

PEDIATRICS SUPPORTING PARENTS

PROGRAM ANALYSIS: PROGRAM AND SITE SELECTION PROCESS AND RESULTS

Introduction

Several national foundations¹ came together in the last year to design a new initiative to explore what is possible during the pediatric well-child visit to support children's health social and emotional development. This initiative, *Pediatrics Supporting Parents*, has two phases. In the first phase, the Center for the Study of Social Policy (CSSP) is working to identify evidence-informed, scalable strategies that can be integrated into pediatric well-child visits to promote social and emotional health, the parent-child bond, and parental mental health. In other words, what more could be done in pediatric primary care settings, and how best could it be done, to help families achieve these outcomes? CSSP will also investigate how these strategies might differ depending on the pediatric practice and community setting. In the second phase, the National Institute for Children's Health Quality (NICHQ) will use the results of this study to support a learning community of pediatric primary care practices who will pilot these promising strategies and make recommendations for more widely implementing successful strategies nationally.

This report briefly describes the project background and provides detail about CSSP's process for identifying 12 outstanding programs and initiatives from across the country that will be studied through site visits. *Appendix A* provides a list of all programs identified for investigation. *Appendix B* gives brief descriptions of each of the programs that will be visited, including what we look forward to learning from each. *Appendix C* provides the full description of the selection criteria and *Appendix D* describes the categories into which we sorted the programs. *Appendix E* provides a list of references for the outcome definitions and programs that we reviewed.

Project Background

In 2016, the Einhorn Family Charitable Trust, the National Institute for Children's Health Quality (NICHQ), and Ariadne Labs published *Promoting Young Children's (Ages 0-3) Socioemotional Development in Primary Care,* a review and report on principles, interventions, and recommendations related to addressing early childhood social and emotional development within the pediatric primary care setting. Based on an environmental scan, an expert meeting, and a survey of the current field of pediatric interventions, the report identified 11 promising design elements for further validation and potential scaling. As a result of this initial work, four design elements emerged as the focus of future study. These four design elements can be summarized as:

¹ This group includes the Einhorn Family Charitable Trust, J.B. and M.K. Pritzker Family Foundation, The David and Lucile Packard Foundation, W.K. Kellogg Foundation and an anonymous individual contributor.

- 1. **Assessment.** Social and emotional development is screened for and the bond between caregiver and child and parental family stressors are assessed through formal screening tools, interactions, and observations.
- 2. **Education.** Families are given information about social and emotional development and ageappropriate expectations
- 3. **Modeling.** All members of the health care team model behaviors that promote social and emotional development.
- 4. **Connection.** Families are referred to tailored, clinical, and concrete resources (for example community-based early intervention services or housing or immigration assistance) that they can access during and between visits and other community-based organizations that can help families navigate public systems.

The project's theory of change posits that these design elements will contribute to two important outcomes²:

- Social-Emotional Development. The ability for children to experience, manage, and express the full range of positive and negative emotions as well as read the emotions of others; develop close, satisfying, trusting and sustained relationships with other children and adults; and actively explore their environment and learn. Importantly, research confirms that a child's capacity for healthy social-emotional development exists in the context of family, community and culture
- **Parent-Child Bond.** A selective, meaningful, and significant psychological relationship between parent and child that develops through mutual interactions and persists over time.

In addition, the project recognizes that the **parental mental health** is a critical mediator of socialemotional development and the parent-child bond. Therefore, the program analysis is looking at this outcome as well in service of promoting the parent-child bond and parenting efficacy.

This study is focused on answering five questions to learn what strategies associated with these design elements could be cost-effectively incorporated into pediatric well-child visit routines and the pediatric medical home at a scale that is likely to lead to the identified outcomes. These questions are:

- 1. What are effective well-child visit practices for advancing social-emotional development, parent-child bond and parental mental health? And, why are they effective?
- 2. What can we learn about what has not been effective?
- 3. How do community conditions and population differences among those served by well-child visits affect implementation strategies? What adaptations are necessary?
- 4. What promising well-child visit strategies will be most scalable across primary care settings serving low income families and communities of color?
- 5. What are lessons from exemplar programs on what it takes to scale promising strategies?

² See Appendix E for the references from which these outcome definitions were derived.

To begin to answer these questions, CSSP embarked on a process to identify evidence-informed and promising programs and initiatives that are achieving these outcomes or in the process of building significant evidence about their impact. The remainder of this report describes the process CSSP used.

Program Identification and Selection Criteria

One goal of this study phase was to identify programs for further study in 15 pediatric care or ancillary settings (referred to as sites). CSSP used a multi-step process to identify and select the evidence-

informed and promising programs to be examined further for the strategies they use to implement the programs. The **first step** compiled a list of programs from a variety of sources, including the 2016 NICHQ/Ariadne Labs report, evidence-based program registries, interviews with key stakeholders in public health, pediatrics, and early childhood, and a national nomination process. The national nomination process was specifically designed to uncover

Figure 1	
Sources of Identified Programs	
2016 NICHQ Report:	21
Evidence-Based Registries	14
Stakeholder interviews	8
Nominations	25

"under the radar" programs that are innovative and/or in the process of building an evidence base. This entire process produced a total of 68 programs. Figure 1 shows the number of programs identified from each source. *Appendix A* has the complete list of programs.

The **second step** involved developing an understanding of the programs from publicly available information about the programs (such as websites, research and evaluation studies, and journal articles) and reviewing questionnaire responses from the nominated programs. As a result of this greater understanding, we developed an organizing framework of 10 strategy categories. The categories that emerged and the number of programs that fell within each are listed below and the category descriptions are presented *in Appendix C*. In some cases, a program could have fallen into more than one category, but we assigned it to a category that seemed to best represent its primary focus.

- Anticipatory Guidance (7 programs)
- Screening, Connection, and Access (5 programs)
- Health-Related Resources (5 programs)
- Curriculum Based Courses for Parents/Caregivers (17 programs)
- *Observations* (7 programs)
- Group Well-Child Visits (2 programs)
- *Mental Health Consultation* (7 programs)
- **Physician Extenders** (4 programs)
- *Home Visits* (9 programs)
- Trainings/ Continuous Quality Improvement (5 programs)

Organizing the programs into these categories promoted consideration of commonalities across programs as well as innovative and unique features. The categories provided a framework for applying selection criteria that had been developed with review and comment from the Project Steering Committee. The selection criteria and associated description/definition are presented in *Appendix D*.

The CSSP team used the selection criteria to rate and compare similar programs. We looked closely at the strength of evidence or evidence building for one or more of the designated outcomes, the program's approach to parent/family engagement, and/or potential for or current scale/spread of the program's practices. Once we determined that programs sufficiently satisfied the "evidence of outcomes" criteria, we also discussed the unique learning opportunities afforded by observing innovative aspects of the programs. Perhaps the program used a strategy we knew was not widely used: for example, they integrated a medical-legal partnerships, or they actively engaged families and the community in the design and implementation of the program, or they were closely tied to the community (e.g., emerging from identified community needs or effectively linked to community resources). We also looked for programs that are successfully integrating mental health consultation, addressing the social determinants of health, and employing a physician extender; our interviews with expert stakeholders in public health and pediatrics suggested that these strategies show great promise for improving social and emotional well-being of young children and their families.

These deliberations resulted in the following considerations and decisions:

- Among the seven programs we identified as having an "anticipatory guidance" focus, five met the criteria to different degrees. We selected three for further investigation based on the strength of evidence, geographic location and innovative approaches. For example, Reach Out and Read (ROR), had strong/building evidence in the three outcomes and is widely spread across the country. This meant it would be more likely that an exemplar ROR site would be located in a community of interest and/or in a location that hosted one of the other programs. Therefore, we chose ROR rather than the other literacy based program, which was still building evidence and had fewer sites.
- The five models we identified as having a "screening, connection and access" focus are primarily instruments designed to be used to different degrees in well-child visits and one is a web-based resource and referral data base for use by clinicians and child care providers. As a result of this understanding, we determined that we will look for sites that use one of these instruments and will capture information from all sites about the screening tools and protocols used and how they connect to a centralized resource and referral hub in their community, such as Help Me Grow. For example, we know that some of the South Carolina clinics that are part of the Quality through Technology and Innovation in Pediatrics (QTIP) use SEEK (Safe Environment for Every Kid). Multiple programs and sites use ACE Screening Intervention (Adverse Child Experiences Questionnaire), ASQ-SE (Ages and Stages Questionnaire-Social Emotional), and PEDS (Parents' Evaluation of Developmental Status). In addition, comprehensive programs such as Healthy Steps and Project DULCE identify screening and connecting families to resources and services as part of their model.
- The five programs we sorted into the category of "health related resources" all involved the
 provision of educational materials to families during well-child visits. Most, if not all programs in
 the other categories use similar resources. For example, Healthy Steps provides parents with

educational materials about child development and simple activities designed to support the child's early learning. Therefore, instead of explicitly choosing a site that used one of the nominated health related resources, we decided to document the characteristics of effective use and availability of health related resources in all our site visits, rather than consider these programs, alone, through independent site visits.

- The 17 "curriculum-based programs" would be very difficult to implement within the parameters of a well-child visit because of the session frequency and length. However, looking across categories, we did see similar "educational" strategies already being implemented in the well-child visit through some of the seven programs in the anticipatory guidance category or in the two group well-child visit models. For example, programs in the anticipatory guidance category provided parents with education about child development, the importance of reading/playing, and parenting strategies. The group well-child visits taught similar content as did the curriculum-based programs, but aligned with the well-child visit schedule for young children. For example, one group well-child visit program, Empowering Mothers, was based on content from Bright Futures and the evidence-based Nurturing Parenting Program. Therefore, we believe we will have opportunities to collect important information and insights about effective educational strategies in the context of other well-child visit models.
- Among the seven "observation programs," two using approaches to video-tape parent child interactions were closely considered. We determined the evidence base was strongest for Video Interaction Project, a program that has been successfully integrated into the pediatric medical home and well-child visit. Other programs in this category were ruled out for site visits because they were focused only on a high risk population and/or were intensive, therapeutic interventions that did not align with the focus of this project.
- Two programs were sorted into the category of "group well-child visits." We have chosen to go to both as they represent significantly different approaches. Centering Parenting builds on the evidence from Centering Pregnancy and has a robust strategy for national spread. The other is a program that emerged from community needs. Empowering Mothers in Oakland, CA, is a strategy that was created following the success of other medical group visits in the clinic. This clinic found that group well-child visits designed specifically for the Asian immigrant and refugee community they serve would provide culturally responsive care and contribute to an effective social support system.
- One program was chosen from among six we identified as "mental health consultation
 models." The Massachusetts Project LAUNCH, a federal Substance Abuse and Mental Health
 Services Administration (SAMHSA) program grantee, is identified as the "gold standard" by
 federal partners for the implementation of one of LAUNCH's five strategies: integration of
 behavioral health in primary care. In this locally developed program, an Early Childhood Mental
 Health Clinician and Family Partner are embedded in the primary care setting. Through their

local evaluation, the program has seen improvements in social-emotional development and parental stress and a return on investment to the state's mental health system.

- We determined that all four of the initiatives employing a "physician extender" model would be important to observe given how strongly expert stakeholders and national program developers identified this approach as a promising practice for the outcomes on which this project focuses. Project DULCE is in the process of building evidence and is integrating an approach to addressing social determinants of health through universal screening of infants, integration of a relational approach, and a family specialist and a legal partner joining the care team. Healthy Steps has a strong evidence base and is in the midst of an ambitious spread strategy. We believe an additional two initiatives are important to investigate because of their close connections to their communities and the evidence they are generating. These two are the Mental Health Outreach for Moms (MOMS) Partnership in New Haven, CT, which has strong evidence for decreasing maternal depression symptoms and improving child attendance in school, and Family Connects which requires strong community alignment in order to effectively connect and refer families to needed community resources and services.
- While there are effective practices in "home visiting programs," most of the nine home visiting programs we included in this category do not have practices that fit easily within a primary care setting or a well-child visit format because of their program intensity and in-home setting for service delivery. However, one of the nominated programs in the category of "provider-level trainings/CQI," Promoting First Relationships, is adapting a home visiting model to the primary care clinic. This program has a strong evidence base in the home visiting literature and now aims to change the delivery of care in the clinic by infusing reflective practice and focusing on the provider/parent relationships, similar to how their home visiting program focused on the home visitor/parent relationship. Therefore, we thought this program provided a good opportunity to learn how home visiting model practices are being adapted to the primary care setting through provider training. Likewise, visiting Family Connects will also provide insights into how a community-based, low intensity home visiting program links to pediatric practices.
- Lastly, we considered programs that are intended to build the knowledge, competency, and
 quality of providers to serve families more effectively, rather than having direct connections to
 parent or child behaviors. We sorted five programs into a category we referred to as "providerlevel trainings/continuous quality improvement." As previously noted, we singled out one,
 Promoting First Relationships, because of the evidence it has generated and because of its

³ Project DULCE is an approach being further developed by CSSP and partner jurisdictions with support from The JPB Foundation, as part of the foundation's overall interest in developing community responses to early life stress in young children and their families. We felt that the level of evidence for Project DULCE, derived initially from a federally-funded randomized control trial conducted at Boston Medical Center and now the subject of an evaluation by Chapin Hall, as well as the potential lessons from its innovations, warranted inclusion in this study. We want to make sure that the Steering Committee is aware of and comfortable with CSSP's connections to Project DULCE and its inclusion in this study.

approach to developing clinic staff skills to apply relationship building practices found in home visiting programs. We also determined that the *Quality through Technology and Innovation in Pediatrics (QTIP)* in South Carolina offered an excellent opportunity to learn about a statewide pediatric quality improvement effort that is sustained through the state's Medicaid agency and to include a site visit to a geographic location not represented in other programs.

As we moved through the process, we found that some of the settings with nominated programs were not only implementing their own, innovative programs, they were simultaneously implementing other national programs on our list. Mountainland Pediatrics in Thornton, Colorado, illustrates this well. Their group well-child visit model -- based on the *Incredible Years* program curriculum -- had been nominated for the study and was included in the 68 programs. This practice is also implementing *Reach Out and Read* as well as another nominated program, *Behavioral Health Integration Program (BHIPP)*. Similarly, the *Quality through Technology and Innovation in Pediatrics (QTIP)* has over fifteen participating pediatric practices across South Carolina. From available information, we learned that the majority of these pediatric practices are implementing *Reach Out and Read*, use a variety of evidence based screening tools for child social-emotional development and maternal depression, and are *Healthy Steps* sites. Here, too, we will be able to document practices from multiple programs with a single site visit. Appendix B provides a description of each program, a summary of the evidence, and the specific learning opportunity for the site visit to that program.

Table 1, on the following page, summarizes the final list of programs selected for site visits and the locations known as of this writing. The site visits will allow us to obtain first-hand information from the leaders, staff, and community partners, who are actually implementing these strategies and from the participating families. For those programs that are being implemented in multiple pediatric care practices, CSSP is currently interviewing program developers to determine which pediatric care practices we should visit in order to obtain the information needed to answer our five study questions.

Table 1: Programs Selected for Site Visits

Primary Category	Program		Outcome		
		SED	МН	РВ	
Anticipatory Guidance	Reach Out and Read	٧	٧	٧	
	Thirty Million Words (Well Baby Model)	В		В	
	Incredible Years	٧	٧	٧	
Group Well-Child Visit	Empowering Mothers	В	В	В	
	Centering Parenting	В	В	В	
Observation	Video Interaction Project	٧	٧	٧	
Physician Extender	Mental Health Outreach for Mothers (MOMS) Partnership		٧		
	Healthy Steps	٧	٧	٧	
	Developmental Understanding and Legal Collaboration for Everyone (DULCE) (The Touchpoints and the Newborn Behavioral Observation (NBO) is part of DULCE)	В	В	В	
	Family Connects (This is a unique program as it has characteristics of both home visiting and physician extender programs.)		٧	В	
Mental Health Consultation	Project LAUNCH (Linking Actions for Unmet Needs in Children's Health)- Massachusetts	٧	٧		
Training/ Continuous Quality Improvement	Promoting First Relationships	٧	В	٧	
Quanty improvement	Quality through Technology and Innovation in Pediatrics(QTIP)				

V: Available evidence indicates an impact on outcome

B: Program is building evidence

SED: Social-emotional development

MH: Parental mental health

PB: Parent-Child bond

We believe the process we employed to cast a "wide net" for strategies and then to carefully review all available evidence and other information about innovative program characteristics as we winnowed the programs to the final list has yielded a solid range of programs and geographic locations that we're excited to visit. Furthermore, it has already produced a rich knowledge base that we have shared with NICHQ and are working with them to incorporate this knowledge into the design of the learning community in the next phase of this work.

Appendix A

Compiled List of Candidate Program

- 1. ACE Screening Intervention
- 2. All Babies Cry
- 3. Arts in Play
- 4. Assuring Better Child Health and Development (ABCD) Program
- 5. Attachment and Behavioral Catch Up
- 6. Attachment Vitamins
- 7. Behavioral Health Integration in Pediatric Population 0-5
- 8. Brazelton Touchpoints
- 9. Bringing Baby Home
- 10. Centering Parenting
- 11. Centralized Resource and Referral Hub
- 12. Chicago Parent Program
- 13. Circle of Security Parenting
- 14. Collaborative Problem-Solving Approach
- 15. Connect the Dots
- 16. Earlier is Easier
- 17. Educating Practices in the Community
- 18. Effective Black Parenting Program
- 19. Empowering Mothers
- 20. Every Child Succeeds
- 21. Family Connects
- 22. Family Expectations
- 23. Family Foundations
- 24. Family Nurture Intervention
- 25. Family Practice and Counseling Network
- 26. Filming Interactions to Nurture Development (FIND)
- 27. Fussy Baby FAN
- 28. Healthy Start + Family Thriving Program
- 29. HIPPY USA (Home Instruction for Parents of Preschool Youngsters)
- 30. HealthConnect One Breastfeeding Peer Counselor
- 31. HealthConnect One Community Based Doula
- 32. Incredible Years
- 33. Healthy Steps
- 34. Infant Health and Development Program
- 35. Legacy for Children

- 36. Maryland Behavioral Health Integration in Pediatric Primary Care
- 37. Massachusetts Child Psychiatry Access Program (MCPAP) and MCPAP for Moms
- 38. Mental health Outreach for Moms (MOMs)
 Partnership
- 39. Minding the Baby
- 40. Mount Sinai Parenting Center (Residency Curriculum)
- 41. Mothers and Babies Course
- 42. Nassau Thrives
- 43. Newborn Behavioral Observations
- 44. Parent Corps
- 45. Parent-child Interaction Therapy
- 46. Parents as Teachers
- 47. Pasaporte a la Salad
- 48. Play Nicely
- 49. Preventing Behavioral Problems
- 50. PriCARE
- 51. Project DULCE (Development
 Understanding and Legal Collaboration for
 Everyone
- 52. Project LAUNCH (Boston)
- 53. Project LAUNCH (Multi-Site)
- 54. Promoting First Relationships
- 55. PURPLE Curriculum
- 56. Quality through Technology and Innovation in Pediatrics
- 57. Reach Out and Read
- 58. Safe Environment for Every Kid
- 59. Supporting Father Involvement
- 60. Systematic Training for Effective Parenting
- 61. Talk Read Engage Encourage
- 62. Thirty Million Words
- 63. Triple P Parenting Program
- 64. Tulane Early Learning Collaborative
- 65. Tuning into Kids
- 66. Video Intervention Therapy
- 67. Video Interaction Project
- 68. Welch Emotional Connection Screening

Appendix B Selected Programs for Site Visits

Program Name: CenteringParenting Group Well-Child Visit

Description: CenteringParenting is the billable healthcare visit; a two-generation intervention that supports healthy parent-child interactions and early learning through group well-child visits. It was developed because families requested continued support as they finished their prenatal care in a CenteringPregnancy group. In some clinics CenteringPregnancy prenatal care and CenteringParenting well-child care provide a continuous model of care (P-2+). In the CenteringParenting group well-child visits, 6-8 parents (or caregivers) and their infants of the same age are brought together with their healthcare team. The group meets for 1.5-2 hour sessions at every well-child visit from the second week to the 24 month visit (or beyond). The extended group visit supports knowledge around healthy development, the parent-child bond, and family-caregiver relationship. Each visit begins with individual health assessments and follows with interactive educational activities about different topics, such as attachment, nutrition, breastfeeding, and literacy. Parents also monitor their personal goals and discuss stress management.

Target Population: Children 0-2+ and their caregivers

Outcomes Evidence: "Building"

A three-year randomized control trial of the CenteringParenting model will be launched in 2018. Led by Dr. Renee Boynton-Jarrett (BMC), they anticipate this study will make a significant contribution to an understanding of how the CenteringParenting intervention may positively impact the developmental and behavioral trajectory of children. The program shows a great deal of promise, as CenteringPregnancy has proven health outcomes such as decreasing low birthweight babies, increasing breastfeeding rates, and eliminating racial disparities in preterm birth.

What we want to learn through the site visit: Centering models are scaled widely across the country and we will look for scalable strategies used in the group well-child visit model. In addition, we will learn about the opportunity to continue care from prenatal through the first two years of the child's life.

Program Name: Empowering Mothers

Group Well-Child Visit

Description: This program is a community start-up that was created and has been sustained to meet the needs of the Asian immigrants and refugees in the community. The program provides parenting education and support in the form of group well-child visits for infants and young toddlers, as the clinic saw the success other medical group visits in their practice. It was adapted from the Bright Futures guidelines and the evidence-based Family Nurturing Program and has been translated to multiple Asian languages. During group sessions, parents learn about nurturing/attachment, child development, the importance of interaction and play, stress management/self-care, positive discipline for toddlers, nutrition and safety. The program ran from 2012-2016, stopped due to funding and staffing changes, and is scheduled to restart early in 2019 at a Federally Qualified Health Center in Oakland, California.

Target Population: Mothers who are Asian American immigrants and refugees and their children (0-18 months).

Outcomes Evidence: "Building"

Social-Emotional Development:

The program was evaluated by comparing developmental screening results (ASQ-3 at 18 months) between group well-child care infants (41) vs. standard care (538). Group well-child care infants had lower odds for risk of developmental delay.

Parent-Child Bond:

Qualitative data was gathered from open-ended, anonymous parent surveys, interviews and focus groups. Mothers reported that the program promoted mother/infant attachment.

Parental Mental Health:

The qualitative data suggested that mothers had improved their well-being, self-efficacy, and social support and felt their stress was relieved.

What we want to learn through the site visit: We want to know how the program was specifically designed for the community and utilize are culturally responsive strategies. Furthermore, we are interested in the structure of group well-child visits and the maximization of time with visit content and medical checkups.

Program Name: Family Connects

Physician Extender

Description: Family Connects is a nurse home visiting program with a strong connection to primary care medical homes and community resources. The nurse home visitor acts as a physician extender --conducting assessments and connecting families to needed supports and services. By using screening tools and a comprehensive assessment in the home visits, nurses can quickly identify mother and infant needs. Family Connects builds strong relationships with the community through collaborative efforts and sharing data, which allows them to efficiently and easily connect and refer families to community resources and services. They help transform the community early childhood system and individual services to be aligned and continuous. Families are given one to three home visits depending on their needs, risk factors and assessment results.

Target Population: All newborns and their families in the Family Connects community.

Outcomes Evidence: Building

Social-Emotional Development:

Parent-Child Bond: A randomized controlled trial evaluation of Durham Connects conducted in 2009-2010 indicated that mothers assigned to receive intervention displayed significantly more positive parenting behaviors than did control mothers and their infants had significantly fewer emergency medical care episodes for injuries and illnesses.

Parental Mental Health: In the evaluation of Durham Connects, mothers were less likely to report possible clinical anxiety.

What we want to learn through the site visit: We are interested in learning about the community alignment model of Family Connects and their strong screening and referral process. Family Connects has been shown to connect families to more community resources, which we believe is an important aspect of comprehensive care.

Program Name: Incredible Years (IY)®

Anticipatory Guidance/ Group Well-Child Visit

Description: Incredible Years (IY)[®] is a program for parents, children, and teachers and is intended to prevent and treat young children's behavior problems (ages 0-12 years) and promote their social, emotional, and academic competence.

The IY Baby Parent program is a 10-12 week group based course that covers topics such as parent-child attachment, providing visual, tactile, and physical stimulation, communication and language development, building parental support networks, and recognizing babies' sense of self and temperament. A version of the IY baby parent program (the Well-Baby Program) can be implemented in the primary care setting during 6 well-child visits across the baby's first 9 months of life. Content in both versions of the program is taught in a collaborative way recognizing parent goals and using videotaped modeling, discussion, role plays, and home practice recommendations.

Target Population for the Well-Baby Program: Children birth to 9 months; can be used as a universal intervention for all families in a primary care practice, or can be used as a selective preventive intervention for high-risk families receiving primary care services.

Target Population for Full Suite of IY Programs (ages 0-12 years): programs have been implemented and evaluated across many cultures and socioeconomic groups. The programs have been used as prevention programs for high risk families and as treatment programs for children with conduct problems and or ADHD.

Outcomes Evidence: Building

Current evidence is about Incredible Years Programs that are geared towards children 2+. However, they are building evidence for the 0-12 months Baby Parent group and home coaching program and the individualized Well-Baby Program.

Social-Emotional Development:

A study of the Parenting Resource and Education Project (PREP), which combined screening efforts with Incredible Years programming, was conducted in two sites in Massachusetts. It studied outcomes for toddlers (2-3) with emerging disruptive behavior whose parents took an Incredible Years parenting education program held in pediatric offices. Children displayed improvement in 6 of 7 behavioral measures related to externalizing and internalizing problems and competencies.

Parent-Child Bond: A trial conducted at 11 pediatric practices in Boston studied 273 families with children 2-4 that had disruptive behaviors. Families attended Incredible Years parent training groups conducted in the primary care setting. Results of the study indicated positive parent-child interaction at the 12 month follow up.

Parental Mental Health:
According to the PREP study, mothers reported lower levels of parenting stress. They also reported improvements in parenting skills, such as using appropriate discipline and positive parenting.

Program Name: HealthySteps (HS)

Physician Extender

Description: This program leverages the pediatric primary care setting and frequency of recommended well-child visits during the early years of life to promote nurturing parenting and healthy child development. HealthySteps (HS) integrates a child development specialist (HS Specialist) into the primary care team, whose members then work together to support implementation of the model's eight core components. These eight components reflect the diverse needs of children ages 0-3 and their families, and they are organized in 3 tiers of service that are stratified by risk. The first tier, "universal services," includes child development, social-emotional, and behavioral screenings, screening for family needs, and a child development support line; the second tier, "short-term supports," adds child developmental and behavioral consults with the HS Specialist, care coordination and systems navigation, positive parenting guidance and information, and early learning resources; and the third tier, "comprehensive services," adds ongoing, preventive team-based well-child visits, in which the HS Specialist partners with the provider to deliver enhanced well-child visits.

Target Population: Children 0-3 years and their caregivers

Outcomes Evidence

Social-Emotional Development:

A study of 170 children found significant improvement in social-emotional screening scores over time among children who received HealthySteps, as compared to similar children whose families declined the intervention. Another study of 124 children whose mothers reported experiencing childhood trauma demonstrated reduced risk of social-emotional challenges at 36 months of age among children who received the program, as compared to similar children who did not receive the program.

Parent-Child Bond: A study of two HealthySteps sites indicated that mothers were more likely to interact sensitively with their children. Children and mothers also had greater security of attachment.

Parental Mental Health: A large, national evaluation, as well as subsequent site-level studies, indicated that mothers and providers were more likely to talk about depression and be referred to services. One additional study of mothers receiving HS services were less likely to report depressive symptoms at 3 months.

What we want to learn through the site visit: We are very interested in learning how HealthySteps' use of a physician extender and tiered model based on family needs and risks are used effectively in the well-child visit. HealthySteps has an impressive scale and spread plan and integrates many strategies to promote all three of our outcomes, as the evidence suggests.

Program Name: Massachusetts Project LAUNCH (Linking Actions for Unmet Needs in Children's Health)

Mental Health Consultation
Physician Extender

Description: Massachusetts Project LAUNCH is focused on an integrated behavioral/ mental health approach in the pediatric medical home for young children. A Family Partner and Early Childhood Mental Health Clinician are employed in the primary care setting to work collaboratively with primary care providers and caregivers to support social emotional wellness. Families are referred to MA LAUNCH services for support with challenging life circumstances, for example, parents who are challenged by their children's behaviors, families facing high levels of stress, or children whose social emotional development is impeded.

At the federal level, Project LAUNCH includes five prevention and promotion strategies to ensure that all children enter school ready to learn and succeed. The five strategies are: (1) Behavioral Health in Primary Care; (2) Mental Health Consultation; (3) Enhanced home visiting; (4) Family Strengthening; and (5) Screening and Assessment. Grantees of the US Substance Abuse and Mental Health Services Administration (SAMHSA) implement these strategies based on local community needs and capacity.

Target Population: Children birth-8 years and their caregivers

Outcomes Evidence

Evaluations of Project LAUNCH grantees vary across the country. The evidence of outcomes in Massachusetts are included below from an <u>evaluation of Project LAUNCH MA</u> conducted from 2011-2015.

Social-Emotional Development:

Children who began services aged 1-5 years showed a statistically significant decline in social, emotional and behavioral problems based on ASQ-SE scores. Children who began services under 1 year of age maintained social emotional health as measured by the ASQ-SE scores.

Parent-Child Bond:

Parental Mental Health:

The depressive symptoms of caregivers, who exhibited a mix of high and low depressive symptoms, declined. Caregivers with high stress level reported a decline in stress, bringing them into a healthy range.

What we want to learn through the site visit: We are especially interested in how Massachusetts Project LAUNCH sites use an integrated behavioral health model in the pediatric setting. We would also like to see how the family partners are responsive to family needs and build trust with families. While there over 75 Project LAUNCH grantees, each is designed for that community, and we would like to learn about this process in Massachusetts.

Program Name: Mental Health Outreach for Mothers (MOMS) Partnership

Physician Extender

Description: This program is a community-based partnership that aims to support mothers and reduce depressive symptoms. It was designed specifically to meet the needs of at-risk mothers in New Haven, CT. The MOMS partnership offers a variety of supports for mothers including material resources, group courses and one-on-one coaching. Group interventions are delivered by a licensed clinician and a Community Mental Health Ambassador.

Target Population: Expecting and current mothers in New Haven, CT, with a focus on mothers experiencing/ at risk of poverty and depression.

Outcomes Evidence

Social-Emotional
Development:

Parent-Child Bond:

Parental Mental Health: Several evaluations, including a randomized control trial conducted in 2012-2016 in New Haven public housing, showed that mothers receiving MOMS partnership interventions experience a significant decrease in depressive symptoms and parenting stress. Furthermore, 78% of mothers complete the program, which is significantly higher than the national percentage who complete similar programs (30%).

What we want to learn through the site visit: We are interested in how the design and implementation of the partnership is responsive to community needs and how it leads to such strong outcomes (i.e. maternal depression and stress). Furthermore, we would like to learn about the systems connections within the community, including pediatric practices.

Program Name: Project DULCE (Developmental Understanding and Legal Collaboration for Everyone)

Physician Extender

Description: This program is centered on building partnerships between family specialists and families. Family specialists, trained in the Touchpoints approach and Newborn Behavioral Observation tool, attend each well-child visit for the child's first six months of life to provide families with support. The program supports a child's development by focusing on parenting skills, conducting universal social determinants of health and mental screening, providing information about healthy development, and connecting families to legal and community resources.

Target Population: Low income families and their newborns

Outcomes Evidence: "Building"

An RCT evaluation of DULCE conducted from 2010-2013 revealed that infants were more likely to have completed their 6 month immunization schedule by 7 and 8 months, have 5 or more routine preventive visits by age 1 and have accelerated access to concrete resources. While there was no quantitative data for a change in the outcomes of this project, qualitative data pointed to improved parental mental health (see below). Additionally, Chapin Hall is currently undergoing a study of DULCE that will be completed in 2020, and the Project DULCE team is developing several small scale studies and analyses as well as a has long-range plan for building evidence.

Social-Emotional Development:	Parent-Child Bond:	Parental Mental Health:
		Qualitative analysis of DULCE
		participants' experiences
		revealed that Family Specialists
		connected mothers to resources
		about intimate partner violence
		and immigration status, which
		may have helped lower their
		stress.

What we want to learn through the site visit: DULCE uses a Medical Legal Partnership in their model, which is a unique way to support families and connect them to needed services. We are interested in how the DULCE team (family specialist, pediatrician, legal partner and mental health specialist) joins the care team to provide enhanced and comprehensive support for families and their newborns.

Program Name: Promoting First Relationships (PFR)

Provider-level Trainings/Continuous
Quality Improvement

Description: This program is based on a manualized home visiting intervention/prevention and parental training program that aims to promote healthy relationships between caregivers and young children, educate parents about social-emotional needs, promote emotion regulation and self-reflection, and help parents address behavioral concerns. Specifically, this program is a pediatric primary care version that trains providers to reinforce the same strengths-based messages when interacting with parents and infuses infant mental health practices into care.

Target Population: Parents and caregivers and their children 0-5 years old

Outcomes Evidence

Social-Emotional Development: The result of two randomized control trials, PFR training efforts, showed that in both studies caregivers were more sensitive and contingent with their child supporting emotional growth and had a better understanding of social emotional development relative to the control group. One study RCT reported that children at risk for autism enrolled in PFR showed improvement in social attention and learning. Two RCT studies also showed improvements in stress physiology, measured with cortisol and respiratory sinus arrythmia.

Parent-Child Bond: Two studies. one conducted in 1998 and one conducted in 2002-2003, examined how Promoting First Relationships trained providers discuss parent-child relationships with mothers. In both studies, mothers were more stimulating and/or growth fostering in their interactions with their children. One study showed child reduction in atypical affective communication in toddlers, suggesting better parent-child interaction. Another study showed that children who had multiple foster care placements had more secure attachment to their caregiver after receiving PFR and that this reduced their expression of problem behaviors.

Parental Mental Health: A study of the impact of PFR training delivered to providers of homeless families, showed that parents served after the providers were trained had decreased distress compared to the parents served before the providers were trained. In one study, PFR showed to be more effective for parents who were abused when they were children, these parents received a much stronger positive effect of the program compared to parents who did not have a history of abuse. Parents also state that they learned how to understand their child's social and emotional needs and were highly satisfied with the program.

What we want to learn through the site visit: Promoting First Relationships began as a home visiting model that aimed to support social-emotional development of children. This program has been widely spread and has strong evidence of outcomes. We are very interested in how the home visiting program is being adapted to the pediatric model and how this model can support the same outcomes for children and their families.

Program Name: Quality through Technology and Innovation in Pediatrics (QTIP)

Provider-level Trainings/Continuous
Quality Improvement

Description: This is not a direct service intervention. Instead, this is a quality improvement program in South Carolina that works to improve health care for children. It brings pediatric practices together to collaborate on quality improvement projects that promote physical as well as social-emotional health of young children. There are 32+ QTIP sites around South Carolina.

Target Population: Pediatric practices in South Carolina that serve children of all ages. This project will study the quality improvement initiatives which focus on children 0-3.

Outcomes Evidence

Evaluation and outcome data is at the provider level. QTIP practices submit data monthly regarding changes due to QTIP quality improvement initiatives. For example:

- The percentage of providers that perform developmental screening for children 9 months old has increased steadily over 10 cycles.
- The percentage of providers that perform maternal depression screening and follow-up for mothers with children 9 months old has increased.

What we want to learn through the site visit: We want to observe and learn about the multiple strategies implemented by pediatric clinics in the quality improvement collaborative to promote social-emotional development, including the use of evidence based screening tools. QTIP has strong provider level outcomes that are relevant to this project. In addition, we will learn about sustainability of this type of statewide quality improvement infrastructure.

Program Name: Reach out and Read (ROR)

Anticipatory Guidance

Description: During each well-child visit from at least six months to five years of age, a medical provider trained in research-based methods of early language and literacy promotion discusses with parents and caregivers the importance of reading together, models best practices for encouraging language development, and provides anticipatory guidance. At the start of each visit, the child is offered an age-appropriate book to keep, which helps build a literacy-rich home environment and enables parents to build on the skills and guidance discussed during the visit. There is a focus on leveraging the parent-provider relationship to encourage the parent-child interaction in the first few years of life that is critical for the brain development that is the foundation for both the development of critical early reading skills as well as social-emotional skills.

Target Population: Children 6 months – 5 years and their caregivers, with an emphasis on families in low income communities.

Outcomes Evidence

Social-Emotional Development: Building Evidence

A meta-analysis of parentchild book reading (PCBR) interventions, including Reach Out and Read, concluded that PCBR interventions are significantly beneficial to the psychosocial functioning of children and parents.

Parent-Child Bond:

7 studies (and counting) suggested that parents are more likely to read to their children, report that reading is a favorite activity, and/or report enjoying reading together. These parent-child interactions and serve and return interactions have positive effects on the parent-child bond. The studies were conducted in ROR sites around the country with a variety of populations, including Hispanic families, immigrants, and low income families.

Parental Mental Health:

A pilot study with 30 adolescent mothers with children ages 6-20 months in Toronto suggested that ROR helped reduce maternal depression. Maternal depression scores were significantly lowered from pre to post.

What we want to learn through the site visit: We are interested in ROR's notable benefit, given the low intensity of the intervention. ROR is easily replicable and adaptable to many well-child visits. Because of its reach, we will be able to observe multiple examples of ROR implementation in conjunction with several other programs, and we can learn how they complement one another and how primary care practices have integrated ROR. We are also interested in observing what similar or differing implementation strategies may be employed in the different settings we will be able to observe. Although a seemingly "simple" program, we want to understand the infrastructure and office system needs for successful implementation. We can also learn about how ROR has been able to scale, given the program's widespread implementation.

Program Name: Thirty Million Words (TMW) / TMW Center for

Early Learning + Public Health

TMW-Well Baby and TMW-Pediatrics

Anticipatory Guidance

Description: TMW-Well Baby is implemented in conjunction with the well-child pediatric visit. TMW Well-Baby is a series of interactive, video-based sessions (available in both English and Spanish) delivered in conjunction with the one, two, four, and six month well-child visits. The videos are designed to teach parents about infants' cognitive, language, and social-emotional development, and how to build a strong attachment in order to promote this development from the start. The videos are administered at the start of the well-child visit by the medical assistant. The TMW Center is developing TMW-Pediatrics, a professional development curriculum and continuing medical education training (CME) for pediatric care providers. The program is designed to deepen their knowledge of the role of early learning environments in foundational brain development and equip them with the tools to model behavioral strategies for caregivers that enrich child early language environments during routine well-child visits. TMW-Well Baby and TMW-Pediatrics are designed to complement one another.

Target Population: Children 0-3 and their caregivers with a focus on low income communities.

Outcomes Evidence: "Building"

TMW-Well Baby is currently undergoing a longitudinal randomized controlled evaluation with 469 parent-child dyads enrolled across 10 Chicago pediatric primary care clinics, including eight FQHC clinics. Preliminary analyses find that parents demonstrate significant gains in knowledge of infant cognitive and language development, and demonstrate increases in language interactions with their children, an important aspect of the parental responsivity that promotes social-emotional development and the parent-child bond. Longer-term child outcome data to evaluate the impact of TMW-Well Baby on child language and social-emotional development are still being collected and will be analyzed over the coming year.

What we want to learn through the site visit: TMW-Well Baby is a simple intervention designed for and conducted at pediatric well-child visits, so we are interested in learning about how it fits into the workflow of the visits. We would like to see the coordinated approach that the care team uses to implement the intervention, with the medical assistant showing the video to the families (TMW-Well Baby) and the provider discussing it and providing anticipatory guidance (TMW-Pediatrics). The TMW Center is working on scaling their intervention and building their evidence base, so the intervention has strong potential to be spread. Furthermore, the TMW Center tracks the intervention's participants through the TMW Tech Platform, and they are working on redesigning the platform to integrate data for families who have participated in multiple interventions in the community and we would like to learn about the use of this data.

Program Name: Video Interaction Project (VIP)

Observation

Description: This program uses the time that families are waiting for their pediatrician to record a video of parent-child interactions. These videos are recorded and reviewed by a VIP Child Development Specialist with parents. Through observation and reflection, the VIP Child Development Specialist reinforces how parents are supporting the child's learning and set goals with the parents to improve the parent-child interactions. There are 14 sessions that correspond with all well-child visits from 0-3 years old.

Target Population: Children 0-3 years and their caregivers with an emphasis on families in low income communities.

Outcomes Evidence

Social-Emotional Development:

The BELLE 0-3 Study was a randomized controlled trial of two parent intervention programs: the Video Interaction Project and Building Blocks (BB). 463 families, from primarily low-income immigrant backgrounds, were assessed during the 0-3 period at a New York public hospital. The study suggested the VIP enhanced social-emotional development of the child showing increasing positive effects from 14 to 36 months old in areas such as imitation and attention, reduced separation distress, hyperactivity, and externalizing problems, with sustained effects at school entry 18 months following program completion, including reductions in meeting a clinical hyperactivity threshold.

Parent-Child Bond:

Results from the BELLE 0-3 study indicated enhanced parent engagement in reading, play, and verbal interactions with their child which increased parent-child interactions and parental responsivity, and sustained effects at school entry 18 months following program completion. In addition, there were reductions in physical punishment and in screen time.

Parental Mental Health:

Results from the BELLE 0-3 study indicated reduced maternal depressive symptoms and parenting stress.

What we want to learn through the site visit: We are interested in strategies used to promote all three of our outcomes. Because VIP is specifically designed for the well-child visit, we will look at how the intervention flows with the structure of the visit and how the VIP Child Development Specialist works with the care team to implement the program. We also want to understand the equipment and staff competency requirements for implementation.

Appendix C Selection Criteria

Criteria	What are we looking for?	
Age	Program focuses on children ages 0-3 and their parents. If a program focuses on a broader age range (e.g. ages 0-8 or ages 0-17), we will consider if the program identifies tailored materials/supports for children ages 0-3 that promote social-emotional development. Evidence of impact is specific to children ages 0-3.	
Intervention Focus	Program focuses on child's social-emotional development, parent-child bond, and/or parental mental health.	
Target Populations	Race, cultural groups, immigrants (including by status), and socioeconomic status. Program designed for or implemented with diverse cultural and racial groups and families with higher needs (low-income, immigrants, education, age of parent, etc.). Program has evidence of impact with those specific groups.	
Community Settings	Programs are implemented in a diversity of settings and regions across the country. Including, urban, suburban, rural, and tribal settings for example. Programs do not have to be in multiple areas, but rather, the full list of 10 programs should represent diverse settings and regions.	
Evaluation of impact	Multiple evaluation methods indicate positive impact on social-emotional development, parent-child bond, and/or parental mental health. For programs that are building evidence, we will look for practice-based evidence and results that demonstrate impact with the target population.	
	Impact is demonstrated through the experience of the PtP target populations and in pediatric primary care settings. We will be also looking for evidence of reductions in inequities in the three outcomes.	
Evidence of Design Elements	The design elements can be identified in the program's description of its intervention or core components. Program incorporates at least one of the 4 design elements of focus. In addition, we will be looking to see: • A unique application of the design element. • Other design elements that are essential to the program. • High quality and intentional implementation [IA3] of the design element as described in publicly available information, information gathered through the nomination process or in follow up interviews with developers. • Data system to track and improve design elements. Note: All design elements will be documented in order to learn about co-occurring design elements and identify other essential design elements.	

Criteria	What are we looking for?
Fit for Well-Child Visits	Program was designed for a pediatric primary care setting or has been adapted and implemented in a pediatric primary care setting. Evidence of impact exists from implementation in pediatric primary care. Or,
	Program has specific characteristics that make it suitable for adaptation to pediatric primary care and specifically, to the well-child visit. Characteristics of programs suitable for potential adaptation include: • Potential for reimbursement, including feasibility of billing as part of CPT codes for Developmental Screening (96110).
	 Feasible intensity level (# of sessions, length of sessions, space needs). Brief interventions that can be conducted in a single well-child visit Services that can be delivered by a community health worker or clinician or any member of the care team. Program's outcomes assessments (child and parent) demonstrated as feasible in the pediatric primary care setting.
Potential for Spread/ Scale	Potential for spread and scale is focused on characteristics of the program practices and infrastructure that would need to be in place (or in process) in order to scale up and spread the implementation strategies. We propose using the National Implementation Research Network definition of Readiness for Replication which suggests looking at the following characteristics:
	 Qualified purveyor. Expert or technical assistance available (including materials). Mature sites to observe. Several replications (Program implemented in multiple clinics). Operational definitions of essential functions. Implementation components operationalized (e.g. staff competency, organizational support, leadership). In addition, other criteria to include:
	 Cost using a relative scale (\$, \$\$, \$\$\$). Approach to adaptation and innovation, including data system for CQI. Viable financing mechanism. Demand from parents and providers for the program.
	Note: We may want to consider in later research stages (developer interviews & site visits) how external factors, such as political will, impact the potential for spread and scale.
Family and Community Engagement in Program Design and Implementation	Families and communities were involved in the design of the program and ongoing structures and processes are in place to include families in implementation, adaptation, quality improvement and evaluation. Program has: A strengths-based, partnership approach with families. A documented design process that included families and communities. Ongoing structures in place to include families in the implementation, adaptation, quality improvement and evaluation of the program. (Satisfaction surveys, advisory boards, qualitative interviews, quality improvement committees, etc.)

Appendix D Programs Organized by Primary Focus Categories

The 68 programs organized below into categories that reflect the strategies that are the primary focus of the program intervention. Please note that many of these programs could fit into multiple categories.

Anticipatory Guidance- Anticipatory guidance for parents during the well-child visit provided by providers/ clinicians. These programs seek to enhance the anticipatory guidance recommended in Bright Futures for social-emotional development of young children.

- Brazelton Touchpoints
- Connect the Dots
- PURPLE Curriculum
- Incredible Years
- Reach Out and Read
- Thirty Million Words
- Talk Read Engage Encourage

Screening, Connection and Access- Models that use screening to identify family needs including developmental concerns, parental mental health and/or concrete supports.

- ACE Screening Intervention
- Assuring Better Child Health and Development (ABCD) Program
- Centralized Resource and Referral Hub
- Safe Environment for Every Kid
- Welch Emotional Connection Screening

Health Related Resources- Resources that families can use in the well-child visit or at home that offer child development and parenting tips (i.e., handouts, booklets, or videos).

- All Babies Cry
- Pasaporte a la Salad
- Play Nicely
- Preventing Behavioral Problems
- Earlier is easer

Curriculum based courses for parents/caregivers- Courses conducted over a longer period of time (e.g. full day workshops, group education classes. or DVD/ online based courses).

- Arts in Play
- Attachment Vitamins
- Bringing Baby Home
- Chicago Parent Program
- Circle of Security Parenting
- Collaborative Problem-Solving Approach
- Effective Black Parenting Program
- Family Expectations
- Family Foundations
- Legacy for Children
- Mothers and Babies Course
- Parent Corps

- PriCARE
- Supporting Father Involvement
- Systematic Training for Effective Parenting
- Triple P Parenting Program
- Tuning into Kids

Observations- Observations conducted during the well-child visit, therapy session or by videoing interactions and followed with reflection and consultation with the parent.

- Attachment and Behavioral Catch Up
- Family Nurture Intervention
- Filming Interactions to Nurture Development (FIND)
- Newborn Behavioral Observations
- Video Intervention Therapy
- Video Interaction Project
- Parent-child Interaction Therapy

Group Well-Child Visit- Group well-child visits that include parenting education components and are designed to increase parent agency and connection to resources.

- Centering Parenting
- Empowering Mothers

Mental Health Consultation- Mental health consultation provided to the primary care clinics or integrated consultation model to provide support to the parent/ child within the practice.

- Family Practice and Counseling Network
- Maryland Behavioral Health Integration in Pediatric Primary Care
- Massachusetts Child Psychiatry Access Program (MCPAP) and MCPAP for Moms
- Nassau Thrives
- Project LAUNCH (National Multi-Site Federal Program)
- Tulane Early Learning Collaborative

Physician Extender- Models that include licensed professionals or trained community health workers, embedded in the care team and focused on providing support for families during and/ or outside of the well-child visit.

- Healthy Steps
- New Haven Mental health Outreach for Moms (MOMs) Partnership
- Project DULCE (Development Understanding and Legal Collaboration for Everyone)
- Project LAUNCH (Boston)

Home Visiting- Individual home visits to mothers, parents, and caregivers. Home Visiting services may include educational/ curriculum components, relationship building and/or screenings.

- Every Child Succeeds
- Family Connects
- HealthConnect One Community Based Doula
- HealthConnect One Breastfeeding Peer Counselor
- Healthy Start + Family Thriving Program
- HIPPY USA (Home Instruction for Parents of Preschool Youngsters)
- Infant Health and Development Program
- Minding the Baby

• Parents as Teachers

Provider-level Trainings/ Continuous Quality Improvement- Efforts are geared towards improving the model of care in the clinic and/or how professional staff interact with families and children.

- Educating Practices in the Community
- Fussy Baby FAN
- Mount Sinai Parenting Center (Residency Curriculum)
- Promoting First Relationships
- Quality through Technology and Innovation in Pediatrics

Appendix E References

Definitions of Outcomes

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QTIP

Information about evaluation outcome data was retrieved from Program Survey and developer interview.