areas and to plan for future challenges.[2]

PROGRAM SELECTION AND OUTCOMES

Research partners at the Colorado Evaluation and Action Lab engaged in an extensive review of Colorado needs assessment to inform the selection of services. FFT was selected as a prevention service because the national literature on FFT creates a compelling case for meeting local needs. For example, delinquent behavior, including academic failure, is a common issue with children and adolescents across Colorado. Research shows that 46.2% of children and adolescents indicate a low commitment to school, with 37.4% reporting academic failure.[3] Healthy family functioning is a protective factor for managing delinquent behavior. Yet, 24.6% of children and adolescents indicate poor family management, with 12.9% indicating their parents would not know if they came home on time.[4] Multiple studies referenced in the research table indicate improvements in defensive communication and externalizing behaviors.

The national literature also indicates that FFT drives outcomes related to youth mental health and family functioning for individuals and families that meet Colorado's candidacy definition. The family-based model addresses the whole family. The specific outcome to be tracked and measured for this service in Colorado is youth will remain home

1 Administration for Children and Families (ACF). "Functional Family Therapy." Title IV-E Clearinghouse, Dec. 2020, preventionservices.abtsites.com/programs/252/show.

2 Functional Family Therapy LLC. "Clinical Model." Clinical Model - About FFT Training - Functional Family Therapy, fftllc.com/about-fft-training/clinical-model.html.

3 Colorado Department of Public Health & Environment. (2018). 2017 Colorado Healthy Kids Survey. Retrieved from https://cdphe.colorado.gov/healthy-kids-colorado-survey-archive.

4 Colorado Department of Public Health & Environment. (2018). 2017 Colorado Healthy Kids Survey. Retrieved from https://cdphe.colorado.gov/healthy-kids-colorado-survey-archive.

and family functioning will improve based on the Family Functioning Assessment scale.

The two overarching domains for FFT in Colorado are:

- Child Well-Being: Behavioral and emotional functioning
- Adult Well-Being: Family functioning

Child Well-Being: Behavioral and emotional functioning

The specific outcome Colorado will be targeting and tracking in this domain is decreased depression symptomatology. This outcome is measured by providers using the following pre/post assessments: OQ®-45.2 Outcome Questionnaire, Y-OQ® 2.01 Youth Outcome Questionnaire, and Y-OQ® SR 2.0 Youth Outcome Questionnaire. Statistically significant positive effect sizes were found in Clearinghouse "highly rated" studies.[5]

This outcome specifically links back to Colorado's candidacy definition by targeting the youth's mental health.

Adult Well-Being: Family functioning

The specific outcome Colorado will be targeting and tracking in this domain is improved family conflict management. This outcome is measured by providers using the Family Risk and Protective Factors assessment. Statistically significant effect sizes were found in Clearinghouse "highly rated" studies.[6]

This outcome targeted through FFT specifically links back to Colorado's candidacy definition by targeting parents' lack of parenting skills and parents' inability, or need for additional support, to address serious needs of a child/youth or related to the child/youth's behavior or physical or intellectual disability.

SERVICE DESCRIPTION AND OVERSIGHT

a. Implementation Manual:

Alexander, J. F., Waldron, H. B., Robbins, M. S., & Neeb, A. A. (2013). Functional Family Therapy for adolescent behavioral problems. American Psychological Association.

b. Implementation of FFT:

FFT LLC utilizes a multi-phased approach to implementation. Sites must purchase three clinical assessments licenses utilized during FFT: the Outcome Questionnaire (OQ), the Youth Outcome Questionnaire (YOQ), and the Youth Outcome Questionnaire Self Report (YOQ SR); these must be purchased outside of the standard costs of implementation through FFT LLC.

Phase I - Clinical Training

The initial goal of the first phase of FFT implementation is to impact the service delivery context so that the local program builds a lasting infrastructure that supports clinicians to take maximum advantage of FFT training/consultation. The secondary objective of Phase I is for local clinicians to demonstrate strong adherence and high competence in the FFT model. Assessment of adherence and competence is based on data gathered through the FFT Clinical Service System (CSS) and through weekly consultations during Phase I FFT training activities. Periodically during Phase I, FFT LLC personnel provide the implementation site with feedback to identify progress toward Phase I implementation goals and steps toward beginning Phase II. Phase I includes a two-day initial clinical training, three two-day follow up trainings and a second two-day clinical training for the full team and an externship training series for the person identified to become the site supervisor in Phase II.

Phase II - Supervision Training

The objective of the second phase of implementation is to assist the site in creating

5 Slesnick, N., & Prestopnik, J. L. (2009). Comparison of family therapy outcome with alcohol-abusing, runaway adolescents. Journal of Marital and Family Therapy, 35(3), 255-277. doi:10.1111/j.1752-0606.2009.00121.x

6 Slesnick, N., & Prestopnik, J. L. (2009). Comparison of family therapy outcome with alcohol-abusing, runaway adolescents. Journal of Marital and Family Therapy, 35(3), 255-277. doi:10.1111/j.1752-0606.2009.00121.x

greater self-sufficiency in FFT, while also maintaining and enhancing site adherence/competence in the model. Primary in this phase is developing competent onsite/virtual FFT supervision. During Phase II, FFT LLC trains a site's extern to become the onsite/virtual supervisor. This supervisor will attend two supervisor trainings, then is supported by FFT LLC during monthly phone consultations. FFT LLC provides a one-day onsite/virtual training during Phase II for the full team. In addition, FFT LLC provides ongoing consultation as necessary and reviews the site's CSS database to measure site/therapist adherence, service delivery trends and outcomes. Phase II is a year-long process.

Phase III - Maintenance Phase

The objective of the third phase of FFT implementation is to move into a partnering relationship to assure on-going model fidelity and impact issues of staff development, interagency linking and program expansion. FFT LLC reviews the CSS database for site/therapist adherence, service delivery trends and client outcomes, and provides a whole team, one-day, onsite/virtual training for continuing education in FFT (the same one-day training cited in Phase II). Phase III is renewed on an annual basis.[7]

c. Target Population in Colorado:

Youth between the ages of 11 and 18 with behavioral issues, who are not currently in out-of-home placements, are eligible to receive FFT services.

Referral sources to FFT may include schools, community-based organizations, hospitals, child welfare and juvenile justice agencies, and self-referrals. In order to be a candidate for FFT services, families must meet at least one of the following criteria:

- Substance use disorder or addiction
- Mental illness
- Lack of parenting skills
- Limited capacity or willingness to function in parenting roles
- Parents' inability, or need for additional support, to address serious needs of a child/youth or related to the child/youth's behavior or physical or intellectual disability
- Youth with externalized behavioral concerns
- Reunification, adoption or guardianship arrangements that are at risk of disruption

d. Sites in Colorado

FFT is currently being utilized in five counties across Colorado; Boulder, Denver, Larimer, Weld, and El Paso. Programming is provided through the following organizations:

1. Mental Health Partners, Boulder, CO
2. North Range Behavioral Health, Greeley, CO
3. Savio House, Denver & Colorado Springs, CO
4. Savio House FFT-G, Denver, CO

FIDELITY MONITORING

FFT LLC is the intermediary for the FFT provision of services across the state. Fidelity for each site is monitored through the national Clinical Service System (CSS) database. The CSS is designed to build therapist' competence and skills in the application of FFT. The CSS is the implementation tool that allows therapists to track modalities essential for successful implementation: session process goals, comprehensive client assessments, and clinical outcomes. Therapists and supervisors are required to enter the information at each consultation and evaluation. FFT LLC reviews the CSS database for site/therapist adherence, service delivery trends and client outcomes, and provides a Tri Yearly Performance Evaluation to sites three times a year reviewing outcomes and model fidelity.

The following instruments are used in monitoring fidelity: WSC – Weekly Supervision Checklist (weekly fidelity ratings); GTR – Global Therapist Rating (provided three times per year) and its Learning and Growth Plan; FSR – Family Self Report (done throughout intervention); and TSR – Therapist Self Report (done throughout intervention).

7 FFT LLC. Phases of FFT Implementation and Certification, FFT LLC. , 2006.

WSC: Following every clinical staffing and individual supervision staffing, the clinical supervisor completes a fidelity rating for each case that was reviewed for each therapist. The fidelity rating reflects the degree of clinical adherence and competence for that therapist's work in that case in a specific session. Adherence is on a four point Likert scale and ratings are based on the extent (frequency) to which therapists engage in FFT-model specific behaviors. GTR: Three times a year the clinical supervisor rates each therapist's overall performance in their practice of FFT (clinical fidelity, dissemination adherence and general clinical skills). FSR: The FSR is a 7 item self-report inventory completed by all family members participating in FFT sessions. The main purpose of the FSR is to give the family an opportunity to tell the therapist how they view the counseling process and therapist. TSR: The TSR is a 6 item self-report inventory completed by the FFT therapist each time FSRs are completed by the family members. The purpose of TSR is to provide therapists, supervisors and/or consultants with a measure of how the therapist perceives the family members' perception of relational quality with the therapist.

CONTINUOUS QUALITY IMPROVEMENT (CQI)

As part of the CQI process, FFT, LLC's sites collect and monitor data such as:

- Therapists on the team (name and number)
- Cases: Referral, Active, Closed
- Referral information
- Demographics
- Contacts
- Sessions
- Successfully Closed Ratings
- Non-completed reasons
- Never-Began reasons
- Outcome Assessments and Questionnaires
    - Pre and Post Outcomes (OQ.45.2)of individual functioning: symptom distress, interpersonal relationship, social role
    - Pre and Post Outcomes (YOQ 2.01) of caregivers'/parents' perception of their child's behavior in a context: interpersonal distress, somatic, interpersonal relations, critical items, social problems, behavioral dysfunction
    - Pre and Post Outcomes (YOQ SR 2.0) of youth's self report of their behavior in a context: interpersonal distress, somatic, interpersonal relations, critical items, social problems, behavioral dysfunction
    - Pre and Post Risk and Protective Factors of: family love and support, family closeness, opportunities for involvement, conflict management, degree of supervision, degree follows the rules, degree of consistent/ appropriate punishment, available of appropriate rewards for good behavior
    - Ultimate outcomes (caregiver, youth, and therapist): family functioning, youth behavior change
- Fidelity and Adherence ratings (weekly by Site Supervisor for Phase 2 & 3 teams, weekly by FFT National Consultant for Phase 1 teams)
- Global Therapists Ratings (Tri-Yearly by Site Supervisors for Phase 2 & 3 teams, FFT National Consultant for Phase 1 teams)
- Process Assessments
    - Family Self Reports (conducted throughout intervention, 7-item self-report)
    - Therapist Self Reports (conducted throughout intervention, 6-item self-report)

CQI data will be collected by FFT, LLC through the Client Service System's (CSS) Reports and monitoring of the system. These include Weekly Supervision Checklists (WSC) which contain Fidelity and Dissemination Adherence Ratings, Tri-Yearly Performance Evaluations (TYPE) which contain benchmarks and national standards for implementation, TYPE Performance Review Plans (PRP) which provide Quality Assessment and Improvement Plans based on the TYPE, Global Therapist Ratings (GTR) which contain therapist knowledge and performance in the model. These

are monitored by the National FFT Supervisors, FFT Clinical Director, and Implementation Specialists.

Therapists are required to enter case information (assessments, contacts, and sessions) into the CSS. National Consultants/Supervisors are required to enter information related to their monitoring of therapists/cases into CSS at each consultation and evaluation which is brought together in a TYPE report. The TYPE report is generated every four months from CSS which includes things like: utilization percentage, outcomes completed, treatment pacing, consultation attendance, and assessment completion. In addition, the sites receive ongoing feedback from families on the benefits and areas for improvement of the program, providing an opportunity for real time correction to service delivery. Results from all data sources are then used by FFT LLC and the therapist to create quality assurance plans, impacting the efficacy of service provision.

FFT LLC requires that individual therapists meet with a national consultant weekly, either virtually or over the phone during Phase I of training. In Phase II, the national consultant meets twice a month, virtually or over the phone, with the staff supervisor, while the supervisor then takes over the weekly consultations with their individual therapists. In Phase III, they move to monthly calls between the staff supervisor and the consultant. Consultation includes general topics, such as issues around documentation or caseloads and moves into being more clinical, utilizing the FFT model of supervision and staffing of cases. At a minimum, the weekly calls are considered a requirement for site certification, so attendance by individual therapists is mandatory.

FFT LLC will be the main point of contact for any service/provider level fidelity monitoring and CQI efforts through implementation and the TYPE report.

ELIGIBILITY FOR FEDERAL CLAIMING

For Family First IV-E claiming purposes, only youth in an open child welfare case are eligible for federal reimbursement to Colorado's Children's Trust Fund. Per FFT service eligibility, youth may not be in current out-of-home placements in order to receive FFT services.

REQUEST FOR EVALUATION WAIVER

Colorado is seeking an evaluation waiver for Functional Family Therapy (FFT) and, upon approval, will assess program implementation and fidelity through a robust continuous quality improvement (CQI) process rather than through formal, independent evaluation. FFT is rated as well-supported by the Title IV-E Prevention Services Clearinghouse. It has extensive and rigorous research behind it, with nine studies qualifying as eligible for review by the Clearinghouse.

Studies conducted to-date on FFT have demonstrated efficacy of the program on outcomes in several domains, including child well-being (Celinska et al., 2013; Slesnick & Prestopnik, 2009) and adult well-being (Slesnick & Prestopnik, 2009). Studies have also demonstrated favorable outcomes measured after the end of treatment, including favorable child well-being and adult well-being outcomes sustained at seven and 13 months after treatment (Slesnick & Prestopnik, 2009). These outcomes have been demonstrated for several populations, including among adolescents with a primary alcohol problem (Slesnick & Prestopnik, 2009) and at-risk youth identified as having a history of aggressive behavior, destruction of property, or chronic truancy (Celinska et al., 2013). Outcomes demonstrated and populations reached with efficacy are aligned with Colorado's stated outcomes for this service and the target populations prioritized for candidacy.

CHILD SAFETY AND INDIVIDUAL PREVENTION PLANS

As described in Colorado's five-year prevention plan, child safety is an important component of the implementation plan. With all open child welfare cases, the county department is responsible for ongoing safety monitoring.

All FFT sites in Colorado follow the rigorous training schedule and guidelines in the Functional Family Therapy Clinical Training Manual. Child safety is assessed at multiple points during a family's engagement with an FFT provider.

During the referral/engagement phase of FFT, resources are provided to help the therapist make assessments around the appropriate engagement of family members. This includes conversations

with the referring agent (e.g., judge, probation officer, case worker, etc) and all relevant intake materials. The therapist will be able to further assess this on phone calls with the family before the first session. Part of this assessment decision-making includes gauging and monitoring the safety of the child/youth.

During service provision for substance use treatment, targets of FFT include the reduction in family symptoms and referral symptoms (truancy, compliance with probation, family safety, etc) by enhancing family protective factors (appropriate parental monitoring, appropriate family communication, etc) and decreasing family risk factors (inappropriate parent skills, inappropriate family communication, inappropriate problem solving skills, etc). Part of enhancing family protective factors include gauging and monitoring the safety of the child/youth.

Assessment in FFT occurs throughout the treatment period, and is an ongoing, multifaceted process that reflects the phased and functional nature of FFT. Child safety is continually gauged during the assessment process. In general, important features of this assessment phase include:

- The pretreatment formal assessment often accompanies referrals to FFT; the FFT-specific assessment occurs once actual face-to-face intervention commences. As such, much of the important assessment focus is simultaneous with early session interventions.
- Beyond the generic assessment generally obtained in educational, juvenile justice, and social service/mental health contexts, FFT emphasizes the identification of the interpersonal impact of behavior for each family member, usually determined on the basis of the characteristic patterns and processes that have characterized the family of late. The initial focus of this assessment is within the family and between the family members and the therapist. The assessment focus then broadens to include behavioral strengths and problems of the youth and parental figures.
- After the initial pretreatment formal assessments, FFT uses formal assessments when necessary to answer specific questions that cannot be answered in direct clinical contact, or when additional information is necessary for legal and/or record keeping responsibilities (e.g., drug screens, documentation of reading scores to establish improvement or appropriate school placement) is required. This form of direct clinical contact allows for continual monitoring of child safety throughout the treatment period.

FFT therapists are all trained and required to use the CSS database to collect demographic data, case tracking information, progress and assessment notes, and outcome measures. Individualized session plans are documented in the CSS. The CSS keeps therapists focused on relevant goals, skills, and interventions necessary for each phase of FFT. The computer-based format allows the therapist to have easy access to a wide variety of process and assessment information in order to make good clinical decisions and complete outcome information to evaluate case success. The following pieces of functionality are built into the CSS system:

- Client Assessment
- Case Tracking
- Process Tracking
- Outcome Assessment

As FFT is administered weekly, and the frequency and intensity of treatment vary depending on risk and protective factors, reassessment for the risk of out-of-home placements occurs on a regular basis. Risk factors are targeted through the duration of treatment, which typically last from three to five months. In the final phases of FFT treatment, therapists create a general plan with the family, to ensure the continuation of addressing risk factors, and maintaining supports for the family post-treatment.

WORKFORCE SUPPORT AND TRAINING

Colorado's adherence to the rigorous design of the FFT implementation and certification model will ensure the successful replication of FFT

programming across the state. This adherence further ensures the program's long-term viability at each individual site. The three main phases of this process: 1) Clinical Training, 2) Supervision Training, and 3) Practice Research Network, provide comprehensive support to each individual FFT site.

All FFT site staff will be held to the trauma-informed care prevention service provider requirements designed by the Colorado Department of Human Services and included in Colorado's 5-year Prevention Plan. Individual sites will be responsible for ensuring compliance with the standards.

PREVENTION CASELOADS

Family needs and distance traveled are important factors that go into caseload size determinations for FFT. The expectation is that FFT service providers have at least five families on their caseload at any given time. This averages out to approximately 20 hours of face-to-face work per week. There is potential for FFT service providers to reach 10-12 families per staff, but that is dependent on the site agency's location and the complexity of travel to access the family.

Appendix D: Healthy Families America

Healthy Families America (HFA) is a home visiting program for new and expectant families with children who are at-risk for maltreatment or adverse childhood experiences. The overall goals of the program are to cultivate and strengthen nurturing parent-child relationships, promote healthy childhood growth and development, and enhance family functioning by reducing risk and building protective factors. HFA includes screening and assessments to identify families most in need of services, offering intensive, long-term and culturally responsive services to both parent(s) and children, and linking families to a medical provider and other community services as needed.

The HFA model is based upon 12 Critical Elements. These Critical Elements are operationalized through a series of standards that provide a solid structure for quality, yet offer programs the flexibility to design services specifically to meet the unique needs of families and communities.

The HFA program begins at birth and enrolls families through the first three-months postpartum. Families initially receive weekly home visits, and the frequency of home visits may change depending on their needs and progress. Most families are offered services for a minimum of three years, or until the child turns five years of age.

PROGRAM SELECTION AND OUTCOMES

Healthy Families America was selected as a model program to address the lack of home visiting resources for families living in poverty in non-metro Colorado communities. The program was also recently endorsed by Colorado's Home Visiting Investment Task Force. A recent Colorado study, specific to infants affected by substance use, found that removal risk was higher when mothers had less than adequate prenatal care, did not participate in Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and a lower household income, resulting in an increase in medical fragility of the newborn.

The Colorado Home Visiting Coalition indicates that there is a compelling need for expanding the array of home visiting services - currently only 19% of families living in poverty with children under the age of six are participating in a home visiting program.

The three overarching domains for HFA in Colorado are:

- Child Well-Being: Behavioral and emotional functioning
- Adult Well-Being: Positive parenting practices
- Adult Well-Being: Parent/caregiver mental or emotional health

Child Well-Being: Behavioral and emotional functioning

Colorado will be targeting and tracking increased developmental progress and social-emotional health in this domain. This outcome is measured by providers using the Ages and Stages Questionnaires (ASQ), administered twice per year for children under the age of three and annually for children ages three through five years, and the ASQ-Social Emotional, administered once per year for children birth through age five. Statistically significant positive effect sizes were found for this domain in Clearinghouse "highly rated" studies.[1]

This outcome specifically links back to Colorado's candidacy definition by targeting

1 Duggan, A., Caldera, D. Rodriguez, K., Burrell, L., Shea, S., & Rohde, C. (2005). Evaluation of the Healthy Families Alaska program: Final report. Juneau, AK: Alaska State Department of Health and Social Services.

Caldera, D., Burrell, L., Rodriguez, K., Crowne, S. S., Rohde, C., & Duggan, A. (2007). Impact of a statewide home visiting program on parenting and on child health and development. Child Abuse & Neglect, 31(8), 829-852. doi:http://dx.doi.org/10.1016/j.chiabu.2007.02.008

developmental delays and parents' inability, or need for additional support, to address serious needs of a child/youth or related to the child/youth's behavior or physical or intellectual disability.

Adult Well-Being: Positive parenting practices
Colorado will be targeting and tracking improved praise and decreased criticism in this domain. This outcome is measured by providers using the HFA CHEERS Check-In Tool, which assesses parent-child interaction and is administered twice annually from birth through 36 months of age. Statistically significant positive effect sizes were found in Clearinghouse "highly rated" studies.[2]

This outcome targeted through HFA specifically links back to Colorado's candidacy definition by targeting parents' lack of parenting skills.

Adult Well-Being: Parent/caregiver mental or emotional health
Colorado will be targeting and tracking maternal depression in this domain. This outcome is measured by providers using a depression screening tool (sites are able to choose a standardized tool) at least once prenatally, at least once postnatally within three months of the baby's birth, and at least once postnatally within three months of any subsequent births. Statistically significant positive effect sizes were found in Clearinghouse "highly rated" studies.[3]

This outcome targeted through HFA specifically links back to Colorado's candidacy definition by targeting caregiver mental illness.

SERVICE DESCRIPTION AND OVERSIGHT

a. Implementation Manual:

Healthy Families America: Healthy Families America. (2018) Best practice standards. Prevent Child Abuse America, in conjunction with Healthy Families America. (2018). State/multi-site system central administration standards. Prevent Child Abuse America. Supporting materials from Healthy Families America National.

b. Implementation of HFA

Service providers receive intensive training specific to their role to understand the essential components of family assessment, home visiting and supervision. HFA Core training is required for all Family Support Specialists, Family Resource Specialists, supervisors and program managers within six months of hire. This training must be provided by a nationally certified HFA Core trainer.

Supplemental wrap-around training occurs within three months, six months, and 12 months of hire. There is annual training on child abuse and neglect and cultural humility. Family Support Specialists receive weekly reflective supervision as ongoing support.

While all training is provided by certified HFA trainers, Illuminate Colorado, as the state office/state intermediary for HFA, provides additional support and follow-up as needed for local sites. At the time a provider seeks to affiliate with HFA, they are required to submit an implementation plan that discusses how they intend to carry out model requirements. There is an accreditation guide for potential affiliates.

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2 DuMont, K. A., Mitchell-Herzfeld, S. D., Kirkland, K., Rodriguez, M., Walden, N., Greene, R., et al. (2008).Effects of Healthy Families New York on maternal behaviors: Observational assessments of positive and negative parenting. Rensselaer, New York: New York State Office of Children and Family Services.

3 Duggan, A., Fuddy, L., Burrell, L., Higman, S. M., McFarlane, E., Windham, A., & Sia, C. (2004). Randomized trial of a statewide home visiting program to prevent child abuse: Impact in reducing parental risk factors. Child Abuse & Neglect, 28(6), 623-643. doi:http://dx.doi.org/10.1016/j.chiabu.2003.08.008

Duggan, A., Caldera, D., Rodriguez, K., Burrell, L., Rohde, C., & Crowne, S. S. (2007). Impact of a statewide home visiting program to prevent child abuse. Child Abuse & Neglect, 31(8), 801-827. doi:http://dx.doi.org/10.1016/j.chiabu.2006.06.011

McFarlane, E., Burrell, L., Crowne, S., Cluxton-Keller, F., Fuddy, L., Leaf, P., & Duggan, A. (2013). Maternal relationship security as a moderator of home visiting impacts on maternal psychosocial functioning.Prevention Science, 14(1), 25-39.

c. Target Population in Colorado

Child welfare involved families and non-child welfare involved families are eligible to access HFA. For families currently involved in child welfare, referrals often come from the county child welfare agency. Families may also self-refer to HFA, and other referral sources may include community agencies and hospitals.

Standardized screening and assessment tools are used to systematically identify and assess families most in need. The Parent Survey (formerly the Kempe Family Stress Checklist), or another HFA-approved tool is used prior to or within four visits after enrollment to assess the presence of various factors associated with increased risk for child maltreatment or other adverse childhood experiences. New parents are eligible for the HFA program if they have been screened and/or assessed as moderate to high risk for child maltreatment and/or poor early childhood outcomes (e.g., mental health issues, domestic violence, substance abuse, poverty, housing, lack of education, lack of social support, etc.). Sites will be moving towards the HFA Family Resilience and Opportunities for Growth (FROG) Scale in 2022. The FROG scale is a one-time assessment used to create a family service plan, which is monitored and updated throughout the course of services.

Based on the results of the Parent Survey (or another HFA-approved tool), families can screen into the signature HFA program or qualify for accelerated services. Families are eligible for accelerated services if they score as "low-risk" on their initial assessment. Instead of serving families for a minimum of three years, families in HFA Accelerated can move through the program at their own pace and graduate sooner. For families involved with child welfare, there are additional protocols related to enrollment, caseload management, and establishing a formal MOU with child welfare in order to best serve families. If a family is not eligible for HFA, reduced services may be provided, or they may be referred to other services or programs.

d. Sites in Colorado

As of March 2021, Illuminate Colorado became the state office/state program intermediary for Healthy Families America.

HFA is implemented by the Healthy Families Aspen to Parachute program, as well as by the Genesis Program (an HFA affiliate) in Boulder County.

FIDELITY MONITORING

HFA requires implementing sites to utilize the HFA Best Practice Standards and to demonstrate fidelity to the standards through periodic accreditation site visits. The HFA Best Practice Standards serve as both the guide to model implementation and as the tool used to measure adherence to model requirements. There are 153 standards and each is coupled with a set of rating indicators to assess the site's current degree of fidelity to the model. The HFA site must meet a minimum of 85% threshold of adherence to the "HFA Best Practice Standards", which is the standardized tool used for monitoring fidelity.

All HFA affiliated sites are required to complete a self-study that illustrates current site policy and practice. An outside, objective peer review team uses this in conjunction with a multi-day site visit every four years to determine the site's rating for each standard.

During the accreditation on-site visit, the team reviews participant records and supervision notes, and conducts interviews with clients, staff and board of directors. Feedback is provided directly to site leadership daily, covering the site's strengths and areas of improvement identified through the review.

Additionally, quarterly and annual site reviews are conducted to inform the improvement process and make adjustments or corrections as needed. A full re-accreditation is required by the site every four years.[4]

CDHS will coordinate with Illuminate to receive relevant fidelity data which will then be translated

4 Healthy Families America Site Development Guide (revised 2014). Chicago, IL: Prevent Child Abuse America.

into the standardized statewide metrics of fidelity and moved into the Colorado Fidelity Monitoring Platform. See the Colorado 5-year Prevention Plan for more details on the Platform.

CONTINUOUS QUALITY IMPROVEMENT (CQI)

As part of the CQI process, HFA sites collect and monitor data such as:

- Number of referrals and eligibility status
- Timeframes for initial engagement of families referred
- Age of the focus child at the time of the first home visit
- Acceptance rates
- Retention rates
- Home visit completion rates
- Children connected with a pediatrician
- Immunization rates
- Well-child visits
- Caseload monitoring
- Staff retention
- Adherence with staff training requirements
- Frequency and duration of supervision

Quarterly learning calls are conducted with each site to:

- Review, strategize and support progress toward addressing recommendations made by the site team and challenges identified by the sites; and
- Review child safety performance management data that are routinely collected and opportunities to build capacity for routinely collecting and using child and adult well-being data.

In combination between HFA and local HFA sites, Illuminate will serve to be a centralized collection point for the QCI metrics and work with HFA to ensure data is available and in alignment with HFA standards.

ELIGIBILITY FOR FEDERAL CLAIMING

For Family First IV-E claiming purposes, only children and families in an open child welfare case are eligible for federal reimbursement to Colorado's Children's Trust Fund.

REQUEST FOR EVALUATION WAIVER

Colorado is seeking an evaluation waiver for Healthy Families America (HFA) and, upon approval, will assess program implementation and fidelity through a robust continuous quality improvement (CQI) process rather than through formal, independent evaluation. HFA is rated well-supported by the Title IV-E Prevention Services Clearinghouse. It has extensive and rigorous research behind it, with 22 studies qualifying as eligible for review by the Clearinghouse.

Studies conducted to-date on HFA have demonstrated efficacy of the program on outcomes in several domains, including child safety (Duggan et al., 2004; Mitchell-Herzfeld et al., 2005), child well-being (Caldera et al., 2007; Duggan et al., 2005; DuMont et al., 2010; Kirkland et al., 2012), and adult well-being (Bair-Merritt et al., 2010; Duggan et al., 2004, 2007; DuMont et al., 2008; McFarlane et al., 2013). Studies have also demonstrated favorable outcomes measured after the end of treatment, including favorable child well-being outcomes sustained at 24 months after treatment (DuMont et al., 2010; Kirkland et al., 2012). These outcomes have been demonstrated for several populations of families with newborns at-risk for child abuse and neglect, including children of mothers with poor mental health, maternal substance use, and partner violence (Bair-Merritt et al., 2010; Caldera et al., 2007; Duggan et al., 2004); and women with less than a high school diploma, under 19 years of age, and first-time mothers (DuMont et al., 2010; Mitchell-Herzfeld et al., 2005). Outcomes demonstrated and populations reached with efficacy are aligned with Colorado's stated outcomes for this service and the target populations prioritized for candidacy.

CHILD SAFETY AND INDIVIDUAL PREVENTION PLANS

As described in Colorado's five-year prevention plan, child safety is an important component of the implementation plan. With all open child welfare cases, the county department is responsible for ongoing safety monitoring.

After enrollment, all sites complete the following screens/assessments at the minimum frequency indicated below:

- HFA CHEERS Check-In Tool (assesses parent-child interaction) – twice annually from birth through 36 months of age
- ASQ – twice per year for children under the age of three and annually for children ages three through five years
- ASQ-SE –once per year for children birth through age five
- Depression screening (sites are able to choose a standardized tool) – at least once prenatally, at least once postnatally within three months of the baby's birth, and at least once postnatally within three months of any subsequent births.

One of the foundational principles of HFA is to prevent child abuse and neglect. Within the HFA Best Practice Standards, all Safety standards must be met in order to be accredited, as they impact the safety of the families being served and the staff serving them. Safety standards include personnel background checks (9-3.B), orienting staff on child abuse and neglect indicators, role as a mandated reporter and reporting requirements (10-2.D), supervision of direct service staff (12-1.B), and child abuse and neglect policy and procedures that include reporting criteria, definitions and practice (GA-6.A, GA-6.B).

WORKFORCE SUPPORT AND TRAINING

There are standard requirements for training in HFA and training logs are kept to track training for the workforce. All staff receive HFA core training plus intensive role-specific training. There are two core trainings that direct hires must complete within 6 months of hire: Foundations for Family Support (FFS), which is required for family support specialists (who conduct home visits), and Parent Survey for Community Outreach (PSCO), which is required for family resource specialists (who conduct the initial assessment/parent surveys). Supervisors must complete both FFS and PSCO core training, and stay for one additional day of core training, within 6 months of employment. Program managers must complete FFS and PSCO core training, as well as an Implementation Training, within the first 18 months of employment.

All HFA site staff will be held to the trauma-informed care prevention service provider requirements designed by the Colorado Department of Human Services and included in Colorado's 5-year Prevention Plan. Individual sites will be responsible for ensuring compliance with the standards.

PREVENTION CASELOADS

The Best Practice Manual provides guidance on caseload sizes. The importance of a manageable caseload size ensures families will be afforded the time, energy and resources necessary to help build protective factors, reduce risk and impact positive change. Caseload size provides the maximum number of families and maximum case weight that can be carried by a full-time Family Support Specialist. HFA allows sites to factor in circumstances that will weigh more heavily for many families, including high risk issues, extensive travel, multiple births, translation needs, etc. Guidance regarding assigning case weights based on level of service (frequency of home visits) can be referenced in standard 4-2.A, and in HFA's Level Change forms.

A site's policy and procedures regarding caseload size cannot exceed 15 families at the most intensive level, and no more than 25 families at any combination of service levels, and a maximum case weight of 30 points, per full-time (40 hours/week) Family Support Specialist.

Appendix E: Multisystemic Therapy (MST)

Multisystemic Therapy (MST)MST is an intensive family- and community-based treatment program that addresses the multiple influences that contribute to youth risk of out-of-home placement, including serious antisocial or illegal behavior, truancy, school refusal, and substance use in youth aged 12 to 17 years old. The MST approach views individuals as being part of, and influenced by, a complex network of interconnected systems that encompass individual, family, and extrafamilial (peer, school, neighborhood) factors. In MST, this "ecology" of interconnected systems is viewed as the "client." To achieve successful outcomes with these youth, interventions are generally necessary within and among a combination of these systems. MST uses the strengths of each system to promote behavior change in the youth's natural environment and increase the likelihood that they can remain successfully in their home.

The ultimate goal of MST is to empower parents, assuring that they have or can develop the skills and resources needed to address the difficulties that arise in raising children and adolescents, and to similarly empower youth to cope with family, peer, school, and neighborhood problems.

MST is provided using a home-based model of service delivery. This model helps to overcome barriers to accessing services, increases family retention in treatment, allows for the provision of intensive services, and enhances the maintenance of treatment gains. The usual duration of MST treatment is about 4-5 months, with multiple meetings between the family and therapist occurring each week. Frequency of contact is calibrated to family needs and progress, such that therapists see families more frequently early in treatment and less frequently as treatment goals are reached.

As of this writing, a solicitation for the program intermediary for Colorado has been released to identify a licensed MST Network Partner.

PROGRAM SELECTION AND OUTCOMES

Colorado has been evaluating the effectiveness of MST in the State through the Colorado State Pay for Success Initiative. The Pay for Success Initiative aims to expand MST to underserved regions of Colorado using a Pay for Success funding structure. The plan details the use of a propensity score analysis to match children/youth and track out-of-home placements and recidivism up to a year after receiving MST services. At the time of this writing, findings are not yet available.

For Family First, the three overarching domains for MST in Colorado are:

- Child Well-Being: Delinquent Behavior
- Child Well-Being: Educational Achievement and Attainment
- Child Permanency: Out-of-Home Placement

All outcomes are assessed using a standardized data collection instrument called the MSTi. Therapists input information into the MSTi database about youth when they are enrolled in MST and again at case closure. At the time of case closure, therapists indicate whether there has been improvement or lack of improvement in domains of functioning. The MST expert then converges with the therapist on outcome ratings to ensure accuracy based on clinical knowledge of the case. This system is standardized for all licensed MST teams across the country.

Child Well-Being: Delinquent behavior

The specific outcome Colorado will be targeting and tracking in this domain is decreased offending behavior. This outcome is measured by the MSTi around any new youth arrests[1]. Statistically significant effect sizes for this domain were found in multiple Clearinghouse "highly rated" studies.

This outcome specifically links back to Colorado's candidacy definition by targeting parents' inability, or need for additional support, to address serious

1 MSTi definition: Youth has not been arrested since the beginning of MST treatment, for an offense committed during MST treatment.

needs of a child/youth or related to the child/youth's behavior or physical or intellectual disability.

Child Well-Being: Educational Achievement and Attainment

The specific outcome Colorado will be targeting and tracking in this domain is educational attainment. This outcome is measured by the MSTi at the end of treatment to identify if the youth is in school or working[2]. Statistically significant effect sizes for this domain were found in multiple Clearinghouse "highly rated" studies.

This outcome specifically links back to Colorado's candidacy definition by targeting parents' inability, or need for additional support, to address serious needs of a child/youth or related to the child/youth's behavior or physical or intellectual disability.

Child Permanency: Out-of-Home Placement

The specific outcome Colorado will be targeting and tracking in this domain is decreasing the number of children/youth entering out-of-home care. This outcome is measured by the MSTi at the end of treatment to identify if the youth is living at home[3]. Statistically significant effect sizes for this domain were found in multiple Clearinghouse "highly rated" studies.

This domain specifically links back to Colorado's overall goals for Family First prevention services by decreasing the number of children/youth entering out-of-home care as measured by state data.

SERVICE DESCRIPTION AND OVERSIGHT

a. Implementation Manual

Henggeler, Schoenwald, Borduin, Rowland, & Cunningham (2009) Multisystemic Therapy for Antisocial Behavior in Children and Adolescents. The Guildford Press.

b. Implementation of MST

The Rocky Mountain MST Network (RM Network) (formerly the Center for Effective Interventions) is the MST intermediary in Colorado and oversees the implementation, program evaluation, training, and licensing of MST providers across Colorado. As an MST Services network provider licensed to disseminate MST, the RM Network trains and licenses local provider teams to ensure they deliver the intervention with quality and fidelity. Becoming a licensed MST provider involves careful consideration of how systems operate in the community and how the MST treatment model can become an integral part of the system of services available to adolescents and their families.

Preparatory Process

Agencies participate in a preparatory process that encompasses topics such as securing funding, developing referral criteria, confirming agency policies and procedures for MST, and obtaining memoranda of understanding between agencies. This process maximizes the chances of having a sustainable program that reliably provides good clinical outcomes.

Practice Requirements

Certain practice requirements are important to ensure high-quality services. These requirements include identifying training and consultation expectations; the completion of all necessary adherence-measure instruments; and creation

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2 MSTi definition: Youth is attending school (is not truant,) or vocational training or, if of the legally appropriate age to not attend school, has a paying job (at least half-time).

Youth is attending school, a high school equivalency program (GED program,) or a vocational program in the youth's natural ecology, or working. The primary objective of the program is educational or vocational. A youth in a correctional facility or treatment setting in which educational or vocational activities are provided, where the primary objective is treatment or correction, will NOT count as a "yes" for this item.

If the youth is in school, youth is attending frequently enough to meet expectations placed on youth by school system or court. If the discharge occurs during the summer when school is not in session, it is recommended that the response "yes" be selected if the youth was attending school at the end of the last school year, or is working.

3 MSTi definition: Home is defined as a private residence that is approved by the youth's guardian. This could include a parent's home, the home of an approved relative or friend of the family. Foster homes or other types of placement would not be included in the definition of "home". Youth who are on runaway status would not be at home.

of internal policies, such as flexible appointment schedules, maintaining caseloads of 4–6 families, monitoring duration of treatment, and other therapist supports.

Training

Once site readiness activities are successfully completed and the necessary contracts are signed, therapists may be trained in MST and begin serving clients.[4]

Training in MST through the RM Network is intensive and ongoing. The basic elements of training for clinical staff include a week of orientation training, weekly consultation with an expert in MST, and quarterly booster training.

The MST supervisor at each agency site provides task-oriented, analytically-focused clinical supervision on-site. The overarching objective of MST Clinical Supervision is to facilitate therapists' acquisition and implementation of the conceptual and behavioral skills required to achieve adherence to the MST treatment model. These skills are critical to reducing or eliminating identified problems and achieving positive, sustainable outcomes for children and their families.

The RM Network acts as the MST expert, providing weekly consultation to each treatment team (therapists and MST supervisor). Consultation sessions focus on promoting adherence to MST treatment principles, developing solutions to difficult clinical problems, and designing plans to overcome any barriers to obtaining strong treatment adherence and favorable outcomes for youths and families.[5]

c. Target Population in Colorado

In Colorado, MST providers serve youth and the families between the ages of 12 and 17. Specifically, the programming is designed to support youth and families who have experiences with or are at risk of substance abuse and/or are at risk of becoming, or already have been, involved in the child welfare or juvenile justice system.

Child welfare involved families and non-child welfare involved families are eligible to receive MST services. Referrals can be accepted from a range of sources, including but not limited to: community agencies, juvenile justice and child welfare agencies, mental health centers, schools, hospitals, faith-based community resources, and self-referrals.

Eligibility for MST services in Colorado are provided to youth, and their families, who display the following behaviors:

1. Verbal Aggression
2. Physical Aggression
3. Substance Use/Abuse
4. Police Involvement/Criminal Behaviors
5. Threatening/Posturing Behavior
6. Engagement with Negative Peers
7. Significant Property Destruction
8. Running Away/Chronic Leaving Home without Permission
9. Truancy/Suspension/Expulsion
10. Risk of Failure at School due to Behaviors

d. Sites in Colorado

As of this writing, the RM Network supports MST in the following counties: Archuleta, Broomfield, Denver, El Paso, Huerfano, La Plata, Las Animas, Mesa, Park, Pueblo, Teller, and Weld. Programming is provided through the following organizations:

1. Four Feathers Counseling

4 Our Services: MST, CEI Services | Graduate School of Social Work | University of Denver, 2021, socialwork.du.edu/effectiveinterventions/our-services.

5 MST Services (2018). Multisystemic Therapy® (MST®) Organizational Manual. Charleston, SC.

2. Hilltop Family Resource Center
3. Health Solutions
4. North Range Behavioral Health
5. Savio House
6. Southern Colorado Community Action Agency
7. Synergy (note: this provider is not supported by the same program intermediary)

Counties or agencies interested in MST implementation engage in a full process with the RM Network to ensure successful implementation. The process consists of ensuring readiness for program implementation and sustainability, understanding of all data and CQI requirements, and review of the financial sustainability model of the program proposal. The RM Network works closely with site agencies to support all aspects of program start-up, replication and sustainability.

FIDELITY MONITORING

The RM Network follows the national guidelines for MST Therapist Adherence Measure - Revised (TAM-R) and works closely with the MST Institute (MSTI) to ensure that data are being collected ethically, accurately and to the specifications outlined.

Fidelity to MST in Colorado will be assessed by the Therapist Adherence Measure – Revised (TAM-R). The first measure is administered to parents/ caregivers telephonically or via an online survey in the first two weeks of treatment and then monthly thereafter. The TAM-R contains 28 items that assess the primary caregiver's perception of treatment. Each item is rated on an adherence scale from 1 (not at all) to 5 (very much). The adherence score is calculated by the number of items rated as adherent (i.e., a 5) divided by the number of items that can be scored. Thus, adherence scores can range from 0 to 1, with a score of 0.61 considered the threshold for fidelity. The adherence scale was originally developed as part of a clinical trial on the effectiveness of MST. The measure proved to have significant value in measuring an MST Therapist's adherence to MST and in predicting outcomes for families who received treatment.

Under Family First, TAM-R will be administered by an independent call center run by MSTI. The call center will enter all data into a national MSTI database that will be used to create a feedback loop to providers and support the CQI process.

MSTI utilizes a secure data collection and reporting system that provides tools to enter, store, and manage the data collection process. Information can be accessed on the MSTI website, msti.org, to guide sites in the process of administering and interpreting the adherence measures. Logins are required to access the secure site and are restricted to individuals who are part of a licensed MST team. Training guides and online training sessions are available on how to use these tools. Information about the online training sessions can be found at msti.org/mstinstitute/services/training.html.

A secondary way in which MST agency sites ensure fidelity to the national MST model is through the use of Program Implementation Reviews (PIR), which are written reports completed every six-months by the site's MST supervisor and the RM Network's MST expert. The report details areas of strengths and areas needing improvement in implementation. The PIR also includes a review of critical program practices and characteristics; operational, adherence, and case closure data; and the statuses of previously recommended actions and plans.

The Colorado Department of Human Services will coordinate with the RM Network to receive reports from the MSTI system, which will then be reviewed and standardized in the state's CQI Dashboard, as described in the five-year prevention plan.

CONTINUOUS QUALITY IMPROVEMENT (CQI)

As part of the CQI process, Multisystemic Therapy (MST) sites collect and monitor data such as:

- Number of clients served
- Client-level, therapist level and team level fidelity (TAM-R scores)
- Team utilization rates
- Implementation Outcomes:

- Average length of stay
- % completing treatment
- % discharged due to lack of engagement
- % youth placed outside of home
- Number of active FTE therapist positions
- Average number of cases per therapist
- Client-level outcomes:
- Ultimate Outcomes
  - % living at home at end of treatment
  - % in school or working at end of treatment
  - % no new arrests at end of treatment
- Instrumental outcomes
  - % with parenting skills necessary to handle future problems
  - % with improved family relations
  - % improved network of supports
  - % success in educational/vocational setting
  - % involved with prosocial peers/activities
  - % cases where changes have been sustained
- Substance use outcomes (for portion that SU was a treatment target)
  - % youth with reduced SA (any measurement option)
  - % youth with reduced SA as measured by objective means (i.e., drug screen)

CQI data will be collected by:

- Therapists will enter client-level data into the MSTi database at intake and discharge
- Fidelity data are collected in various ways, including use of an independent call center, use of agency-specific call center, and client completion via an on-line portal. The fidelity questions are the same regardless of the methods used, and are entered and analyzed through the MSTi database.
- MST Experts assigned to each team will collaborate with each team supervisor to create a Program Implementation Review (PIR) twice a year. The PIR consists of an evaluation of all clinical and implementation outcomes as well as an assessment and goal setting of any areas that are below standard benchmarks.

Data will be monitored by Rocky Mountain MST in several different ways. First, the MST Expert that is assigned to each team regularly reviews data for each team on an approximately monthly basis and co-creates a PIR twice/year. The MST Expert and therapist, along with the supervisor converge on outcome reporting at the end of each case and this is monitored by the MST Expert. Additionally, the Colorado MST Co-Director will review dashboards for all teams in Colorado on a monthly basis and identify any anomalies in reporting and support any data collection challenges. The RMM Network Partner Director will review data on a quarterly basis.

The MST site supervisor, in collaboration with agency leadership and the RM Network, is primarily responsible for ensuring that the MST quality assurance and improvement program is in place and functions as intended. The MST site supervisor manages the day-to-day business of the MST team so that each therapist can effectively implement MST with each youth and family being treated. While the RM Network supports the site's data collection and CQI efforts, measurement of the implementation of MST is a function of the MSTI, and is intended to provide all MST programs around the world with tools to assess the adherence to MST of therapists, supervisors, experts and organizations. The national MSTI provides comprehensive guidelines for their MST Program Quality Assurance/Quality Improvement (QA/QI) in their organizational manual.

As part of the national MST QA/QI Program implementation, information is gathered from caregivers, therapists, and supervisors. The families receiving MST will be asked to answer a few questions about treatment periodically. In addition, therapists will be asked to rate their supervisors and experts bimonthly. Finally, supervisors report

on the expert, as well as report on organizational practices in collaboration with the expert. MST experts, in collaboration with MST Supervisors and other MST program staff, will use this information to provide feedback to the MST program about how to improve adherence and program outcomes.[6]

ELIGIBILITY FOR FEDERAL CLAIMING

For Family First IV-E claiming purposes, only children and families in an open child welfare or juvenile justice case are eligible for federal reimbursement to the Colorado's Children's Trust Fund.

REQUEST FOR EVALUATION WAIVER

Colorado is seeking an evaluation waiver for Multisystemic Therapy (MST) and, upon approval, will assess program implementation and fidelity through a robust continuous quality improvement (CQI) process rather than through formal, independent evaluation. MST is rated as well-supported by the Title IV-E Prevention Services Clearinghouse. It has extensive and rigorous research behind it, with 16 studies qualifying as eligible for review by the Clearinghouse.

Studies conducted to-date on MST have demonstrated efficacy of the program on outcomes in several domains, including child permanency (Vidal et al., 2017), child well-being (Asscher et al., 2013, 2014; Borduin et al., 1995; Butler et al., 2011; Dekovic et al., 2012; Fonagy et al., 2018; Henggeler et al., 1993, 1997; Manders et al., 2013; Ogden & Halliday-Boykins, 2004; Ogden & Hagen, 2006; Vidal et al., 2017), and adult well-being (Asscher et al., 2013; Borduin et al., 1995; Dekovic et al., 2012; Fonagy et al., 2018). Studies have also demonstrated favorable outcomes measured after the end of treatment, including favorable child well-being outcomes sustained at 14 months (Fonagy et al., 2018), 16 months (Henggeler et al., 1997), 18 months (Butler et al., 2011; Ogden & Hagen, 2006), and 48 months (Borduin et al., 1995) after treatment; as well as favorable adult well-being outcomes sustained at 2, 8, and 14 months after treatment (Fonagy et al., 2018). These outcomes have been demonstrated for several populations, including youth involved in the juvenile justice system and being treated for antisocial behavior (Asscher et al., 2013, 2014; Borduin et al., 1995; Butler et al., 2011; Henggeler et al., 1997; Manders et al., 2013; Vidal et al., 2017;); and adolescents with various types of serious antisocial behavior (Deković et al., 2012; Ogden & Halliday-Boykins, 2004; Ogden & Hagen, 2006) or moderate-to-severe antisocial behavior (Fonagy et al., 2018). Outcomes demonstrated and populations reached with efficacy are aligned with Colorado's stated outcomes for this service and the target populations prioritized for candidacy.

CHILD SAFETY AND INDIVIDUAL PREVENTION PLAN

As described in Colorado's five-year prevention plan, child safety is an important component of the implementation plan. With all open child welfare cases, the county department is responsible for ongoing safety monitoring.

MST utilizes a perpetual planning process throughout the treatment period. MST uses a structured, ongoing, logical treatment planning process, which includes the ongoing use of assessments that look at strengths and needs, appropriateness of treatment intervention, and prioritization. The MST analytical process includes the individual, school, peer, and community perspectives in order to determine the intervention process. Overall MST program efficiency and effectiveness depend on the effective implementation of this process, so it is rigorously monitored.

This analytic process calls for specific procedures to collect and assess data from multiple sources, develop goals with families, develop and implement interventions, assess outcomes, and adjust interventions as goals are met or new data become available. The MST Supervisor monitors the ongoing treatment planning and implementation process for each case to facilitate problem solving by the MST team and with individual clinicians as

6 MST Services (2018). Multisystemic Therapy® (MST®) Organizational Manual. Charleston, SC.

needed. Throughout this process therapists identify risk and protective factors for families and then personalize the interventions. Upon discharge, therapists submit documentation to supervisors and experts, which is then coded and entered into the MSTI website.

MST therapists continuously assess and address safety needs with the family and assist caregivers in developing and implementing tailored safety plans. These plans involve the commitment from the caregivers to significantly increase the monitoring and supervision of their youth (with the support of others within their ecology). Together the MST therapist and caregivers closely monitor the effectiveness of the safety plan and immediately adjust the plan if barriers or loopholes are identified.

The MST guidelines for this process support staff monitoring for child safety throughout the youth and family's involvement in the program.

WORKFORCE SUPPORT AND TRAINING

MST agency sites participate in Program Implementation Reviews (PIR), which are written reports completed every six-months by the site's MST supervisor and the RM Network's MST expert. The report details areas of strengths and areas needing improvement in MST implementation. The PIR also includes a review of critical program practices and characteristics; operational, adherence, and case closure data; and the statuses of previously recommended actions and plans.

Weekly clinical group supervision is provided by the MST site supervisor as an additional support to individual therapists. MST experts also provide weekly group consultations. These sessions are an opportunity to ensure that therapists are implementing the skills and competencies that adhere to the MST treatment model, and to provide them support and access to learning opportunities that may enhance their practice.

Additionally, the national MST office has a MST Services branch that provides ongoing support to agency sites (teams) and intermediaries (network partners).

- Team Support Services (TSS) Division: The objective of this section of MST Services is to provide direct program development and MST expert support to domestic and international MST teams and provider organizations. MST Services employs many experts and program developers, whose roles and functions are described above. Additionally, the TSS Division coordinates many of the MST trainings that are held worldwide.

- Network Partner Support Division: This division of MST Services includes the Manager of Network Partnerships (MNP) role who acts as the primary liaison between MST Network Partnership organizations and MST Services. The MNP orients, trains and provides ongoing coaching to MST experts, and partners with Network Partner Directors and Program Developers in their efforts to maintain model fidelity and positive outcomes. The Network Partner Support Division provides leadership to the global MST community in continuous quality improvement endeavors via projects, task groups, conferences and workshops each year.[7]

All MST agency sites and their staff will be held to the trauma-informed care prevention service provider requirements designed by the Colorado Department of Human Services and included in Colorado's 5-year Prevention Plan. In addition to meeting those requirements, training specific to trauma-informed therapy is also required of clinicians upon their hiring. Booster trainings are available as an additional opportunity to incorporate further training around trauma-informed principles within MST.

All MST agency sites and their staff will be held to the trauma-informed care prevention service provider requirements designed by the Colorado Department of Human Services and included in Colorado's 5-year Prevention Plan. In addition to meeting those requirements, training specific to trauma-informed therapy is also required of clinicians upon their hiring. Booster trainings are available as an additional opportunity to

7 MST Services (2018). Multisystemic Therapy® (MST®) Organizational Manual. Charleston, SC.

incorporate further training around trauma-informed principles within MST.

PREVENTION CASELOADS

MST is provided using a home-based model of service delivery. This model helps to overcome barriers to accessing services, increases family retention in treatment, allows for the provision of intensive services (i.e., therapists are full-time staff with low caseloads of 4 to 6 families per therapist), and enhances the maintenance of treatment gains. The usual duration of MST treatment is about 4-5 months, with multiple meetings between the family and therapist occurring each week. Frequency of contact is calibrated to family needs and progress such that therapists see families more frequently early in treatment and less frequently as treatment goals are reached.

Appendix F: Nurse-Family Partnership

Nurse-Family Partnership (NFP) is a program of intensive prenatal and postnatal home visitation by nurses, designed to empower mothers experiencing poverty and their first-borns. NFP has three goals: (1) to improve pregnancy outcomes by helping women improve their prenatal health, (2) to improve child health and development by helping parents provide more sensitive and competent care, and (3) to improve parental life-course by helping parents plan future pregnancies, complete their educations, and find work. By design, NFP helps parents to understand how their behaviors influence their own health and their child's health and development. It supports them in choosing to change their lives in ways that protect themselves and their children more effectively.

The expectant moms benefit by getting the care and support they need to have a healthy pregnancy. At the same time, new mothers develop a close relationship with a nurse who becomes a trusted resource they can rely on for advice on everything from safely caring for their child to taking steps to provide a stable, secure future for them both. Through the partnership, the nurse provides new moms with the confidence and the tools they need not only to assure a healthy start for their babies, but to envision a life of stability and opportunities for success for both mom and child.

NFP is delivered within a 1:1 therapeutic relationship with a personal nurse. Visits occur at the client's home or at an alternative location based on the needs of the client and may include virtually through telehealth. Nurses use their judgment to apply the NFP visit guidelines across 6 domains: Personal Health, Environmental Health, Life Course Development, Maternal Role, Family and Friends, and Health and Human Services.

PROGRAM SELECTION AND OUTCOMES

Much of the national research demonstrating NFP's efficacy has included samples from Colorado. The Pacific Institute for Research and Evaluation (PIRE) published a fact sheet in 2019, titled "Life status and financial outcomes of Nurse-Family Partnership in Colorado", using a published systematic review of more than 30 NFP evaluations. Based on statistically significant life status and financial changes it documented, the fact sheet estimates NFP outcomes as implemented in Colorado.

Table 1. Expected Life Status and Financial Outcomes When First-Time Low-Income Mothers Receive Nurse-Family Partnership Home Visitation Services in Colorado

Outcome	Change
Smoking During Pregnancy	25% reduction in tobacco smoked
Complications of Pregnancy	33% reduction in pregnancy-induced hypertension
Preterm First Births	15% reduction in births below 37 weeks gestation (17 fewer preterm births per 1,000 families served)
Infant Deaths	48% reduction in risk of infant death (3.0 fewer deaths per 1,000 families served)
Closely Spaced, High-Risk Pregnancies	37% reduction in closely spaced, high-risk pregnancies within 15 months postpartum during 4 years after the first birth
Very Closely Spaced Births	25% reduction in second births within 15 months postpartum
Subsequent Preterm Births	28.6 fewer subsequent preterm births per 1,000 families served
Breastfeeding	12% increase in mothers who attempt to breastfeed
Intimate Partner Violence	17% reduction in assaults, prenatal to child age 5
Child Maltreatment	33% reduction in child maltreatment through age 15
Childhood Injuries	34% reduction in injuries treated in emergency departments, ages 0-2
Language Development	41% reduction in language delay; 0.14 fewer remedial services by age 6
Youth Criminal Offenses	25% reduction in crimes and arrests, ages 11-17
Youth Substance Abuse	56% reduction in alcohol, tobacco, & marijuana use, ages 12-15
Immunizations	14% increase in full immunization, ages 0-2
TANF Payments	7% reduction through year 13 post-partum; no effect thereafter
Food Stamp Payments	10% reduction through at least year 15 post-partum
Person-months of Medicaid Coverage Needed	8% reduction through at least year 15 post-partum due to reduced births and increased program graduation
Costs if on Medicaid	12% reduction through age 18
Subsidized Child Care	Caseload reduced by 3.0 children per 1,000 families served

The Colorado Evaluation and Action Lab engaged in an extensive review of Colorado needs assessment to inform the selection of services. NFP was selected as a prevention service because the national literature on NFP creates a compelling case for meeting local needs. In addition to living in poverty, NFP moms are also often experiencing, or at risk of experiencing, addiction or substance misuse; involvement with child welfare or juvenile or criminal justice systems; intimate partner violence; severe developmental disabilities; and/or behavioral or mental health needs. All of these risk factors are closely aligned with Colorado's proposed definition of candidacy.

For Family First, the overarching domain for NFP in Colorado is:

- Child Safety: Child welfare administrative reports.

Colorado will be targeting and tracking subsequent

referrals made regarding suspected child abuse and neglect. This outcome will be measured by the assigned caseworker analyzing Trails data within a minimum of 6 months after the family's last NFP visit. Statistically significant positive effect sizes were found for child safety in Clearinghouse-rated studies.[1]

SERVICE DESCRIPTION AND OVERSIGHT

a. Implementation Manual

Nurse Family Partnership. (2020). Visit-to-visit guidelines.

b. Implementation of Nurse-Family Partnership

All of Colorado's NFP staff and home visitors receive the same training on the NFP model elements. The Community Planning Guide provides a 5-chapter series as a resource for implementing NFP: Building Partnerships, Based in Evidence, Funding & Financing, Your Staff, and What to Expect in Your First 6 Months.

NFP requires highly skilled NFP Nurses and Supervisors so that they may work effectively with the families participating in the program, many of whom are experiencing multiple complex issues. All NFP nurses participate in a comprehensive program of education designed to support them in developing: (1) strong communication, personal relationship building and problem-solving skills; (2) a deep understanding of all facets of the NFP program model; (3) skill in delivering all components the NFP program with fidelity; and (4) the ability to adapt the program as necessary to "make it work" for each client and family.

The NFP National Service Office (NSO) develops and delivers initial education for nurse home visitors and nurse supervisors. Initial education is required as part of model fidelity as outlined in agency contracts. The initial education training policy can be found here.

One-on-one weekly clinical supervision occurs for each nurse with the nurse supervisor. NFP nursing teams meet regularly for team meetings and case conferences at least twice per month, where they receive guidance from supervisors and colleagues to help them deliver the best possible care to their clients. Reflective supervision (RS) in NFP is based on a collaborative relationship between NFP nurses and their supervisors. Effective RS is also a protective factor in preventing burnout or compassion-fatigue for the NFP nurse, and is encapsulated in model element #14. The use of RS in NFP implementation has also been shown in several studies to significantly increase program retention, reduce attrition and provide nurses with a positive modeling framework that ultimately cascades down to the client and her baby. Nurse supervisors conduct joint home visits with each nurse three times a year.

c. Target Population in Colorado

Nurse-Family Partnership focuses on first-time mothers experiencing poverty — a population disproportionately impacted by systemic barriers that sometimes has limited access to role-models. Women voluntarily enroll as early as possible with nurse home visits, ideally beginning at birth through two years of age. In Colorado, NFP will serve pregnant and parenting teens in foster care. This population has been identified to need additional prenatal and parenting support. Family First will claim post-birth program delivery costs.

Per C.R.S § 26-6.4-104 (2), "A mother shall be eligible to receive services through the program if she is pregnant with her first child, or her first child is less than one month old, and her gross annual income does not exceed two hundred percent of the federal poverty level".

d. Sites in Colorado

Currently, NFP is implemented in 21 sites across 64 counties, including service provision to the

1 Mejdoubi, J., van den Heijkant, S. C. C. M., van Leerdam, F. J. M., Heymans, M. W., Crijnen, A., & Hirasing, R. A. (2015). The effect of VoorZorg, the Dutch Nurse-Family Partnership, on child maltreatment and development: A randomized controlled trial. PLoS ONE, 10(4), e0120182. doi:10.1371/journal.pone.0120182

two Federally recognized tribal communities in Colorado.

FIDELITY MONITORING

Fidelity is measured through the Nurse-Family Partnership Model Elements instrument, which assesses the extent to which there is adherence to the model elements CDHS will coordinate with IIK to receive relevant fidelity. Applying the model elements in practice provides a high level of confidence that the outcomes achieved by families who enroll in the program will be comparable to those achieved by families in the three randomized, controlled trials and outcomes from ongoing research on the program. In addition to applying the model elements to implementation, fidelity includes agency and nurse uptake and application of new research findings and new innovations, as well as adjusting NFP practice to the changing context and demographics of NFP clientele.

C.R.S § 26-6.4-102 details how the University of Colorado is responsible for the programmatic and clinical support, evaluation and monitoring for the program. The Colorado Coordination Team (CCT) is a partnership between the NFP NSO, the University of Colorado, Invest in Kids (IIK), and the Colorado Department of Human Services (CDHS). The CCT has well-established processes for monitoring fidelity and engaging in continuous quality improvement in urban, rural, and frontier counties. IIK is charged with ensuring all 21 NFP implementing agencies accurately input data from every home visit into a national data-collection system. Once the data are collected, IIK assists NFP teams in using the data to assess their program fidelity according to 19 model elements and to track progress toward outcome achievement. IIK employs a full-time data analyst to oversee this work. IIK also employs a program director and two nurse consultants to work with NFP teams daily on all aspects of implementation, including using the data to guide nursing practice given individual NFP site context.

As statutorily required in C.R.S § 26-6.4-106 (e), all NFP teams submit a progress report to the CCT for review annually. This review results in a feedback letter to every NFP team detailing their successes on maintaining fidelity and achieving outcomes, as well as guidance to improve areas of fidelity and progress toward outcomes that IIK will support them with throughout the following year. IIK's work to support fidelity is financed through two contracts with the University of Colorado, with the funding coming from the administrative portion of the Master Tobacco Settlement to the Nurse Home Visitor Program and a smaller portion from the administrative portion for Colorado's Maternal Infant and Early Childhood Home Visitation funding.

CDHS will coordinate with IIK to receive relevant fidelity data which will then be translated into the standardized statewide metrics of fidelity and moved into the Colorado Fidelity Monitoring Platform. See the Colorado 5-year Prevention Plan for more details on the Platform.

CONTINUOUS QUALITY IMPROVEMENT (CQI)

As part of the CQI process, Nurse-Family Partnership sites collect and monitor data such as:

- NFP Model Fidelity
- Maternal Health including pregnancy and birth outcomes
- Child health and development outcomes
- Family economic self-sufficiency outcomes

CQI data will be collected by the utilization of the NFP National Service Office Data Collection System as is already part of NFP program implementation; and monitored through current data reporting measures and established CQI processes including the annual NHVP Continuation Application.

ELIGIBILITY FOR FEDERAL CLAIMING

Colorado has determined that due to the parameters of Family First legislation, and NFP model design, the target population for Family First is narrow. Parenting teens, who are in an open child welfare case, and in foster care, will be eligible for Colorado to claim federal IV-E reimbursement. As NFP can be provided up until the child is the age of two, Colorado will work with NFP and the Children's Bureau to create a waiver extending services for this population.

REQUEST FOR EVALUATION WAIVER

Colorado is seeking an evaluation waiver for Nurse-Family Partnership (NFP) and, upon

approval, will assess program implementation and fidelity through a robust continuous quality improvement (CQI) process rather than through formal, independent evaluation. NFP is rated well-supported by the Title IV-E Prevention Services Clearinghouse. It has extensive and rigorous research behind it, with 10 studies qualifying as eligible for review by the Clearinghouse.

Studies conducted to-date on NFP have demonstrated efficacy of the program on outcomes in several domains, including child safety (Mejdoubi et al., 2015), child well-being (Kitzman et al., 1997; Olds et al., 2014; Robling et al., 2016; Thorland & Currie, 2017), and adult well-being (Olds, 2002). Studies have also demonstrated favorable outcomes measured after the end of treatment, including favorable child safety outcomes sustained at 12 months (Mejdoubi et al., 2015) and 84 months (Olds et al., 2014) after treatment. These outcomes have been demonstrated for several populations of low-income first-time mothers, including among children of mothers with low education who were less than 26 years of age (Mejdoubi et al., 2015); children of African American mothers living in disadvantaged urban neighborhoods (Kitzman et al., 1997; Olds et al., 2014); children of teenage mothers 19 years of age and under (Robling et al., 2016); and mothers with sociodemographic risk factors such as being unmarried, having less than 12 years of education or being unemployed (Olds, 2002). Outcomes demonstrated and populations reached with efficacy are aligned with Colorado's stated outcomes for this service and the target populations prioritized for candidacy.

CHILD SAFETY AND INDIVIDUAL PREVENTION PLANS

As described in Colorado's five-year prevention plan, child safety is an important component of the implementation plan. With all open child welfare cases, the county department is responsible for developing individualized, child-specific prevention plans and ongoing safety monitoring.

During home visits, the NFP nurse provides structured support and guidance across the six program domains: personal health, environmental health, life course development, maternal role, family and friends, and health and human services. The NFP Strengths and Risks (STAR) Framework is designed to help NFP nurses and supervisors systematically characterize levels of strength and risk exhibited by the mothers and families they serve. STAR is intended to inform and support consistent clinical decisions made by NFP nurses and supervisors regarding visit content and dosage (time spent on the six domains). In addition, STAR promotes identifying stages of behavioral change and appropriate corresponding actions and intervention to improve maternal and child health. By attending to specific strengths that mothers and family members bring to the program, STAR helps the NFP nurse to identify families who are doing so well on their own that they may not need to be visited as frequently as called for in the current program guidelines and to identify those that need more visits due to greater risk or need. Information organized within the STAR informs NFP nurses' ways of working with families and helps them align the program content and frequency with mothers' (and other family members') abilities and interests in engaging in the program.

In addition, all NFP nurses and supervisors are mandatory reporters. If there are concerns for a child's safety, they will file a report through the Colorado statewide child abuse and neglect hotline. If a child is in imminent danger, providers will call 911.

WORKFORCE SUPPORT & TRAINING

Detailed information on NFP's initial education policy can be found here.

Nurses and supervisors participate in a 9-month comprehensive training program to learn how to conduct in-home visits.The training incorporates a combination of a self-study workbook, web-based training activities, and two onsite training sessions at the NFP NSO in Denver. Ongoing education and training occurs for both new nurse home visitors and supervisors hired to implement the program. Supervisors receive ongoing consultation to help them develop strong skills with respect to reflective supervision, along with coaching from experienced program consultants.

All NFP site staff will be held to the trauma-

informed care prevention service provider requirements designed by CDHS and included in Colorado's 5-year Prevention Plan. Individual sites will be responsible for ensuring compliance with the standards.

PREVENTION CASELOADS

NFP Model Element 12 states that a full-time nurse home visitor carries a caseload of 25 or more active clients. Colorado limits nurse home visitor caseload sizes to up to 25. Nurses must be at least half-time employed in order for nurses to be proficient in the delivery of the program model. Caseload size may vary, but may not exceed 30 clients without approval from the NSO.

Appendix G: Parents as Teachers

The Parents as Teachers (PAT) program is an evidence-based early childhood home visiting model that builds strong communities, thriving families, and children who are healthy, safe, and ready to learn. Certified parent educators implement the PAT model, using its fundamental approach: partner, facilitate and reflect. There are four integrated components to the PAT model: personal visits, group connections, screening and resource network. Parent educators emphasize parent-child interaction, development-centered parenting and family well-being across all four components.

The PAT model is designed to achieve four primary goals:

- Increase parent knowledge of early childhood development and improve parenting practices;
- Provide early detection of developmental delays and health issues;
- Prevent child abuse and neglect; and
- Increase children's school readiness and school success.

Personal visits of approximately 60 minutes take place at a minimum once per month, depending on family needs. Parents engage in at least 12 group connections (or meetings) annually, and screenings are conducted annually for developmental, health, hearing, and vision issues.

PROGRAM SELECTION AND OUTCOMES

The Parents as Teachers (PAT) program is currently being provided in over 50% of Colorado's counties and in both of Colorado's Tribes. As a model program that provides a soft touch for families and has positive, measurable outcomes, PAT was selected as a service in Colorado's plan. Additionally, Colorado's Office of State Budgeting and Planning and the General Assembly partnered with the Pew-MacArthur Results First Initiative to implement the Results First Initiative in Colorado. The Pew-MacArthur Results First Initiative works with jurisdictions to implement an innovative benefit-cost model. The Colorado Results First report examined PAT and described a positive cost-benefit of continuing to implement this service in Colorado. The research on PAT is compelling and relevant to Colorado because the positive effects on preventing child maltreatment occur with a staffing model that is feasible in rural areas and culturally relevant in Tribal communities. Parent educators are practical to recruit and retain in some areas of Colorado and this is particularly true in our Tribal communities, which is essential in addressing the disproportional representation of American Indian/Alaskan Native children in child welfare. PAT is used in multiple Tribal communities across the country and at both the Ute Mountain Ute and Southern Ute Indian Tribes in Colorado.

The overarching domain for PAT in Colorado is:

- Child Well-Being: Cognitive functions and abilities.

The specific outcome Colorado will be targeting and tracking in this domain is school readiness. This outcome is measured by providers using a school readiness assessment for all children over 3 years old. Statistically significant positive effect sizes were found for this domain in Clearinghouse "highly rated" studies.[1]

This outcome specifically links back to Colorado's candidacy definition by targeting developmental delays and parents' inability, or need for additional support, to address serious needs of a child/youth or related to the child/youth's behavior or physical or intellectual disability.

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1 Neuhauser, A., Ramseier, E., Schaub, S., Burkhardt, S. C. A., & Lanfranchi, A. (2018). Mediating role of maternal sensitivity: Enhancing language development in at?risk families. Infant Mental Health Journal, 39(5), 522-536. doi:http://dx.doi.org/10.1002/imhj.21738

Wagner, M. M., & Clayton, S. L. (1999). The Parents as Teachers program: Results from two demonstrations. The Future of Children, 9(1), 91-115.

SERVICE DESCRIPTION AND OVERSIGHT

a. Implementation Manual:

Parents as Teachers: Parents as Teachers National Center, Inc. (2016). Foundational curriculum (for prenatal to 3). Parents as Teachers National Center, Inc. (2014). Foundational 2 curriculum: 3 years through kindergarten (for 3 years to Kindergarten). Supporting materials from PAT National.

b. Implementation of PAT:

The Affiliate Implementation Manual (AIM) outlines how to design and deliver the PAT model with fidelity and quality, incorporating both the PAT Essential Requirements and the PAT Quality Standards.

All new parent educators and supervisors attend the Foundational and Model Implementation Trainings before delivering Parents as Teachers. Only nationally certified PAT trainers are allowed to train others in the PAT model. There is not a train-the-trainer option.

The main components of Parents as Teachers include:

Personal Visits

Home visitation is a key component of the Parents as Teachers model, with personal visits of approximately 60 minutes delivered at a minimum once a month, depending on family needs. Parent educators share research-based information and use evidence-based practices by partnering, facilitating, and reflecting with families. Parent educators use the Parent as Teachers curriculum in culturally sensitive ways to deliver services that emphasize parent-child interaction, development-centered parenting, goal setting and family well-being.

Group Connections

Another component of the Parents as Teachers model is monthly or more frequent group connections, which parents can attend with their child to obtain information and social support and share experiences with their peers. Group connections formats include family activities, presentations, community events, parent cafes, and ongoing groups.

Screenings

Annual child health, hearing, vision, and developmental screenings, beginning within 90 days of enrollment, are a component of the model. Many programs also carry out adult screenings to identify parental depression, and intimate partner violence.

Resource Network

Additionally, Parents as Teachers maintains ongoing relationships with institutions and community organizations that serve families. Parent educators help families identify needs, set goals, connect with appropriate resources, and overcome barriers to accessing services.

Each month, full-time parent educators participate in a minimum of two hours of individual reflective supervision and a minimum of two hours of staff meetings. Part-time parent educators are required to have one hour of individual reflective supervision per month. All parent educators are observed delivering a personal visit at least once during the program year, conducted by a supervisor or lead parent educator using a structured observation tool. Observations occur more often for new parent educators. In addition, the supervisor observes at least one group connection at least every six months using a structured observation tool, and reviews the planning and delivery documentation for each.

Parent educators obtain competency-based professional development and renew their certification with the National Center annually. 20 hours of annual professional development is required for all parent educators.

c. Target Population in Colorado:

PAT offers services to new and expectant parents, starting prenatally and continuing until their child reaches kindergarten. Child welfare involved families and non-child welfare involved families are eligible to access PAT. The referral process may differ between local sites, but most referrals come from community partners such as family resource centers, schools, preschools, hospitals, and family community events.

The PAT affiliates select the eligibility criteria for the target population they serve. This may include children with special needs, families at risk for child abuse, teen parents, first time parents, immigrant parents, low-income families, parents with mental health or substance abuse issues, or families experiencing unstable housing or homelessness.

PAT affiliates may include usage of Colorado's Family Support Assessment (CFSA) tool[2], the Ages and Stages Questionnaires (ASQ)[3], as well as an assessment of housing, food, mental health, substance use, and income factors to determine eligibility.

The Parents as Teachers model is designed to serve families from pregnancy through kindergarten entry. Families can enroll at any point along this continuum. Curriculum materials provide resources to continue services through the kindergarten year if an affiliate chooses to do so.

d. Sites in Colorado

There are currently 26 PAT program sites in 36 counties across Colorado. Parent Possible serves as the Colorado state program intermediary for PAT.

FIDELITY MONITORING

Parent Possible, the state intermediary for PAT, has a well-established process for monitoring fidelity and ensuring sites engage in continuous quality improvement throughout the state. Parent Possible ensures that all 26 implementing agencies accurately input data from every home visit into the statewide data collection system. Once the data is collected, Parent Possible uses the data along with each site's Annual Performance Report and in-person site visits to assess program fidelity and adherence to "PAT's 21 Essential Requirements", which is the standardized tool for assessing fidelity. An organization must adhere to these Essential Requirements to become and remain a PAT affiliate. Data that addresses these requirements are reported annually on the Affiliate Performance Report (APR) to determine model fidelity. Additional resources such as the Model Implementation Guide, the Quality Standards, and TA Briefs provide guidance and best practices recommendations for high-quality replication of the Parents as Teachers model.

Affiliates are also expected to participate in the Quality Endorsement and Improvement Process (QEIP) in their fourth year of implementation, and every fifth year thereafter. This process consists of four main steps:

1. Essential Requirements Review (front-end): Parents as Teachers National Center reviews whether the affiliate is meeting the Essential Requirements

2. The Affiliate Self-Study: the affiliate prepares and submits a written self-study describing how they meet the quality standards

3. Review of the Affiliate Self-Study: Parents as Teachers National Center reviews family files, conducts a supervisor interview and assesses the affiliate's self-study

4. Essential Requirements Review (back-end): Parents as Teachers National Center reviews whether the affiliate has continued to meet the Essential Requirements.

CDHS will coordinate with Parent Possible to receive relevant fidelity data which will then be translated into the standardized statewide metrics of fidelity and moved into the Colorado Fidelity Monitoring Platform. See the Colorado 5-year Prevention Plan for more details on the Platform.

CONTINUOUS QUALITY IMPROVEMENT (CQI)

In addition to fidelity monitoring, Parent Possible has a well-established evaluation process that tracks parent growth, literacy, school readiness,

2 Permission must be obtained from Family Resource Center Association before using or distributing the CFSA 2.0 matrix: info@cofamilycenters.org.

3 https://agesandstages.com/

and parent-child interaction. As part of Essential Requirement 18, affiliates gather and summarize feedback from families at least annually to inform program improvements.

As part of the CQI process, PAT sites collect and monitor outcome data such as:

- Parent-child observation assessment, which includes parent-child interactions in domains of affection, responsiveness, encouragement, and teaching
- Parent survey – specific question about increased knowledge of positive parenting practices and specific question about increased knowledge about child development

CQI data will be collected by:

- Parent-child observation assessment
  - Assessment to be completed within 90 days of enrollment and annually (typically Sept-Oct) thereafter on age eligible children (10 months old or older)
  - Home visitor to conduct the PICCOLO (Parenting Interactions with Children: Checklist of Observations Linked to Outcomes) Tool and complete required documentation in Visit Tracker data system
  - Parent Possible monitors compliance and sends reminders about completing the PICCOLO
  - Parent Possible conducts annual analysis of pre/post data
- Parent Survey
  - Annual retrospective survey (typically March-April) on all enrolled parents
  - Home visitor to request all enrolled parents complete survey online or on paper
  - Parent Possible monitors compliance and sends reminders about asking parents to complete the survey
  - Parent Possible conducts annual analysis of survey results

ELIGIBILITY FOR FEDERAL CLAIMING

For Family First IV-E claiming purposes, only children and families in an open child welfare case are eligible for federal reimbursement to Colorado's Children's Trust Fund.

REQUEST FOR EVALUATION WAIVER

Colorado is seeking an evaluation waiver for Parents as Teachers (PAT) and, upon approval, will assess program implementation and fidelity through a robust continuous quality improvement (CQI) process rather than through formal, independent evaluation. PAT is rated well-supported by the Title IV-E Prevention Services Clearinghouse. It has extensive and rigorous research behind it, with 6 studies qualifying as eligible for review by the Clearinghouse.

Studies conducted to-date on PAT have demonstrated efficacy of the program on outcomes in several domains, including child safety (Chaiyachati et al., 2018) and child well-being (Wagner & Clayton, 1999; Neuhauser et al., 2018). Studies have also demonstrated favorable outcomes measured after the end of treatment, including favorable child safety outcomes sustained at 37 months after treatment (Chaiyachati et al., 2018). These outcomes have been demonstrated for several populations, including among children of first-time mothers (Chaiyachati et al., 2018), Latino parents (Wagner & Clayton, 1999; Wagner et al., 1999), teen parents in (Wagner & Clayton, 1999; Wagner et al., 1999), and in at-risk families (Neuhauser et al., 2018). Outcomes demonstrated and populations reached with efficacy are aligned with Colorado's stated outcomes for this service and the target populations prioritized for candidacy.

CHILD SAFETY AND INDIVIDUAL PREVENTION PLANS

As described in Colorado's five-year prevention plan, child safety is an important component of the implementation plan. With all open child welfare cases, the county department is responsible for ongoing safety monitoring.

Local sites are responsible for ensuring that staff have completed mandatory reporter training, and are required to provide their child safety policies to the PAT national site as part of the quality

endorsement process every five years. If a provider identifies a safety concern, the concern will be reported to the child abuse and neglect hotline. In addition, all parent educators and supervisors are mandated reporters. If there are concerns of child abuse or neglect, they will file a report through the Colorado statewide child abuse and neglect hotline. If a child is in imminent danger, providers will call 911.

As part of Essential Requirement 14, a child health screening must be completed within 90 days of family enrollment or child's birth, and at least annually thereafter. The Child Health Record contains safety elements that must be completed as part of the review, such as: health status, safety, vision, and hearing elements. Essential Requirement 15 requires a child developmental screening for all children within 90 days of family enrollment or birth, and at least annually thereafter. This screening encompasses developmental domains such as: language, cognitive, social-emotional, and motor development. Essential Requirement 20 asks affiliates to select two outcomes to measure with eligible families. One outcome will be from a list of approved tools that measure parenting skills, practices, capacity or stress. The second outcome will be from an approved list of measures.

Additionally, some affiliates use the Colorado Family Support Assessment (CFSA) tool as part of their process in determining eligibility, and looks at the many domains in a family's life to help determine needed resources and to set family goals. One-time training is required for the CFSA tool; this is completed on an agency by agency basis. During virtual service delivery, affiliates should outline safety practices in their policies, procedures and protocols which apply during virtual visits as well.

PAT affiliates are required to use the Visit Tracker to collect specific data as required by PAT (and MIECHV, if this funding source is used). The visit tracker will be used to document the individualized prevention plan to record goals, progress and barriers to progress. This data can be accessed by the Program Intermediary for PAT, Parent Possible.

WORKFORCE SUPPORT AND TRAINING

Per Essential Requirement 2, the minimum qualifications for parent educators are a high school diploma or equivalency and two years' previous supervised work experience with young children and/or parents. All new parent educators who will deliver PAT services will attend the Foundational and Model Implementation Training before service delivery begins. These trainings are now available as a 40-hour virtual certification training. Only nationally certified PAT trainers are allowed to train others in the PAT model.

Essential Requirement 7 also states that parent educators must obtain competency-based professional development and training, and must renew their certification with the national office on an annual basis. To renew certification, the PAT National Center requires that parent educators complete a minimum of 20 hours of professional development annually.

All PAT site staff will be held to the trauma-informed care prevention service provider requirements designed by the Colorado Department of Human Services and included in Colorado's 5-year Prevention Plan. Individual sites will be responsible for ensuring compliance with the standards.

PREVENTION CASELOADS

PAT does not have a minimum or maximum caseload size, as it depends on factors that make the optimal caseload size different for each individual affiliate, as well as each parent educator. Instead, the PAT Essential Requirements set the maximum number of visits per month. Essential Requirement 13 regulates that "full-time first year parent educators complete no more than 48 visits per month during their first year and full-time parent educators in their second year and beyond complete no more than 60 visits per month. The number of visits completed monthly is decreased proportionately when a parent educator is part-time." Factors that must be considered when determining the maximum number of visits completed monthly include:

- Parent educator responsibilities.
- Frequency of visits.

- The families the affiliate serves and their family experiences and stressors.
- Number of children per family.
- Travel time and geography.
- Languages spoken.

One way that affiliates can determine parent educator caseload size is by a point system. Supervisors can assign point values for each family on a caseload based on the above considerations, and the point total should be 50 or less.

The maximum number of parent educators that can be assigned to each supervisor is 12, regardless of whether the parent educators being supervised are full-time or part-time employees.

Appendix H: Parent-Child Interaction Therapy

Colorado is utilizing the Parent-Child Interaction Therapy International model. Parent-Child Interaction Therapy (PCIT) is a parent coaching program that aims to decrease externalizing child behavior problems, increase positive parenting behaviors, and improve the parent-child relationship. PCIT targets families with children who are two to seven years of age and experiencing frequent, intense emotional and behavioral problems.

PCIT is conducted through coaching sessions during which the parent(s) and child are together in a playroom while the therapist is in an observation room watching through a one-way mirror and/or live video feed. The parent wears a "bug-in-the-ear" device through which the therapist provides in-the-moment coaching.

There are two treatment phases. The first phase of treatment focuses on establishing warmth in the parent-child relationship through learning and applying skills proven to help children feel calm, secure in their relationships with their parents, and good about themselves.

The second phase of treatment equips the parent in managing the most challenging of the child's behaviors while remaining confident, calm and consistent in the approach to discipline.

Sessions can be completed in the home, at outpatient clinics, via telehealth or at a community-based agency/provider. Treatment is not session-limited, and averages three to five months (12 to 20 weekly sessions total) in duration. Treatment length varies to ensure parental attainment of goal competencies.

PROGRAM SELECTION AND OUTCOMES

PCIT is rated well-supported by the Title IV-E Prevention Services Clearinghouse. It has extensive and rigorous research behind it, with 21 studies qualifying as eligible for review by the Clearinghouse. For more information about existing research around PCIT, please see the Research and Evaluation Waiver Request section.

PCIT was selected as a prevention service in Colorado because the national literature on PCIT creates a compelling case for meeting local needs. Traditional out-patient service delivery is impractical in some parts of the state, and Colorado has identified a need for services that families can access without having to travel to a service provider. Furthermore, as of September 25, 2021, 38 percent of children/youth in out-of-home care were Hispanic, and PCIT research has shown that this intervention is culturally responsive and effective for this population.

The two overarching domains for PCIT in Colorado are:

- Child Well-Being: Behavioral and emotional functioning
- Adult Well-Being: Positive parenting practices.

Child Well-Being: Behavioral and emotional functioning

The specific outcome Colorado will be targeting and tracking in this domain is decreased oppositional and conduct problems. This outcome is measured weekly by providers using the Eyberg Child Behavior Inventory (ECBI). Statistically significant effect sizes were found in Clearinghouse "highly rated" studies[1][2], as measured by the ECBI Intensity Scale and Problems Scale.

This outcome specifically links back to Colorado's candidacy definition by targeting parents' inability, or need for additional support, to address serious needs of a child/youth or related to the child/youth's behavior or physical or intellectual disability.

Adult Well-Being: Positive parenting practices

The specific outcome Colorado will be targeting and tracking in this domain is improved praise

1 Leung, C., Tsang, S., Sin, T. C. S., & Choi, S. Y. (2015). The efficacy of Parent-Child Interaction Therapy with Chinese families: Randomized controlled trial. Research on Social Work Practice, 25(1), 117-128.

2 Leung, C., Tsang, S., Ng, G. S. H., & Choi, S. Y. (2017). Efficacy of Parent-Child Interaction Therapy with Chinese ADHD children: Randomized controlled trial. Research on Social Work Practice, 27(1), 36-47.

and decreased criticism. This outcome is measured weekly by providers using the Dyadic Parent-Child Interaction Coding System (DPICS). Statistically significant effect sizes were found in Clearinghouse "highly rated" studies, as measured by DPICS "Don't" Skills, DPICS Positive Practices and DPICS Command/Question/ Negative Talk[3][4][5].

This outcome targeted through PCIT specifically links back to Colorado's candidacy definition by targeting parents' lack of parenting skills.

SERVICE DESCRIPTION AND OVERSIGHT

a. Implementation Manual

Eyberg, S.M. & Funderburk, B.W. (2011) Parent-child interaction therapy protocol. Gainesville, FL, PCIT International.

b. Implementation of PCIT

PCIT International works with Colorado-based agencies and providers to follow an extensive protocol to launch and sustain PCIT-certified therapists. Components of the protocol are as follows:

Training Requirements for Certified PCIT Therapists

In order to apply for certification as a PCIT therapist, therapists must document applicable graduate education, basic PCIT training, and consultation training which includes completing two cases as described below.

Graduate Education requirements

Therapists must have a master's degree or higher in a mental health field, and be a licensed mental health service provider (for example, licensed psychologist, psychiatrist, licensed clinical social worker, etc.) or be working under the supervision of a licensed mental health service provider. Psychology doctoral students who have completed the third year of training and are conducting clinical work under the supervision of a licensed mental health service provider also meet this requirement.

Basic Training

40-hours of face-to-face training with a PCIT Regional or Global Trainer is required. This basic training includes an overview of the theoretical foundations of PCIT, Dyadic Parent-Child Interaction Coding System (DPICS) coding practice, case observations and coaching with families, with a focus on mastery of child-directed interaction (CDI) and parent-directed interaction (PDI) skills, and a review of the 2011 PCIT Protocol.

Consultation Training

The applicant must serve as a therapist for a minimum of two PCIT cases to meet graduation criteria as defined by the 2011 PCIT Protocol. Until the two PCIT cases meet graduation criteria, the applicant must remain in contact via real-time consultation (e.g., telephone conference or live, online, or telehealth observation) or video review with a certified PCIT Trainer at least twice a month.

Skill Review

Applicants must have their treatment sessions observed by a certified PCIT Trainer. Observations may be conducted in real time (e.g., live or online/telehealth) or through video recording. The PCIT Trainer reviews a variety of sessions and determines whether the applicant has demonstrated mastery of each skillset. By the end of the training process, the applicant should be able to: 1) Administer, score, and interpret the required standardized measures for use in assessment and treatment planning; 2) Administer behavioral observations from the DPICS-IV Coding System; and 3) Achieve a minimum of 80% agreement with a PCIT Trainer using the DPICS-IV during five minutes of either live coding or continuous coding with a criterion video recording.

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3 Bjorseth, A., & Wichstrom, L. (2016). Effectiveness of Parent-Child Interaction Therapy (PCIT) in the treatment of young children's behavior problems. A randomized controlled study. PLoS ONE, 11(9), e0159845. doi:10.1371/journal.pone.0159845

4 Leung, C., Tsang, S., Sin, T. C. S., & Choi, S. Y. (2015). The efficacy of Parent-Child Interaction Therapy with Chinese families: Randomized controlled trial. Research on Social Work Practice, 25(1), 117-128.

5 Leung, C., Tsang, S., Ng, G. S. H., & Choi, S. Y. (2017). Efficacy of Parent-Child Interaction Therapy with Chinese ADHD children: Randomized controlled trial. Research on Social Work Practice, 27(1), 36-47.

Final decisions about certification of PCIT Therapists will be made by PCIT. International. Certified PCIT Therapists are required to obtain at least three hours of PCIT Continuing Education credit every two years through educational activities sponsored by the PCIT International Task Force on Continuing Education.

Additional information on training requirements for initial certification can be found here: pcit.org/therapist-requirements.html

c. Target Population in Colorado

The target population for PCIT is families with children who are between two and seven years old with challenging behaviors and experiencing conflict in the caregiver-child relationship.

For families involved with child welfare, referral sources may include child welfare caseworkers and case managers.

For families not involved with child welfare, referral sources may include but are not limited to pediatricians, psychological assessments, and self–referrals.

Child-focused referrals
Children ages two to seven with frequent temper tantrums, aggressive behavior, or oppositional behavior that impacts caregiver-child functioning and/or school functioning; children with co-morbid diagnoses of intellectual disability, autism spectrum disorder, attention-deficit/hyperactivity disorder (ADHD), callous and unemotional traits, anxiety disorders and/or depressive disorders.

Parent-caregiver-focused referrals
Kinship caregivers, foster caregivers, adoptive parents, and biological parents are appropriate referrals; parents or caregivers at-risk or with histories of physical abuse towards a child or coercive parenting interactions; parents that need help with behavior management. PCIT currently excludes families where the primary caregiver has allegations of sexual abuse, or if the parent is actively engaging in substance abuse.

d. Sites in Colorado

Currently, there are 13 agencies across Colorado offering PCIT International with 21 providers. There are also six agency trainers and one regional trainer available to scale the service. Because this model uses an individual therapy approach, there is no state intermediary at this time.

FIDELITY MONITORING

Each session type (CDI Teach, CDI Coach, PDI Teach and PDI Coach) has an associated "PCIT International Protocol Treatment Integrity Checklist", which is the standardized tool used to assess teaching and coaching competencies and fidelity to the model during the rigorous certification process.

PCIT is an assessment-driven treatment, guided by weekly data from the ECBI and DPICS (described below). These standardized instruments are supplemented by additional measures the clinician may select for careful tracking of individual presenting complaints of families during treatment.

PCIT trainers may also use checklists, case-consultation logs, and other fidelity-tracking instruments to ensure standardization within their agency and fidelity to the PCIT model.

CDHS will coordinate with PCIT International to receive relevant fidelity data which will then be translated into the standardized statewide metrics of fidelity and moved into the Colorado Fidelity Monitoring Platform. See the Colorado 5-year Prevention Plan for more details on the Platform.

CONTINUOUS QUALITY IMPROVEMENT (CQI)

As part of the CQI process, PCIT sites collect and monitor outcome data such as:

- Weekly Eyberg Child Behavior Inventory scores to monitor behavior improvements in PCIT
- Weekly Dyadic Parent Child Interaction Coding System scores to monitor improvements in parent skills
- Weekly homework completion rates
- Weekly fidelity ratings to the PCIT essential elements of session

CQI data will be collected by clinicians in session as a part of the treatment delivery process. All measures are a part of weekly sessions and inform treatment progress and session goals. Data will be monitored by the in-house trainer to ensure fidelity to the program and then reported to the state intermediary. In cases where PCIT in-house trainers are not available, data will be reported directly to the state intermediary.

The Colorado Fidelity Monitoring Platform will allow PCIT to systematize processes for collecting fidelity data, ensure all therapists can access ongoing clinical supervision through telehealth platforms, and develop reports that can help sites, counties and the state take a data informed approach to continuous quality improvement and shoring up fidelity to the PCIT model.

ELIGIBILITY FOR FEDERAL CLAIMING

For Family First IV-E claiming purposes, only children and families in an open child welfare case are eligible for federal reimbursement to Colorado's Children's Trust Fund.

RESEARCH AND EVALUATION WAIVER REQUEST

Colorado is seeking an evaluation waiver for Parent-Child Interaction Therapy (PCIT) and, upon approval, will assess program implementation and fidelity through a robust continuous quality improvement (CQI) process rather than through formal, independent evaluation. PCIT is rated well-supported by the Title IV-E Prevention Services Clearinghouse. It has extensive and rigorous research behind it, with 21 studies qualifying as eligible for review by the Clearinghouse.

Studies conducted to-date on Parent-Child Interaction Therapy (PCIT) have demonstrated efficacy of the program on outcomes in several domains, including child well-being (behavioral and emotional functioning) (Bagner & Eyberg, 2007; Bagner et al., 2010; Bjorseth & Wichstrom, 2016; Leung et al., 2015, 2017; Matos et al., 2009; Schuhmann et al., 1998; Thomas & Zimmer-Gembeck, 2011) and adult well-being (positive parenting practices) (Bagner & Eyberg, 2007; Bagner et al., 2010; Bjorseth & Wichstrom, 2016; Leung et al., 2015, 2017; McCabe & Yeh, 2009; Schuhmann et al., 1998; Thomas & Zimmer-Gembeck, 2011). Studies have also demonstrated favorable outcomes measured after the end of treatment, including favorable adult well-being outcomes sustained at 13 months after treatment (Bjorseth & Wichstrom, 2016).

These outcomes have been demonstrated with dyads in various settings, including in community treatment settings (Budd et al., 2011; Danko et al., 2016; Lyon & Budd, 2010; Timmer et al., 2010) and child welfare settings (Hakman et al., 2009; Lanier et al., 2014; Naik-Polan & Budd, 2008; Self-Brown et al., 2012), as well as with several populations, cultures, and countries, including Mexican-American caregivers (McCabe & Yeh, 2009; McCabe, Yeh, Lau, & Argote, 2012); African-American caregivers (Butler & Eyberg, 2006; Fernandez, Butler, & Eyberg, 2011); Puerto Rican caregivers (Matos et al., 2006, 2009); Australian caregivers (Nixon, et al., 2003; Phillips, et al., 2008); Dutch caregivers (Abrahamse et al., 2012); Chinese caregivers (Leung et al., 2009; Yu et al., 2011); incarcerated mothers (Scudder et al., 2014); and American Indian and Alaska Native families (Bigfoot & Funderburk, 2011). Outcomes demonstrated and populations reached with efficacy are aligned with Colorado's stated outcomes for this service and the target populations prioritized for candidacy.

CHILD SAFETY AND INDIVIDUAL PREVENTION PLANS

As described in Colorado's five-year prevention plan, child safety is an important component of the implementation plan. With all open child welfare cases, the county department is responsible for ongoing safety monitoring.

PCIT therapists are trained to observe behaviors that may be indicative or linked to child abuse and neglect. These observations occur during treatment sessions, where the therapist works with the parent on safe parenting skills. If a therapist observes negative parenting behaviors during treatment sessions, the therapist will interrupt the behavior and proceed with safety planning. In the event that a child is observed with signs of abuse or neglect, or if parents attend sessions with signs of intoxication, PCIT therapists will shift to safety assessment protocols, also known as crisis

sessions. The therapist may talk to the parent and child individually to determine whether there are safety concerns. The therapist will make a report to the child abuse and neglect hotline if the therapists observes or learns of alleged abuse or neglect. If a child is in imminent danger, or reports feeling unsafe at home, the therapist may call the PCIT crisis hotline as well as 911 to request police reinforcement.

PCIT is an assessment-driven treatment, guided by weekly assessment data which contributes to the monitoring of safety. The ECBI is a validated measure administered weekly to monitor treatment gains. DPICS observational coding is also used and completed weekly. As part of the certification process, all therapists are required to achieve a minimum of 80% agreement with a PCIT Trainer to DPICS.

Eyberg Child Behavior Inventory (ECBI)[6]
The ECBI is a 36-item parent report instrument used to assess common child behavior problems that occur with high frequency among children with disruptive behavior disorders. It is sensitive to changes with treatment and used to monitor weekly progress in PCIT. The ECBI manual and scoring sheets may be purchased online from Psychological Assessment Resources, Inc. Sites may also use the Weekly Assessment of Child Behavior (WACB) as an alternative to the ECBI. The WACB is a valid alternative to the ECBI, as described in Bennet's 2019 article.

Dyadic Parent-Child Interaction Coding System (DPICS)[7]
The DPICS is a behavioral coding system that measures the quality of parent-child social interactions. It is used to monitor progress in parenting skills during treatment and provides an objective, well-validated measure of changes in child compliance after treatment. The manual presents many studies documenting the reliability and validity of individual DPICS categories. The DPICS (4th edition) is available in the PCIT Store.

Other key assessments tools often used in PCIT include Sutter-Eyberg Student Behavior Inventory-Revised (SESBI-R), Therapy Attitude Inventory (TAI), Revised Edition of the School Observation Coding System (REDSOCS), and Child Rearing Inventory (CRI).

WORKFORCE SUPPORT & TRAINING

In order to apply for certification as a PCIT therapist, therapists must document applicable graduate education, attend basic PCIT training, and complete consultation training. To maintain certification, therapists are required to obtain at least 3 hours of PCIT Continuing Education credit every 2 years through educational activities sponsored by the PCIT International Task Force on Continuing Education.

All PCIT therapists and agency staff (if applicable) will be held to the trauma-informed care prevention service provider requirements designed by CDHS, as described in the five-year prevention plan.

See the Implementation of PCIT for further details on training requirements for certified PCIT therapists.

PREVENTION CASELOADS

There are no limitations for the number of cases that a clinician can carry for PCIT. It is most common that ⅓ of a clinicians caseload consists of PCIT cases, but this depends on the agency and individual preferences of the clinician.

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6 Eyberg, S.M., & Pincus, D. (1999). Eyberg Child Behavior Inventory and Sutter-Eyberg Student Behavior Inventory-Revised: Professional Manual. Odessa, FL: Psychological Assessment Resources.

Funderburk, B.W., Eyberg, S.M., Rich, B.A., & Behar, L. (2003). Further psychometric evaluation of the Eyberg and Behar rating scales for parents and teachers of preschoolers. Early Education and Development, 14, 67-81.

Rich, B.A., & Eyberg, S.M. (2001). Accuracy of assessment: The discriminative and predictive power of the Eyberg Child Behavior Inventory. Ambulatory Child Health, 7, 249-257.

7 Eyberg, S.M., Nelson, M.,M., Ginn, N.C., Bhuiyan, N., & Boggs, S.R. (2013). Dyadic Parent-Child Interaction Coding System: Comprehensive Manual for Research and Training (4th ed.). Gainesville, FL: PCIT International.

Appendix I: SafeCare

Appendix I: SafeCare

SafeCare® is an internationally recognized, evidence-based in-home parent support program that provides direct skills training to parents and caregivers. The parenting model was developed in 1979 and is currently being provided at more than 177 sites across 19 states in the United States. In 2007, the National SafeCare® Training and Research Center (NSTRC) was created through Georgia State University, where it remains today. Although SafeCare® Colorado uses a local intermediary for implementation, NSTRC is responsible for helping sites throughout the United States and other countries implement SafeCare® effectively.

SafeCare® Colorado is a flexible, free and voluntary parent support program for parents and caregivers with children ages five and under who need extra support to keep their families safe and healthy. Parent support providers use a proven process to help at-risk parents and caregivers build on their existing skills in three topic areas: home safety, child health and parent-child interactions. The home safety topic targets risk factors for environmental neglect and unintentional injury by teaching parents and caregivers how to identify and remove common household hazards. This topic also emphasizes the importance of proper supervision. The child health topic teaches parents and caregivers how to prevent, identify, and respond to common childhood illness and injuries. This topic also promotes keeping sound medical records and the importance of preventative care including routine vaccines and wellness checks, which will help reduce incidences of medical neglect. During the parent-child interaction topic, parent support providers teach parents and caregivers ways to increase positive behaviors, prevent difficult behaviors and have a stronger relationship with their children. Parents and caregivers learn ways to help their children make good decisions and develop routines so family time can be more enjoyable and less stressful.

PROGRAM SELECTION AND OUTCOMES

SafeCare® was implemented in Colorado in 2013 as part of Governor Hickenlooper's Child Welfare Plan, "Keeping Kids Safe and Families Healthy 2.0". The Colorado Office of Early Childhood (OEC) partnered with the Kempe Center for the Prevention and Treatment of Child Abuse and Neglect (Kempe) to support the implementation of SafeCare® Colorado through the three-year pilot period (2013-2016).

SafeCare® has a long history of success, and the program's effectiveness has been evaluated in numerous studies during the past 40 years. SafeCare® has high child welfare relevance, and is rated as a supported practice in the Title IV-E Prevention Services Clearinghouse.

For Family First, the overarching domain for SafeCare in Colorado is:

- Child Permanency: Out-of-home placement

Colorado will be targeting and tracking subsequent out-of-home placement for families engaged in this service. This outcome will be measured by analyzing Trails data within a minimum of 6 months after the family's last SafeCare visit. Statistically significant positive effect sizes were found for out-of-home placement in Clearinghouse-rated studies.[1]

SERVICE DESCRIPTION AND TRAINING

a. SafeCare® Colorado Implementation

Lutzker, J. R. (2016). SafeCare provider manual (version 4.1.1). Supporting materials from National SafeCare Training and Research Center.

b. Implementation of SafeCare® Curriculum & Training

SafeCare® Orientation

All SafeCare® provider trainees are required to attend an Orientation, prior to the SafeCare® Provider Workshop. The orientation provides an overview of the SafeCare® model and implementation process.

1 Quick-Beachy, K., Lee, C., McConnell, L., Orsi, R., Timpe, Z., & Winokur, M. (2018). SafeCare Colorado program evaluation report 2014-2017. Colorado Office of Early Childhood.

Provider Workshop and Coaching

The purpose of the Provider Workshop is to provide foundational knowledge of the SafeCare® curriculum, delivery to families, and assessing and training parents in the skills modules. Participation in the four-day Provider Workshop is mandatory and trainees must complete all workshop activities, including quizzes, by the end of the workshop and before working with families.

Following completion of the workshop, providers begin delivering SafeCare® with families. Providers work closely with a coach to build proficiency and competency in delivering the SafeCare® model. The provider records all sessions with the family and the recordings are uploaded to the SafeCare® Portal within 48 hours of session completion for observation by the coach. The coach listens to the audio and provides feedback during a coaching session before the next appointment with the family.

SafeCare® Coach

The role of a provider's coach is to support them as a provider and conduct quality assurance, a requirement for SafeCare® delivery. Coaches observe provider's sessions, score fidelity and provide feedback. They also convene team meetings with providers to provide an opportunity to support and learn from each other.

Provider Certification and Maintenance

To achieve Provider Certification, providers must demonstrate strong fidelity to the model in three sessions for each of the three modules (Parent-Infant/Child Interaction, Home Safety, and Health) with families — nine sessions total (with a combination of assessment and training sessions).

Once certified, providers will maintain certification through monthly fidelity checks and coaching sessions, to document ongoing quality of services. This data is shared with CDHS on a quarterly basis for review. If fidelity is low, additional sessions will be reviewed with coaching until strong fidelity is achieved in two consecutive sessions.

Multilingual SafeCare Providers

If a provider delivers SafeCare® in multiple languages, they must achieve fidelity in at least one session in each module per language to be considered proficient in that language as part of their SafeCare® provider certification.

c. Target Population in Colorado

Families referred to SafeCare® are at risk of becoming, or already have been, involved in the child welfare system. SafeCare® Colorado serves families with children ages five and under who reside in one of the 40 counties or two tribal nations currently offering the program in Colorado.

SafeCare® depends on partners in the community to help identify at-risk families in need of parent support services. Referrals to SafeCare® Colorado are received from multiple pathways, such as from child welfare staff, community organizations, and self-referring parents and caregivers. SafeCare® has increased service opportunities for families who have non-court involvement child welfare involvements, thereby increasing the availability of voluntary services for Colorado children and families. Counties also have the opportunity to offer SafeCare® Colorado services to at-risk families in need of support before they are ever referred to the child welfare system, or after child welfare involvement has closed to prevent future child welfare involvement. Therefore, the program has the potential to impact more families along the entire prevention continuum in local communities across Colorado.

Families must meet at least three of the following high-risk eligibility criteria:

- Being a single parent;
- Multiple children ages five and under in the home;
- Be receiving public assistance (i.e. TANF, WIC, SNAP, Medicaid etc.);
- Child with special needs;
- Parental/caregiver mental health issues;

- Parental/caregiver substance abuse;
- Parent/caregiver less than a high school education;
- Parent/caregiver under the age of 20;
- Unstable or hazardous housing;
- Stepfather or other unrelated male caregiver in the home;
- Prior reports on the parent or caregiver to child welfare;
- Parental/caregiver history of of abuse or neglect as a child; or,
- History of violence in the home.

d. Sites in Colorado

SafeCare® Colorado sites are currently housed within community-based and county public health agencies. SafeCare® Colorado site locations are identified by targeting communities with the highest need for SafeCare® services, as well as community and organizational readiness for implementation.

Site expansion is determined by the OEC's Request for Proposal process. New sites must submit a proposal that demonstrates: organizational capacity and readiness to implement a new program; fit the scope and intent of the program; and, are perceived to have the ability to provide the greatest impact and verifiable return on available funds. Through the proposal, sites are also expected to demonstrate prior experience implementing evidence-based programs, existing relationships with possible referral sources in the community, a strong leadership structure, and adequate infrastructure (e.g., physical, and technological resources).

Although the OEC may also issue a RFP to expand existing sites, a site may make a request to the OEC to expand their services into other counties. If statistical data in that county demonstrates characteristics of families with high need and/or that meet SafeCare® eligibility criteria, the site's capacity and readiness is deemed appropriate, relationships are established with possible referral sources including child welfare departments, and funding is available, the OEC may grant the expansion request.

The OEC has supported multiple rounds of site/county expansions in the implementation of SafeCare® Colorado, in partnership with SCC's intermediary, The Kempe Center. Currently, SCC services are provided at a total of 14 sites across 40 counties, and also serves two tribal nations, constituting a diverse program community (i.e. frontier, rural, urban, and tribal). Many of these areas are home to families with some of the state's highest resource needs and, in some areas, no previous access to home-based parent support services existed.

FIDELITY MONITORING

Coaching

In the eight years since SafeCare® was introduced to Colorado, SCC's intermediary, the Kempe Center has built a monthly coaching program that includes coaches at both Kempe and select sites. SafeCare® Colorado has six sites with trained coaches who monitor fidelity and provide coaching to providers. The cadre of coaches includes two sites with Spanish coaches who also serve state-wide bilingual/Spanish speaking providers. Kempe provides coaching to providers at sites without a trained coach.

As the program intermediary, Kempe employs SafeCare® certified trainers to train and coach SafeCare® coaches, and provides ongoing coaching and fidelity monitoring to site coaches for maintenance of their certification.

SafeCare® Colorado coaches participate in monthly coaching meetings to share information, collaborate, and identify trends in fidelity delivery of the SafeCare® model. Coaches connect with their peers throughout the state and have been able to develop an ongoing working relationship to address the changing needs of providers in the state.

Monitoring and Addressing Fidelity Concerns

Coaching focuses heavily on the monitoring of each provider's fidelity to the SafeCare® model.

The fidelity instruments used to monitor provider fidelity are the Provider Fidelity Checklist: Baseline Assessment, the Provider Fidelity Checklist: Training, the Provider Fidelity Checklist: End-of-Module. To complete fidelity monitoring, each provider is asked to audio record (with the family's permission) their visits. As part of each coaching session, a provider's recording is listened to and scored by his/her coach in advance, and issues concerning fidelity are addressed in the coaching session. Each provider is required to pass fidelity by a minimum of 85%, as determined by the National SafeCare Training and Research Center (NSTRC), on any submitted and scored visit.

Should a provider not achieve 85% or higher fidelity ratings, they will need to submit additional recordings until they meet that threshold for two consecutive recordings. If the provider does not meet the minimum fidelity benchmarks or struggles in other areas of fidelity monitoring (e.g., timely recording uploads) coaches implement a provider support plan that identifies Specific, Measurable, Achievable, Relevant, Time-bound (SMART) goals to address the fidelity or coaching concerns and increase coaching frequency. The provider support plans are designed to be supportive in nature to improve provider performance and participation in the coaching process and are not intended to be punitive. Once a provider completes the parameters of a support plan, they resume regular monthly coaching.

Fidelity Reports

The Kempe Center utilizes an internal Coaching Tracking Form as well as the NSTRC Portal to collate quarterly and annual fidelity outcomes. These resources provide information on outcomes and percentages for individual providers, sites and SafeCare® Colorado as a whole, in a fidelity graphs document. The graphs also denote the previous year's composite data for comparison.

CDHS will coordinate with Kempe to receive relevant fidelity data which will then be translated into the standardized statewide metrics of fidelity and moved into the Colorado Fidelity Monitoring Platform. See the Colorado 5-year Prevention Plan for more details on the Platform.

CONTINUOUS QUALITY IMPROVEMENT (CQI)

As part of the CQI process, SafeCare Colorado sites collect and monitor data from the referral source to family skills change. Data points include:

- Outreach activities and partner type referrals and from which source, intakes and by source,
- Sessions completed
- Topics completed
- Program completion
- Family demographics
- Caregiver satisfaction
- Caregiver skills change in home safety (to reduce household safety hazards and increase age-appropriate supervision); child health (to respond appropriately to child health needs, illness, and injury); and parent-child/parent-infant interaction (to promote positive parenting practices and appropriate responses to challenging child behaviors).

CQI data will be collected by each site and entered into a state database for all but coaching data which is gathered by The Kempe Center through downloads from the National SafeCare Training and Research data portal.

The second step in the CQI process is assisting sites in transforming collected data in a way that allows a site to compare and interpret their performance in several different areas to establish benchmarks. The third step in the current CQI process involves reviewing reports with site supervisors and leadership to devise strategies for improving a site's and provider's performance toward their contract benchmarks.

This process occurs monthly with Kempe site managers and site supervisors, and on a quarterly basis with the OEC SafeCare® Program Manager, Kempe staff and site leadership. Additionally, it is the role of the Kempe site managers to communicate with their individual sites on a regular basis and to be available for real time technical assistance. During the at-least-monthly contact, Kempe site managers help sites synthesize

and make sense of data and performance trends at their sites. Finally, a monthly site supervisor conference call between all site supervisors, Kempe and the OEC is facilitated by a different site supervisor per conference call. This call offers a forum for sharing updates, ideas and solutions to frequently arising concerns from all participants including site supervisors, OEC and Kempe.

ELIGIBILITY FOR FEDERAL CLAIMING

For Family First IV-E claiming purposes, only children and families in an open child welfare case, and are not court-involved, are eligible for federal reimbursement to the Colorado's Children's Trust Fund.

RESEARCH AND ONGOING RIGOROUS EVALUATION

The Social Work Research Center in the School of Social Work at Colorado State University (CSU) has been the independent evaluator of the SafeCare® program since 2013, measuring the implementation process, program outcomes and service delivery costs from 2014 to 2019. Previous evaluation findings include rates of children placed into foster care during one year following program completion were lower for families who completed SafeCare® (0%) than for families in the comparison group who did not complete SafeCare® (7%), which is a statistically significant difference. Overall findings have shown a decrease in home safety hazards and an increase in knowledge of child health and parent infant/child interaction for participating families.

After an intentional pause in SFY20 to integrate the wealth of findings from six years of evaluation and to translate research into practice, CSU created a rigorous two-year evaluation plan, which reflects Family First requirements and includes two components. A descriptive evaluation will assess implementation activities, proximal impacts, and participant populations reached for families served by SafeCare® in SFY 2019, SFY 2020, and SFY 2021. The second component, a quasi-experimental study, will rigorously evaluate the program's effectiveness at improving outcomes in four broad domains: child well-being, adult well-being, parenting practices, and protective factors. In partnership with all SafeCare® stakeholders, including the families SafeCare® serves, the current rigorous evaluation will further build the evidence-base for SafeCare® , comprehensively demonstrate the holistic impact of SafeCare® for Colorado families, and pioneer new directions in child maltreatment prevention.

See the SafeCare® Colorado Evaluation Strategy for FYs 2021-2022 in this Appendix.

CHILD SAFETY AND INDIVIDUAL PREVENTION PLANS

As described in Colorado's five-year prevention plan, child safety is an important component of the implementation plan. With all open child welfare cases, the county department is responsible for ongoing safety monitoring.

During the intake phase, SafeCare® providers utilize an assessment form to gather information on child health, home safety, parent-infant/child interaction, identify parenting goals, and challenges with the target child. This initial assessment helps providers determine which focus area to target, as well as screen for the families needs.

A key component of the SafeCare® program is the proven session structure for each topic, which includes a baseline assessment, training sessions, and follow-up assessments to monitor change. Throughout the training, providers use a set of observation checklists for each topic and conduct observational assessments to gauge current skills and areas in need of improvement. SafeCare® also utilizes a change score tool as part of the individual prevention plan. Providers look for a decrease in hazards and changes in behavior as part of their monitoring. Outcomes are measured based on improvements in change scores.

WORKFORCE SUPPORT & TRAINING

SafeCare® Colorado Coach/Trainer/Site Managers (SMs) complete extensive SafeCare® Training through the National SafeCare® Training and Research Center (NSTRC). Site Managers provide training for, and continuous fidelity monitoring of all providers, keeping them up to date on topics such as barriers to delivery and needs for further training. To maintain their certification as Trainers, SMs are required to actively participate in an annual

SCHOOL OF SOCIAL WORK
COLORADO STATE UNIVERSITY

SafeCare Colorado

Two-Year Evaluation Plan
State Fiscal Year 2021 to 2022

Submitted to the Office of Early Childhood, Colorado Department of Human Services

COLORADO
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Department of Human Services

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1. Table of Contents

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1. Background

Prevention of child maltreatment requires the implementation of evidence-based practices on community- and system-levels. SafeCare® is an evidence-based program implemented in Colorado as part of statewide child maltreatment prevention efforts. The SafeCare Colorado (SCC) program is administered by the Colorado Department of Human Services (CDHS) Office of Early Childhood (OEC) and is evaluated by the Social Work Research Center (SWRC) at Colorado State University (CSU). The Kempe Center for the Prevention and Treatment of Child Abuse and Neglect (Kempe) serves as the state intermediary. The program is supported by the National SafeCare Training and Research Center (NSTRC) at Georgia State University (GSU). NSTRC, in collaboration with Kempe and OEC, oversee implementation and fidelity for this manualized, structured home visiting program.

1.1 SafeCare® Curriculum and History

SafeCare® (SC) originally started as Project 12-Ways and is founded on an eco-behavioral approach to holistically address risk factors for child abuse and neglect while also promoting protective factors. SC targets families with children up to five years of age who have a history of or are at-risk for child maltreatment. The program delivers a home visiting curriculum consisting of three topics to build caregiver capacity around child health (Health topic), home safety (Safety topic), and parent-child/parent-infant interaction (PCI/PII topic). Specifically, the Health topic targets risk factors for medical neglect; the Safety topic targets risk factors for environmental neglect and unintentional injury; and the PCI/PII topic targets risk factors for abuse and neglect with an emphasis on increasing positive parenting practices. Family engagement skills are used to build rapport between the Parent Support Providers (PSPs) and the family participants with communication and problem-solving support wrapping around structured curriculum delivery. Figure 1.1 illustrates the SC model.[1]

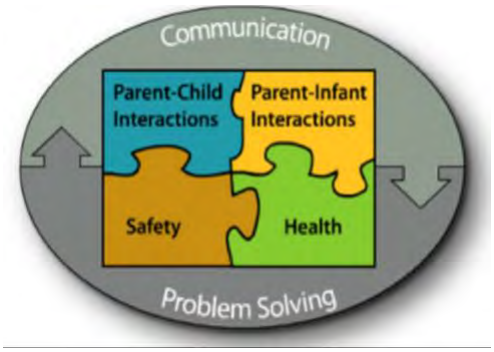

Figure 1.1 SafeCare® Model (image courtesy of NSTRC)

[1] For more information on the SafeCare® curriculum, visit: https://safecare.publichealth.gsu.edu/safecare/safecare-curriculum/

The program is typically delivered through weekly to bi-weekly home visits that last 50 to 90 minutes per session. Delivery of the full curriculum usually lasts 18 to 20 weeks and involves six sessions per topic (18 sessions total). Each topic (or module) involves a baseline pre-assessment (Session One) with observation of parental knowledge and skills, followed by targeted in-home training sessions that employ the EMPF approach (explain-model-practice-feedback) (Sessions Two through Five), and a final session that measures change in parental competency in the targeted topic via a post-assessment (Session Six).

1.2 SafeCare® Evidence-Base

A robust body of literature (more than 60 studies and counting) demonstrates the effectiveness, challenges, and opportunities of the SafeCare® program.[2] The three topics chosen from the initial Project 12-Ways (Lutzker, Bigelow, Doctor, & Kessler, 1998) have been continuously re-validated through single-case, pre-/post-, and repeated measures designs that assess reduction in home safety hazards, improvement in positive parent-child/parent-infant interaction, and increases in parental competency of child health (Bigelow & Lutzker, 1998, 2000; Churchill, 2015; Cordon, Lutzker, Bigelow, & Doctor, 1998; Gershater-Molko, Lutzker, & Wesch, 2003; Metchikian, Mink, Bigelow, Lutzker, & Doctor, 1999; Rostad, McFry, Self-Brown, Damashek, & Whitaker, 2017). Following, several other experimental and quasi-experimental studies with moderate to high evidence ratings have demonstrated positive findings of the SC curriculum in the outcome domains of child development and school readiness (Carta, Burke, Bigelow, Borkowski, & Warren, 2013; Lefever, Bigelow, Carta, Borkowski, Grandfield, McCune, Irvin, & Warren, 2017); family economic self-sufficiency (Silovsky, Bard, Chaffin, Hecht, Burris, Owora, Beasley, Doughty, & Lutzker, 2011); resource connections and referrals (Silovsky et al., 2011); maternal health (Carta et al. 2013; Silovsky et al., 2011); positive parenting practices (Carta et al., 2013; Gershater-Molko et al., 2003; Lefever et al., 2017; Llewellyn, McConnell, Honey, Mayes, & Russo, 2003); reductions in child maltreatment (Chaffin, Hecht, Bard, Silovsky, & Beasley, 2012; Gershater-Molko, Lutzker, & Wesch, 2002; Silovsky et al., 2011); and reductions in juvenile delinquency, family violence, and crime (Silovsky et al., 2011).

In addition, studies have documented variations in program efficacy dependent on the version of SafeCare® implemented. For example, Damashek and colleagues (2011) found that caregivers engaged in SafeCare® Augmented were four times more likely to enroll and eight-and-half times more likely to complete compared to families in SafeCare® standard. SC Augmented integrates motivational interviewing and training of providers on identification and response to risk factors of substance abuse, depression, interpersonal violence, and impending child maltreatment into the standard SafeCare® curriculum. The improved enrollment and

[2] For a full review of the literature, please visit: https://safecare.publichealth.gsu.edu/safecare/

completion rates for the SC Augmented participants in the Damashek and colleagues (2011) study were attributed to the inclusion of motivational interviewing into curriculum delivery. The effectiveness of SC Augmented was further evidenced in a Randomized Controlled Trial (RCT) by Silovsky and colleagues (2011) that compared SC Augmented to home-based community mental health services as usual, as well as in an RCT by Slemaker and colleagues (2017) with Spanish-speaking immigrant Latino families.

Finally, there is a growing body of literature examining adaptations of SafeCare® (defined as a modification to the program to align with specific populations or unique conditions) and efficacy therein. Adaptations have targeted specific parenting populations, such as Latina mothers (Morales, Lutzker, Shanley, & Guastaferro, 2015), caregivers with intellectual or development disabilities (Gaskin, Lutzker, Crimmins, & Robinson, 2012), parenting adolescents (Guastaferro, Lutzker, Jabaley, Shanley, & Crimmins, 2013), fathers (Self-Brown et al., 2015), and those experiencing substance abuse (Strong et al., 2014), as well conditions such as virtual service delivery through use of smartphones (Jabaley, Lutzker, Whitaker, & Self-Brown, 2011).

Based on these systematic investigations to-date, SafeCare® has received an evidence-based designation of "supported" by the California Evidence-Based Clearinghouse for Child Welfare (CEBC)[3] in the topic areas of home visiting programs for prevention of child abuse and neglect, interventions for abusive behavior, interventions for neglect, parent training programs that address child abuse and neglect, and prevention of child abuse and neglect (secondary) programs, as well as a designation of "promising" for the topic area of home visiting programs for child well-being. In addition, SafeCare® Augmented meets the Department of Health and Human Services (HHS) criteria as an evidence-based, home visiting early childhood service delivery model.[4] Finally, SafeCare® has recently received a designation of "supported" for the eligible service domain of in-home parent skill-based programs by the Title IV-E Prevention Services Clearinghouse, as part of the Family First Prevention Services Act (FFPSA).[5] Child safety and child permanency were the two target domains where significant effect, sustained for 6-months, was demonstrated. At the time of this evaluation plan writing, NSTRC had requested a re-review of the SafeCare® evidence-base, as they believe a "well-supported" designation is more accurate; further, SafeCare® Augmented is also planned for systematic review in the next round of evidence reviews by the Clearinghouse.

[3] The complete SafeCare® CEBC review is available here: https://www.cebc4cw.org/program/safecare/
[4] The complete SafeCare® HHS review is available here: https://homvee.acf.hhs.gov/index.php/model/safecare
[5] The complete SafeCare® Prevention Services Clearinghouse review is available here: https://preventionservices.abtsites.com/programs/169/show

1.3 SafeCare Colorado: Practice and Evaluation

Program History: In 2012, Governor John Hickenlooper unveiled a new child welfare plan, called "Keeping Kids Safe and Families Healthy." The plan detailed a common practice approach for Colorado's 64 counties and two tribal nations designed to strengthen the state's child welfare system. In 2013, the second phase of the plan built upon five core strategies: (1) common practice; (2) performance management; (3) work force development; (4) funding alignment; and (5) transparency and public engagement. These core strategies were in part implemented by revamping the front end of Colorado's child protection system through enhanced screening of calls reporting possible child abuse or neglect; new prevention strategies to assist families before they become part of the system; and training for mandatory reporters so at-risk children come to the attention of the child protection system sooner. Within the common practice approach, a central strategy was to increase prevention services for referrals that do not meet the criteria to open a child welfare investigation, but for which the family is in need of additional supports to ensure they remain stable and do not become part of the child protection system. The prevention programs chosen for this strategy were Colorado Community Response (CCR), Enhanced Nurse-Family Partnership (NFP), and SafeCare®. At that time, Kempe was selected by the Office of Children, Youth and Families to oversee implementation of SafeCare® in Colorado. In May 2015, state funding and statewide program oversight moved to the CDHS Division of Community and Family Support (now, the Strengthening Families Unit) in the Office of Early Childhood.

Following, in April 2017, CDHS unveiled the Colorado Child Maltreatment Prevention Framework for Action (herein called the Framework for Action) to help local communities create focused, integrated plans to prevent child maltreatment and promote child well-being. The framework is underscored by six foundational strategies: (1) monitoring program implementation; (2) strengthening the work force; (3) fostering data integration; (4) incentivizing continuous quality improvement; (5) honoring family and participant voice; and (6) driving policy integration. These foundational principles are enacted through four channels for change that outline strategies related to individualized services, organizational and practice change, agency collaboration and community capacity-building, and policy reforms. SafeCare Colorado fits within the outlined strategies for individualized services as a home visiting, parent education centered curriculum.[6] In November 2017, SCC was designated by NSTRC as meeting the additional standards required for the SafeCare® Augmented designation.

[6] The full Framework for Action is available here: https://co4kids.org/framework

Program Status: Currently, SCC is implemented by 14 diverse organizations across Colorado, covering a total of 38 counties and one tribal reservation. Colorado is one of the few statewide implementations of SafeCare® nationally; according to NSTRC, "Of the 177 implementations of SafeCare® in the U.S., only 6 have grown to comparable measure as seen in Colorado." SCC is implemented on a voluntary basis and thus straddles primary and secondary prevention tiers in Colorado's continuum of services, as illustrated in Figure 1.2. Importantly, SCC cannot be delivered to families with court-involved open child welfare cases.

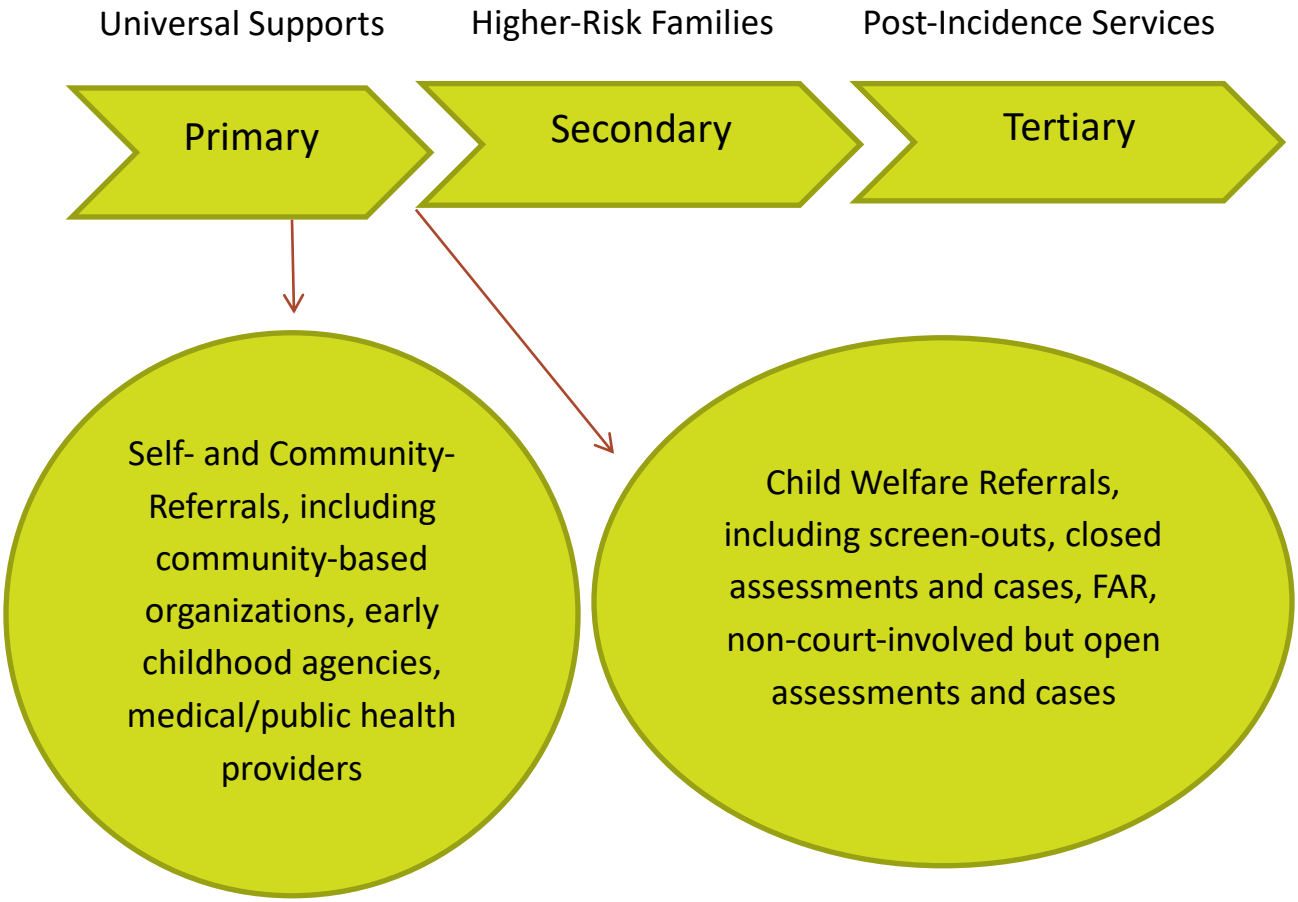

Figure 1.2 SCC as Primary & Secondary Prevention

Evaluation History: The CSU Social Work Research Center has served as the independent evaluator since 2013. Between 2014 and 2018, the evaluation was designed to measure the implementation processes, program outcomes, and service delivery costs. Numerous evaluation reports and briefs document the findings of these activities.[7] While it is outside the scope of this document to delineate all evaluation results, highlights of significance for shaping

[7] Full evaluation reports and briefs are on file with CDHS/OEC and CSU/SWRC.

the new evaluation plan are discussed below, drawing largely on State Fiscal Year (SFY) 2018 evaluation results.

Target Populations: SCC is meeting the goal of serving as a primary and secondary prevention program, creating both universal supports and serving families at-risk for maltreatment, including younger parents, low-income families, caregivers and children with mental/behavioral health challenges, and caregivers with low to no social networks. In addition, nearly 20% of SCC families speak Spanish as their primary language, 30% identify as Hispanic or Latino, and 22% live in a rural county.

Outreach & Referral Trends: The largest proportion of SCC referrals come from self-referrals, early childhood agencies, community-based organizations, and medical/public health providers. A smaller percentage come from child welfare referral sources, such as screen-outs and closed cases. When examining uptake rates (defined as the percentage of families referred who enroll in the program), rates are strongest for self-referrals and community-based organization referrals, while child welfare referrals consistently result in lower uptake rates. These trends reflect SCC's focus as a primary and secondary prevention program.

Family Engagement and Retention: On average, 1.7 topics are completed per family, with Safety consistently being the most completed topic, followed by a tie between Health and PCI/PII. SCC families take a median of 24 weeks to complete the program involving on average 20 sessions, which is slightly above the NSTRC national curriculum target of 18 to 20 weeks and 18 sessions. Safety takes the shortest amount of time for families, followed by Health, and then PCI/PII. Process evaluation data speak to the generally positive experiences families have with SCC and the ways in which core protective factors and family strengthening mechanisms, including parenting skills, social support, resource connection, and use of motivational interviewing, are fostered during service delivery.

Completion & End-of-Topic Learning Outcomes: SCC has consistently struggled with lower-than-desired completion rates. Full program completion, defined as three-topic completers, has hovered around 25% throughout implementation years, while families completing at least one topic has clustered around 60% year-over-year. End-of-topic learning outcomes have been consistently strong with families showing measurable decreases in number of home hazards (Safety), improved parental knowledge of child health and appropriate treatment routes (Health), and better-quality parent-child/parent-infant interactional behaviors alongside a decrease in negative parenting behaviors. These positive results reflect the SCC basis in eco-behavioral approaches to developing parental competencies and improving family functioning.

Child Welfare Outcomes: In the SFY 2018 and SFY 2019 evaluations, propensity score matching (PSM) was employed to examine four child welfare outcomes (subsequent referral, assessment,

founded assessment, and out-of-home placement) in a follow-up analysis with SCC families and appropriately matched comparison groups at the 12-month and 24-month post-program completion mark, respectively. No statistically significant differences were found in any of the outcomes. This was a departure from the 2014 to 2017 pilot years evaluation, where subsequent founded assessments and out-of-home placements in the 12-months following program completion were significantly lower for SCC families. The sample size available for analysis beginning in SFY 2018 improved considerably as implementation scaled-up, though the sample remains under-powered to accurately detect child welfare outcomes based on a recent power analysis. The lack of significant results in child welfare likely reflects three converging factors: program voluntariness, problematic use of child welfare outcomes as a sole measure of program impact, and limitations to the PSM analysis and comparison group construction.

Cost Findings: Cost evaluation findings demonstrate that once the full implementation scale was reached, SCC was similar or lower in cost per family to that of other evidence-based home visiting programs for child maltreatment prevention. Additionally, in using the intervention and comparison sample from the PSM outcomes analysis, costs incurred in a 24-month period following program completion were examined for the two primary mechanisms for intervening with families in need in Colorado—Core Services and out-of-home placement. SCC families demonstrated a reduction in costs for both mechanisms compared to non-SCC families, whether one, two, or three topic completers. While the sample size was too small to detect statistically significant differences, the observed differences are of practical significance in actual dollars saved and show promising evidence for SCC as a cost savings mechanism.

Evaluation Status: On July 1, 2019, the SCC evaluation entered its seventh year of evaluation activities with a wealth of findings from six years of evaluation robustly documented and available for practice integration. In response, CDHS/OEC and CSU/SWRC agreed to take an intentional pause in evaluation activities for SFY 2020 in order to create deliberate space for translating research into practice and to reinvigorate the SCC evaluation with new potentials. In keeping with the CSU/SWRC commitment to uplifting research for results through meaningful research-practice partnerships, the SCC principal investigators collaborated with OEC leadership to envision, explore, and outline evaluation priorities for SFY 2021 and beyond. The result of these collaborative efforts is the herein provisioned SFY 2021 through 2022 two-year evaluation plan. A two year-evaluation plan structure was chosen to ensure a balance of identified descriptive and experimental evaluation priorities; to support ongoing, meaningful knowledge translation and mobilization efforts; and to foster study feasibility and strategic success. In the next section, we outline the evaluation design origins and two primary evaluation components.

2. Evaluation Design Origins

In creating this two-year evaluation plan, four primary sources influenced evaluation foci, design considerations, and anticipated outcomes to be measured. These sources are as follows: (1) SCC facilitated stakeholder meeting; (2) CDHS/OEC evaluation priorities; (3) Colorado's anticipated adoption of the Family First Prevention Services Act; and (4) Leading prevention science, home visiting, and child maltreatment literature on priorities, opportunities, and challenges for research and practice. Each source and implications for final design decisions are summarized below.

2.1 SCC Facilitated Stakeholder Meeting

The intentional pause for evaluation innovation and practice integration was catalyzed by an inaugural SCC multi-vocal facilitated stakeholder meeting, jointly hosted by CSU/SWRC and CHDS/OEC on July 30, 2019. The purpose of the meeting was to create a multiple participant platform that explored recent evaluation results from the SCC program, discussed the application of results to practice, and envisioned future evaluation directions. Findings[8] from this meeting created the foundation necessary to launch the future of SafeCare Colorado in responsive and meaningful ways, in shared commitment to Colorado families and communities. Two overarching implications thus resulted. First, SCC stakeholders were equipped with a foundational understanding of evaluation results to-date and co-created a roadmap of considerations for translating findings into practice application. Second, the CSU evaluation team received invaluable practice partnership insights for future evaluation design. Specifically, the following top three evaluation foci were developed and prioritized by stakeholders:

- Deeper analyses around factors contributing to retention and completion success
- Additional analyses on the relationships between outreach, referral, and decline trends
- Measuring the impact of SCC on protective factors for child maltreatment

2.2 CDHS/OEC Evaluation Priorities

The new evaluation design must, first and foremost, reflect CDHS/OEC needs and hopes regarding assessment of program efficacy, holistic impact, and program intersections with State of Colorado priority areas for early childhood and child maltreatment prevention. To this end, over the past 12 months, ongoing discussions between the CSU evaluation team, the Strengthening Families Unit Director, the SCC Program Administrator, and other central OEC

[8] For complete meeting findings, please see: Everson, C. & Winokur, M. (2019). *SafeCare Colorado Facilitated Stakeholder Meeting: From Data to Applied Action*. Fort Collins, CO: Colorado State University, Social Work Research Center.

staff occurred to elicit OEC priorities for the new evaluation. Here, practice partners evoked four intersecting landscape factors in outlining their hopes for the evaluation.

First was consideration of the findings from the facilitated stakeholder meeting, as described above. Second was integration of Colorado's Child Maltreatment Prevention Framework for Action, where the four overarching outcomes delineated are: (1) Child well-being and achievement; (2) Consistent high-quality caregiving ; (3) Caregiver well-being and achievement; and (4) Safe and supportive neighborhoods. Third, practice partners strategically considered the future of SCC in light of the Governor's priorities for Colorado. Here, Governor Polis has outlined four key priorities for the State, also known as the "Bold Four" key issues: (1) Economy; (2) Environment and renewables; (3) Health/Healthcare; and (4) Education (where school readiness for early childhood education is central).

Fourth, practice partners critically considered the implementation of SafeCare® as a voluntary prevention program in Colorado. Many of the early implementations of SafeCare® nationally focused on delivery of the curriculum to court-involved child welfare families where program participation was mandatory as part of the family's treatment plan; in turn, the evaluations of these implementation cases focused on traditional child welfare outcome measures, such as re-referrals and subsequent founded assessments. Such implementation models and evaluation foci reflected delivery of SafeCare® as a tertiary prevention approach. In keeping with the SCC implementation model of voluntary primary and secondary prevention, practice partners wanted a re-consideration of measures used in the evaluation, moving away from a near sole focus on child welfare outcomes to outcome domains that better reflect SCC as a true prevention program. Additionally, practice partners desired ongoing documentation of foundational SCC client population, service delivery, and proximal impacts, including program retention, completion, and end-of-topic learning outcomes. These data remain crucial because they inform state and national home visiting legislation, NSTRC oversight of SafeCare® implementation, local continuous quality improvement (CQI) efforts, and the efficacy of SCC as a state-funded program with ongoing strengths as well as opportunities for growth.

2.3 Building the Evidence-Base for SafeCare®

On February 9, 2019, the Family First Prevention Services Act (FFPSA or Family First) was signed into law as part of the Bipartisan Budget Act (H.R. 1892), outlining substantial new parameters and priorities for allocation of Title IV-E funds by states. The legislation officially went into effect on October 1, 2019, bringing sweeping changes to the child welfare system, including:

- Shifts the focus to using funds for prevention services that allow "candidates for foster care" to stay with families

- Restricts use of congregate or group care while emphasizing use of family-like foster homes and kinship care when removal from home is deemed necessary
- Provides support for kinship caregivers, including kinship navigation programs
- Improves services to older youth by allowing states to support youth who have aged out of foster care up to 23 years old

To enact these priorities, under Family First states will receive a 50% federal match for prevention services that are evidenced to keep families together safely and prevent children/youth from entering foster care. While the legislation officially went into effect on October 1, 2019, states may choose to delay their "opt-in" effective date[9] for up to 24 months, with all states being required to transition to the new model as of October 1, 2021. At the time of this evaluation plan submission, Colorado had drafted a robust Prevention Services Plan and received extensive stakeholder feedback, but had not yet submitted the plan to the federal government for approval, choosing to delay fiscal opt-in due to impacts of COVID-19 and the temporary funding loss the State will incur while they transition to the new Title IV-E funding model. While Colorado chose to delay official fiscal opt-in, the State continues to focus on building out the prevention services continuum and the evidence-base therein, given Colorado's strong focus on family and community strengthening.

As part of Family First, prevention services/programs outlined in the state's Prevention Services Plan must be trauma-informed and evidence-based. An evidence-based designation is determined through the newly created Title IV-E Prevention Services Clearinghouse (herein referred to as the Clearinghouse). Through a highly technical systemic review process, practices are given a designation of evidence-based along a continuum of "well-supported," "supported," or "promising." Practices can also be given no designation when there are insufficient findings to demonstrate meaningful effect or when study designs do not meet the required level of rigor set-forth by Clearinghouse standards. To be eligible for federal reimbursement and included in the Clearinghouse, practices must align with at least one of the four eligible service/program domains: (1) mental health; (2) substance abuse; (3) in-home parent skill-based; or (4) kinship navigation. In addition, the evidence-base for the practice must include significant, sustained findings in one or more of the target outcomes for each eligible service/program domain. A copy of these target outcomes, by service/program domain, is included in Appendix A.

Significant, sustained findings in targeted outcomes must be demonstrated through rigorous study design standards. Key design requirements include:

[9] To begin drawing down federal dollars, the Children's Bureau must approve the state's 5-Year Prevention Services Plan. At the time of this evaluation plan submission, six states had approved plans and five states plus two tribal nations had submitted plans for approval.

- Study designs must be experimental or quasi-experimental in nature. Note: SCC will not undergo an RCT at this time because the program is well-established and serving families actively with success. As such, a quasi-experimental design (QED) is the only available option.
- The comparison group used in the QED must be comprised of comparable families who receive treatment as usual (TAU)/standard of care (SAU). Baseline equivalence on direct pre-tests and/or race and ethnicity, socioeconomic status, and child age (when available) must be established. Comparison groups cannot be comprised of:
    - Families who are offered services, but refuse
    - Families participating in another formal intervention
- Measures used to assess target outcomes must be consistent between comparison and treatment groups in the following areas: (1) the measures must be constructed the same way for both groups; (2) the data collectors and data collection modes must be the same for both groups or only differ in ways that would not impact the measures or outcomes; and (3) the time between pre-test and post-test cannot systematically differ between intervention and comparison groups.

Status of SafeCare® in Colorado's Prevention Services Plan: SafeCare® is currently included in Colorado's Prevention Services Plan as one evidence-based model to implement. Because SafeCare® is designated in the Clearinghouse as a "supported" practice, it is required to undergo ongoing rigorous evaluation. While SCC is administered through CDHS/OEC, not the CDHS Division of Child Welfare, building the evidence-base for this practice (at-large) and bolstering Clearinghouse inclusion (more specifically) remains vital to ensure funding sustainability, implementation capacity-building, and familial impact.

2.4 Summary of Literature Considerations

In examining leading prevention science and child maltreatment literature on priorities, opportunities, and challenges for research and practice, several key considerations for the new evaluation design emerged.

First, literature on other early childhood home visiting prevention programs demonstrates that families most likely to reap benefits are younger parents, first-time parents, and/or those who are introduced to the program prenatally (i.e., before the birth of the child) (DuMont et al., 2008; Eckenrode et al., 2017). Following, a common recommendation in prevention programming is to have a "target" group(s) during program implementation in order to maximize success (Child Welfare Information Gateway, 2017; Howard & Brooks-Gunn, 2009). Because SafeCare® is implemented in Colorado on a voluntary basis, such target groups are only one segment of the total SCC participating family population. Additionally, families cannot

prenatally enroll and receive services in the current SCC implementation model. The voluntary nature of the program means that meaningful differences in child welfare outcomes may be diluted and more difficult to detect without strict target groups used during programming and due to the at-will, variable nature of program participation. As a remedy, research on prevention programs should ensure collection of key participant socio-demographics and program characteristics documented to be successful facilitators of home visiting interventions. Following, exploratory analyses of resultant findings can help to determine key predictive factors for program success, directly informing practice capacity-building and outreach efforts. Additionally, such sub-group analyses are essential to equity impact efforts, where determining efficacy of programs *for whom* and under what conditions is necessary for advancing culturally responsive practices for diverse communities (Andrews, Parekhm, & Peckoo, 2019).

Second, child welfare outcomes are downstream, culminating outcomes that are cited in prevention programming literature as problematic to use as a sole or primary measure of program effectiveness, due to under-reporting of child maltreatment incidences in official rates, difficulty in detecting differences in rates between intervention and control groups due to low rates of abuse in the population overall and thus the need for very large sample sizes; and the fact that official reports of child maltreatment do not reflect the full range of harmful parenting practices and environments (Harding, Schellenbach, & Martin, 2007; LeCroy & Krysik, 2011; Negriff, Schneiderman, & Trickett, 2017). Additionally, official child maltreatment rates do not reflect protective factors and well-being conditions (Child Welfare Information Gateway, 2017) that may be cultivated by the program being evaluated; sole reliance on official rates in research is thus detrimental to advancing prevention practice and science.

For example, a narrow focus on child welfare outcomes limits assessment of the holistic, expansive impact prevention programs aim to foster. In applying an eco-behavioral approach to the prevention and management of child maltreatment, SCC targets multiple components of family functioning (i.e., social and structural properties correlated with child maltreatment) to cultivate safe and stable households, strengthen the family unit, and promote both caregiver and child well-being. Given this robust prevention model, multiple intermediate and long-term outcomes should be considered in demonstrating the impact of SCC, such as caregiver stress and coping, social network enhancement, and child socioemotional competence. Relatedly, a narrow focus on child welfare outcomes perpetuates deficit-based approaches in research and evaluation, which limit equity-centered practices and perpetuate scientific investigation as a system of power (Kirkland, 2019). To redress, asset-based approaches in both practice and evaluation/research should be used that uplift and assess the inherent cultural, familial, and community strengths, resiliencies, and protective factors that diverse caregivers and their children possess (Saleebey, 2006).

Third, evaluation of prevention practices must thoughtfully consider the limitations of using secondary administrative data in constructing comparison groups and choosing outcome measures. For example, in order to establish comparison groups for the quasi-experimental design engaged in previous SCC evaluation years, only SCC participating families with a prior history of child welfare involvement were included in the PSM analysis, thus excluding all SCC participating families without prior involvement. However, SCC is designed for both families with a history of child maltreatment and for families at-risk for child maltreatment. Because the data source used in the PSM analysis (i.e., administrative data from Trails) only captures the former target population, in effect, the primary and secondary prevention focus of the program is incompletely captured. Additionally, measures available in Trails primarily reflect downstream outcomes, such as re-referrals, assessments, substantiated cases of child maltreatment, and out-of-home placement. To resolve such limitations, prevention research must consider substantial use of primary data collection approaches and validated instrumentation that can measure more upstream, holistic outcomes.

Finally, the SCC Co-Principal Investigator and SCC Program Administrator met with the SafeCare® Principal Investigators for NSTRC to discuss the future of SC research and evaluation. The NSTRC investigators provided strategic guidance on national efforts around evidence-building for SafeCare® including measures used in a recently conducted RCT [10] that focused on the curriculum's impact in domains of family strengthening, well-being, and protective factors.

2.5 Synthesis Conclusion

Collectively, these four sources were used to develop a new evaluation plan that would meet the priorities of OEC leadership for SCC research and practice, articulate with wider State priorities for a thriving Colorado, align with the State's framework for child maltreatment prevention, and further build the evidence-base for SafeCare® as a primary and secondary prevention program. The end result is an evaluation plan that reflects the upstream nature of prevention practices in child abuse and neglect, where we move away from downstream measures of child welfare re-involvement to proactive measures of protective factors, child-well-being, and caregiver well-being. In doing so, we evoke an ethos that prevention science must leverage and assess strength-based approaches to service delivery, center equity impacts of practice, and strategically translate findings to strengthen families and communities.

[10] This study is currently undergoing peer-review for publication and is thus embargoed.

3. Evaluation Overview

Reflecting key considerations, priorities, and opportunities for SCC research, the SFY 2021 to 2022 two-year evaluation plan has three primary components: (1) Descriptive Evaluation of SCC Clients, Service Delivery, and Proximal Impacts; (2) Well-Being Feasibility Study; and (3) Quasi-Experimental Design Study of SCC Effects on Child and Adult Well-Being, Protective Factors, and Parenting Practices.

The evaluation plan for both primary components should be considered a living document, wherein refinement will be made to reflect emergent opportunities, respond to developing needs, and address challenges that arise during study or program implementation. In accordance, before beginning evaluation activities, this evaluation plan will be approved[11] by CDHS/OEC and fine-tuning of proposed elements engaged collaboratively between the CSU evaluation team, the SCC Program Administrator, and the Director of the Strengthening Families Unit. Institutional Review Board (IRB) approval[12] will be secured from Colorado State University for the entirety of the SCC evaluation.

This evaluation plan has been updated as of May 2022 to reflect the design and implementation of a well-being feasibility study. The well-being feasibility study represents an important step toward the larger QED that is planned for subsequent years of the evaluation. In this revised evaluation plan, the feasibility study is described followed by the QED study.

3.1 Descriptive Evaluation

The descriptive evaluation will assess implementation activities, proximal impacts, and participant populations reached for families served by SCC in SFY 2019, SFY 2020, and SFY 2021. The design and scope of the descriptive evaluation reflect the well-established evaluation approaches used in previous years by CSU/SWRC. Years of refinement and partnership with OEC leadership have resulted in reliable methods for data acquisition, cleaning, management, and analysis of secondary program data from the OEC database, Salesforce. We augment these well-established approaches with new analyses aimed at better understanding key participant and practice characteristics that influence program referral, outreach, engagement, and retention/completion trends, infusing an equity impact lens throughout.

[11] This evaluation plan was approved by CDHS/OEC on 7/23/2020.
[12] The SCC evaluation is currently under IRB approval through April 22, 2022 (Protocol No. 19-8817H). The new QED component will be submitted as a separate study for IRB approval and any revisions to the descriptive evaluation activities made via an amendment to the existing IRB protocol.

3.2 Well-Being Feasibility Study

The well-being feasibility study will allow the evaluation team to pilot study procedures and instruments and build capacity for the larger QED study, described in the Quasi-Experimental Study section (3.3, below). The feasibility study will be conducted with both the treatment group (i.e., families receiving SCC services) and comparison group (i.e., families not receiving SCC services). The feasibility study will assess: (1) the alignment between the well-being assessments and the SafeCare curriculum; (2) the ability of the well-being assessment to show change over time for participating families; and (3) the viability of integrating the administration of the well-being assessment into the PSP workflow with families.

3.3 Quasi-Experimental Study

The quasi-experimental study, to be conducted in subsequent years of the evaluation, will rigorously evaluate the program's effectiveness at improving outcomes in four broad domains: child well-being, adult well-being, parenting practices, and protective factors. Intervention and comparison groups constructed for the quasi-experimental study will be enrolled and followed for 12-months post-SCC completion. The design and scope of the quasi-experimental study reflect the overwhelming desire by practice partners to assess caregiver, child, and family well-being conditions and protective factors within the context of Colorado's implementation of SafeCare® as a primary and secondary prevention program. This desire aligns well with the burgeoning shift in child maltreatment prevention science to focus on upstream, intermediate outcomes that leverage resiliency research frameworks and strength-based approaches. Additionally, the study design requirements of the Prevention Services Clearinghouse were diligently considered in hopes of building the evidence-base for SafeCare® as a well-supported practice within Family First, to advanced designation of SafeCare® as a well-supported practice in the CEBC for the child well-being domain, and to ensure the SCC program receives the rigorous evaluation attention it so deserves.

3.4 Dissemination Plan

Interim and Final Evaluation Reports: Interim and final evaluation reports with accompanying briefs will be provided to CDHS/OEC by the CSU evaluation team for both the descriptive evaluation and quasi-experimental study, as follows:

> *Descriptive Evaluation:* Findings from the descriptive analysis of the SFY 2019 and 2020 cohorts were provided in an evaluation report to CDHS/OEC on June 30, 2021. Findings for the SFY 2021 cohort will be provided in an evaluation report to CDHS/OEC on June 30, 2022.
>
> *Well-Being Feasibility Study and Quasi-Experimental Study:* An interim evaluation report was provided to CDHS/OEC on June 30, 2021 that documented progress to-date for the

study. Initial well-being feasibility study findings will be provided in an evaluation brief to CDHS/OEC on June 30, 2022.

Academic and Practice Dissemination: In commitment to knowledge translation and mobilization efforts, the CSU evaluation team will prepare manuscripts for publication in peer-reviewed journals in the fields of prevention science, child maltreatment, social work, family development, early childhood, and related disciplines. The total number of manuscripts to be produced will be predicated on study findings. Whenever possible, journals targeting both academic and policy/practitioner audiences will be prioritized. Publications will be accompanied by presentations at conferences, symposiums, webinars, and other research translation opportunities that target academic, policy, practitioner, and community audiences.

SCC Program CQI and Capacity-Building: A strategic effort will be made to ensure preliminary and final results can be used in continuous quality improvement (CQI) efforts for SCC and in program outreach with diverse stakeholders, including legislators, prospective families, and community/agency referral sites. To this end, the CSU evaluation team will collaborate with the Kempe team and SCC Program Administrator in using evaluation results to inform ongoing CQI efforts, including through site coaching calls and via presentations at SCC Grantee Meetings. Additionally, the CSU evaluation team will work with the OEC marketing firm to ensure select evaluation data can be used in outreach efforts with communities, families, and referral agencies. The CSU evaluation team will also provide timely evaluation data to OEC leadership, as requested, in advocating for home visiting, child maltreatment prevention, and related practices during legislative sessions. Data visualization techniques and mediums, such as infographics, will be used throughout these endeavors.

3.5 Evaluation Team

The SCC evaluation is supported by an experienced team from CSU/SWRC. The Principal Investigator for the SCC evaluation is Dr. Marc Winokur. Milena Casamassima, MPH, MSW serves as Project Manager for the SCC evaluation and all pilot programs therein. Evaluation support staff are Lauren Alessi, MA; Sunil Butler, MS; and an MSW student intern. A new research associate will serve on the SCC evaluation team to support well-being feasibility study implementation. The evaluation team will also partner with Dr. Dallas Elgin from RTI International on the well-being feasibility study and the larger quasi-experimental design.

4. Descriptive Evaluation of SCC Clients, Service Delivery, and Proximal Impacts

The descriptive evaluation will assess implementation activities, proximal impacts, and participant populations reached for families served by SCC in SFY 2019, SFY 2020, and SFY 2021.

4.1 Research Questions

Four overarching research questions guide the descriptive evaluation:

1. What are the characteristics of children and caregivers participating in SCC?
2. What trends in referral, outreach, and enrollment are observed for SCC?
3. What trends in family engagement, retention, and completion of SCC are observed?
4. What are the learning outcomes of caregivers who complete the home safety, child health, and parent-child/parent-infant interaction topics?

4.2 Participant Population

The participation population for the descriptive evaluation will be all SCC families, divided into cohorts by state fiscal year. In total, three cohorts will be descriptively analyzed: SFY 2019 SCC cohort,[13] SFY 2020 SCC cohort, and SFY 2021 SCC cohort. Creation of cohorts by SFY aligns with OEC strategic planning, practice implementation, and budgeting for the SCC program. Additionally, analyzing and reporting on findings in the fiscal year following cohort completion will ensure complete data are available for analysis and subsequent dissemination of findings. Eligibility criteria for analytical inclusion are as follows: participant must have engaged a referral, intake, and/or participation in the SCC program at one of the designated SCC sites during SFY 2019, 2020, or 2021.

4.3 Study Design

Characteristics of SCC Clients: Basic descriptive statistics will be used to characterize the population of clients served by SCC. Socio-demographic variables will include:

- Primary caregiver characteristics:
    - Age, race and ethnicity, gender, primary language, employment/occupation, highest level of education achieved, martial/spousal status
- Target SCC child characteristics:
    - Age, race and ethnicity, gender, primary language

[13] The SFY 2019 cohort was not analyzed during the SFY 2020 evaluation year due to the intentional pause in primary evaluation activities and the focus on evaluation innovation and practice dissemination. To ensure there is no gap in documentation of program implementation and impact, the SFY 2019 cohort will be included in the new two-year evaluation plan.

- Family characteristics:
    - Household income, housing situation, public assistance forms

In addition to these socio-demographics, descriptive statistics will also be used to portray structural, social, and health vulnerabilities experienced by SCC families, including:

- Difficulty paying bills and securing basic needs (i.e., food, housing)
- Having a doctor and dentist for both caregivers and children
- Neighborhood characteristics (i.e., sidewalks, playground, rec center)
- Social support availability (i.e., having people to turn to for help)
- Mental, behavioral and physical health status of primary caregiver
- Socioemotional status of target SCC child (e.g., child emotion, concentration, etc.)

Referrals, Outreach & Enrollment: Referral, outreach, and enrollment (uptake) rates will be descriptively analyzed to understand facilitators and challenges to SCC initial participation. Specifically, the following variables will be examined:

- Referral sources, total and by primary and secondary prevention referral source
- Active and passive declines to program participation, total and by referral source
- Enrollment rates (i.e., uptake rates), total and by referral source

Engagement, Retention, and Completion: Engagement, retention, and completion rates serve as measures of program success and will be descriptively analyzed to document trends in:

- Number of topics completed, total and average per family
- Frequency of topic completion, by topic type
- Frequency of client support provision for referrals and problem-solving
- Time in weeks to topic completion, by topic type and for full program
- Frequency of families completing none, one, two, and three topics

End-of-Topic Learning Outcomes: To measure change in parental competency in the areas of home safety, child health, and positive parent-child/parent-infant interaction, a repeated-measures design (Hays, 1994) will be used. Specifically, baseline (pre-test) and follow-up (post-test) assessments will be analyzed, corresponding to the SafeCare® curriculum progression of Session 1: baseline assessment, Sessions 2 through 5: curriculum delivery, and Session 6: post-assessment. SCC internal assessments for each topic will be used in analysis, as follows:

- HAPI (Home Accident Prevention Inventory) Assessment, for the Safety topic
- SICC (Sick and Injured Child Checklist) Assessment, for the Health topic
- cPAT/iPAT (Child Planned Activities Training Checklist; Infant Planned Activities Training Checklist) Assessments, for the PCI/PII topic

4.4 Data Collection

CDHS/OEC maintains a database of all SCC participating families, called Salesforce. This database is used for programmatic purposes and data are entered by SafeCare Parent Support Providers (PSPs) in delivering services to families as part of their regular work duties. All data required for the descriptive evaluation are housed in Salesforce. CSU will periodically access these secondary data via a secure data download from the CDHS/OEC data analyst. Because the CSU evaluation team is accessing administrative data collected primarily for programmatic purposes and secondarily used for evaluation purposes, there is no primary data collection or participant time commitment for this portion of the evaluation.

4.5 Data Analysis

Three overarching analytical approaches will be used. First, in keeping with the descriptive nature of this evaluation component, primary analyses will consist of basic frequencies, measures of central tendency, measures of variability, and confidence intervals (CIs), as applicable. Using repeated-measures t-tests, pre-/post-assessments will be analyzed for statistically significant gains in participant knowledge/skills from baseline to follow-up, per measure. Second, exploratory logistic regression models will be applied to identify any significant predictors of program enrollment, retention, and completion. Third, in commitment to equity impact efforts in prevention science and practice, sub-group analyses by race and ethnicity, primary caregiver age, and family socioeconomic status will be conducted.

For all analyses, the analytical sample will be limited to those exposed to the given variable (e.g., calculation of program completion rates will be limited to those who had at least an intake, excluding those referred to the program, but who declined participation). Actual denominators will be reported throughout (i.e., less missing data). All analyses will be conducted using appropriate statistical software (e.g., RStudio).

4.6 Anticipated Challenges

The descriptive evaluation builds off the well-established methods and analytical techniques refined over the past seven years of SCC evaluation. As such, minimal new challenges are anticipated. Previous documented challenges have primarily involved a high percentage of missing data for certain variables (e.g., demographics) as well as anomalies in data downloads received. Proactive redressing of these anticipated challenges will include receipt, review, and corrections via interim data downloads (as part of ongoing quality assurance processes); proposal of new required variables in Salesforce; and continuous technical assistance provided to SCC sites for best practices in evaluation.

4.7 Project Timeline

SFY 2021: Descriptive Evaluation Project Timeline

Task/Activity	Period of Performance (SFY 2021)											
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Task 1. – Data Collection												
Secure approval for descriptive evaluation plan from OEC leadership; make any adjustments required; amend IRB if necessary	—	—	—									
Review Salesforce with SCC Program Administrator; document required and optional variables			X									
Initiate any changes to required variables with Salesforce team			X									
Issue guidance and technical assistance to PSPs on data collection, via written protocol and during SCC Evaluation Kick-Off Meeting				X								
Ongoing program data collection by PSPs, entered into Salesforce	—	—	—	—	—	—	—	—	—	—	—	—
Provide ongoing technical assistance and onboarding to sites	—	—	—	—	—	—	—	—	—	—	—	—
Task 2. – Data Analysis												
Receive interim data download on SFY 2019 and 2020 SCC cohorts		X										
Initiate data cleaning, merging, and management processes			X									
Conduct preliminary analysis of data to identify any underling issues that need to be addressed with OEC data analysts				X								
Work with OEC data analysts to correct data issues identified					—	—						
Receive updated data download on SFY 2019 and SFY 2020 SCC cohorts for final analysis							X					
Conduct final analyses of data for reporting								—	—			
Task 3. – Reporting and Dissemination												
Prepare SFY 2021 evaluation report for submission to CDHS/OEC										—	—	—
Submit SFY 2021 evaluation report to CDHS/OEC on June 30, 2021												▲
Engage ongoing dissemination of results through presentations, webinars, workshops, publications, and related means	—	—	—	—	—	—	—	—	—	—	—	—

SFY 2022: Descriptive Evaluation Project Timeline

Task/Activity	Period of Performance (SFY 2022)											
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Task 1. – Data Collection												
Make any adjustments required to descriptive evaluation plan, as informed by SFY 2019 and 2020 cohort analyses and other practice or evaluation emergent needs; amend IRB if necessary	▬	▬	▬									
Review Salesforce with SCC Program Administrator; document any changes to required and optional variables			X									
Initiate any new changes to required variables with Salesforce team			X									
Issue guidance to PSPs on data collection, via written protocol and during SCC Evaluation Kick-Off Meeting				X								
Ongoing program data collection by PSPs, entered into Salesforce	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬
Provide ongoing technical assistance and onboarding to sites	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬
Task 2. – Data Analysis												
Receive interim data download on SFY 2021 cohort		X										
Initiate data cleaning, merging, and management processes			X									
Conduct preliminary analysis of data to identify any underling issues that need to be addressed with OEC data analysts				X								
Work with OEC data analysts to correct data issues identified					▬	▬						
Receive updated data download on SFY 2021 SCC cohort for final analysis							X					
Conduct final analyses of data for reporting								▬	▬			
Task 3. – Reporting and Dissemination												
Prepare SFY 2022 evaluation report for submission to CDHS/OEC										▬	▬	▬
Submit SFY 2022 evaluation report to CDHS/OEC on June 30, 2022												▲
Engage ongoing dissemination of results through presentations, webinars, workshops, publications, and related means	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬

5. Well-Being Feasibility Study

The well-being feasibility study utilizes a single-group pretest-posttest design that will inform the development of the difference-in-difference QED (described in section 6). This feasibility study will test the use of four instruments that assess outcomes in four broad domains: child well-being, adult well-being, parenting practices, and protective factors. These four instruments will be compiled into a single Qualtrics assessment, herein referred to as the Well-Being Assessment. The treatment group feasibility study will be implemented in Q3 of SFY22 and the comparison group feasibility study will be implemented in Q1 of SFY23.

5.1 Research Questions

Three primary research questions guide the well-being feasibility study:

1. Do the four selected instruments that make up the Well-Being Assessment align with the SafeCare curriculum?
2. Do the four selected instruments that make up the Well-Being Assessment show significant change over time?
    a. Are there significant changes in parental/caregiver stress, protective factors, child well-being, and parenting practices before and after the completion of the SCC curriculum?
    b. Is there a dosage effect?
    c. Are observed changes (if any) sustained at 6-months following end of treatment?
3. How feasible are the study procedures for the family participants and PSPs?
    a. Are SCC families in the treatment and comparison groups willing to take the Well-Being Assessment?
    b. How do study procedures fit into PSPs existing workflow?

5.2 Participant Population

The participant population for the treatment group well-being feasibility study will be comprised of SCC participating families. Starting on February 21, 2022, all families who enroll in SCC will be asked to participate in the study, following the outlined protocol for study eligibility and enrollment, as specified in the Study Design section (5.3, below).

The participant population for the comparison group well-being feasibility study will be comprised of families that meet the study eligibility criteria but do not receive the SafeCare intervention.

5.3 Study Design

A single-group pretest-posttest design will be used for the treatment group well-being feasibility study. The intervention group (i.e., families receiving SCC services) will be administered four validated measures (see Data Collection section, 5.4, for details) at baseline (i.e., intervention start), corresponding to the four outcome domains of focus. The intervention group will then participate in the SCC program, following standard implementation procedures. Upon completion of each SafeCare topic, the Well-Being Assessment will be re-administered.

Following program completion, the intervention group will be re-administered the same four measures as an initial post-assessment. They will then be re-administered the four measures at the 6-month follow-up mark, in order to examine sustained effects of SCC overtime. Participant study engagement is anticipated to last a total of 12 months, with two weeks dedicated to enrollment and collection of baseline data, 24 weeks dedicated to program involvement, two weeks dedicated to initial post-assessment data collection, and 6-months (26 weeks) dedicated to sustained follow-up.

A single-group pretest only design will be used for the comparison group well-being feasibility study. The comparison group (i.e., families not receiving SCC services) will be administered four validated measures (see Data Collection section, 5.4, for details) at baseline only. The intent is to assess the viability of engaging non-participating families in the well-being assessment procedure.

An overview of study eligibility, enrollment, and matching procedures for construction of the intervention group is provided below.

Eligibility Criteria: Eligibility criteria for study participation mirrors SCC program eligibility, as follows:

- ✓ Participant resides in Colorado
- ✓ Participant has at least one child between 0 and 5 years of age
- ✓ Participant does not have an open court-involved child welfare case
- ✓ Participant meets at least three of the following criteria:
    - Family characteristics: child with special needs, housing issues (e.g., instability, hazardous), multiple children $\leq$5 years of age, public assistance recipient (e.g., TANF, WIC), single parent, stepfather or unrelated male caregiver in the home
    - Caregiver characteristics: any prior report or involvement with child welfare, childhood experience of abuse/neglect, developmental delay, less than high school education, mental health issue, substance use issue, violence in the home, young caregiver age <20

Given the significant percentage of primary language Spanish-speaking families (14%) and Latinx families (27.5%) in the SCC program, this feasibility study is designed for inclusiveness of

both English and Spanish speaking participants. All study materials will be translated into Spanish by qualified translators. As such, an additional eligibility criterion is the participant must be able to adequately read/write/speak in English or Spanish.

Enrollment & Consent Procedures: Study recruitment and enrollment for the treatment group well-being feasibility study will occur on a rolling basis starting February 2022. Enrollment procedures are as follows:

SCC is currently implemented at 14 sites across Colorado. All eligible families who receive an intake and formally enroll in the program starting February 21, 2022 will be allocated to the intervention group. Because study eligibility criteria match program eligibility requirements, SCC sites will be responsible for screening participant families for study eligibility using standard practice protocols. If eligibility is met, during the SCC program intake session, PSPs will use a script and study one-pager to review study activities with the family. If the family verbally agrees to participate, the Well-Being Assessment will be electronically administered via the CSU Qualtrics platform. Collection of the caregiver's full name, date of birth, and county at the start of the assessment will ensure data from varying collection sources can be accurately linked throughout the study timeframe. All socio-demographic variables required for the study are standardized for collection[14] during program intake, allowing baseline participant characteristic data to be efficiently obtained. The entire study-specific consent and data collection process is anticipated to last 30 to 45 minutes.

Study recruitment and enrollment for the comparison group well-being feasibility study will occur on a rolling basis starting in Q1 of SFY23. Comparison group families will be identified through a data extract from Trails. A random sample of identified families will be contacted by the evaluation team and offered the opportunity to participate in the study by completing the well-being assessment. If the family verbally agrees to participate, the Well-Being Assessment will be electronically administered via the CSU Qualtrics platform. Collection of the caregiver's full name, date of birth, and county at the start of the assessment will ensure data from varying collection sources can be accurately linked throughout the study timeframe.

5.4 Data Collection

Data collection for the well-being feasibility study will involve a combination of primary data collection and use of secondary data from the OEC database, Salesforce. Proposed measures and data collection procedures are summarized below.

[14] While all necessary variables are part of the program intake process, certain demographics are notoriously missing from the OEC database. As part of study capacity-building, PSPs will be trained on the required nature of study variables and the ability to mandate fields in Salesforce explored in collaboration with the SCC program administrator.

Proposed Outcome Measures: Four validated assessments with strong psychometric properties will be used that correspond to the four outcome domains of focus, as illustrated in Table 5.2. These measures were chosen from an extensive suite of available assessments based on the following criteria: (1) low burden assessment (i.e., minimal administration time, validated for parent self-report); (2) assessment constructs appropriately map to SCC curriculum content and impact goals; and (3) measure has been used in previous studies on SafeCare® or similar home visiting child maltreatment programs, with significant findings detected.

Parenting Stress Index-Short Form (PSI-SF): PSI-SF is a 36-item scale designed to measure stressors unique to the parent-child relationship (Abidin, 2012). This short form was drawn from the full PSI 120-item form using several exploratory factor analyses and measures stressors in three domains: Parental Distress (PD), Parent–Child Dysfunctional Interaction (PCDI), and Difficult Child (DC). Each sub-scale can be analyzed independently and the three sub-scales combine to create a total stress score. The PSI-SF takes 10 minutes to administer; is appropriate for caregivers of children ages 1 month to 12 years; is rated at a 5th grade comprehension level; and is available in both English and Spanish. Version 4 (proposed for this study) includes several enhancements, including improved cultural sensitivity of item language, increased internal consistency of scales, the addition of age-based norms at the domain and subscale level, enhanced factor loading of scale items, the addition of T scores to percentiles for enhanced interpretation, and a new normative sample that includes fathers (PAR, Inc., 2020). The tool has been validated in multiple populations, including high risk caregivers (Barroso et al., 2016) and racially diverse populations (Lee, Gopalan, & Harrington, 2016).

Parenting Young Children Scale (PYCS): The PYCS is a 21-item instrument designed to measure parenting behaviors (McEachern et al., 2012). The PYCS includes three sub-scales that assess parenting and childrearing behaviors in three constructs: Supporting Positive Behavior (Construct A); Setting Limits (Construct B); and Proactive Parenting (Construct C). This tool will be professionally translated from English to Spanish by a qualified cultural translator.

Devereux Early Childhood Assessment (DECA) Tools: The widely used DECA tools are based on resiliency research and utilize strength-based assessments to measure child socioemotional skills and competencies. Because child development is processual in nature and highly contingent upon age range, the DECA tools have several age-contingent versions validated for measuring socioemotional competence at the appropriate developmental stage, as follows: DECA for Infants (DECA-I, ages 0 to 18 months); DECA for Toddlers (DECA-T, ages 18 to 36 months); and DECA for Preschoolers, Second Edition (DECA-P2, ages 3 to 5 years). Each tool takes only 5 to 10 minutes to complete; is rated at a 6th grade comprehension level; ensures culturally appropriate item inclusion; and is available in both Spanish and English. The DECA-I is a 33-item instrument containing a total protective factors (TPF) score with two sub-scales

(Initiative, Attachment/Relationships). The DECA-T is a 36-item instrument containing a total protective factors (TPF) score with three sub-scales (Initiative, Self-Regulation, Attachment/ Relationships). The DECA-P2 is a 38-item instrument containing a total protective factors (TPF) score with three sub-scales (Initiative, Self-Regulation, Attachment/Relationships) as well as a Behavioral Concerns scale. For all assessments, raw scores, percentile ranks, and T-scores are provided with T-scores being used to categorize the child's developmental status as an area of need, typical, or strength. All assessments were validated in multiple populations with consideration for age, race, socioeconomic status, and gender (Devereux Foundation, 2007).

Protective Factors Survey (PFS): The PFS is a 20-item instrument designed to measure multiple protective factors for child maltreatment and family strengthening. The instrument includes five sub-scales correlating to five of the six[15] primary protective factor domains: Social Support, Concrete Support, Nurturing and Attachment, Family Functioning/Resiliency, and Knowledge of Parent & Child Development. The PFS takes 10 to 15 minutes to administer; is appropriate for caregivers of children (all ages) participating in child maltreatment or family support programs; is rated at a 5th grade comprehension reading level; and is available in both English and Spanish. The tool has been validated with a diverse sample and received a "B" assessment rating for psychometric properties by the California Evidence-Based Clearinghouse for Child Welfare (Counts, 2010).

Table 5.2: Proposed Outcome Measures

Assessment Measure	Psychometric Properties	Outcome Domain (this study)	Prevention Services Clearinghouse Target Outcome(s)
Parenting Stress Index-Short Form (PSI-SF)	Internal consistency[16]: Cronbach's α ranging from .88 to .92 for PSI-SF (total score), .87 to .89 for PD sub-scale, .80 to .88 for PCDI sub-scale, and .83 to .89 for DC sub-scale. Test-retest correlations after 6 months have ranged from .68 to .85.	Adult Well-Being	Parent/Caregiver Mental or Emotional Health (Adult Well-Being)

[15] The sixth protective factor domain is social-emotional competency of children. While this is not covered by the PFS, it is covered by the DECA tools to ensure holistic assessment of all protective factors against child maltreatment and as an asset-based approach to the SCC quasi-experimental study.
[16] Citations: Abidin, 1995; Lee et al., 2016; Reitman, Currier, & Stickle, 2002

Parenting Young Children Scale (PYCS)	Internal consistency[17]: Cronbach's α of .78 (Construct A); .79 (Construct B); .85 (Construct C).	Parenting Practices	Parenting Practices (Adult Well-Being)
Devereux Early Childhood Assessment for Infants (DECA-I)	Internal consistency[18]: Cronbach's α ranging from .90 to .94 for the TPF with parent raters Test-retest coefficients have ranged from .86 to .94 across all scales for parent raters	Child Well-Being	Behavioral and Emotional Functioning; Social Functioning; Cognitive Functions and Abilities (Child Well-Being)
Devereux Early Childhood Assessment for Toddlers (DECA-T)	Internal consistency[23]: Cronbach's α of .94 for the TPF with parent raters Test-retest coefficients have ranged from .92 to .99 for the TPF with parent raters	Child Well-Being	Behavioral and Emotional Functioning; Social Functioning; Cognitive Functions and Abilities (Child Well-Being)
Devereux Early Childhood Assessment for Preschoolers (DECA-P2)	Internal consistency[23]: Cronbach's α of .92 for the TPF and .80 for the Behavioral Concerns scale with parent raters Test-retest coefficients of .88 for TPF and .78 for Behavioral Concerns scale with parent raters	Child Well-Being	Behavioral and Emotional Functioning; Social Functioning; Cognitive Functions and Abilities (Child Well-Being)
Protective Factors Survey (PFS)	Internal consistency[19]: Cronbach's α of .89 (family functioning/resiliency), .89 (social support), .76 (concrete support), .81 (nurturing and attachment).	Protective Factors	Family Functioning (Adult Well-Being)

[17] Citations: McEachern et al., 2012
[18] Citations: LeBuffe & Naglieri, 2003a, 2003b, 2012a, 2012b; Mackrain, LeBuffe, & Powell, 2007a, 2007b
[19] Citations: Counts, 2010

	Note: the knowledge of parenting scale involves complex constructs that do not always correlate with one another; as such, no score is recommended to be calculated and means, standard deviations, and percentages at the individual item level used instead.		

Baseline Data Collection: Using the specified measures above, baseline data collection will occur during the intake session or within two weeks prior to beginning the SafeCare curriculum, as described below. A $15 gift card will be provided to participants who complete the baseline Well-Being Assessment.

PSPs will be enlisted to support data collection as part of regular work duties. The PSPs are well-versed in the use of assessments as part of their SafeCare training and certification and meet administration qualifications for each tool. The PSPs will administer the Well-Being Assessment to intervention group participants via video-conferencing or in-person[20] either during the intake session following study enrollment, between intake and SCC Session One as a dedicated visit, or at the start of SCC Session 1. Choices are given to support low burden administration, wherein PSPs can administer baseline assessments during the session that makes most sense for the unique family circumstances (for instance, if the intake session is going particularly long, the PSP may choose to delay administration of assessments to the first SCC session or during a second, interim dedicated visit). Administration of the Well-Being Assessment prior to the start of SCC Session 1 will ensure true baseline data are captured, before the intervention formally begins. The four assessments, taken collectively, are anticipated to take 25-30 minutes to administer[21], depending on individual family needs.

Online Interface: The Well-Being Assessment will be programmed into the CSU online platform, Qualtrics. All four measures will be securely accessed via a CSU supported study website. Each tool is validated to be self-administered (i.e., completed by the caregiver) or administered by

[20] The nature of COVID-19 has necessitated hybrid approaches to both service delivery and research. Following state and federal guidance for child welfare, early childhood, and other family-centered, home visitation programs, the CSU evaluation team will conduct study activities using both in-person and video-conference approaches. There is no evidence that these differential interfaces for administration of assessments would impact study outcomes and, thus, both administration routes are considered equivalent.

[21] Time to complete each assessment is anticipated to be slightly reduced from the average stated by developers of each tool because each tool contains demographic questions that will not be repeated for each assessment, having been already collected as part of program and study enrollment.

having a qualified provider/researcher read the questions aloud, the caregiver answers verbally, and the provider/researcher records their response.

Post-Topic Data Collection: PSPs will re-administer the Well-Being Assessment to caregivers upon completion of each SafeCare topic to look at potential dosage effects. The Well-Being Assessment may be offered during the last session (Session 6) of a SafeCare topic, at a separate visit, or during the first session of the next SafeCare topic, before the next topic's curriculum begins. PSPs will receive reminder emails automatically triggered through Salesforce to prepare them to re-administer the assessment after each topic. A $15 gift card will be provided to participants who complete post-topic data collection.

Initial Post-Assessment Data Collection: Initial post-assessment data collection will occur within a two-week period following SCC program completion. A $15 gift card will be provided to participants who complete post-assessment data collection.

The PSPs will re-administer the four assessments to intervention group participants via video-conference or in-person, either at the end of Session 6 (i.e., the final program visit) or via a dedicated visit occurring within two weeks of program completion. Choices are given to support low burden administration, wherein PSPs can re-administer assessments at a time that makes most sense for the unique family circumstances (for instance, if Session 6 is going particularly long, the PSP may choose to delay administration of assessments to a separate, dedicated visit). Re-administration of all four assessments within two weeks of program completion will ensure true post-test data are captured. The four assessments, taken collectively, are anticipated to take 25 to 30 minutes to re-administer, depending on individual family needs.

6-month Follow-up Assessment: Six months following initial post-assessment administration, all participants will be contacted by a team from RTI International to schedule a 6-month follow-up assessment, either in-person or via video-conference. The Well-Being Assessment will be re-administered at this time, within four weeks of the 6-month mark. The four assessments, taken collectively, are anticipated to take 25 to 30 minutes to re-administer, depending on individual family needs. A $15 gift card will be provided to participants who complete the 6-month follow-up assessment.

5.5 Data Analysis

Data analysis will involve several time points and components to reflect the longitudinal nature of this study that aims to document intermediate and sustained effects of the SCC program. Data from the following sources will be merged for analysis: (1) CSU database, Qualtrics; and (2) OEC database, Salesforce. Client demographics obtained from Salesforce will be descriptively analyzed. Pre/post inferential statistics will be run on the well-being domains.

5.6 Study Capacity-Building

To maximize study success, a dedicated seven-month period for study capacity-building will occur. The following capacity-building activities will be engaged from July 2021 through February 2022:

- Review and refinement of the proposed evaluation plan between CSU principal investigator and OEC leadership, with a focus on both design and instrumentation measures chosen
- Implementation of an automatically triggered Salesforce reminder email alerting PSPs that a caregiver is approaching the end of a topic and to re-administer the Well-Being Assessment
- Creation and testing of all necessary data collection and study coordination platforms
- Procurement and programming of all assessment measures (the PSI-SF and DECA require purchase of instrumentation and licenses to integrate into the CSU Qualtrics platform)
- Creation of a workgroup to co-create data collection procedures and materials as well as workshop training and onboarding materials and processes
- Onboarding SCC sites to the feasibility study at the Annual Grantee Meeting on September 23, 2021
- Training for all PSPs who will be assisting with data collection
- Development of an ongoing plan to provide support and technical assistance to PSPs and Site Supervisors

In September 2021, a SCC Evaluation Kick-Off Meeting[22] will occur (virtually due to COVID-19); this meeting will serve as a prime opportunity to unveil the feasibility study to all SCC sites, including directors, supervisors, and PSPs. This will be followed by a series of trainings for PSPs, conducted at the site level, on enrollment/intake/consent procedures and Well-Being Assessment administration.

The following personnel and software systems will be used as part of capacity-building efforts:

- Employ a BSW student worker who can process incentives and organize study materials
- Implement a spreadsheet system to track study activities and participants
- Create a study website using the LinkTree platform to serve as a one-stop-shop interface for recruitment scripts, a study one-pager, frequently asked questions, and data collection links

[22] Or series of meetings, to accommodate availability of multiple sites, to ensure robust discussion, and to scaffold learning and assessment(s) training

5.7 Anticipated Challenges

With the historically high rates of SCC program attrition, significant feasibility study attrition is expected. Every design element of this proposed well-being feasibility study has been carefully considered with regards to maximizing study success. For example, the use of participant incentives is a known strategy to improve study retention; and a robust capacity-building phase with training for PSPs on administration procedures will increase data integrity and design strength.

5.8 Project Timeline

SFY 2022: Well-Being Feasibility Study Project Timeline

Task/Activity	Period of Performance (SFY 2022)											
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Task 1. – Capacity-Building												
Onboard the new Project Manager and evaluation partners at RTI International to the SCC evaluation	—	—	—									
Receive RTI International's proposal to lead the outcome evaluation			X									
Unveil new study design at SCC Evaluation Kick-off Meeting			X									
Construct and implement evaluation workgroup comprised of the evaluation team, SCC Program Manager, representatives from Kempe, PSPs, Site Supervisors, and an SCC alum				—	—	—	—					
Procure all assessment measures and program into Qualtrics			—	—	—	—	—	—				
Create and test all necessary data collection (e.g., Qualtrics) and study coordination platforms (e.g., LinkTree, Excel)					—	—	—	—				
Train all PSPs staff on assessment administration							—	—				
Provision ongoing technical assistance and onboarding to all study personnel, PSPs, referral sites, and associated study collaborators	—	—	—	—	—	—	—	—	—	—	—	—
Task 2. – Recruitment & Enrollment												
Ongoing recruitment of intervention group participants via PSPs									—	—	—	—
Ongoing enrollment of intervention group participants by PSPs; intake sessions conducted									—	—	—	—
Task 3. – Data Collection												
Ongoing baseline data collection (Well-Being Assessment)									—	—	—	—
Initial post-topic data collection (Well-Being Assessment) with intervention group participants conducted by PSPs										—	—	—
Task 4. – Data Analysis												

Receive ongoing, interim data downloads from OEC database, assessment databases, and Qualtrics database; merge, clean, and prepare accordingly									—	—	—	—
Conduct preliminary analyses on Well-Being Assessment at baseline and after Topic 1 completion										—	—	—
Task 5. – Reporting and Dissemination												
Prepare SFY 2022 brief on well-being feasibility study for submission to CDHS/OEC										—	—	—
Submit SFY 2022 brief on well-being feasibility study to CDHS/OEC on June 30, 2022												▲
Engage ongoing dissemination of study activities and preliminary results through presentations, webinars, workshops, publications, and related means	—	—	—	—	—	—	—	—	—	—	—	—

6. Looking Ahead: Quasi-Experimental Study of SCC Effects on Child and Adult Well-being, Protective Factors, and Parenting Practices

The quasi-experimental study will rigorously evaluate the program's effectiveness at improving outcomes in four broad domains: child well-being, adult well-being, parenting practices, and protective factors. Intervention and comparison groups constructed for the quasi-experimental study will be enrolled in a future evaluation and followed for 12-months post-SCC completion.

6.1 Research Questions

Four primary research questions, with sub-questions, guide the quasi-experimental study:

1. What is the effect of SCC on child maltreatment protective factors?
    a. Are there significant differences in protective factors between families that receive SCC services and comparison families that receive TAU?
    b. Are observed differences (if any) sustained at 6-months and 12-months following end of treatment?
2. What is the effect of SCC on parental/caregiver stress?
    a. Are there significant differences in parental/caregiver stress between families that receive SCC services and comparison families that receive TAU?
    b. Are observed differences (if any) sustained at 6-months and 12-months following end of treatment?
3. What is the effect of SCC on child developmental well-being and school readiness?
    a. Are there significant differences in child developmental well-being and school readiness between families that receive SCC services and comparison families that receive TAU?
    b. Are observed differences (if any) sustained at 6-months and 12-months following end of treatment?
4. What is the effect of SCC on negative and positive parenting practices?
    a. Are there significant differences in parenting practices between families that receive SCC services and comparison families that receive TAU?
    b. Are observed differences (if any) sustained at 6-months and 12-months following end of treatment?

6.2 Participant Population

The participant population for the quasi-experimental study will be comprised of an intervention and comparison[23] group. The intervention group will be constructed from SCC

[23] The term "comparison" group is used to reflect the quasi-experimental nature of the study design, in contrast to the term "control" group that is generally reserved for experimental designs (i.e., Randomized Controlled Trials).

participating families and a matched comparison group will be constructed from otherwise eligible (i.e., meet SCC eligibility criteria as displayed below) non-SCC families identified in the Trails and Salesforce databases. Construction of groups will occur over a fifteen-month time period, following the outlined protocol for study eligibility, enrollment, and matching, as specified in the Study Design section (6.3, below). The final analytical sample size is targeted at n = 200, split roughly evenly between intervention and comparison groups. At onset, n = 125 participants will be recruited for the intervention group and n = 175 will be recruited for the comparison group, to allow for the probability of higher attrition among comparison group participants. A final analytical sample size of n = 200 is anticipated based on use of a complete case analysis approach during impact estimates (see Section 6.5, Data Analysis, for details).

6.3 Study Design

A pretest-posttest nonequivalent groups design (Rubin & Babbie, 2017) will be used for this quasi-experimental study. The intervention group (i.e., families receiving SCC services) will be administered four validated measures (see Data Collection section, 5.4, for details) at baseline (i.e., intervention start), corresponding to the four outcome domains of focus. A matched comparison group will be administered the same four validated measures during a similar baseline time period. The intervention group will then participate in the SCC program, following standard implementation procedures, while the comparison group will only receive treatment as usual (TAU). TAU will consist of the usual or typical services available to the comparison group, via their connection with referral partners and in reflection of Colorado's standard service continuum for children, youth, and families.

Following program completion, the intervention group will be re-administered the same four measures as an initial post-assessment. The comparison group will also be re-administered the same four measures after an equivalent lapsed time period of approximately 24 weeks (based on historical median time to full program completion for SCC families). Both groups will then be re-administered the four measures two more times following the initial post-assessment, at the 6-month and 12-month follow-up mark, in order to examine sustained effects of SCC overtime. Participant study engagement is anticipated to last a total of 19 months, with two weeks dedicated to enrollment and collection of baseline data, 24 weeks dedicated to program involvement (intervention group) or equivalent time lapse (comparison group), two weeks dedicated to initial post-assessment data collection, and 12-months (52 weeks) dedicated to sustained follow-up.

An overview of study eligibility, enrollment, and matching procedures for construction of the intervention and comparison groups is provided below. Design decisions for this pretest-posttest nonequivalent groups study closely follow Prevention Services Clearinghouse and What

Works Clearinghouse (WWC) guidance for rigorous evaluations using quasi-experimental designs (QED), alongside standard methodological practices.

Eligibility Criteria: Eligibility criteria for study participation mirrors SCC program eligibility and is applied consistently to both the treatment and comparison group, as follows:

- ✓ Participant resides in Colorado
- ✓ Participant has at least one child between 0 and 5 years of age
- ✓ Participant does not have an open court-involved child welfare case
- ✓ Participant meets at least three of the following criteria:
    - Family characteristics: child with special needs, housing issues (e.g., instability, hazardous), multiple children ≤5 years of age, public assistance recipient (e.g., TANF, WIC), single parent, stepfather or unrelated male caregiver in the home
    - Caregiver characteristics: any prior report or involvement with child welfare, childhood experience of abuse/neglect, developmental delay, less than high school education, mental health issue, substance use issue, violence in the home, young caregiver age <20

Given the significant percentage of primary language Spanish-speaking families (14%) and Latinx families (27.5%) in the SCC program, this quasi-experimental study is designed for inclusiveness of both English and Spanish speaking participants. All study materials will be translated into Spanish by qualified translators and the four chosen validated assessments are already available in both English and Spanish. As such, an additional eligibility criterion is the participant must be able to adequately read/write/speak in English or Spanish.

Exclusion Criteria: for those assigned to the comparison group, two additional exclusion criteria apply: (1) they cannot have actively refused to participate in SCC after a referral; and (2) they cannot participate in SCC at any time during the 19-month total time period (from enrollment through 12-month follow-up).[24]

Enrollment & Consent Procedures: To ensure an adequate analytical sample size with an appropriately matched comparison group, study recruitment and enrollment will occur over a fifteen-month period. Enrollment procedures for the intervention and comparison groups, respectively, are as follows:

Intervention group: SCC is currently implemented at 13 sites across Colorado. All eligible families who receive an intake and formally enroll in the program during a specified timeframe will be allocated to the intervention group. Because study eligibility criteria match program eligibility

[24] Following study completion, comparison group families are eligible to participate in the SCC program. Should they choose to participate in SCC prior to study close, they will be excluded from analysis. The research activity, in-and-of-itself, is not a reason to deny services.

requirements, SCC sites will be responsible for screening participant families for study eligibility using standard practice protocols. If eligibility is met, during the SCC program intake session, PSPs will use the IRB approved procedures and materials to review study activities, obtain verbal consent for participation, and enroll the participant in the study via a study enrollment form. The study enrollment form will be electronically administered[25] via the CSU Qualtrics platform and include date of enrollment, participant (caregiver) name, SCC target child name, phone number, email, preferred contact method, SCC program code (provided by the PSP), a CSU-assigned participant ID code for longitudinal study tracking, and documentation of participant verbal consent. Collection of both the SCC program code and participant ID code will ensure data from varying collection sources can be accurately linked throughout the study timeframe. The electronically received enrollment form will be stored in a secure electronic file by the CSU evaluation team, separate from other data collection materials. One master file will link the participant ID code with the enrollment form that contains personally identifiable information. Following study enrollment, the PSPs will conduct the standard program intake session. All socio-demographic variables required for the study are standardized for collection[26] during program intake, allowing baseline participant characteristic data to be efficiently obtained. The entire study-specific consent and enrollment process is anticipated to last 15 to 30 minutes. SCC program standard intakes on average last 45 minutes to one hour (for a total time commitment of 1 hour to 1.5 hours).

Comparison group: Evaluation team staff will reach out to a random sample of eligible non-SCC families during the enrollment period using a recruitment script and follow-up emails, text messages, and phone calls. Recruitment calls, messages, and emails will include contact information to learn more about the study. If a participant meets eligibility, evaluation team staff will contact the potential participant to initiate the consent and enrollment process.[27] During this study intake session, evaluation team staff will use the IRB approved procedures and materials to verify eligibility criteria are met, review study activities, obtain verbal consent for participation, and enroll the participant in the study via a study enrollment form. The study enrollment form will be electronically administered via the CSU Qualtrics platform and include date of enrollment, participant (caregiver) name, name of the oldest child in the home under 5 years of age, phone number, email, preferred contact method, a CSU-assigned participant ID code for longitudinal study tracking, and documentation of participant verbal consent. The enrollment form will be stored in a secure electronic file by the evaluation team, separate from other data collection materials. One master file will link the participant ID code with the

[25] A paper copy of the form will be provided as well, in cases where electronic systems are not accessible during the intake session. In this case, PSPs will be asked to enter the information electronically following the visit.
[26] While all necessary variables are part of the program intake process, certain demographics are notoriously missing from the OEC database. As part of study capacity-building, PSPs will be trained on the required nature of study variables and the ability to mandate fields in Salesforce explored in collaboration with the SCC program administrator.
[27] The enrollment process will be done via phone or video-conference.

enrollment form that contains personally identifiable information. Following study enrollment, evaluation team staff will conduct the study intake session, which will mirror collection of the same required socio-demographic variables and characteristics obtained during SCC program intake, allowing baseline participant characteristic data to be equivalently collected. The entire study enrollment, consent, and intake session for the comparison group is anticipated to last 30 to 45 minutes.

Matching Approach: To improve the internal validity of the nonequivalent comparison groups design (i.e., increase comparison group similarity), prospective cohort sampling will be used (Wertz et al., 2012). Specifically, a snapshot of enrolled participants will be taken near the end of the three-month enrollment period and participants in the two groups matched on key socio-demographics and characteristics that are known correlates to child maltreatment and parent-child dyad completion of SCC. Propensity score matching (PSM) will be used (Rosenbaum & Rubin, 1983; Stuart, 2010) to enact prospective cohort sampling. Briefly, PSM is a matching technique to address an ever-present "what if" scenario when evaluating the efficacy of interventions: that is, what would have happened to these same families in the absence of the SCC program? PSM thus relies on matching intervention and comparison group participants via key characteristics anticipated to highly influence the desired outcomes. Nineteen variables are preliminarily proposed for matching, as illustrated in Table 5.1

Table 5.1: PSM Proposed Variables

Socio-demographic Characteristics		**Baseline Assessment Scores[28]**
County	Caregiver abused as child	PSI-SF
Child year of birth	Any caregiver substance use	PYCS
Caregiver year of birth (current age)	Domestic or interpersonal violence	DECA
Child race and ethnicity	Prior child welfare involvement	PFS
Number of children in household	Recent receipt of SNAP (3 years)	

[28] See Data Collection section, 5.4, for details on these measures

Caregiver age at birth of first child	Recent receipt of TANF (3 years)	
Caregiver race and ethnicity	Recent receipt of Medicaid (3 years)	

The resultant matches will create a longitudinal cohort moving forward. If an appropriately matched comparison group fails to be constructed based on PSM results, the enrollment period will be extended until an adequately matched comparison group is constructed.

6.4 Data Collection

Data collection for the quasi-experimental study will involve a combination of primary data collection and use of secondary data from the Colorado Department of Early Childhood (DEC) database, Salesforce. Proposed measures and data collection procedures are summarized below.

Proposed Outcome Measures: Four validated assessments with strong psychometric properties will be used that correspond to the four outcome domains of focus, as illustrated above in Table 5.2. These measures were chosen from an extensive suite of available assessments based on the following criteria: (1) low burden assessment (i.e., minimal administration time, validated for parent self-report); (2) assessment constructs appropriately map to SCC curriculum content and impact goals; (3) measure has been used in previous studies on SafeCare® or similar home visiting child maltreatment programs, with significant findings detected; (4) the tool is available in both English and Spanish; (5) there is evidence of cultural sensitivity and appropriateness for diverse caregivers; (6) the tool is validated for children ages 0 through 5; and (7) the tool is useful as both a research and practice tool. Collectively, the four measures chosen for the quasi-experimental study will facilitate holistic evaluation of SCC as a comprehensive child maltreatment prevention and family strengthening program, meeting the priority goals of DEC practice partners, SCC stakeholders, and the prevention sciences and practice field. Descriptions of each tool can be found in the Data Collection section (5.3 above).

Baseline Data Collection: Using the specified measures above, baseline data collection will occur within a two-week period following study enrollment, for both the intervention and comparison groups, as described below. A $15 gift card[29] will be provided to participants who complete all baseline assessments.

[29] As currently proposed, the treatment and comparison groups will receive equal amounts for participant incentives at each data collection (i.e., assessment administration) point. In finalizing the evaluation plan with DEC partners, we will consider a differential, context-bound participant incentive structure, wherein the comparison group may receive a slightly higher amount than the treatment group to account for recruitment and retention challenges.

Intervention Group: PSPs will be enlisted to support data collection as part of regular work duties. The PSPs are well-versed in the use of assessments as part of their SafeCare training and certification and meet administration qualifications for each tool.[30] The PSPs will administer the four assessments to intervention group participants via video-conferencing or in-person[31] either during the intake session following study enrollment, between intake and SCC Session One as a dedicated visit, or at the start of SCC Session 1. Choices are given to support low burden administration, wherein PSPs can administer baseline assessments during the session that makes most sense for the unique family circumstances (for instance, if the intake session is going particularly long, the PSP may choose to delay administration of assessments to the first SCC session or during a second, interim dedicated visit). Administration of all four assessments prior to the start of SCC Session 1 will ensure true baseline data are captured, before the intervention formally begins. The four assessments, taken collectively, are anticipated to take 25-30 minutes to administer[32], depending on individual family needs. If administered during the intake session, baseline data collection may extend the intake session to 1.5. Similarly, if administered during SCC Session 1, baseline data collection may extend the first session to 1.5 hours(with an average SCC session lasting around 60 to 90 minutes).

Comparison Group: For the comparison group, participants will be required to complete all four assessments within two weeks of study enrollment, to mirror the average lapsed time between intake and first program session of the intervention group. Trained, qualified evaluation team staff from the evaluation team will be responsible for administering the assessments to comparison group participants via an in-person or video-conference session. Administration will occur during the study intake session or at a separate, dedicated administration time within two weeks of enrollment. Administration of all four assessments in a time frame comparable to that of the comparison group will ensure equivalency in baseline data collection between the groups. The four assessments, taken collectively, are anticipated to take 25 to 30 minutes to administer, depending on individual family needs. If administered during the study intake session, baseline data collection may extend the intake session to 1 hour.

Online Interface: All assessments will be programmed into the CSU online platform, Qualtrics, and administered electronically. All four measures will be securely accessed via a CSU supported study website. Each tool is validated to be self-administered (i.e., completed by the

[30] Both PSPs and evaluation team staff will be trained in assessment administration to ensure equivalency in data collection by collector type and integrity of resultant outcomes.
[31] The nature of COVID-19 has necessitated hybrid approaches to both service delivery and research. Following state and federal guidance for child welfare, early childhood, and other family-centered, home visitation programs, the CSU evaluation team will conduct study activities using both in-person and video-conference approaches. There is no evidence that these differential interfaces for administration of assessments would impact study outcomes and, thus, both administration routes are considered equivalent.
[32] Time to complete each assessment is anticipated to be slightly reduced from the average stated by developers of each tool because each tool contains demographic questions that will not be repeated for each assessment, having been already collected as part of program and study enrollment.

caregiver) or administered by having a qualified provider/researcher read the questions aloud, the caregiver answers verbally, and the provider/researcher records their response.

Initial Post-Assessment Data Collection: Initial post-assessment data collection will occur within a two-week period following SCC program completion, for the intervention group, and within two weeks of a 24-week lapse period since study enrollment, for the comparison group, as described below. A $15 gift card will be provided to participants who complete post-assessment data collection.

Intervention Group: The PSPs will re-administer the four assessments to intervention group participants via video-conference or in-person, either at the end of Session 6 (i.e., the final program visit) or via a dedicated visit occurring within two weeks of program completion. Choices are given to support low burden administration, wherein PSPs can re-administer assessments at a time that makes most sense for the unique family circumstances (for instance, if Session 6 is going particularly long, the PSP may choose to delay administration of assessments to a separate, dedicated visit). Re-administration of all four assessments within two weeks of program completion will ensure true post-test data are captured. The four assessments, taken collectively, are anticipated to take 25 to 30 minutes to re-administer, depending on individual family needs. If re-administered during SCC Session 6, post-assessment data collection may extend the final session to 1.5 hours (with an average SCC session lasting around 60 to 90 minutes).

Comparison Group: For the comparison group, re-administration of the four assessments will occur within two weeks following a 24-week lapse period since study enrollment. A 24-week lapse period was chosen to mirror the amount of time intervention group participants are receiving the intervention. Re-administration of all four assessments in a time frame comparable to that of the comparison group will ensure equivalency in post-assessment data collection between the groups. Evaluation team staff will be responsible for re-administering the assessments to comparison group participants via an in-person or video-conference session. At the time of re-administration, the participant will also be asked a screening question around SCC participation, to verify eligibility criteria are still met, namely: has the participant enrolled in SCC since study enrollment? If cross-over has occurred, the participant will be excluded from analysis.[33] The four assessments, taken collectively, are anticipated to take 30 to 45 minutes to re-administer, depending on individual family needs.

6-month Follow-up Assessment: Six months following initial post-assessment administration, all participants will be contacted by the evaluation team to schedule a 6-month follow-up

[33] Presuming a complete case analysis approach; if an intent-to-treat comparison is used instead, the participant would be analyzed by their original comparison group assignment. Please see the Data Analysis section (5.5) for details.

assessment, either in-person or via video-conference. All four measures will be re-administered at this time, within four weeks of the 6-month mark. For comparison group participants, the screening question on SCC participation will once again be asked, to verify ongoing eligibility. If cross-over has occurred, the participant will be excluded from analysis.[27] The four assessments, taken collectively, are anticipated to take 25 to 30 minutes to re-administer, depending on individual family needs. A $15 gift card will be provided to participants who complete the 6-month follow-up assessment.

12-month Follow-up Assessment: Twelve months following initial post-assessment administration, all participants will be contacted by the evaluation team to schedule a 12-month follow-up assessment, either in-person or via video-conference. All four measures will be re-administered at this time, within four weeks of the 12-month mark. For comparison group participants, the screening question on SCC participation will once again be asked, to verify ongoing eligibility. If cross-over has occurred, the participant will be excluded from analysis.[27] The four assessments, taken collectively, are anticipated to take 25 to 30 minutes to re-administer, depending on individual family needs. A $15 gift card will be provided to participants who complete the 12-month follow-up assessment.

6.5 Data Analysis

Data analysis will involve several time points and components, as follows, to reflect the longitudinal nature of this study that aims to document intermediate and sustained effects of the SCC program. Data from the following sources will be merged for analysis: (1) CSU database, Qualtrics; and (2) DEC database, Salesforce.

Following the initial PSM analysis and construction of the appropriately matched comparison group, pre-test results of all four assessments will be preliminarily analyzed for the matched sample. Once the entire matched sample has also completed the initial post-assessment, baseline equivalence on the following variables will be determined: race and ethnicity of primary caregiver, child age, socioeconomic status of family, and all pre-test results for the four assessments. The What Works Clearinghouse and Prevention Services Clearinghouse standards for baseline equivalence will be applied to determine if statistical adjustments are needed when calculating impact estimates, wherein if baseline effect sizes are <0.05 standard deviation units, no adjustment is required; if between 0.05 and 0.25, baseline variables will be controlled for in impact analyses; and if >0.25, baseline equivalence will be deemed as not achieved. While an initial PSM analysis done as part of prospective cohort sampling does not guarantee baseline equivalence (and cannot be used as a substitute for baseline equivalence), the integration of an initial PSM analysis to construct the matched sample does improve the probability that baseline equivalence will be demonstrated. If adjustments are required because baseline effect sizes fall between 0.05 and 0.25 standard deviation units, then one of the following methods will be

used to control for pre-test differences, dependent on the underlying structure of the final dataset: regression models, gain score models, or difference-in-difference models. Following application of any covariate adjustments necessary, effect sizes for all four measures (both total and sub-scales) will be calculated and recorded as Hedges' *g* accompanied by sampling variance and statistical significance. To promote translation in findings, the effect size will be converted into percentile units (or implied percentile effect).

6-month and 12-month follow-up outcomes will be analyzed following the same procedures, as delineated above, wherein baseline equivalence will first be established, covariate adjustments applied as necessary, and effect sizes on outcomes calculated. Because attrition is anticipated to occur given the longitudinal nature of this study, a complete case analysis approach will be used, wherein observations with missing data are excluded from the analysis and baseline equivalence established on the exact analytic sample as the impact analysis, for all time points (i.e., initial post-assessment outcomes, 6-month follow-up outcomes, and 12-month follow-up outcomes). Alternatively, an intent-to-treat (ITT) analysis may be used. An ITT analysis would analyze participants in the study based on their original assignment to treatment or comparison condition, whether or not they completed the intervention or if they switched conditions. This would mean comparison group families who enroll in SCC during the study period, for instance, would still be analyzed as if they are receiving TAU and, inversely, SCC participants who attrition out of SCC would still be analyzed as part of the intervention group. ITTs are an acceptable approach to accounting for attrition and have the added benefit of increasing the total analytical sample available for analysis; the limitation is that ITTs can underestimate the impact of the treatment on families. Decision on the final analytical approach employed will be made once the evaluation plan is finalized and a picture of the sample available for analysis emerges.

Finally, in commitment to equity impact efforts in prevention practice, sub-group analyses, using procedures specified above, by race and ethnicity, primary caregiver age, and family socioeconomic status will be conducted ongoing, as sample sizes allow.

All analyses will be done using appropriate statistical software (e.g., RStudio). Fidelity scores from the Kempe Center will also be obtained for the study period and documented during study reporting as part of interpretation of impact estimates.

6.6 Study Capacity-Building

To maximize study feasibility and ultimate success, a dedicated one-month period for study capacity-building—alongside ongoing study implementation supports—will occur. The following capacity-building activities will be engaged:

- Review and refinement of the proposed evaluation plan between CSU principal investigators and DEC leadership, with a focus on both design and instrumentation measures chosen
- Refining the study website and Qualtrics form based on lessons-learned from the feasibility study
- Training for all PSPs who will be assisting with data collection and for all evaluation team staff who will be administering assessments

6.7 Anticipated Challenges

QEDs that are longitudinal in nature and that rely on primary data collection are notoriously challenging, particularly around participants being lost to follow-up, difficulties in constructing appropriate comparison groups, and the intensity of data collection required. Every design element of this proposed quasi-experimental study has been carefully considered with regards to maximizing feasibility and study success. For example, the use of participant incentives is a known strategy to improve study retention; use of spreadsheets and data dashboards for participant tracking will bolster timely, equivalent data collection; a robust capacity-building phase with training for PSPs and researchers on administration procedures will increase data integrity and design strength; and integration of dedicated evaluation team staff and student interns/workers will distribute the study implementation load in a balanced manner overtime.

Even with these safeguards in place, should the nonequivalent comparison groups design become unfeasible for any reason—due to lack of adequate study enrollment, inability to establish an appropriately matched comparison group, unacceptably high attrition, external landscape changes, or other shifting priorities of practice partners—then a single-group interrupted time series design (Handley, Lyles, McCulloch, & Cattamanchi, 2018) with a larger SCC cohort will be applied instead (eliminating the comparison group entirely). An interrupted time series—a form of quasi-experimental designs—involves the collection of outcome data at several points before and after an intervention is introduced. The pre-intervention outcome data are used to establish an underlying trend, wherein the assumption is that the trend will continue unchanged in the absence of the intervention (i.e., the counterfactual scenario). Any change in outcome trends from the counterfactual scenario in the post-intervention period is then attributed as an intervention impact.

Should this pivot become necessary, a revised evaluation plan detailing methodology for the interrupted time series design will be drafted and submitted to DEC for approval. It is important to be transparent about the consequences of this pivot for building the evidence-base of SafeCare® in relationship to Prevention Services Clearinghouse requirements, namely: interrupted time series design, though a quasi-experimental design form, will not meet Clearinghouse standards for study design and subsequent inclusion in the Clearinghouse, as

there is no comparison group. Inversely, should the Clearinghouse re-review of SafeCare® and/or initial review of SC Augmented result in a practice designation of well-supported, a full nonequivalent comparison groups design using primary data collection may be deemed no longer necessary by practice partners and a pivot to an interrupted time series design chosen proactively.

6.8 Project Timeline

Well-Being Feasibility Study Year 2: SFY2023

Task/Activity	Period of Performance (SFY 2023)											
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Task 1. – Capacity-Building												
Provision of ongoing technical assistance and onboarding to all study personnel, PSPs, and associated study collaborators												
Work with DEC data analyst to obtain pool for comparison group participant recruitment												
Create and test a study enrollment form for comparison group participant enrollment												
Secure IRB approval for quasi-experimental design launching in SFY24												
Task 2. – Recruitment & Enrollment												
Ongoing recruitment of SCC participants by PSPs												
Ongoing enrollment of SCC participants by PSPs												
Ongoing recruitment of comparison group participants by evaluation team												
Ongoing enrollment of comparison group participants by evaluation team												
Task 3. – Data Collection												
Ongoing baseline data collection with SCC participants conducted by PSPs												
Initial post-assessment data collection (four measures) with intervention group participants conducted by PSPs												
Evaluation team conducts 6-month follow-up data collection with SCC participants												
Ongoing baseline data collection with comparison group participants conducted by evaluation team												
Initial post-assessment data collection with comparison group participants by evaluation team												
Task 4. – Data Analysis												

Receive ongoing, interim data downloads from DEC database, assessment databases, and Qualtrics database; merge, clean, and prepare accordingly												
Conduct preliminary analyses on pre-test and post-test measures												
Task 5. – Reporting and Dissemination												
Prepare evaluation brief on well-being feasibility study for submission to DEC												
Submit evaluation brief on well-being feasibility study to DEC												
Engage ongoing dissemination of study activities and preliminary results through presentations, webinars, workshops, publications, and related means												

Quasi-Experimental Study Year 1: SFY2024

Task/Activity	Period of Performance (SFY 2024)											
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Task 1. – Capacity-Building												
Provision of ongoing technical assistance and onboarding to all study personnel, PSPs, and associated study collaborators.												
Train PSPs on quasi-experimental study procedures												
Make required changes to the study website and Qualtrics assessment												
Task 2. – Recruitment & Enrollment												
Ongoing recruitment of intervention group participants by PSPs												
Ongoing recruitment of comparison group participants by evaluation team												
Ongoing enrollment of intervention group participants by PSPs; intake sessions conducted												
Ongoing enrollment of comparison group participants by evaluation team												
Task 3. – Data Collection												
Ongoing baseline data collection with intervention group participants conducted by PSPs												
Ongoing baseline data collection with comparison group participants conducted by evaluation team												
Initial post-assessment data collection with intervention group participants conducted by PSPs												
Initial post-assessment data collection with comparison group participants by evaluation team												
6-month follow-up assessment data collection with comparison and intervention group participants conducted by evaluation team												
Task 4. – Data Analysis												
Receive ongoing, interim data downloads from DEC database, assessment databases, and Qualtrics database; merge, clean, and prepare accordingly												

Conduct preliminary analyses on pre-test measures												
Conduct exploratory PSM analysis and examine potential comparison groups												
Task 5. – Reporting and Dissemination												
Prepare SFY2024 interim evaluation report on quasi-experimental study for submission to DEC												
Submit SFY2024 interim evaluation report on quasi-experimental study to DEC												▲
Engage ongoing dissemination of study activities and preliminary results through presentations, webinars, workshops, publications, and related means												

Quasi-Experimental Study Year 2: SFY2025

Task/Activity	Period of Performance (SFY 2025)											
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Task 1. – Capacity-Building												
Provision of ongoing technical assistance and onboarding to all study personnel, PSPs, and associated study collaborators.												
Task 2. – Data Collection												
Ongoing baseline data collection with intervention group participants conducted by PSPs												
Ongoing baseline data collection with comparison group participants conducted by evaluation team												
Initial post-assessment data collection with intervention group participants conducted by PSPs												
Initial post-assessment data collection with comparison group participants by evaluation team												
6-month follow-up assessment data collection with comparison and intervention group participants conducted by evaluation team												
12-month follow-up assessment data collection with comparison and intervention group participants conducted by evaluation team												
Task 3. – Data Analysis												
Receive ongoing, interim data downloads from DEC database, assessment databases, and Qualtrics database; merge, clean, and prepare accordingly												
Conduct baseline equivalence analyses and preliminary effect size analyses on initial post-assessment outcome measures and 6-month follow-up assessment outcome measures												
Task 4. – Reporting and Dissemination												
Prepare SFY2025 interim evaluation brief on quasi-experimental study for submission to DEC												
Submit SFY2025 interim evaluation brief on quasi-experimental study to DEC												▲

Engage ongoing dissemination of study activities and preliminary results through presentations, webinars, workshops, publications, and related means												

Quasi-Experimental Study Year 3: SFY2026

Task/Activity	Period of Performance (SFY 2026)											
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Task 1. – Capacity-Building												
Provision of ongoing technical assistance and onboarding to all study personnel, PSPs, and associated study collaborators.												
Task 2. – Data Collection												
6-month follow-up assessment data collection with comparison and intervention group participants conducted by evaluation team												
12-month follow-up assessment data collection with comparison and intervention group participants conducted by evaluation team												
Task 3. – Data Analysis												
Receive ongoing, interim data downloads from DEC database, assessment databases, and Qualtrics database; merge, clean, and prepare accordingly												
Conduct baseline equivalence analyses and preliminary effect size analyses on initial post-assessment outcome measures, 6-month follow-up assessment outcome measures, and 12-month follow-up assessment outcome measures												
Task 4. – Reporting and Dissemination												
Prepare SFY2026 evaluation report on quasi-experimental study for submission to DEC												
Submit SFY2026 evaluation report on quasi-experimental study to DEC												▲
Engage ongoing dissemination of study activities and preliminary results through presentations, webinars, workshops, publications, and related means												

7. Evaluation Plan Summary

The field of child maltreatment research and practice is rapidly evolving, pushed forward by sweeping federal legislation, innovation in service delivery, unexpected global pandemics, an unequivocal call for equity and justice in child maltreatment interventions, and ever-emergent opportunities to enact rigorous study designs. The evaluation plan proposed herein reflects this evolving landscape alongside deep consideration of practice partner priorities, with an ultimate guiding goal of using research to strengthen families, uplift communities, and promote child, caregiver, and family well-being. We are confident that in partnership with SCC stakeholders, the proposed rigorous evaluation will further build the evidence-base for SafeCare®, comprehensively demonstrate the holistic impact of SCC for Colorado families, and pioneer new directions in child maltreatment prevention. The CSU Social Work Research Center is honored to collaborate with CDHS/OEC in these efforts.

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9. Appendices

Appendix A. Family First Target Outcomes by Eligible Program/Service Domain

The below information comes directly from: Wilson, S. J., Price, C. S., Kerns, S. E. U., Dastrup, S. D., & Brown, S. R. (2019). *Title IV-E Prevention Services Clearinghouse Handbook of Standards and Procedures, version 1.0, OPRE Report #2019-56.* Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, US Department of Health and Human Services.

Target Outcomes

Studies must *measure and report* program or service impacts on at least one eligible target outcome. Eligible target outcomes differ by program or service area and are defined as follows:

Eligible Outcomes for Mental Health, Substance Abuse Prevention and Treatment, and In-Home Parent Skill-Based Programs and Services

- **Child Safety.** Child safety refers to a current condition within a home or family and considers whether or not there is an immediate threat of danger to a child. A threat of danger refers to a specific family situation that is out of control, imminent, and likely to have severe physical, psychological, and/or developmental effects on a child. Eligible indicators of child safety for the Prevention Services Clearinghouse pertain to both child maltreatment and risk of maltreatment and include:
  - Evidence of substantiated or unsubstantiated child maltreatment from administrative records.
  - Injuries or ingestions taken from medical records of encounters with health care providers.
  - Measures that assess neglectful, psychologically aggressive, or abusive parenting behavior.
- **Child Permanency.** Child permanency refers to the permanency and stability of a child's living situation (in-home or in foster care) and includes the continuity and preservation of family relationships and connections. Eligible indicators of child permanency for the Prevention Services Clearinghouse include:
  - Length of placements, placement disruptions, stability or permanency of placements, reunification, and use of kinship care.
  - Eligible sources of this information may be reports from child welfare, juvenile justice, or similar administrative databases, including Child and Family Services Reviews. Studies may also obtain placement information from therapist, provider, or parent/caregiver reports.

- **Child Well-being.** Child well-being is a multi-faceted construct that broadly refers to the skills and capacities that enable young people to understand and navigate their world in healthy, positive ways.[3] It is an umbrella term that includes child and youth development in behavioral, social, emotional, physical, and cognitive domains. The Prevention Services Clearinghouse reviews the following domains of child well-being, the specific nature of which may vary with age:
  - *Behavioral and Emotional Functioning.* Characteristics and behaviors relating to the ability to realize one's potential, cope with daily activities, and work and play productively and fruitfully. Both strengths-based and deficit-based indicators are eligible. Examples include measures of externalizing behaviors (e.g., aggressive behavior, disruptiveness, impulsive behavior), internalizing behaviors (e.g., depression, anxiety, mood or thought problems), mental/behavioral health diagnoses, positive behavior, resilience, self-regulation or self-control, and emotional adjustment.
  - *Social Functioning.* Skills and capabilities relating to the ability to develop, maintain, and manage interpersonal relationships (e.g., social skills, assertiveness, cooperation, empathy, social adjustment, peer relations, rebelliousness, defiance, and other similar characteristics related to interpersonal interactions and relationships).
  - *Cognitive Functions and Abilities.* Abilities related to reasoning, knowledge, problem-solving, mental processing, executive functioning, and the like. Eligible measures include intelligence tests, developmental assessments, measures of visual or spatial processing, and other indicators of cognitive functions and abilities.
  - *Educational Achievement and Attainment.* Educational achievement refers to the extent to which students master academic content. Eligible measures include composite or subject-specific (e.g., reading, mathematics) standardized achievement test scores or overall grade point averages. Educational attainment refers to student progress through school or the completion of a degree, certificate, or program. Eligible measures of attainment include grade promotion, high school graduation or dropout rates, certificate or degree completion rates, and other indicators for educational attainment.
  - *Physical Development and Health.* Characteristics related to the healthy functioning of the body may include indicators of physical health (e.g., Body Mass Index), physical capabilities (e.g., motor skills), normative indicators of healthy development (e.g., height), and any other measure relating to healthy (or unhealthy) physical development.

- *Substance Use or Misuse.* Measures of substance use or misuse may involve any substances and may be self- or other-reported, clinical tests such as urinalysis, or any other measure that provides an assessment of the participants' substance use behavior. Measures must describe actual use or misuse, such as frequency or quantity of use, type of use, use/no use, time since last use, etc. Substance use diagnoses (e.g., from a clinical interview or DSM criteria) are considered eligible outcomes in this domain. Measures that do not directly index substance use or misuse (e.g., drug-related criminal or delinquency activity such as selling drugs, drug knowledge, behavioral intentions to use or not, etc.) are not eligible in this domain, but may meet the requirements for other outcome domains.
- *Delinquent Behavior.* Delinquent behavior refers to behavior chargeable under applicable laws, whether or not apprehension occurs or charges are brought. Chargeable offenses also include "status" offenses (e.g., runaway, truancy, curfew violations).

- **Adult Well-being.** Adult well-being refers to the specific skills and capabilities adults need to navigate their world in healthy, positive ways and provide for themselves and their children's needs. Well-being is an umbrella term that includes outcomes in a range of individual and interpersonal domains. The Prevention Services Clearinghouse reviews the following domains of adult well-being:
  - *Parenting Practices.* Parenting practices include a range of practices and behaviors focused on developing strong, functional relations between parents or caregivers and children and the parents or caregivers' abilities to successfully manage child socialization and support child development, health, and well-being in an effective and constructive manner. Measures may include items about basic elements of caregiving, such as feeding and physical care; communication and listening; nurturing, loving, or supportive behavior; rules and consequences; setting boundaries; warmth; scaffolding children's behavior to develop self- discipline; parent-child relationships, and the like. Measures may index either positive parenting practices or negative parenting practices.
  - *Parent/Caregiver Mental or Emotional Health.* Mental or emotional health refers to a parent's/caregiver's ability to cope with daily activities, realize his or her potential, and interact productively in the world. Both strengths-based and deficit- based indicators are eligible. Examples include measures of externalizing behaviors (e.g., aggressive behavior), internalizing behaviors (e.g., depression, anxiety, mood or thought problems), mental/behavioral health diagnoses, parent/caregiver stress, relationship stress, positive behavior, resilience, and emotional adjustment.
  - *Parent/Caregiver Substance Use or Misuse.* Measures of substance use or misuse may involve any substances and may be self- or other-reported, clinical tests such as

urinalysis, or any other measure that provides an assessment of the participants' substance use or misuse. Measures must describe actual use or misuse, such as frequency or quantity of use, type of use or misuse, use/no use, time since last use, etc. Substance use diagnoses (e.g., from a clinical interview or DSM criteria) are considered eligible in this domain. Measures that do not directly index substance use or misuse (e.g., drug-related criminal or delinquency activity such as selling drugs, drug knowledge, behavioral intentions, etc.) are not eligible in this domain, but may meet the requirements for other outcome domains.

- *Parent/Caregiver Criminal Behavior.* Criminal behavior refers to behavior chargeable under applicable laws, whether or not apprehension occurs or charges are brought.
- *Family Functioning.* Family functioning refers to the capacity or lack of capacity of a family to meet the needs of its members and includes physical care and maintenance of family members; socialization and education of children; and economic and financial support of the family.
- *Physical Health.* Refers to the physical health of parents or caregivers and can include a variety of indicators including blood pressure; weight, obesity, or body mass index (BMI); chronic conditions such as asthma or diabetes; and healthy lifestyle behaviors such as diet and exercise.
- *Economic and Housing Stability.* Economic and housing stability includes indicators of financial or economic stability (e.g., level of income, employment/unemployment, financial assistance) and/or housing stability (e.g., number of moves, quality of housing, homelessness).

Eligible Outcomes for Kinship Navigator Programs

- **Child Safety** (defined as above).
- **Child Permanency** (defined as above).
- **Child Well-Being** (defined as above).
- **Adult Well-Being** (defined as above).
- **Access to Services.** Access to services refers to a parent, caregiver, or family's knowledge of and ability to access, or utilization of services to support the family's financial, legal, social, educational, and/or health needs such as medical care, financial assistance, and social services. Parent/caregiver self-reports, informed collateral reports (e.g., from therapists or case managers), or administrative records are eligible indicators for Prevention Services Clearinghouse reviews.

- **Referral to Services.** Referral to services may include referrals to any needed financial, legal, social, educational, or health services. Measures may be obtained from parent/caregiver self-reports, therapist or provider reports or records, or administrative records. Examples include the presence or absence of referrals or counts/frequencies of referrals.
- **Satisfaction with Programs and Services.** Satisfaction with programs and services refers to parent or caregiver satisfaction with the programs and services to which they are referred or which they receive as part of a kinship navigator program.

SafeCare Colorado

CHILD WELFARE OUTCOMES EVALUATION BRIEF | SFY2018-SFY2020 Cohorts

PROGRAM OVERVIEW

Prevention of child maltreatment requires delivery evidence-based practices on community- and system-levels. SafeCare is an evidence-based program implemented in Colorado as part of statewide child maltreatment prevention efforts. The SafeCare Colorado (SCC) program is administered by the Colorado Department of Human Services (CDHS) Office of Early Childhood (OEC) and is evaluated by the Social Work Research Center (SWRC) at Colorado State University (CSU). The Kempe Center for the Prevention and Treatment of Child Abuse and Neglect serves as the state intermediary.

BACKGROUND

SafeCare is an in-home behavioral parenting program that aims to prevent child maltreatment by teaching caregivers skills in three topic areas: home safety (to reduce household safety hazards and increase age-appropriate supervision); child health (to respond appropriately to child health needs, illness, and injury; and parent-child/parent-infant interaction (to promote positive parenting practices and appropriate responses to challenging child behaviors). SafeCare is included in the California Evidence-based Clearinghouse (CEBC), the Title IV-E Prevention Services Clearinghouse, and the HomVEE Clearinghouse (for SafeCare Augmented).

To evaluate the impact of SCC on subsequent child welfare involvement outcomes, a statistical analysis was conducted comparing SCC and non-SCC families that would have been potentially eligible for the program.

METHODS

SCC families that had an intake and exited the program between November 2017 and June 2020 were considered for the analysis. Subsequent involvement was observed over a comparable time period for comparison families that did not participate in SCC. Subsequent referrals, assessments, founded assessments, cases, and removals were the outcome measures.

SCC families were divided into six samples by topic completion and the two time periods after program completion, 12 and 24 months. For the comparison group, subsequent involvement was observed starting at six months after a child welfare referral, which is the average time to complete SCC. The samples for each group were restricted to those families with a prior assessment, as data obtained during the assessment were used in the analysis. Data were securely collected from Trails (Comprehensive Child Welfare Information System) for both SCC and non-SCC families. SCC families were identified from the OEC database, Salesforce.

To help reduce the bias of confounding variables resulting from the non-experimental nature of the study, propensity score matching (PSM) was used to construct samples that had a similar distribution of 21 selected characteristics between the SCC and non-SCC comparison groups[1] (shown in Table 1).

For each sample, subsequent child welfare involvement was modeled with logistic regression. To account for the large number of outcomes being evaluated, the Holm-Bonferroni multiple testing method was applied.[2] In some samples, the number of subsequent involvement incidents were too small for analysis and were excluded from the results.[3] This study was approved by the CSU Institutional Review Board.

Table 1: PSM Matching Variables

Prior Involvement	Family Demographics & Structure	Case Characteristics
Prior caregiver case involvement (3 years)	County	Risk level
Prior caregiver assessments (3 years)	Caregiver year of birth	Physical abuse issue
Prior caregiver referrals (3 years)	Caregiver age at birth of first child	Recent receipt of SNAP (3 years)
Prior child neglect investigations	Child ethnicity	Recent receipt of TANF (3 years)
	Number of children in household	Recent receipt of Medicaid (3 years)
	Child year of birth	Domestic violence
	Caregiver relationship to child	Any caregiver substance use
		Caregiver abused as child
		Caregiver mental health problems
		Sex abuse issue

FINDINGS

The results of the analysis are summarized in Figure 1. After the multiple comparisons adjustment, subsequent referral and assessment rates for one-topic completers 24 months after program completion were significantly higher than for the non-SCC comparison group. **No other child welfare involvement outcomes were statistically significant.** Subsequent founded assessments and cases are not reported for two-topic completers at 12 and 24 months due to the small sample size. This is also the case for three-topic completers at 24 months, as well as for subsequent removal for all six samples. Table 2 shows the raw *p*-values for each outcome as well as the adjusted *p*-values.

Figure 1: Subsequent Child Welfare Involvement by Dosage and Time

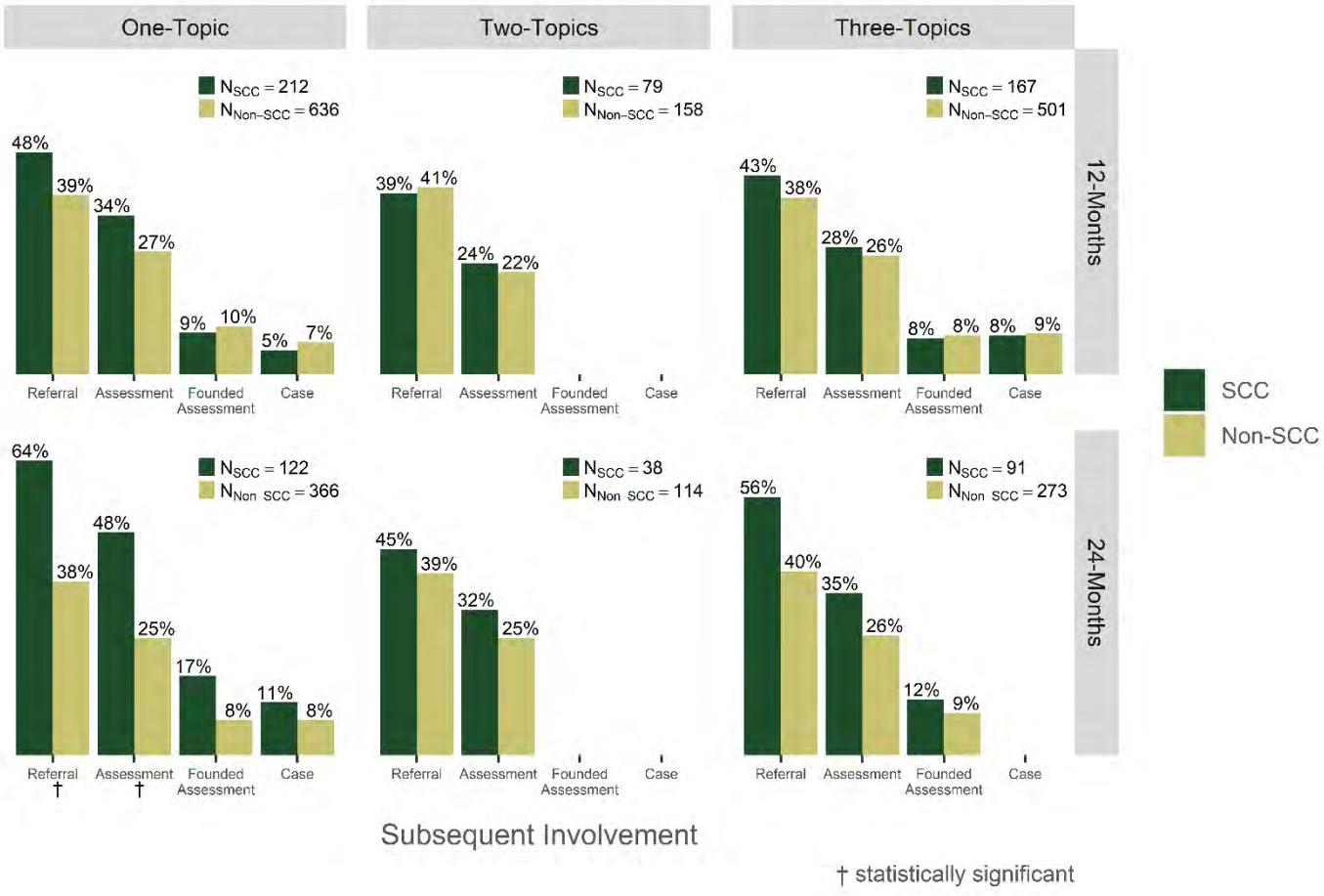

Table 2: Outcome p-values (p-value, adjusted p-value)

	One-Topic		Two-Topic		Three-Topic	
	12-months	24-months	12-months	24-months	12-months	24-months
Referral	(0.018, 0.462)	(<0.001, <0.001)	(0.851, >0.999)	(0.568, >0.999)	(0.273, >0.999)	(0.008, 0.210)
Assessment	(0.029, 0.715)	(<0.001, <0.001)	(0.743, >0.999)	(0.461, >0.999)	(0.648, >0.999)	(0.094, >0.999)
Founded Assessment	(0.553, >0.999)	(0.003, 0.084)			(0.807, >0.999)	(0.419, >0.999)
Case	(0.377, >0.999)	(0.195, >0.999)			(0.874, >0.999)	

DISCUSSION

The wider literature on home visiting prevention programs helps to contextualize findings from the one- and two-year outcome analyses. SafeCare uses as an eco-behavioral approach to the prevention and management of child maltreatment.[4] In practice, this means that multiple components of family functioning (i.e., parenting behaviors known to lead to child maltreatment) are targeted through three in-home topics (home safety, child health, and parent-child/parent-infant interaction).

Given this robust prevention approach, multiple intermediate and long-term outcomes should be considered in demonstrating the impact of SafeCare Colorado. For instance, intermediate outcomes include reduction in hazards, improvement in child health knowledge and skills, and improvement in the quality of parent-child/parent-infant interactions, all of which were found for SCC, as detailed in the SFY2019 and SFY2020 evaluation briefs.

When examining long-term child welfare outcomes, it is important to take a wide lens in interpreting results. For these outcome analyses, there are two primary limitations to the analysis that once thoughtfully considered, help to expand understanding of findings.

First, in order to establish comparison groups, only SCC participating families with a prior history of child welfare involvement were included in the PSM analysis, thus excluding all families without prior involvement. Importantly, SafeCare is designed for both families with a history of child maltreatment and for families at-risk for child maltreatment. However, because of the data source used in the PSM analysis (Trails), only the former target population is captured in the 12- and 24-month follow-up analyses.

Furthermore, literature on other early childhood home visiting prevention programs demonstrates that families most likely to reap benefits are younger parents, first-time parents, and/or those who are introduced to the program prenatally (i.e., before the birth of the child).[5,6] Following, a common recommendation in prevention programming is to have a "target" group(s) during program implementation in order to maximize success.[7,8] Because SafeCare Colorado is implemented on a voluntary basis, such target groups are only one segment of the total SCC participating family population. The voluntary nature of the program means that meaningful differences in child welfare outcomes may be diluted and more difficult to detect without strict target groups used during programming.

The second limitation of the 24-month child welfare outcomes analysis involves the small sample sizes available for the evaluation, which compounds issues discussed in the first limitation above. The available SCC and comparison group sample sizes are likely too under-powered to detect small differences in child welfare outcomes between groups. Additionally, official child maltreatment rates do not reflect protective factors

that may be cultivated by the program being evaluated.[7]

In addition, inconsistency in child welfare findings across and within prevention programming is also associated with differences in program implementation (such as training, supervision, and fidelity), as well as study characteristics (such as target populations for service delivery and comparison groups).[9]

Taken together, these considerations have several implications for future SCC evaluations and the iterative evaluation-practice cycle. First, future evaluation efforts should explore opportunities to create well-matched comparison groups for both primary and secondary prevention populations and those with a history of maltreatment (tertiary prevention populations). Second, future evaluation efforts should consider sub-analyses at the level of target groups known from other prevention programming research to be most successful in the program (e.g., first-time parents, young parents). Third, future evaluation efforts should expand the range of outcomes measured to include long-term intermediate outcomes that reflect the continuum of negative parenting behaviors and that measure parent, family, and child well-being and protective factors.[7,10]

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Kyra Montgomery, Office of Early Childhood
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SafeCare site supervisors, providers, and families

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SafeCare Colorado

DESCRIPTIVE OUTCOMES EVALUATION BRIEF | SFY2019 Cohort

PROGRAM OVERVIEW

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To assess implementation activities, proximal impacts, and participant populations reached by SafeCare, descriptive analyses were conducted for families served in State Fiscal Year (SFY) 2019 as part of ongoing performance management tracking.

METHODS

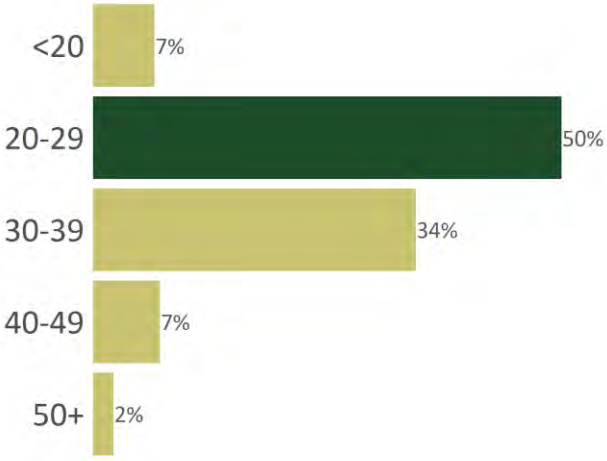
Secondary administrative data were securely received by the evaluation team from the SCC database, Salesforce, maintained by CDHS/OEC. Basic descriptive statistics were used to assess performance management outputs and outcomes.[1] Some variables have missing data, either because the family declined to respond, the data point is not applicable, or the data were not collected by the provider. As such, only valid percentages are reported (i.e., incidence rate out of actual denominator). Analyses and the presentation of findings represent the program lifecycle, from outreach and referrals, to family engagement and retention, to parental competencies gained. Underscoring the life cycle is target populations and the community sites serving these families. Data definitions, inclusion/exclusion criteria, and other analytical notes are provided under the findings section. This study was approved by the CSU Institutional Review Board.

FINDINGS

A total of **1,439 families actively participated** in SafeCare Colorado from July 1, 2018 to June 30, 2019 (SFY2019). Active participation was defined as a family who had more than only an informational session or non-outreach activity on file.

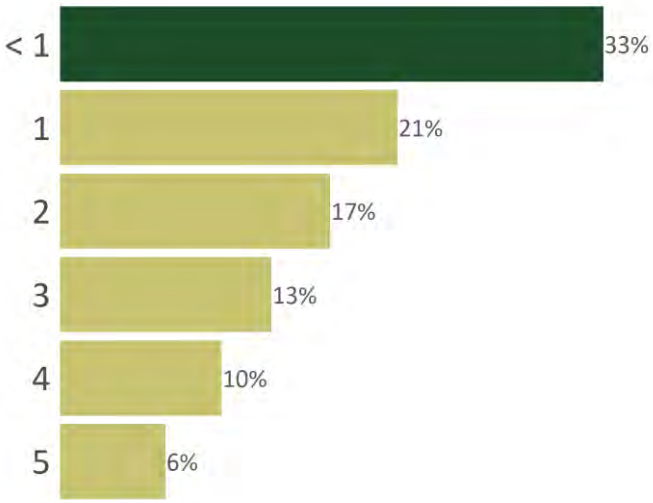
Participant Characteristics. SCC uses both primary caregiver and target child as the delivery approach. The vast majority of primary caregivers identified as female (93.3%). English was the primary language spoken by the majority of participants (79%), followed by Spanish at 20.9%. The median age of the primary caregiver was 28 (Figure 1). It is worth noting that seven percent of participants were younger parents under 20.

Figure 1. Primary Caregiver Age



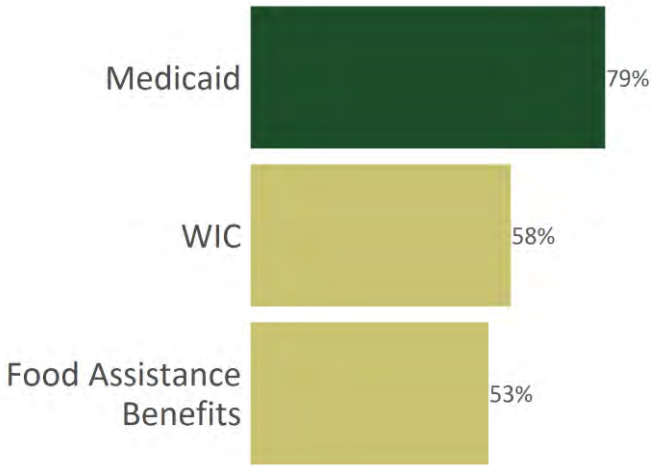
SafeCare targets families with children under five and does not begin until after the birth (i.e., no prenatal enrollment). Figure 2 illustrates the age ranges of children served by SCC; the median age was 1.7 years.

Figure 2. Target Child Age



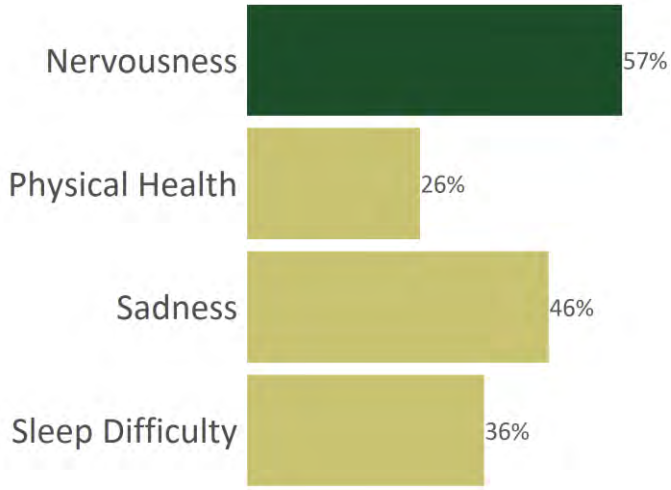
Ninety percent of SCC families received at least one public benefit; Figure 3 depicts the three major forms of assistance reported by families. Only 39.2% of SCC primary caregivers were in some form of employment, while 18.6% were unemployed, and 42.2% were "not working" (defined by serving as a full-time caregiver, a student, or retired). Nearly three-quarters of participants (73.8%) reported an annual household income of <$30,000.*

Figure 3. Public Assistance Rates



There were also **high mental and physical health needs among primary caregivers**, with 65% of participants reporting at least one health-related issue at present or within the past year (Figure 4).

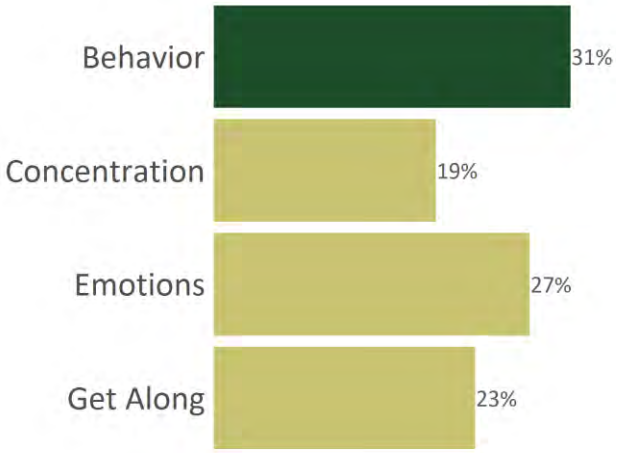
Figure 4. Health Issues of Primary Caregiver



In addition to their own health-related needs, primary caregivers reported **high behavioral health needs among target children**, with 39% of target children having at least one behavior-related issue (Figure 5).

* For reference, the federal poverty level in 2019 was $25,750 for a family of four.

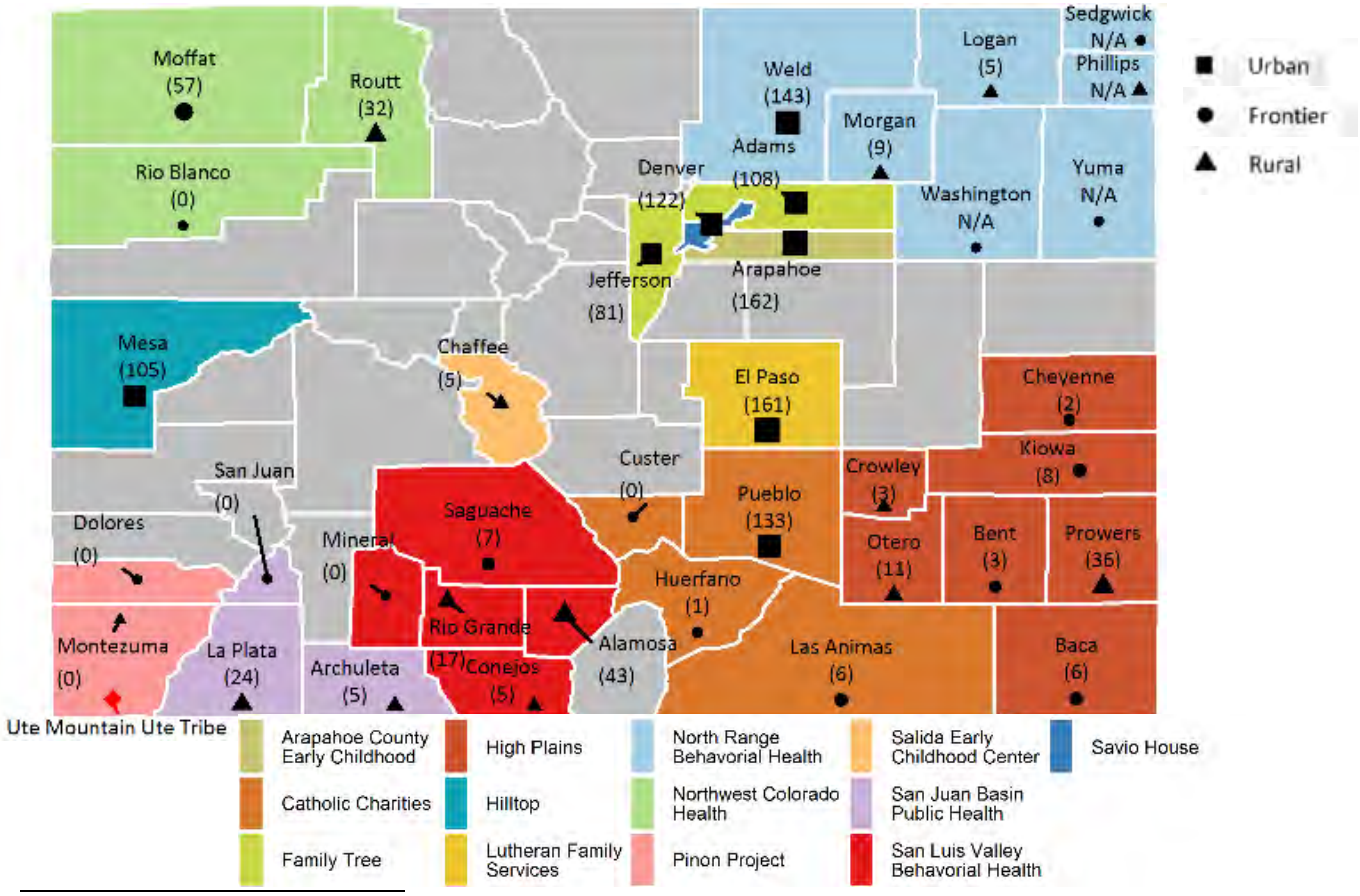
Figure 5. Behavior Issues of Target Child



Finally, SCC families reported low social support, with **13% indicating they had no one to turn to on a day to day basis for emotional help**.

SCC Sites and Geographic Coverage. Currently[†], SCC is available in 38 counties with service delivery provided by 13 community sites. Figure 6 illustrates the number of SCC families served in SFY19, by geographic county and SCC site. The evaluation team intentionally used SFY19 participant numbers, but only current (i.e., active) SCC sites, in order to visually depict areas for potential site expansion moving forward (i.e., standing up new sites in areas with no geographic coverage, or a county has the potential to be served by an existing site, but there are no to low participant numbers in the area).[‡] Note that in SFY19, 139 participants lived in an unserved county or did not report; this could be because the participant moved counties during SCC services and their files were not accurately transferred in Salesforce, the data are truly missing, or the participant lived in a geographic area no longer served by SCC due to a site discontinuing participation. A total of **15.8% of SCC families lived in rural areas**, **6.9% in frontier areas**, and **77.4% in urban areas**.

Figure 6. SCC Sites and Geographic Coverage



[†] As of Spring 2021.

[‡] North Range Behavior Health expanded geographic coverage to Phillips, Washington, Sedgewick, and Yuma counties as of Spring 2021; participant numbers are thus N/A for these sites in SFY19. There have been other site changes as well that have impacted SCC coverage and participant numbers (e.g., Ute Mountain Ute Tribe was served in SFY19, but the site provider slot is vacant as of SFY20, which impacts reach of SCC to tribal communities); please contact the SCC administrator at OEC for specifics of site and coverage year-over-year changes.

Outreach and Referrals. There was a total of 3,690 referrals made to SCC during SFY19 (excluding ineligible, duplicate, and open referrals not closed out in SFY19). Uptake rates are calculated for families that either actively declined or accepted the referral (i.e., active referral), meaning "passive" declines (i.e., unable to reach caregiver; 45.3%) were excluded from the uptake rate. Figure 7 illustrates referral and uptake rates for SCC families in SFY19, with uptake being defined as the percentage of active referrals that resulted in an intake (percentages in the graph are the uptake rates for each referral source). Of the families who actively responded to an outreach, 68% accepted enrollment. **Highest uptakes rates were seen for community referral sources** with a noteworthy 100% uptake rate for community centers and early childhood councils, followed by other home visiting programs (93%), family resource centers (87%), early childhood education/child care (84%), mental health providers (83%), self-referrals (83%), and early intervention (82%). **Lowest uptake rates were observed for child welfare referral sources**, with the lowest seen in closed assessments at 35% uptake. The one exception was non-court involved open case referrals, which reflected a 100% uptake rate; this is a (positive) divergence from past trends and should be watched carefully moving forward.

Family Engagement and Retention. Program engagement and retention for SCC can be understood through a three-dimensional measure of number of topics completed, degree of program completion, and median time to completion.

Number of Topics Completed. In SFY19, **1,484 topics were completed** by 875 families (Figure 8). Mirroring previous years' data, safety continues to be the most completed topic at 36% completion. An impressive 10,316 home visits were completed by providers for topic delivery.

Figure 7. Program Uptake Rates

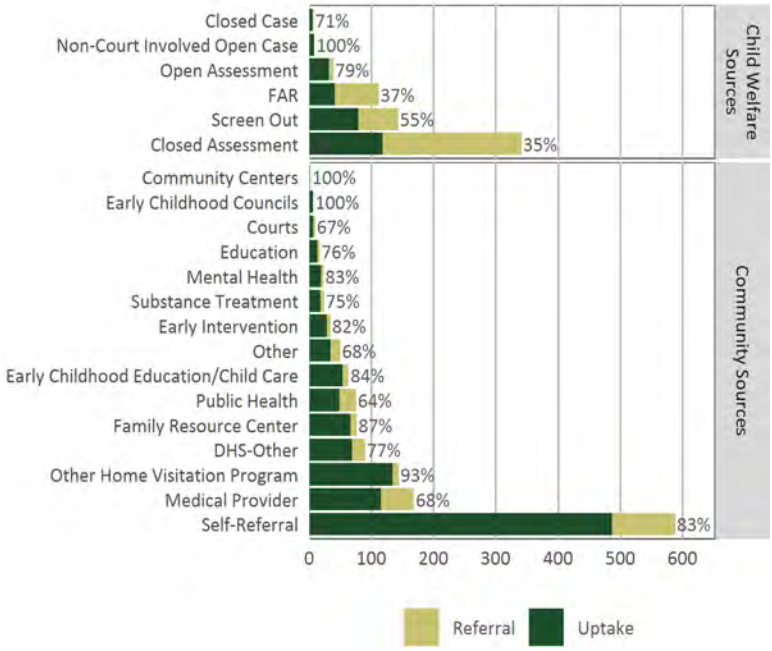
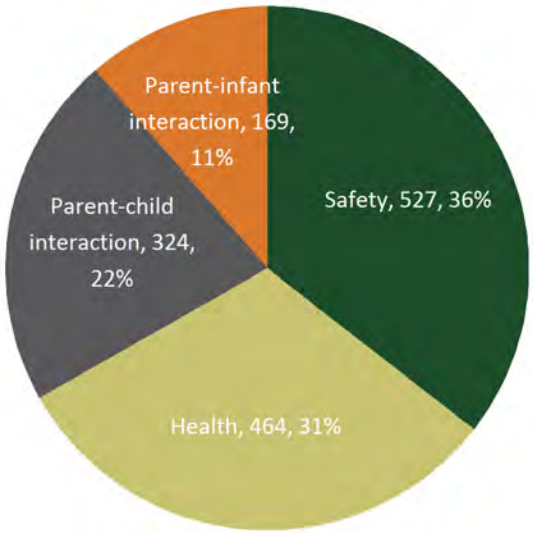


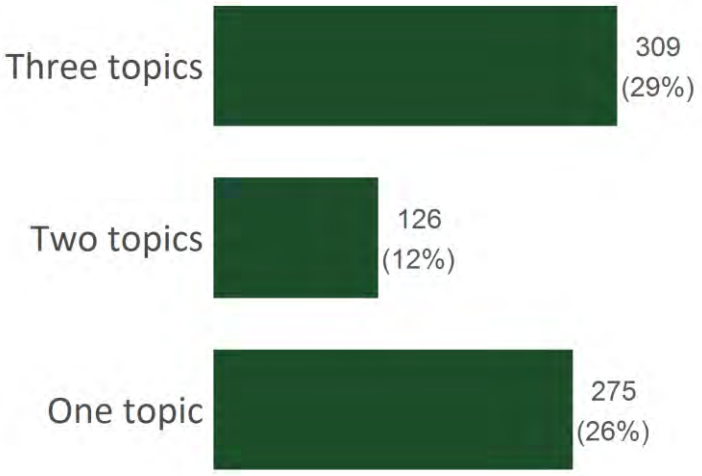
Figure 8. Number of Topics Completed



Degree of Program Completion. SCC aims to have families complete all three topics and fidelity to the model is defined as three-topic completers. As a voluntary prevention program, however, families may choose to discontinue program engagement at any time. As such, measuring early attrition and retention through topic completion is important for identifying program growth edges and strengths.

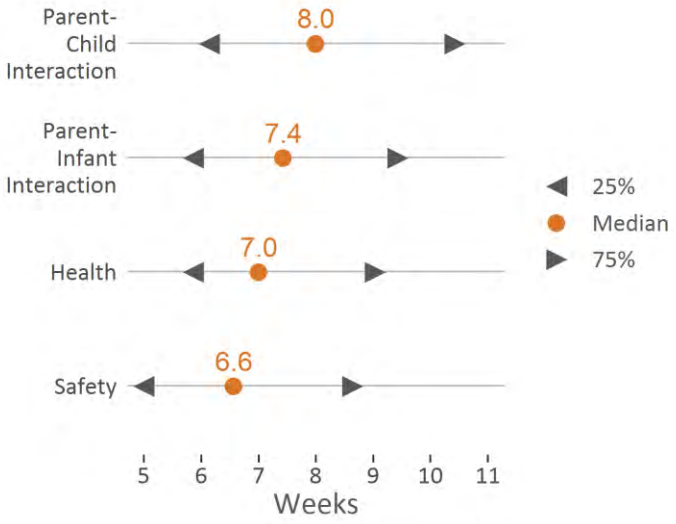
Of the 1,050 families that closed out of the program in SFY19, **68% completed at least one topic** and **29% completed all three topics.** On average, families completed 1.4 topics. Figure 9 illustrates the rates of one-, two-, and three-topic completers.

Figure 9. Topic Completion Rates



Time to Completion. Topic completion rates are accompanied by median time to completion rates, as another dimension for understanding how a SCC family engages with the program. **Median time to program completion was 28 weeks.** Mirroring previous years' trends, parent-child and parent-infant interaction (PCI/PII) took the longest, followed by health, and then safety (Figure 10).

Figure 10. Topic Time to Completion



Parental Competencies Gained. SafeCare providers deliver baseline assessments for each topic at the first topic session and then re-administer the assessment at the last topic session to measure change in parental competencies (i.e., knowledge/skills) in the target domains of home safety (measure: Home Accident Prevention Inventory, or HAPI), child health (measure: Sick and Injured Child Checklist, or SICC), and PCI/PII (measure: Child/Infant Planned Activities Training Checklist, or cPAT/iPAT). A pre-/post-test analysis was conducted to measure change in parental competencies for families that closed out of SCC in SFY19.

For home safety, there was a **91% decrease in the average number of home hazards** recorded on the HAPI from baseline to post-test. For child health, **99% of families met "success" or "mastery" criteria on the SICC at post-test** for each health scenario posed, up from 22% (emergency scenario), 12% (doctor appointment scenario), and 19% (care at home scenario) at baseline. For PCI (as measured by the cPAT) and PII (as measured by the iPAT), the proportion of positive behaviors observed at baseline and post-intervention were examined, and a percentage change was calculated by dividing the post-intervention proportion by the baseline proportion. Greater values indicate an increase in the percentage of positive behaviors observed. **For PCI, scores improved by 220% and for PII, scores improved by 117%.**

DISCUSSION

In this section, we highlight key considerations for moving findings into action, with an eye towards continuous quality improvement and strategic learning.

Strengths. Participant characteristic findings indicate that SCC families experience several social and structural vulnerabilities that can serve as risk factors for child maltreatment and impede healthy child development and family functioning when left unaddressed.[2] SafeCare works to address these factors through a behavioral model that increases parental competencies in the target areas of child health, home safety and parent-child/parent-infant interaction.

Findings from the parental competency analyses demonstrate substantial increases in caregiver knowledge/skills that can act as protective factors for child maltreatment. Specifically, environmental neglect and unintentional injury are anticipated to decrease through a reduction in home hazards alongside improved age-appropriate supervision; medical neglect is anticipated to decrease through a substantial gain in parental competencies in child health; and positive parenting practices alongside healthy child development are anticipated to be improved through an increase on positive parenting behaviors and a decrease in negative behaviors associated with abuse and neglect. Collectively, these findings demonstrate the value SCC brings to child and family well-being, and participant data indicate SCC is reaching target populations prioritized for service delivery.

Growth Edges. SCC serves as a primary and secondary prevention program with voluntary participation. As such, the program receives referrals from both community sources and child welfare sources. On-the-whole, uptake rates were strongest in community sources and lowest in child welfare sources. These findings indicate a need to continue strengthening outreach practices from child welfare sources while sustaining investments in community referral pathways to maximize return on investment and successful program reach.[3, 4, 5]

The second area for continuous quality improvement is found in topic and program completion. While 68% of SCC families with a closed case completed at least one topic, this leaves 32% of families having not completed even one topic in full. Additionally, only 29% of families completed the program in full as intended (i.e., completed all three topics). Program retention and completion is a key growth edge for SCC and improving these rates will ensure families are receiving the maximum benefit possible from program participation. Findings on median time to topic completion point to a potentially useful strategy for increasing retention. Topic completion lengths reflect the variable complexity of SCC topics, with safety being the most clear-cut, followed by health, and then PCI/PII (with completion taking longer for the more complex topics). SCC participants can choose to begin with any topic, though by default most begin with safety. Previous qualitative research[6] with SCC participants indicates that the PCI/PII topic is the most favored by participants, despite being the more complex one. As such, SCC providers may want to encourage participants to start with PCI/PII to leverage passion and encourage ongoing retention.

Collectively, results from the SFY2019 descriptive outcome evaluation position SafeCare as a valuable service in the home visiting array for Colorado families with young children.

ACKNOWLEDGMENTS

We express our sincerest gratitude to the following people for their partnership in the SCC evaluation:

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SafeCare site supervisors, providers, and families

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SafeCare Colorado

DESCRIPTIVE OUTCOMES EVALUATION BRIEF | SFY2020 Cohort

PROGRAM OVERVIEW

Prevention of child maltreatment requires delivery of evidence-based practices on community- and system-levels. SafeCare is an evidence-based program implemented in Colorado as part of statewide child maltreatment prevention efforts. The SafeCare Colorado (SCC) program is administered by the Colorado Department of Human Services (CDHS) Office of Early Childhood (OEC) and is evaluated by the Social Work Research Center (SWRC) at Colorado State University (CSU). The Kempe Center for the Prevention and Treatment of Child Abuse and Neglect serves as the state intermediary.

BACKGROUND

SafeCare is an in-home behavioral parenting program that aims to prevent child maltreatment by teaching caregivers skills in three topic areas: home safety (to reduce household safety hazards and increase age-appropriate supervision); child health (to respond appropriately to child health needs, illness, and injury); and parent-child/parent-infant interaction (to promote positive parenting practices and appropriate responses to challenging child behaviors). SafeCare is included in the California Evidence-based Clearinghouse (CEBC), the Title IV-E Prevention Services Clearinghouse, and the HomVEE Clearinghouse (for SafeCare Augmented).

To assess implementation activities, proximal impacts, and participant populations reached by SafeCare, descriptive analyses were conducted for families served in State Fiscal Year (SFY) 2020 as part of ongoing performance management tracking.

METHODS

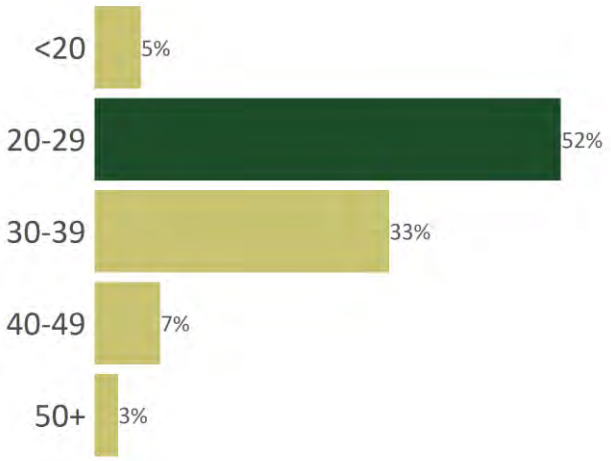
Secondary administrative data were securely received by the evaluation team from the SCC database, Salesforce, maintained by CDHS/OEC. Basic descriptive statistics were used to assess performance management outputs and outcomes.[1] Some variables have missing data, either because the family declined to respond, the data point is not applicable, or the data were not collected by the provider. As such, we report valid percentages only (i.e., incidence rate out of actual denominator). Analyses and the presentation of findings represent the program lifecycle, from outreach and referrals, to family engagement and retention, to parental competencies gained. Underscoring the life cycle is target populations and the community sites serving these families. Data definitions, inclusion/exclusion criteria, and other analytical notes are provided under the findings section. This study was approved by the CSU Institutional Review Board.

FINDINGS

A total of **1,374 families actively participated** in SafeCare Colorado from July 1, 2019 to June 30, 2020 (SFY2020). Active participation was defined as a family who had more than only an informational session or non-outreach activity on file.

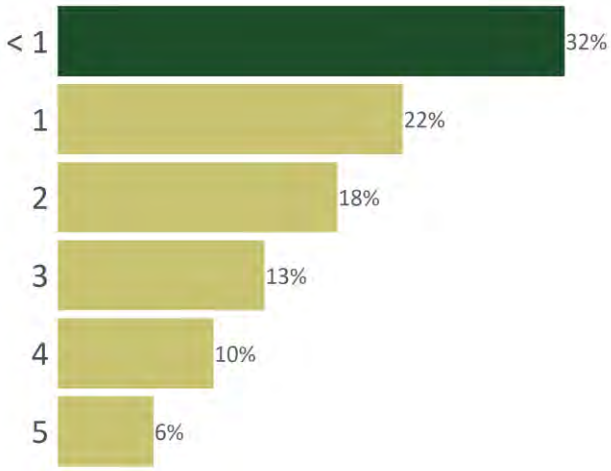
Participant Characteristics. SCC uses both primary caregiver and target child as the delivery approach. The vast majority of primary caregivers identified as female (93.8%). English was the primary language spoken by the majority of participants (79.9%), followed by Spanish at 20.05%. The median age of the primary caregiver was 28 (Figure 1); it is worth noting that five percent of participants were younger parents under 20.

Figure 1. Primary Caregiver Age



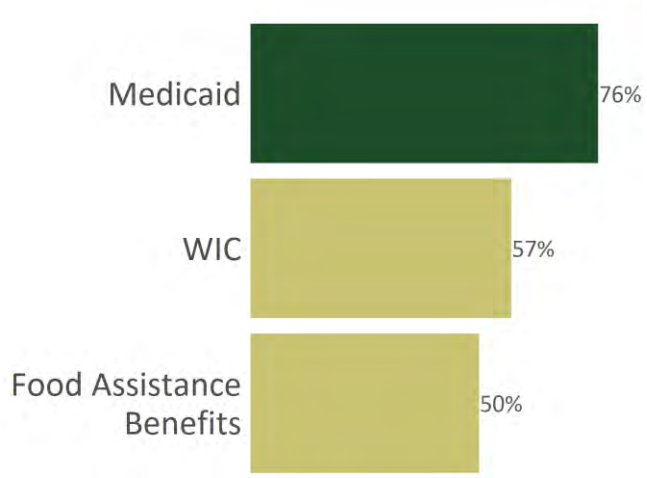
SafeCare targets families with children under five and does not begin until after the birth (i.e., no prenatal enrollment). Figure 2 illustrates the age ranges of children served by SCC; the median age was 1.7 years.

Figure 2. Target Child Age



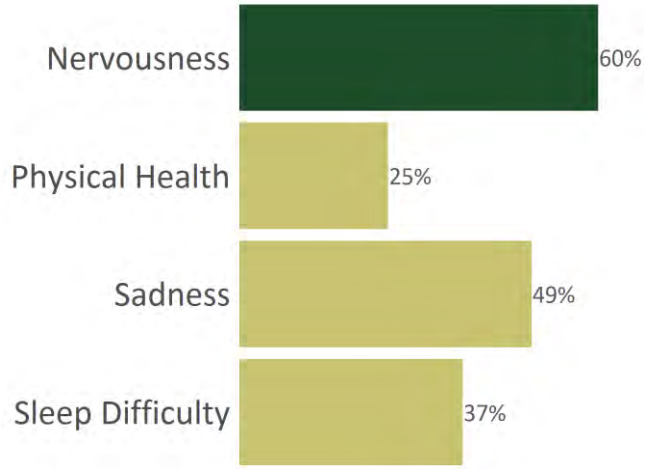
Eighty-eight percent of SCC families received at least one public benefit; Figure 3 depicts the three major forms of assistance reported by families. Only 39.4% of SCC primary caregivers were in some form of employment, while 21.6% were unemployed, and 39% were "not working" (defined by serving as a full-time caregiver, a student, or retired). Nearly three-quarters of participants (71%) reported an annual household income of <$30,000.*

Figure 3. Public Assistance Rates



There were also **high mental and physical health needs among primary caregivers**, with 67% of participants reporting at least one health-related issue at present or within the past year (Figure 4).

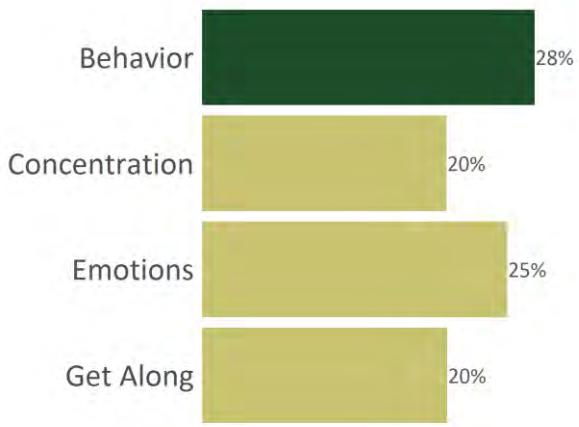
Figure 4. Health Issues of Primary Caregiver



In addition to their own health-related needs, primary caregivers reported **high behavioral health needs among target children**, with 36% of target children having at least one behavior-related issue (Figure 5).

* For reference, the federal poverty level in 2020 was $26,200 for a family of four.

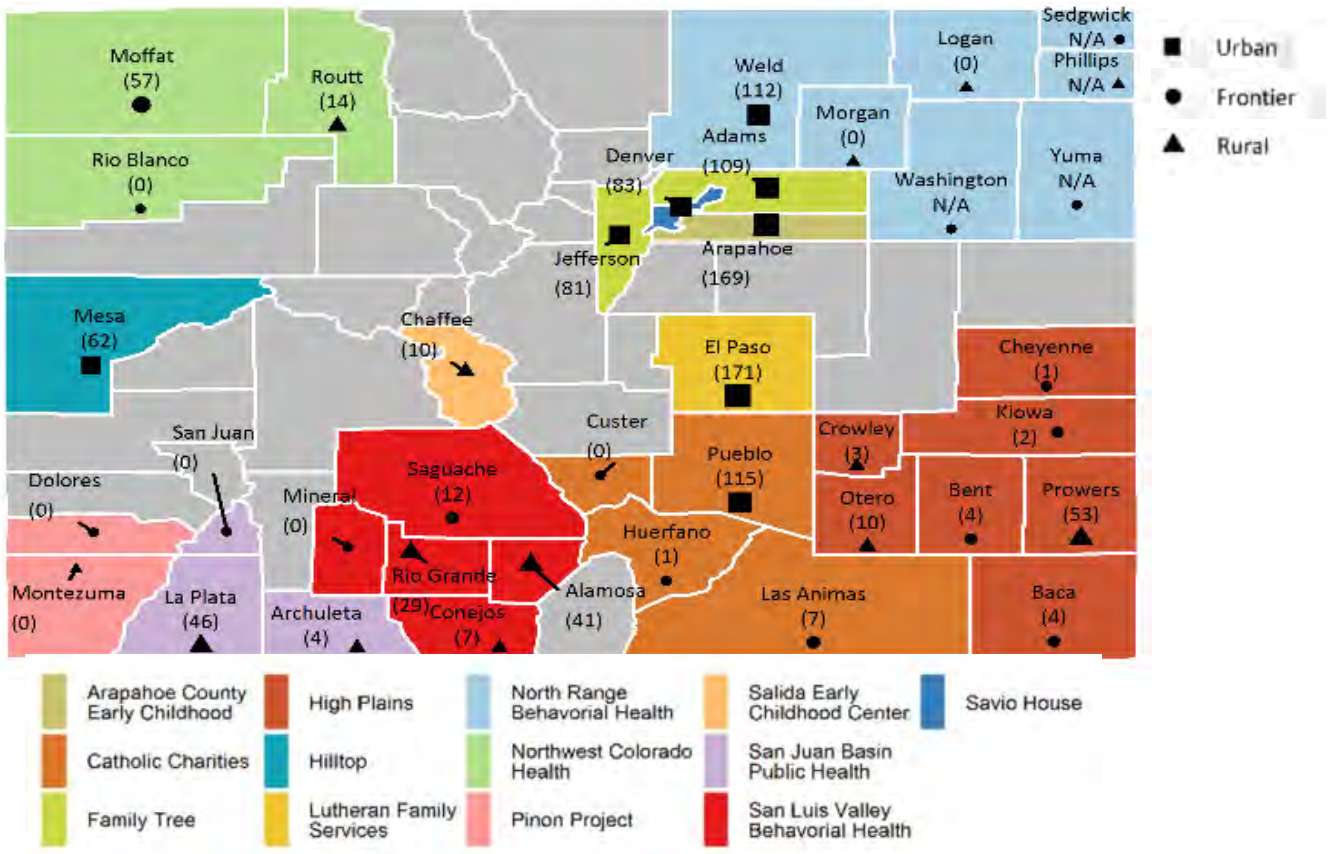
Figure 5. Behavior Issues of Target Child



Finally, SCC families reported low social support, with **12% indicating they had no one to turn to on a day to day basis for emotional help**.

SCC Sites and Geographic Coverage. Currently[†], SCC is available in 38 counties with service delivery provided by 13 community sites. Figure 6 illustrates the number of SCC families served in SFY20, by geographic county and SCC site. The evaluation team intentionally used SFY20 participant numbers, but only current (i.e., active) SCC sites, in order to visually depict areas for potential site expansion moving forward (i.e., standing up new sites in areas with no geographic coverage, or a county has the potential to be served by an existing site, but there are no to low participant numbers in the area).[‡] Note that in SFY20, 167 participants lived in an unserved county or did not report; this could be because the participant moved counties during SCC services and their files were not accurately transferred in Salesforce, the data are truly missing, or the participant lived in a geographic area no longer served by SCC due to a site discontinuing participation. A total of **18.0% of SCC families lived in rural areas**, **7.3% in frontier areas**, and **74.7% in urban areas**.

Figure 6. SCC Sites and Geographic Coverage

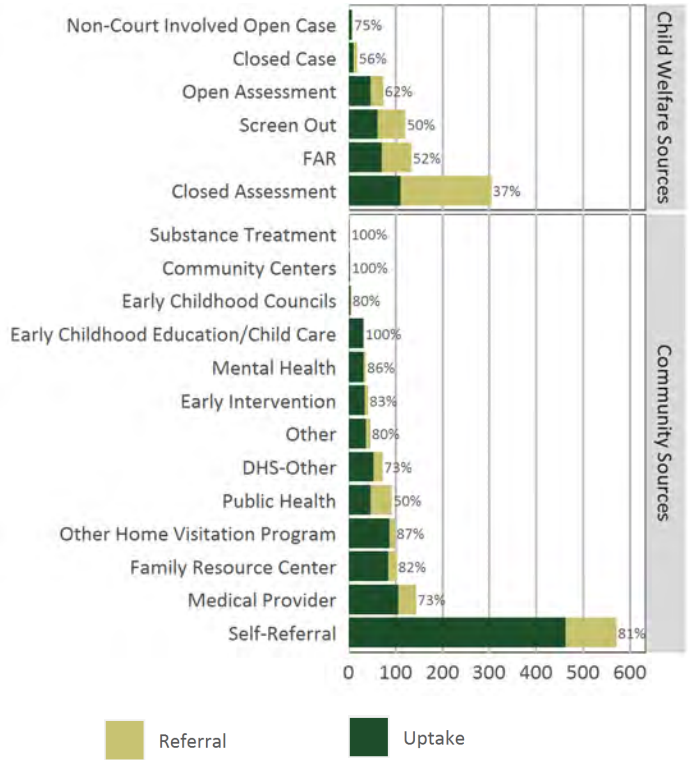


[†] As of Spring 2021.

[‡] North Range Behavior Health expanded geographic coverage to Phillips, Washington, Sedgewick, and Yuma counties as of Spring 2021; participant numbers are thus N/A for these sites in SFY20. There have been other site changes as well that have impacted SCC coverage and participant numbers; please contact the SCC administrator for specifics of site and coverage year-over-year changes.

Outreach and Referrals. There was a total of 3,664 referrals made to SCC during SFY20 (excluding ineligible, duplicate, and open referrals not closed out in SFY20). Uptake rates are calculated for families that either actively declined or accepted the referral (i.e., active referral), meaning "passive" declines (i.e., unable to reach caregiver; 48%) were excluded from the uptake rate. Figure 7 illustrates referral and uptake rates for SCC families in SFY20, with uptake being defined as the percentage of active referrals that resulted in an intake (percentages in the graph are the uptake rates for each referral source). Of the families who actively responded to an outreach, 67% accepted enrollment. **Highest uptakes rates were seen for community referral sources** with a noteworthy 100% uptake rate for community centers, early childhood, education/childcare, and substance treatment providers, followed by other home visiting programs (87%), mental health providers (86%), early intervention (83%), family resource centers (82%), and self-referrals (81%). **Lowest uptake rates were observed for child welfare referral sources**, with the lowest seen in closed assessments at 37% uptake.

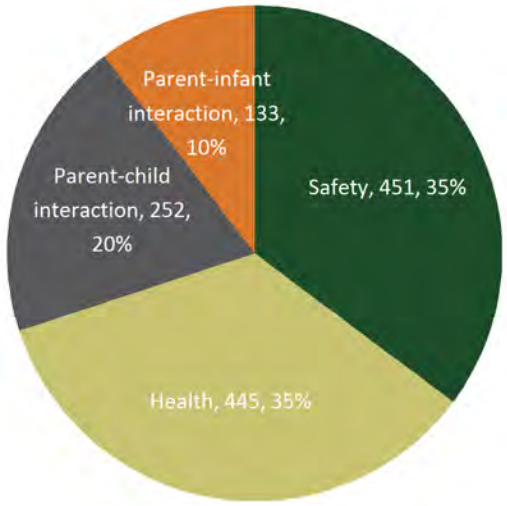
Figure 7. Program Uptake Rates



Family Engagement and Retention. Program engagement and retention for SCC can be understood through a three-dimensional measure of number of topics completed, degree of program completion, and median time to completion.

Number of Topics Completed. In SFY20, **1,281 topics were completed** by 775 families (Figure 8). Mirroring previous years data, safety and health continue to be the most completed topics at an equal 35% completion. A total of 9,739 home visits[§] were completed by providers for topic delivery.

Figure 8. Number of Topics Completed



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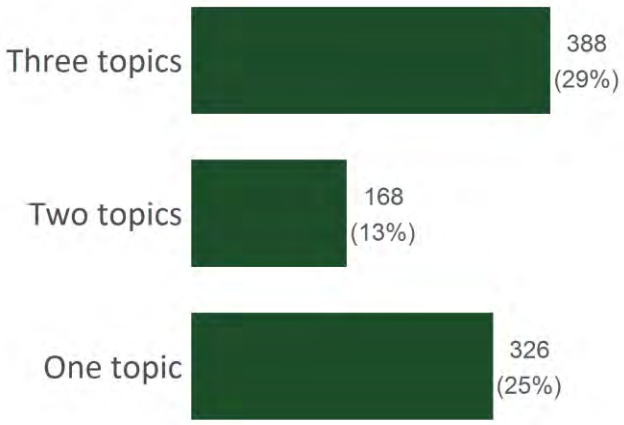
Of the 1,317 families that closed out of the program in SFY20, **67% completed at least one topic** and **29% completed all three topics.** On average, families completed 1.4 topics. Figure 9 illustrates the rates of one-, two-, and three-topic completers.

[§] During the COVID-19 pandemic, many home visits became virtual, using a tele-health model, due to ongoing public health orders and state mandates.

Figure 9. Topic Completion Rates



Time to Completion. Topic completion rates are accompanied by median time to completion rates, as another dimension for understanding how a SCC family engages with the program**. Median time to program completion was 28 weeks.** Mirroring previous years trends, parent-child and parent-infant interaction (PCI/PII) took the longest, followed by health, and then safety (Figure 10).

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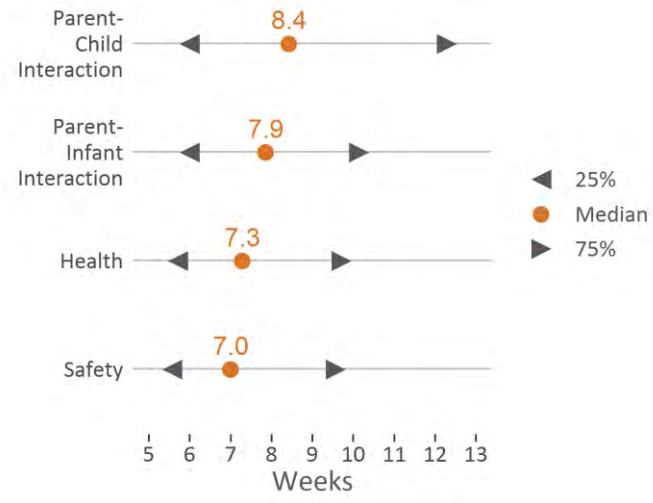

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For home safety, there was an **89% decrease in the average number of home hazards** recorded on the HAPI from baseline to post-test. For child health, **100% of families met "success" or "mastery" criteria on the SICC at post-test** for the emergency scenario, up from 17% at baseline; while 99% of families met "success" or "mastery" criteria on the SICC by post-test for the doctor appointment and care at home scenario, up from 9% and 15% at baseline, respectively. For PCI (as measured by the cPAT) and PII (as measured by the iPAT), the proportion of positive behaviors observed at baseline and post-intervention were examined, and a percentage change was calculated by dividing the post-intervention proportion by the baseline proportion. Greater values indicate an increase in the percentage of positive behaviors observed. **For PCI, scores improved by 227% and for PII, scores improved by 125%.**

DISCUSSION

In this section, we highlight key considerations for moving findings into action, with an eye towards continuous quality improvement and strategic learning. Despite the last three months of SFY20 bringing the onset of COVID-19, findings, on-the-whole, were nearly identical to SFY2019 results. Instability was introduced into the program by COVID-19, however, for key metrics, beginning in April 2020; for this more thorough discussion of COVID-19 early impacts on SCC, please see the evaluation brief entitled, "Impacts of COVID-19 on SafeCare Colorado Performance Measures."

Strengths. Participant characteristic findings indicate that SCC families experience several social and structural vulnerabilities that can serve as risk factors for child maltreatment and impede healthy child development and family functioning when left unaddressed.[2] SafeCare works to address these factors through a behavioral model that increases parental competencies in the target areas of child health, home safety and parent-child/parent-infant interaction.

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Growth Edges. SCC serves as a primary and secondary prevention program with voluntary participation. As such, the program receives referrals from both community sources and child welfare sources. On-the-whole, uptake rates were strongest in community sources and lowest in child welfare sources. These findings indicate a need to continue strengthening outreach practices from child welfare sources while sustaining investments in community referral pathways to maximize return on investment and successful program reach.[3, 4, 5] It is worth noting that since the July 2019 Facilitated SCC Stakeholder meeting,[6] SafeCare Colorado sites, the state intermediary, and OEC have invested intentional efforts into improving referrals from community sources as well as reducing the stigma associated with referrals from child welfare. This investment is reflected in SFY2020 data, where despite referrals/outreach remaining a growth edge, positive progress is observed compared to previous year trends.

The second area for continuous quality improvement is found in topic and program completion. While 67% of SCC families with a closed case completed at least one topic, this leaves 33% of families having not completed even one topic in full. Additionally, only 29% of families completed the program in full as intended (i.e., completed all three topics). These trends mirror previous years and program retention and completion continue to be a key growth edge for SCC, as improving these rates will ensure families are receiving the maximum benefit possible from program participation. Findings on median time to topic completion point to a potentially useful strategy for increasing retention.

Topic completion lengths reflect the variable complexity of SCC topics, with safety being the most clear-cut, followed by health, and then PCI/PII (with completion taking longer for the more complex topics). SCC participants can choose to begin with any topic, though by default most begin with safety. Previous qualitative research[7] with SCC participants indicates that the PCI/PII topic is the most favored by participants, despite being the more complex one. As such, SCC providers may want to encourage participants to start with PCI/PII to leverage passion and encourage ongoing retention.

Collectively, results from the SFY2020 descriptive outcome evaluation position SafeCare as a valuable service in the home visiting array for Colorado families with young children.

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SafeCare Colorado

EQUITY IMPACT ANALYSIS BRIEF | SFY2019-SFY2020 COHORTS

PROGRAM OVERVIEW

Prevention of child maltreatment requires delivery of evidence-based practices on community- and system-levels. SafeCare is an evidence-based program implemented in Colorado as part of statewide child maltreatment prevention efforts. The SafeCare Colorado (SCC) program is administered by the Colorado Department of Human Services (CDHS) Office of Early Childhood (OEC) and is evaluated by the Social Work Research Center (SWRC) at Colorado State University (CSU). The Kempe Center for the Prevention and Treatment of Child Abuse and Neglect serves as the state intermediary.

BACKGROUND

SafeCare is an in-home behavioral parenting program that aims to prevent child maltreatment by teaching caregivers skills in three topic areas: home safety (to reduce household safety hazards and increase age-appropriate supervision); child health (to respond appropriately to child health needs, illness, and injury; and parent-child/parent-infant interaction (to promote positive parenting practices and appropriate responses to challenging child behaviors). SafeCare is included in the California Evidence-based Clearinghouse (CEBC), the Title IV-E Prevention Services Clearinghouse, and the HomVEE Clearinghouse (for SafeCare Augmented).

As part of the descriptive evaluation component of SafeCare Colorado, a preliminary equity impact analysis on select sociodemographic and structural factors was conducted to identify any disparities and/or disproportionality in program participation, and to assess the extent to which SCC is reaching and retaining racially and culturally diverse families.

METHODS

Because this equity impact brief relies on subgroup analyses, data for SFY2019 and SFY2020 SCC participant cohorts were aggregated to improve sample size(s). To contextualize results and identify potential patterns of disproportionality/disparity, two levels of data were used: (1) State Level: this includes general population demographics for Colorado as well as Colorado-specific child maltreatment data; (2) SafeCare Level: this includes families who participated in SCC as well as disaggregation of participation by topic completion rates.

Level One data were accessed through publicly available data sources, specifically: (1) Demographic data for rates of child maltreatment and out-of-home placement were sourced from the National Child Abuse and Neglect Data System (NCANDS) and aggregated by the research organization Child Trends[1] (unless otherwise noted). Overall demographic data come from the 2019 American Community Survey (ACS) census data.[2]

Level Two data are secondary administrative data that were securely received by the evaluation team from the SCC database, Salesforce, maintained by CDHS/OEC. Representation is gauged by the proportion of families at each level.

As this brief is a supplement to the SFY19 and SFY20 cohort analyses, please see the *Descriptive Outcomes Evaluation Briefs for SFY19 and SFY20* for standard data definitions and other analytical notes. This study was approved by the CSU Institutional Review Board.

ANALYSIS HIGHLIGHTS

Presentation of findings focus on variation in SCC participation and topic completion by race and ethnicity, socioeconomic status, receipt of public benefits, caregiver age, and geography. Brief discussion accompanies each finding.

Analyses and findings reported here should be considered a starting place for exploration. As the SCC evaluation continues, the evaluation team will work with program stakeholders to refine analytical techniques, focus priorities, and to move findings into action in thoughtful ways.

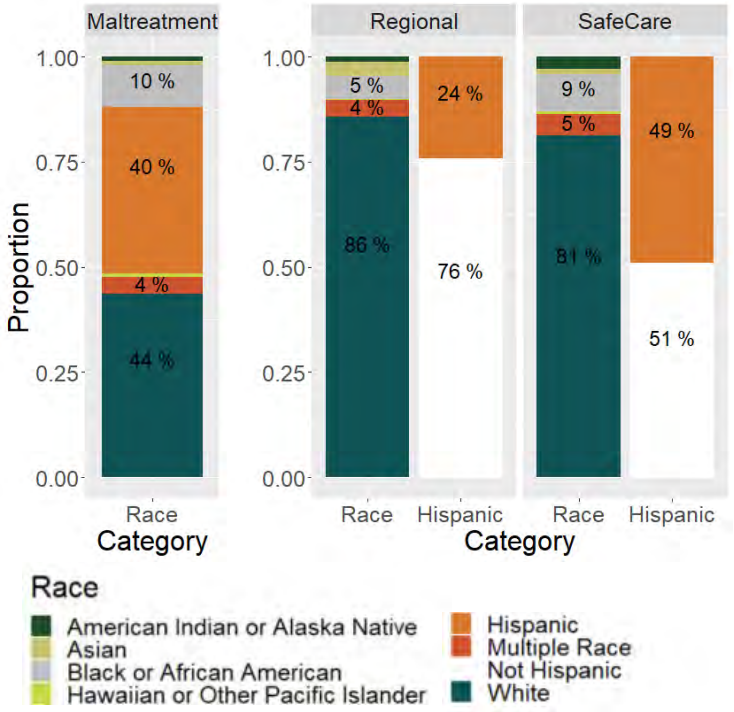
Highlight #1. Reaching racially and culturally diverse families.

Figure 1 presents Colorado child maltreatment rates by race and ethnicity, followed by regional race and ethnicity data for children in Colorado (i.e., general population), and then the racial and ethnic composition of SafeCare participants. Hispanic, American Indian/Alaska Native, Black/African American, and Multiracial children were represented at a higher proportional rate in SCC compared to both the general population of children in Colorado as well as compared to the population of children experiencing maltreatment.

While this preliminary analysis indicates disproportionately in SCC participation, not all disproportionately is inherently negative. As a primary and secondary child maltreatment prevention program, SafeCare works to help alleviate root cause inequities, build family-level protective factors, and cultivate cultural and community strengths.[3]

The overrepresentation of children of color in SCC may reflect the program's commitment to racial and cultural inclusion. Moreover, this expansive reach can catalyze family strengthening efforts that have the potential to intercede with trends in overrepresentation of children of color in child welfare on-the-whole.[4] In other words, investing in "upstream" approaches like home visiting for racially and culturally diverse families can have the "downstream" implication of preventing involvement in child welfare and advancing race equity in family well-being efforts.

Figure 1. Racial and Ethnic Representation in SafeCare Colorado



Highlight #2. Reducing the conflation of "poverty" and "neglect" in child welfare referrals.

Figure 2 presents data on state-level poverty rates for families with young children in Colorado, compared to poverty rates among Colorado children in out-of-home placement, SCC participants, and SCC three-topic completers. Children placed in out-of-home care and SCC participants experience poverty at similar rates, which were much higher than the statewide average. A large body of literature positions poverty as a risk factor for child welfare involvement.[5]

A more nuanced interpretation of this correlation suggests that in many ways, the child welfare system is set-up to punish poor families for being poor, conflating poverty with neglect and failing to provide the prevention-oriented services families need and deserve.[5] Given the high proportion of children in poverty that SCC reaches, the program is positioned to support families most at-risk for (poverty-related)

referrals of neglect by helping caregivers connect to vital support services (e.g., Colorado Community Response) and building protective factors. Alongside this strength comes a potential area of disparity that that this equity impact analysis uncovered. Specifically, as illustrated in Figure 2, Hispanic and Black/African American children experiencing poverty composed a smaller proportion of three-topic completers than their initial representation in the SCC population. Put another way, families with Hispanic or Black/African American children experiencing poverty were less likely to complete all three topics than those not experiencing poverty. Second, across the board, caregivers experiencing poverty were less likely to move from two-topic to three-topic completion, with the exception of White families (Figure 3).

Figure 2. Child Poverty in SafeCare Colorado

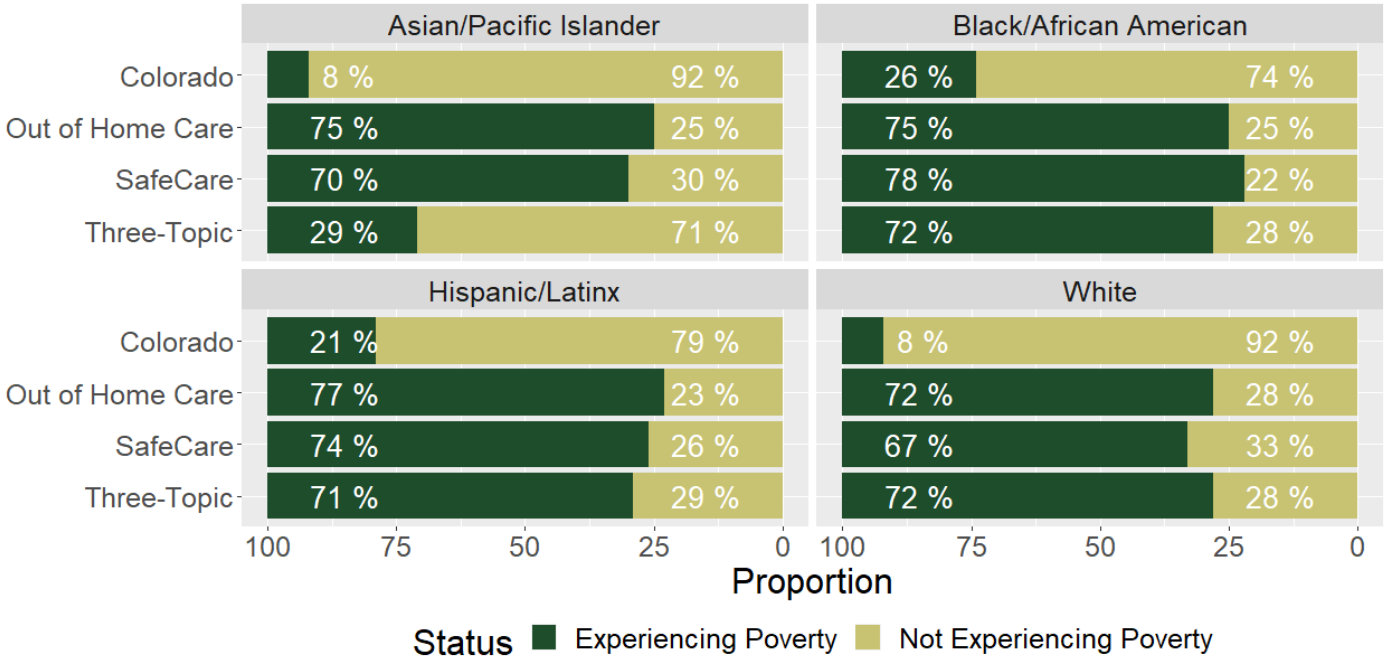
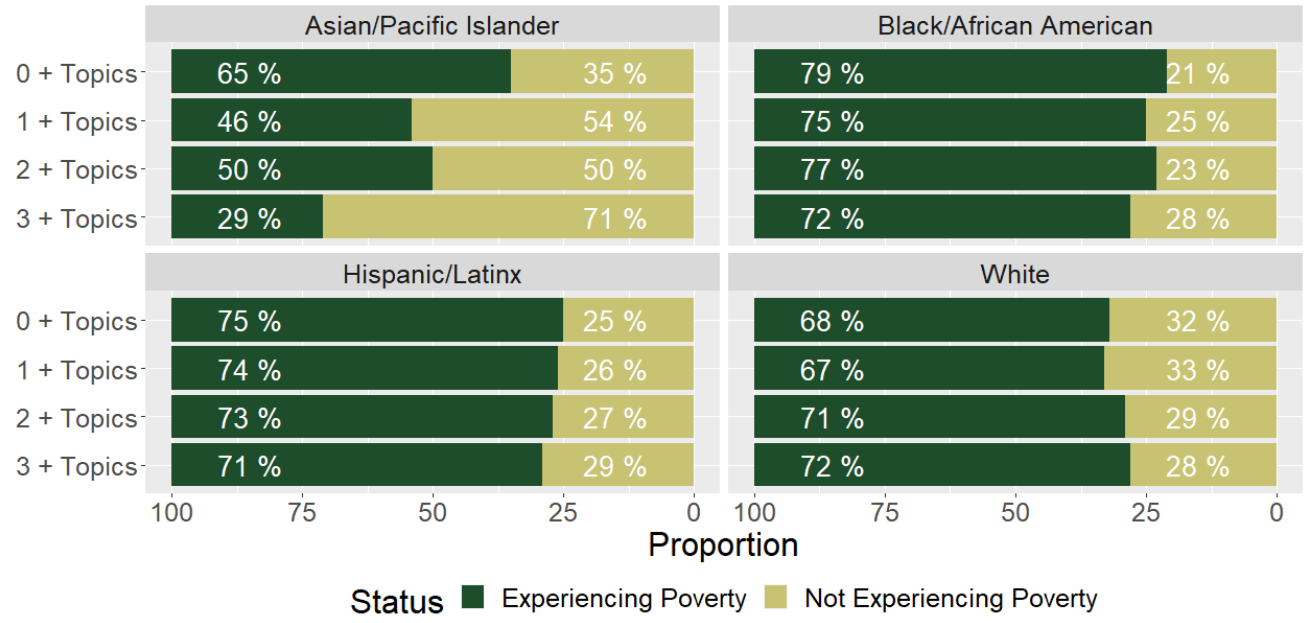


Figure 3. SCC Topic Completion & Poverty



These findings illustrate an important intersection between race/ethnicity and poverty that can impede equitable program completion rates. SCC stakeholders must take care to address root cause inequities on all levels and turn the lens critically inward to examine the potential role of implicit bias in observed disparities around topic completion.

Finally, in addition to income levels, receipt of public benefits can serve as a proxy for concrete support needs. As displayed in Figure 4, families receiving public assistance were overrepresented in SCC compared to the general population of Colorado families with young children. This is not surprising in that receipt of public benefits is a targeted eligibility criteria for SCC. It is worth nothing that SafeCare families receiving WIC services and Medicaid were more likely to complete three topics than SafeCare families who were not receiving these services, indicating a potential buffering effect of concrete supports for retention in SCC.

Highlight #3. Supporting Younger Caregivers.

As illustrated in Figure 5, caregivers ages 20-24, 25-34, and 35-44 are the most represented in both raw numbers and proportion relative to the general population of Colorado adults. However, the representation of caregivers age 20-24 decreased as the program continued, meaning that they were less proportionately likely to complete each successive topic. Ultimately, only 21% of primary caregivers ages 20-24 completed three topics compared to 27% among other age ranges. This finding indicates a potential disparity in topic completion rates for younger caregivers and, like disparities seen at the intersection of race and poverty, requires continued investment by SCC stakeholders to equitable program outcomes.

Figure 4. Public Benefit Receipt by SafeCare Colorado Families

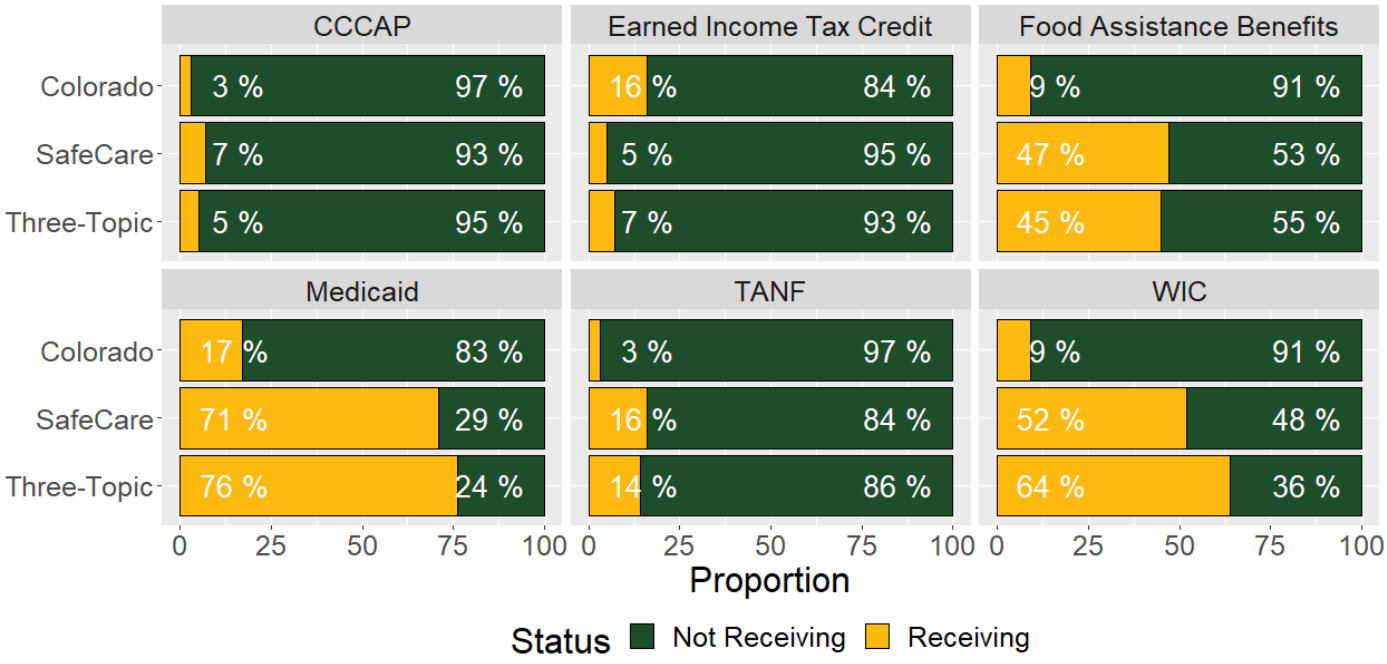
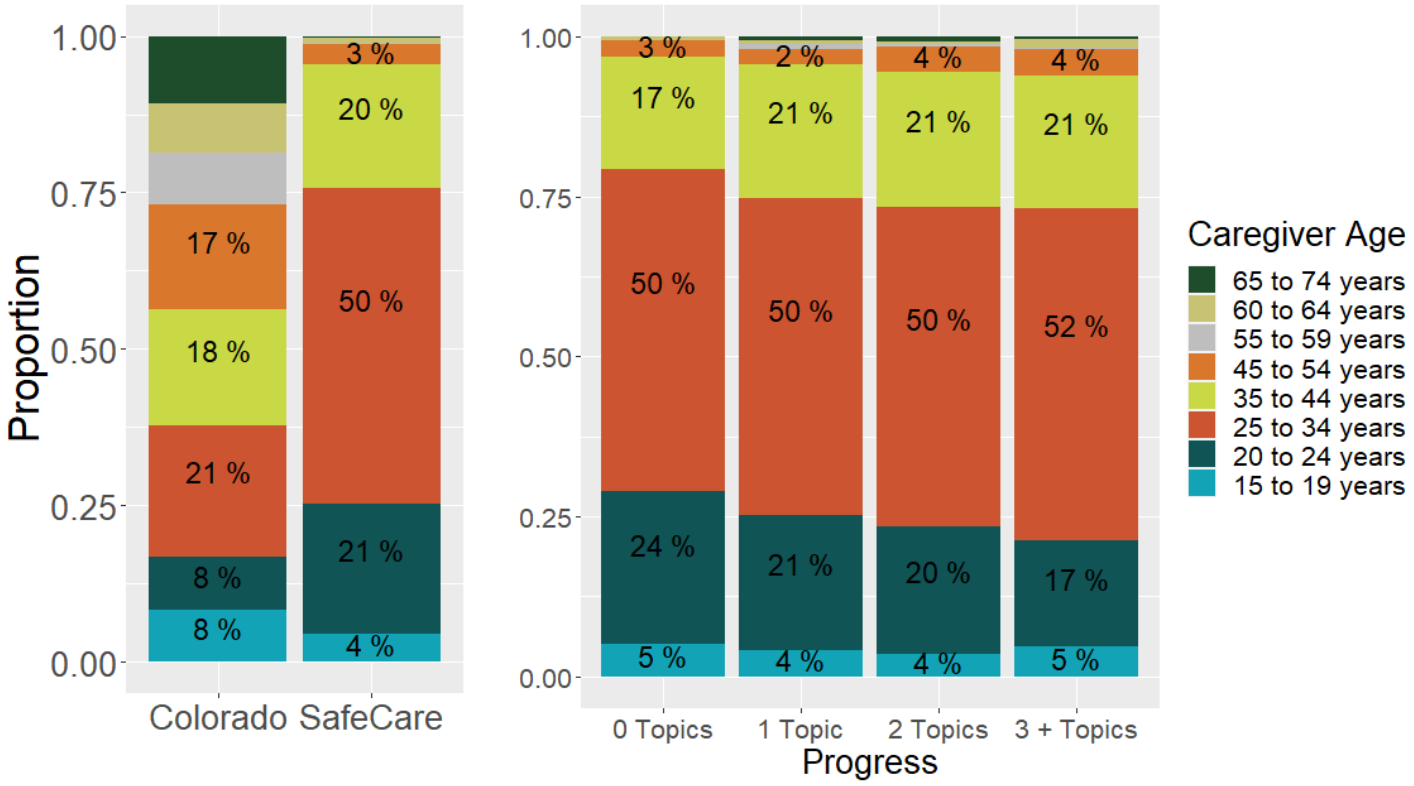


Figure 5. SCC Topic Completion, Participation, & Caregiver Age



Highlight #4. Reaching Rural and Frontier Communities

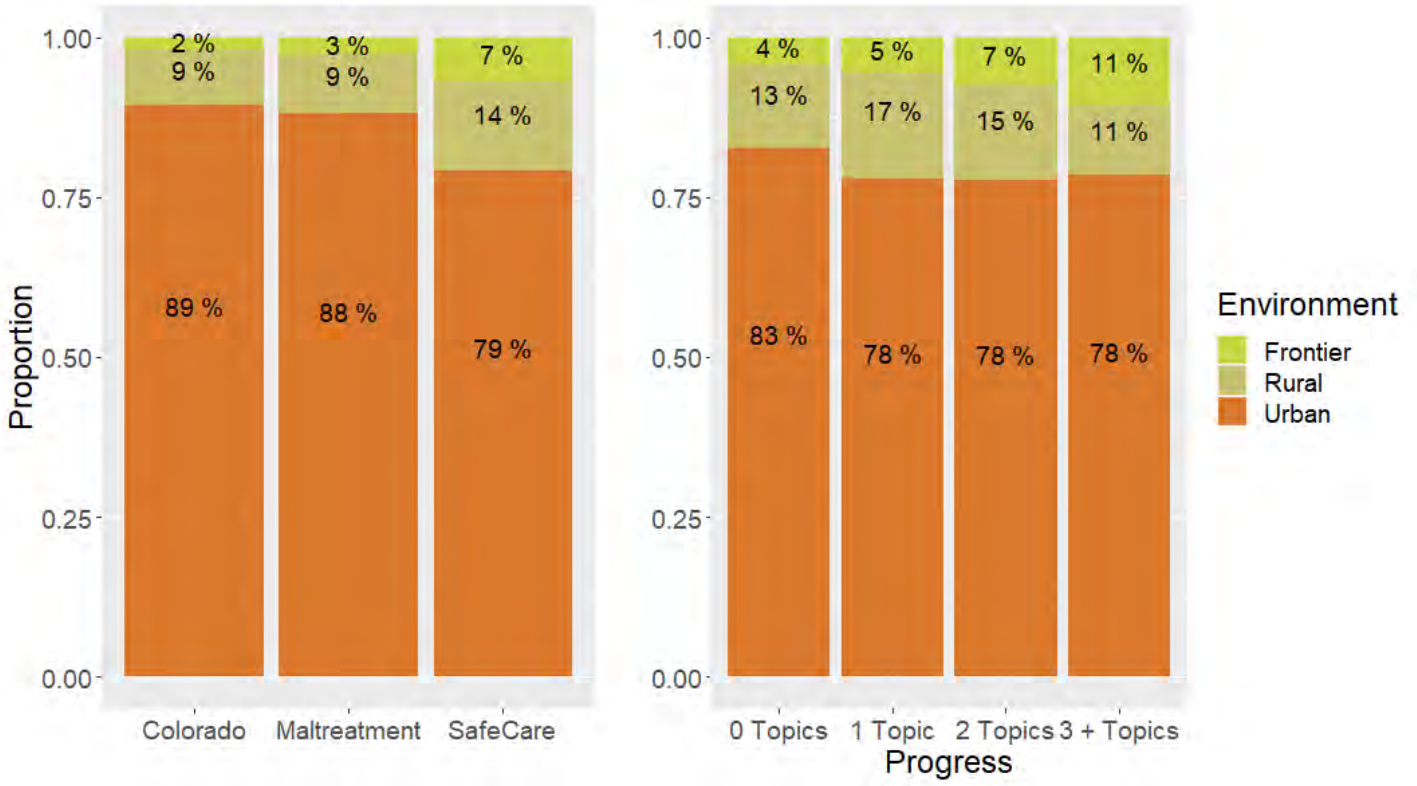
SCC participants were categorized into rural, urban, and frontier designations based on the county they lived in at intake. These same designations were then applied to the general geographic distribution for Colorado as well as for cases of child maltreatment in 2018, as reported by CDHS Division of Child Welfare.*

As illustrated in Figure 6, SCC has a slightly higher proportion of rural and frontier families, compared to both child maltreatment and general population distributions. Given social isolation is a documented risk factor for child maltreatment[3] and in light of the general under-serving[6] of rural/frontier communities, this overrepresentation of rural and frontier families in SCC is promising, demonstrating the strong presence of the program across Colorado.

In examining changes in geographic representation across the program lifecycle, however, the most substantial change was found in the ratio of rural to frontier residents. After at least one topic was completed, rural representation shrunk consistently as the program continued, while frontier representation grew. Ultimately, 45% of frontier families who started the program completed three or more topics, compared to only 22% of rural families. This is a noteworthy disparity that indicates another key area for SCC program stakeholders to invest in as issues of equity and access are centered during continuous quality improvement and data-informed learning.

* Data Source: Kids Count Data Center (2018). Child abuse (rate per 1,000) in Colorado. Division of Child Welfare.

Figure 6. Rural, Frontier, and Urban Representation in SafeCare Colorado



CONCLUSION

Findings from this preliminary equity impact analysis demonstrate that SafeCare Colorado is reaching target populations and providing critical support to strengthen families from across the state. As a primary and secondary prevention program, the ability to reach racially and culturally diverse families is crucial for reducing overrepresentation in child welfare involvement and advancing equitable family well-being.

Despite inclusive reach being strong, some findings also serve as early indicators of places where disparities may be experienced by SCC families and intentional investments to close these gaps remain vital. Future evaluation efforts will continue this equity impact work, deepening and broadening analyses in partnership with SCC stakeholders.

ACKNOWLEDGMENTS

We express our sincerest gratitude to the following people for their partnership in the SCC evaluation:

Kyra Montgomery, Office of Early Childhood
Kendra Dunn, Office of Early Childhood
SafeCare site supervisors, providers, and families

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SafeCare Colorado

IMPACTS OF COVID-19 ON PERFORMANCE MEASURES

PROGRAM OVERVIEW

Prevention of child maltreatment requires delivery of evidence-based practices on community- and system-levels. SafeCare is an evidence-based program implemented in Colorado as part of statewide child maltreatment prevention efforts. The SafeCare Colorado (SCC) program is administered by the Colorado Department of Human Services (CDHS) Office of Early Childhood (OEC) and is evaluated by the Social Work Research Center (SWRC) at Colorado State University (CSU). The Kempe Center for the Prevention and Treatment of Child Abuse and Neglect serves as the state intermediary.

BACKGROUND

SafeCare is an in-home behavioral parenting program that aims to prevent child maltreatment by teaching caregivers skills in three topic areas: home safety (to reduce household safety hazards and increase age-appropriate supervision); child health (to respond appropriately to child health needs, illness, and injury; and parent-child/parent-infant interaction (to promote positive parenting practices and appropriate responses to challenging child behaviors). SafeCare is included in the California Evidence-based Clearinghouse (CEBC), the Title IV-E Prevention Services Clearinghouse, and the HomVEE Clearinghouse (for SafeCare Augmented).

To assess potential impacts of the global COVID-19 pandemic on key performance measures, select SafeCare Colorado activities were analyzed for the time period of 1/1/2020 through 8/31/2020, and then compared to the same time period in the previous year to calculate year-over-year change.

METHODS

Secondary administrative data were securely received by the evaluation team from the SCC database, Salesforce, maintained by CDHS/OEC. The evaluation team identified the "COVID-19 time period" as SCC activities taking place between 1/1/2020 to 8/31/2020. This time period captures the months leading up to COVID-19 (1/1/2020 to 3/21/2020); the most intense periods of COVID-19 in Colorado, as measured by stay-at-home and safer-at-home orders (3/22/2020 to 7/17/2020); and a roughly six week "post-COVID" time period as restrictions eased (7/18/2020 to 8/31/2020). SCC activities that took place within this COVID-19 time period were then compared to activities unfolding during the same dates in the year prior (1/1/2019 to 8/31/2019) to examine year-over-year change.[1]

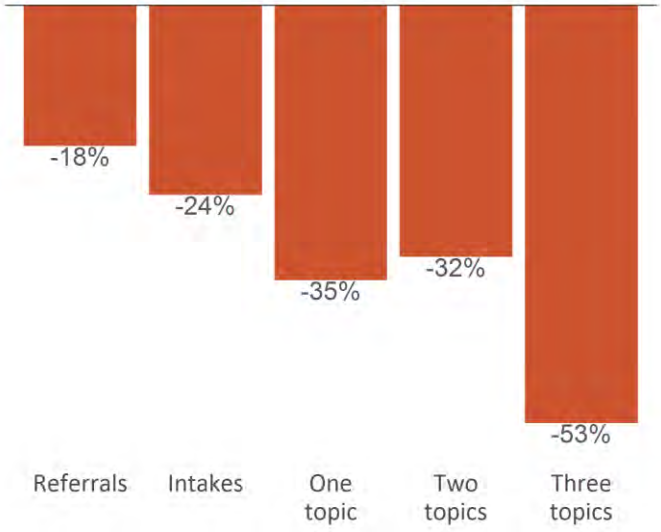
Analyses were conducted for main touchpoints in the program lifecycle; presentation of findings focus on primary areas where significant disruption to SCC trends were observed, namely: referrals, intakes, and topic completion. As this COVID-19 impact report is a supplemental brief, please see the "Descriptive Outcomes Evaluation Brief: SFY2020 Cohort" for data definitions and other analytical notes. This study was approved by the CSU Institutional Review Board.

FINDINGS

Referrals. It was anticipated that a decline in referrals would be observed for the most intense early periods of COVID-19. To examine this hypothesis further, year-over-year change in referrals was examined. Findings revealed an 18% drop (Figure 1) in SCC referrals, with a substantial change in April 2020 as stay-at-home orders were enacted in Colorado (Figure 2).

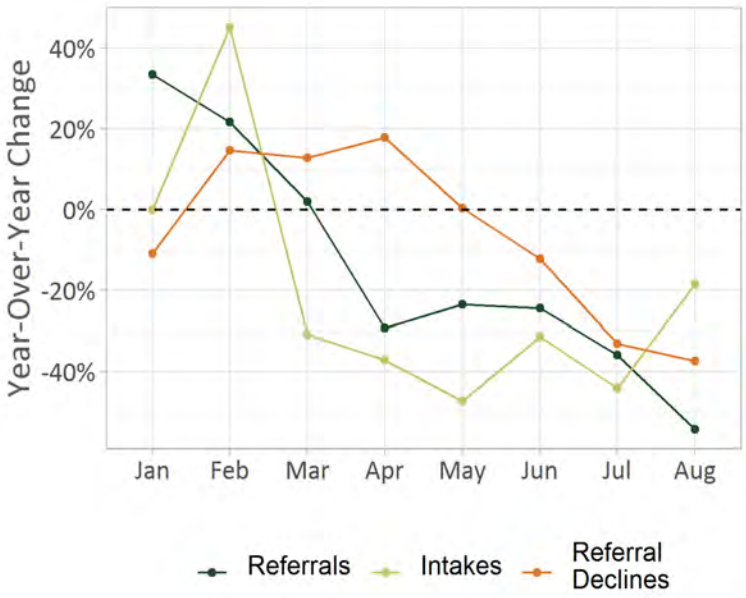
Intakes. It was similarly anticipated that a decline in intakes would be observed for the early COVID-19 time period. To examine this hypothesis further, year-over-year change in intakes was examined. Findings showed a 24% drop (Figure 1) in SCC intakes, with a substantial change being observed in April and May 2020, again reflecting the height of stay-at-home orders (Figure 2). It is worth noting that the month-to-month analysis* revealed that active referral declines increased for select early months of the COVID-19 time period, with a higher proportion of families actively declining SCC participation in March and April 2020 compared to in 2019. **This increase in active declines was then followed by a *decrease* in active declines, meaning a higher proportion of families were then actively accepting the program in comparison to the same time period in the previous year.**

Figure 1. Year-Over-Year Changes -- Summary



Topic Completion. As with referrals and intakes, topic completion was down during the COVID-19 time period compared to previous year data.† Year-over-year analysis revealed a 35% drop in one-topic completers, a 32% drop in two-topic completers, and a 53% drop in three-topic completers (Figure 1). It was hypothesized that in addition to a decrease in completion rates, time-to-topic completion would also become lengthier. This analysis revealed that **median time to completion for each topic remained relatively unchanged in the year-over-year analysis, indicating some stability for families who did received SCC services during the evolving COVID-19 time period.**

Figure 2. Year-Over-Year Changes in Referrals and Intakes, by Month



DISCUSSION

In this section, we discuss possible implications of findings from this preliminary analysis on impacts of COVID-19 for key performance metrics within SCC.

In examining year-over-year changes in referrals and intakes, it is not surprising that declines in both metrics were observed on-the-whole, given the massive disruption to health and human service programs that COVID-19 caused, including to the child welfare system. Referrals to child protective services during the pandemic were seen across Colorado and nationally, which can cause a ripple effect for programs like SCC that rely, in part, on child welfare referral sources for reaching families.[2]

The substantial dips in referrals and intakes in April and May reflect not only the advent of stay-at-home orders in Colorado, but also the time period in which home

* The change in the graph is the percentage change within the percent of declines out of active responses.
† Completion was calculated for those SCC families with an intake starting in January 2019 and 2020, respectively, who then completed one or more topics by 8/31/2019 and 8/31/2020, respectively.

visiting programs had to rapidly change processes, protocols, and delivery mediums to account for ongoing public health orders and state mandates that prevented gatherings of nearly any kind. These requirements were acutely felt for home visiting programs like SafeCare, as the model rests on *in-home delivery* of services. In an extraordinary lift, home visiting programs across Colorado had to shift to telehealth/hybrid delivery and find creative new ways to connect with families (e.g., outdoor parks).[3] National guidance was issued by several home visiting programs, including for SafeCare from the National SafeCare Training and Resource Center, and innovations in home visiting were catalyzed by national and local working groups, including the Rapid Response Virtual Home Visiting collaborative. Initial declines in referrals and intakes during the early months of COVID-19 thus likely reflect not only service disruptions on-the-whole, but the time period necessary for SCC to build infrastructure for new forms of model delivery and other pivots.

The initial increase in the proportion of families actively declining participation in SCC after a referral, followed by a decrease in the proportion of active declines, as compared to the previous year, may in part reflect the ways in which families moved through the COVID-19 pandemic over the first six months. It is unsurprising that there was an uptick in active declines in the first few months, as families navigated public health restrictions and limited contact with any non-essential services to reduce transmission potential. Moreover, parents/caregivers suddenly became full-time caretakers, teachers, playmates, employees, housekeepers, partners, sports coaches, and more, all while navigating increasing rates of unemployment and the loss of financial stability and other concrete supports.[4] Participating in an in-home-turn-virtual parenting program may not have seemed feasible to fit in during early months of the pandemic. However, as the pandemic continued, parental/caregiver stress piled on, social isolation deepened, and families were cut-off from vital services (e.g., behavioral health treatment) and outlets (e.g., schools).[4] A growing body of literature[3] has positioned home visiting programs as a vital "lifeline" to families during the pandemic, given the approach integrates a trauma-informed lens, centers flexibility as an essential ingredient for success, facilitates crucial service connections, provides much needed social and emotional support, and focuses on building within-family strengths and equipping parents with tools/skills needed to be successful during challenging times.[3] The drop in the proportion of active SCC declines observed for the later months of the COVID-19 period may be a refection of home visiting as a lifeline during the pandemic, in which parents increasingly sought out services to fill in critical gaps and meet the needs of their family.

Declines in one-, two-, and three-topic completers may reflect a combination of raw changes in the number of families participating in SafeCare (as an extension of less referrals/intakes) and the volatile external landscape families had to navigate, where program participation (and ultimate retention and completion) may be disrupted by changes in employment, child needs, family health, and other emergent priorities. Given these external factors, SCC sites may want to reach back out to families who participated in SafeCare Colorado during the COVID-19 time period, but did not complete, and re-invite their participation.

Collectively, results from this COVID-19 impact report illuminate key areas where the pandemic disrupted otherwise steady trends in the program's lifecycle. As health and human service providers, policymakers, and program leaders work on COVID-19 recovery efforts, it is critical that families with young children receive the ongoing support they need. Investments in home visiting programs like SCC are central to this goal.[5]

ACKNOWLEDGMENTS

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SafeCare site supervisors, providers, and families

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Response: SafeCare Colorado has been continuously evaluated since it was first lifted in Colorado in 2014. In the early years, a rigorous outcome evaluation assessed impact of the program on child welfare outcomes (permanency, safety). Findings from these evaluations contributed to the Clearinghouse rating of "supported" for SafeCare (favorable, sustained effects demonstrated for permanency). In 2019, the evaluation team partnered with practitioners and state leadership to identify evidence-building priorities for SafeCare moving into the future, with a desire to align the evaluation strategy with Family First opportunities and assuring ongoing rigorous evaluation of SafeCare in alignment with implementation of Colorado's Title IV-E prevention program. The result was an identified focus on a rigorous evaluation of program impacts on child- and adult- well-being outcomes, as aligned with Clearinghouse eligible target domains. In doing so, Colorado's rigorous evaluation of the program will contribute to the body of evidence on SafeCare and help move the program towards a "well-supported" designation as 12-month follow-up outcomes are assessed. Regarding alignment of this rigorous evaluation strategy with the agency's Title IV-E prevention program, from SFY2022 to SFY2023, a feasibility study is being conducted to build capacity for the quasi-experimental design (QED) study focused on child and adult well-being outcomes. Following this building period, the QED well-being study (Section 6) of the SafeCare evaluation strategy (Appendix J) is anticipated to launch in SFY2024 and will continue through at least SFY2026, at which time the evaluation strategy for SafeCare will be revisited to ensure: (a) ongoing rigorous evaluation of the program continues; and/or (b) whether substantial new evidence for the program has been generated from the well-being QED that would make SafeCare eligible for a re-review under Section 7.4.1 of the *Handbook of Standards and Procedures* (as used by the Title IV-E Prevention Services Clearinghouse). If SafeCare receives a well-supported rating by the Clearinghouse, a waiver of evaluation request will be submitted by the agency. Clarification on the rigorous evaluation timeline and execution have been added to the evaluation plan, included in Appendix J with changes summarized below

<u>The following changes were made to SafeCare Colorado Evaluation Strategy:</u>

- A timeline for Year 2 of the well-being feasibility study (SFY 2023) was added that includes collecting initial post-assessment and 6-month follow-up data from the treatment group as well as testing the feasibility of constructing, outreaching, and collecting initial post-assessment data from a comparison group.
- The two quasi-experimental study timelines (originally listed as "future evaluation years" in section 6.8 were replaced with anticipated timelines for SFY 2024, SFY 2025, and SFY 2026, detailing the quasi-experimental study in full.
- The recruitment, enrollment, and consent procedures listed in section 6.3 were altered to reflect a new recruitment approach. Instead of providing recruitment materials to SafeCare Colorado referral sites, the evaluation team will use the Trails and Salesforce databases to locate families that may meet eligibility criteria. Evaluation team staff will call potentially eligible families as well as reach out via email or text message. As illustrated in the updated SFY 2023 timeline, the evaluation team will test the feasibility of this recruitment method and pivot if the need arises.
- For the comparison group procedures, the term "CSU study staff" was changed to "evaluation team staff" for editorial purposes.
- Throughout section 6, "CDHS/OEC" and "OEC" was changed to "DEC" to reflect the transition of the Office of Early Childhood to the Department of Early Childhood.