Building Resilience in Young Children:

Experiences Promoting Protective Factors in Six Pediatric Practices

Support for this work was provided by The JPB Foundation through funding to Help Me Grow® National Center, a program of Connecticut Children's Office for Community Child Health

Abby Alter, MPA
Erin Cornell, MPH

IMPACT

April 2019

Ideas and Information to Promote the Health of Connecticut's Children

IMPACT is a publication of the Child Health and Development Institute of Connecticut, funded by the Children's Fund of Connecticut.

ACKNOWLEDGEMENTS

The authors would like to acknowledge the following people for their contribution to the work reported herein:

Angelina Montgomery, MPH, First 5 Alameda County

Laura Bernard, MPH, Vermont Department of Mental Health

Von Jessee, MA, Help Me Grow® National Center

Allison Matthews-Wilson, LCSW, Connecticut Children's Center for Care Coordination

Katherine Ramírez, MS, Program Specialist, Connecticut Children's Center for Care Coordination

Sara Sibley, Help Me Grow National Center

All of the physicians and staff from the following:

Asian Health Services, Oakland, California

La Clinica Transit Village, Oakland, California

Connecticut Children's Primary Care at East Hartford and West Hartford, Connecticut

University of Vermont Children's Pediatric Primary Care, Burlington and Williston, Vermont

We would also like to thank the following people for their thoughtful reviews, edits and suggestions for improvement on earlier drafts of this publication:

Jeffrey Vanderploeg, Ph.D., Child Health and Development Institute of Connecticut, Inc.

Lisa Honigfeld, Ph.D., Child Health and Development Institute of Connecticut, Inc.

Paul H. Dworkin, M.D., Help Me Grow National Center.

Cailin O'Connor, M.S., Center for the Study of Social Policy

Debra Dudack, M.S., Connecticut Children's Office for Community Child Health

Julie Tacinelli, Child Health and Development Institute of Connecticut, Inc.

Tianna Hill, MSW, Child Health and Development Institute of Connecticut, Inc.

About the Authors

Abby Alter, MPA is the Senior Associate for Early Childhood Initiatives at the Child Health and Development Institute (CHDI) and has been with the organization since 2014. She leads CHDI's efforts in obesity prevention, socio-emotional development, and early childhood systems. In addition, Abby works with Help Me Grow affiliates on disseminating training modules to pediatric providers related to mitigating toxic stress in young children.

Erin Cornell, MPH is the Associate Director of the Help Me Grow® National Center, a program of the Office of Community Child Health at Connecticut Children's Medical Center. Erin's role is focused on the design, delivery, and ongoing refinement of the National Center's work in model replication, enhancement, and assessment. She has a background in health services research and expertise in improving health and developmental outcomes for children through systems innovation.

About the Child Health and Development Institute of Connecticut:

The Child Health and Development Institute of Connecticut (CHDI), a subsidiary of the Children's Fund of Connecticut, is a not-for-profit organization established to promote and maximize the healthy physical, behavioral, emotional, cognitive, and social development of children throughout Connecticut. CHDI works to ensure that children in Connecticut, particularly those who are disadvantaged, will have access to and make use of a comprehensive, effective, community-based health and mental health care system.

For additional copies of this report, call 860.679.1519 or visit www.chdi.org. Alter, A., Cornell, E. Building Resilience in Young Children: Experiences Promoting Protective Factors in Six Pediatric Practices. Farmington, CT: Child Health and Development Institute of Connecticut. 2019.

Executive Summary

The earliest years of life are critical to a child's healthy growth and development, as a large part of brain development occurs during this period. Many families with young children—especially those who are most vulnerable due to poverty, violence, mental illness, and other potentially toxic exposures—experience stressors in their homes, communities, and work. These factors can impede their ability to provide positive and healthy support to their young children, which, in turn, limits a child's ability to learn, function, and achieve healthy development. On the other hand, the presence of protective factors helps children thrive, despite adversity, a phenomenon known as resilience.

The complex interplay of adversity and protective factors shapes a child's physical, social-emotional and intellectual development. The opportunity to intervene so that children develop resiliency in the face of adverse conditions is highlighted by the Center for the Study of Social Policy's Strengthening Families™ initiative, which presents five protective factors as critical for supporting optimal child development:

- Parental Resilience;
- Social Connections;
- Knowledge of Parenting and Child Development;
- Concrete Support in Times of Need; and
- Social-Emotional Competence of Children.

Pediatric primary care practices can play a critical role in promoting protective factors and positively affecting children's developmental trajectories. This IMPACT report reviews results from an initiative, carried out in 2018, that was designed to train pediatric practices to support families in a way that enhances protective factors and mitigates the impact of toxic stress in young children.

About the Project

In 2018, the Help Me Grow National Center partnered with the Child Health and Development Institute (CHDI) to test the feasibility and efficacy of training child health providers to promote the protective factors framework and supporting them, through a quality improvement activity, to apply the protective factors framework. Pediatric primary care was selected as the venue for promoting the protective factors because it is a universal service used by nearly all families, who often look to their pediatricians for guidance and expertise in child development. Six pediatric practices from Connecticut, California, and Vermont were recruited from the Help Me Grow affiliate network to participate in promoting the protective factors in their everyday workflows with families of young children and to monitor their progress through a quality improvement program. The project was funded by a grant from The JPB Foundation.

Results from the project found:

1) **It is feasible for pediatricians to promote the protective factors**. Practices demonstrated longitudinal improvement over the course of the project in documenting discussions of the protective factors in their charts, particularly for three of the five factors: parental resilience, social connections, and knowledge of parenting and child development. The remaining two factors—social-emotional competence in children and concrete support in times of need—were more challenging for practices to fully adopt.

2) **The protective factors enabled a universal, strength-based approach** focused on health promotion and early detection of concerns, as compared to a deficit-based approach that focuses on screening for risks and adverse events.

3) **Help Me Grow served as an important vehicle to diffuse and support pediatric interventions** related to protective factors by offering seamless access to helpful community-based services and by leveraging relationships with local practices to support adoption of the protective factors framework.

4) **Attention to practice and process workflows are important**, as they were found to help or hinder implementation of new services, including discussions about protective factors.

5) **There is a need to further develop measures** that can be used to determine whether practices sufficiently addressed protective factors, and whether that in turn influenced parent knowledge, confidence, and behaviors.

Recommendations for building resilience among vulnerable populations with young children include:

1) **Disseminate the protective factors framework broadly** to educate parents, providers, and other health system partners in the most effective strategies for strengthening families and promoting children's optimal health, development, and well-being.

2) **Develop, test, and disseminate strategies to measure and understand** how to best communicate with families about social-emotional competence.

3) **Explore the use of technology (electronic medical record prompting)** to assist child health providers in promoting the protective factors.

4) **Introduce the concept of the protective factors early in pediatric residency training** to continue to ensure that a strength-based, promotion-focused approach to care is and remains a part of training.

5) **Ensure funding for rigorous research** demonstrating the link between protective factors and long-term outcomes.

6) **Incorporate child health services within the broader early childhood system**, leveraging an "all-sectors-in" approach to strengthening families.

7) **Strengthen the physician outreach component of all Help Me Grow systems** by engaging child health providers in early childhood systems development, implementation, and evaluation.

Introduction

Parents and caregivers play a major role in supporting the health and well-being of the infants, children, and adolescents in their care. Some may benefit from support in building their capacity to play this role, as well as to understand that caring for themselves is an integral component to effective caregiving.[1] All families thrive by having the skills, strengths, resources, and support that can help them to be their very best. Protective factors are the skills, conditions, or attributes that help a parent, child, or family to thrive and make them less likely to experience the negative impacts associated with risk and adversity.

The Center for the Study of Social Policy (CSSP) developed Strengthening Families™, a research-informed approach to increase family strengths, enrich child development, and decrease the likelihood of child abuse and neglect. The approach is built on a framework of protective factors among families and communities that help improve child outcomes.[2] When certain key protective factors are present, parents/caregivers are much more likely to find and use resources, supports, and coping strategies that allow them to parent effectively, even under stressful circumstances.

The five protective factors identified by the Strengthening Families approach are: parental resilience; social connections; knowledge of parenting and child development; concrete support in times of need; and social-emotional competence of children. When these protective factors are present, they can increase the overall well-being of children and families.

Protective factors are especially important for families facing stressors that often are collectively characterized as "social determinants of health" and include: extreme poverty; domestic and community violence; abuse and neglect; housing instability and homelessness; food insecurity and poor nutrition; substance abuse; incarceration; maternal depression; lack of a quality education; lack of access to basic needs; and lack of social supports (isolation). When protective factors are in place, families are able to thrive, even in difficult circumstances.[2]

An effective venue for the promotion of protective factors is pediatric primary care. Pediatric primary care is a unique, universal point of access for most families. More than 90 percent of children younger than 6 used child health services in 2013.[3] Since parents often look to their pediatricians for guidance and expertise, pediatricians can use such opportunities to emphasize the value of protective factors with their patients and, in turn, strengthen the families they serve.

Providing this support to families is especially important in the first year of a child's life. The parent/caregiver-child relationship is fundamental to shaping brain development, specifically through the interaction patterns between the caregiver and child.[4] When interaction patterns are deficient due to the parent/caregiver's inability to respond in supportive ways, children can experience deficits in brain development that impede their ability to cope with stress.[4]

This IMPACT discusses the importance and feasibility of promoting protective factors in pediatric primary care to strengthen the important caregiver-child bond and build the capacity of families struggling with life stressors. It defines the protective factors framework and summarizes results and lessons learned from a pilot study integrating training, quality improvement, and practice change in six pediatric practices. The IMPACT concludes with recommendations for integrating a protective factors approach in pediatric practices.

Promoting Protective Factors in Pediatric Primary Care

Testing Strategies

Recognizing that pediatric practices are ideal venues for promoting resiliency and assessing and mitigating the impacts of toxic stress, The JPB Foundation provided funding to several entities in an effort to shed light on the critical public health crisis associated with toxic stress and to work to build capacity in child health settings to address this important topic. Connecticut Children's Medical Center's Help Me Grow National Center (HMG National), a program of Connecticut Children's Office for Community Child Health (OCCH), was one of the entities funded by The JPB Foundation to develop and disseminate pediatric interventions and quality improvement programs that focus on the mitigation of toxic stress in young children. Specifically, HMG National supported the development of a protective factors training and quality improvement program for pediatric practices. Help Me Grow (HMG) is a model that promotes cross-sector collaboration in order to build efficient and effective early childhood systems that mitigate the impact of adversity and support protective factors among families, so that all children can grow, develop, and thrive to their full potential. HMG's unique model made them an ideal setting in which to support and test the dissemination of the protective factors work in pediatric settings.

Through The JPB Foundation grant, HMG National partnered with CHDI and OCCH's Practice Quality Improvement program, with the goal of embedding training and complementary quality improvement strategies in pediatric practices. The training was developed and disseminated through CHDI's Educating Practices program. These training and quality improvement strategies were embedded in a subset of HMG communities to enhance their capacity in the area of protective factors and mitigation of toxic stress. The core elements of this initiative included Educating Practices trainings and Practice Quality Improvement participation.

Educating Practices

Educating Practices uses an academic detailing model that includes on-site visits to child health practices to provide training to facilitate practice change and has been shown to be effective in a variety of clinical decision-making areas, including developmental and autism screening. Educating Practices trainings focus on the education of the entire office team, including nurses, pediatricians, and administrative staff, to promote a team approach to practice change, as well as an emphasis on state and local resources and policies that serve to incentivize or positively reinforce desired practice performance in key areas.

Practice Quality Improvement (PQI)

The American Board of Pediatrics (ABP) requires that pediatricians demonstrate their successful participation in Maintenance of Certification (MOC) to ensure ongoing credentialing in their specialty. MOC projects assure pediatric patients and their families that ABP certified pediatricians are actively working to stay up to date with the most current medical knowledge over the course of time.[5] A key requirement of MOC is implementing data-driven quality improvement initiatives within the practice setting and demonstrating sustained improvements in the delivery of care to the community. These initiatives require: a) the selection and approval of relevant, timely, and realistic project measures such as rates of screening; b) the tracking and regular reporting of practice performance on project measures; and c) a commitment on the part of participating providers to convene and review performance and identify small tests of change with the potential to improve performance (eg, Plan, Do, Study, Act cycles). OCCH at Connecticut Children's is a Portfolio Sponsor in the ABP MOC Portfolio Program. Pediatricians who participate in Connecticut Children's portfolio projects and meet ABP completion requirements receive credit for the Performance in Practice component of MOC (MOC Part 4).

HMG National recruited a total of 6 pediatric practices from California, Connecticut, and Vermont to participate in the project. CHDI's Educating Practices program delivered the following pediatric primary care practice training modules to all six of the practices:

1) Help Me Grow Developmental Monitoring and Connecting Children to Services;

2) Family Mental Health—Promotion of Infant Mental Health and Addressing Postpartum Mental Health in Pediatric Primary Care; and

3) Strengthening Protective Factors to Mitigate the Effects of Toxic Stress.

In addition, each of the practices participated in practice quality improvement projects and received Maintenance of Certification credits.

Parents who demonstrate resiliency are those who can use their inner strength, as well as external supports and resources, to proactively confront family or personal challenges or adversity.

Protective Factors Framework

Protective Factors Defined

The Center for the Study of Social Policy's Strengthening Families framework focuses on engaging families, programs, and communities in building five protective factors, each defined in this section.

Parental Resilience:[6] According to CSSP, parental stress can be caused by the stressors that are placed on parents personally and in relation to their child, such as: daily parenting challenges, unexpected events, traumatic life events, social factors, and community and/or societal conditions. How a parent reacts to these stressors can be more important to family well-being than the stressor itself. Resilient parents learn how to manage stress and function well in the face of life challenges, adversity, and trauma. While some life challenges can be fixed easily, others need to be managed carefully. Parents who demonstrate resiliency are those who can use their inner strength, as well as external supports and resources, to proactively confront family or personal challenges or adversity. Resilient parents often feel better about themselves, can manage stress, and may be able to spend more time providing nurturing care and building secure attachments with their children. These secure attachments are vital to positive health outcomes for young children and can help build resiliency for a child who may be facing his/her own stressors.

Social Connections:[7] Parents need positive relationships with people in their lives who can provide support in many ways, such as: emotional support (eg., empathy, non-judgmental

relationships); informational support (eg, parental guidance, providing resources, problem solving); instrumental support (eg, providing transportation, financial assistance, links to jobs); and spiritual support (eg, providing hope and encouragement). Parents who develop meaningful connections can share the joys and challenges of parenting with others and often experience positive moods and parental satisfaction, and experience lower levels of anger, anxiety, and depression. Healthy, trusting, and supportive social connections help provide a buffer to parental stressors, allowing parents to be nurturing and supportive to their own children.

Knowledge of Parenting and Child Development:[8] All parents can benefit from understanding child development and the parenting strategies that support physical, cognitive, behavioral, social, and emotional health at each developmental stage of a child's life. This knowledge and awareness helps prepare parents to tackle their child's individual needs while learning what to expect and what their child needs to promote optimal development. When parents learn that by establishing a secure attachment to their child they are helping to build neural connections in their child's brain that lays the foundation for healthy social-emotional, cognitive, and life-long healthy outcomes for their child, they may be more invested in creating positive experiences and interactions with their children. Learning to manage their children's behavior in positive ways increases parents' own well-being, promotes supportive relationships for children, and decreases the risks of child abuse and neglect.

Concrete Support in Times of Need:[9] All families need help identifying, finding, and receiving concrete support to meet their needs (eg, healthy food, a safe environment, specialized medical, mental health, social, educational, or legal services) so that they can live their healthiest and best lives. In some cases, families are facing challenges and adversity in their lives and have a difficult time asking for help or knowing where to get help. It is important that parents feel they are not being judged for asking for help and that having needs does not make them bad parents. Having access to supports, learning how to navigate systems, and seeking help are all steps to managing one's stress and seeking better outcomes for one's family. It is vital that services and supports provided to families be strength-based, coordinated and caring, and help build confidence and self-efficacy.

Social-Emotional Competence of Children:[10] Optimal social-emotional competence is achieved through secure attachments with parents and caregivers who provide opportunities and environments that allow infants and toddlers to explore, learn, and regulate their emotions. Science has demonstrated the strong link between young children's social-emotional competence and their cognitive development, language skills, mental health, and school success. Early, supportive, and consistent attention from a parent/caregiver who knows how to promote social-emotional skills in young children, particularly during challenging times, is vital to achieving healthy social-emotional outcomes in young children.

The Center for the Study of Social Policy's (CSSP) Strengthening Families Protective Factors Framework includes five protective factors:

Protective Factor	Definition	What It Looks Like in Families	Everyday Language
Parental resilience	The ability to recover from difficult life experiences, or even to be strengthened or transformed by those experiences.	• Hope, optimism, self-confidence • Problem solving skills • Self-care and willingness to ask for help • Not allowing stress to interfere with nurturing	Be strong and flexible.
Social connections	Positive relationships that provide emotional, informational, instrumental, and spiritual support.	• Having the skills to establish and make connections • Parents have multiple friendships and supportive relationships with others • Parents feel respected and appreciated • Accepting help from others, and giving help	Parents need friends and family.
Knowledge of parenting and child development	Understanding child development and parenting strategies that support physical, cognitive, language, and social and emotional development.	• Nurturing parenting behavior • Appropriate developmental expectations • Positive discipline techniques; ability to effectively manage child behavior • Recognizing and responding to children's specific needs (eg, response to crying)	Being a great parent is part natural and part learned.

Protective Factor	Definition	What It Looks Like in Families	Everyday Language
Concrete support in times of need	Access to concrete supports and services that address a family's needs and help minimize stress caused by challenges.	• Seeking and receiving support when needed • Knowing what services are available and how to access them • Basic needs being met; adequate financial security • Advocating for self and child to receive necessary help	We all need help sometimes.
Social and emotional competence of children	Family and child interactions that help children develop the ability to communicate clearly, recognize and regulate their emotions, and establish and maintain relationships.	**For Parent:** • Warm and consistent responses that foster a strong and secure attachment • Setting limits, reinforcing social skills **For the Child:** • Age appropriate self-regulation • Ability to form and maintain relationships with others • Positive interactions with others • Effective communication	Parents need to help their children communicate with others.

Sources: Powerpoint Slides from CSSP: Retrieved 2016 at: https://cssp.org/resource/strengtheningfamilies101/ and https://www.aap.org/en-us/Documents/resilience_messaging-at-the-intersections.pdf

Starting Early to Promote the Protective Factors with Families

Promoting the protective factors with families as early as possible is vital to the healthy development of children. The vast research on brain development indicates that a large percentage of brain growth occurs within the first few years of life.[11] Early brain development lays the foundation for future learning, behavior, and health.[12] As noted by the Center for the Developing Child at Harvard, "Just as a weak foundation compromises the quality and strength of a house, adverse experiences early in life can impair brain architecture, with negative effects lasting into adulthood."[12] The caregiver-child relationship is key in shaping a young child's brain architecture. The metaphor "serve and return" describes the interaction patterns that occur between children and their parents/caregivers, which lays the foundation for optimal development of the brain. Warm and responsive parenting/ caregiving helps brain circuits to develop properly. When responses from parents/caregivers are unreliable or inappropriate, the brain's architecture does not form as expected, which can lead to deficiencies in brain development. Such deficiencies can, in turn, cause health and mental health complications and impede the ability for the child to learn and cope with stress.[12] This inability to cope with stress can have lifelong negative implications if the exposure to stress is prolonged and untreated.

Implications of Toxic Stress on Brain Development

Toxic stress may occur when a child experiences repeated and/or prolonged adversity and exposure to stressful situations such as recurrent abuse, chronic neglect, caregiver mental illness or substance abuse, and/or violence or repeated conflict without the buffering of adequate adult support.[13] Infants and young children respond to toxic stress by producing a stress hormone called cortisol. Frequent or sustained action of cortisol can kill brain cells and reduce the number of cell connections completed in young children. Continual toxic stress response can result in lifelong impairment to an individual's physical and mental health. For young children, prolonged or untreated exposure to toxic stress can manifest in physical symptoms (eg, poor weight gain, slow growth), delayed development, inconsolable crying, sleep problems, aggressive behavior, and anxiety. These symptoms may accumulate over time and impair a young child's ability to learn and function.[14] Therefore, it is imperative for a young child's toxic stress to be buffered by the care of an adult. Research shows that, even under stressful conditions, supportive, responsive relationships with caring adults as early in life as possible can prevent or reverse the damaging effects of toxic stress response.[15]

Positive, secure early relationships have a profound effect on an infants and toddler's ability to cope and turn toxic stress into tolerable stress. Protective factors can help ensure that all families understand the importance of developing and maintaining

The caregiver-child relationship is key in shaping a young child's brain architecture.

responsive, caring relationships with their children and how their buffering can alter the effects of toxic stress and reduce the risk of negative health, educational, and social outcomes for their children. However, some families experience poverty, trauma, adverse life events, and other challenges that increase the need for help and attention to mitigate the impact of trauma on their child's health and mental health. This is especially true of families from lower income households who experience increased levels of chronic stress at home and have fewer resources to cope, which can negatively affect how parents interact with their children.[16]

Effects of Trauma on Infant and Toddler Development

The impact of trauma (eg, abuse, neglect, witnessing violence) on infant and toddler brain development has been well researched. While many adults may think that infants and toddlers do not have the capacity to remember trauma, the available evidence tells us that infants are, in fact, very susceptible to the negative impacts of trauma due to the developing architecture of the brain in the first few years of life.[17] Young children who are exposed to trauma and do not have a parent/caregiver to buffer that exposure are more likely to have developmental delays and exhibit aggressive behaviors, and can have problems learning in school.[18]

Without the powerful buffering effect of a caring adult, negative trauma effects may be carried over into adulthood and affect physical and emotional well-being, as has been demonstrated through the Adverse Childhood Experience (ACE) Study. The original ACE Study was conducted at Kaiser Permanente from 1995 to 1997 with more than 17,000 Health Maintenance Organization members from Southern California. Participants receiving physical exams completed confidential surveys regarding their childhood experiences and current health status and behaviors. The adverse childhood experiences were grouped into three categories: abuse, neglect, and household dysfunction. The results documented that as the number of ACEs increased among respondents, the rates of negative health and social outcomes in adulthood (social-emotional and cognitive impairment, health risk behaviors, disease, disability, and early death) also increased.[19]

The Centers for Disease Control and Prevention has identified the promotion of safe, stable, nurturing relationships as a buffer to the toxic stress that children may experience from exposure to trauma, abuse and neglect, or household dysfunction.[20] When a parent/caregiver has experienced trauma or ACEs themselves, they need extra care in building resilience and learning how to be a buffer for their own child's exposure to trauma and stress. Ensuring the protective factors are in place for families exposed to trauma or adverse life experiences is vital to mitigate the risk of poor developmental and behavioral outcomes.

Social determinants of health play a critical role in determining health and life expectancy.

The social determinants of health are the conditions in which we are born, we grow and age, and in which we live and work. The factors below impact on our health and wellbeing.

Source: NHS Health Scotland

Social Determinants of Health

While all families can benefit from the protective factors, we know that they are critical for families from low-income communities who often struggle with unmet non-medical needs, also referred to as social determinants of health. Examples include: unemployment, access to adequate food or safe and stable housing; poverty; access to transportation; poor nutrition; and social isolation. The conditions we live in on a daily basis, often conditions individuals are born into, have the strongest impact on overall health and well-being.[21] Social determinants of health play a critical role in determining health and life expectancy.

Pediatric providers rarely have the resources or capacity to screen for unmet social needs of their patients and connect them to helpful community programs and resources. In a Robert Wood Johnson national survey of pediatricians, more than 4 of 5 physicians (85 percent) expressed a lack of confidence in their capacity to meet their patients' social needs, and that this impedes their ability to provide quality care.[22] By introducing the protective factors framework to pediatricians, they can begin conversations with their patients' families that may identify the need for referrals and resources to address some of their patients' unmet social needs. It is important to note that the protective factors framework is not a screening tool to identify deficiencies in the social determinants of health; rather, it is a strength-based approach to working with families that focuses on building the capacity of families to obtain support, to engage in self-care, and to develop the child-parent relationship. The protective factors framework can guide efforts to identify risks that may be precursors to the ability to buffer toxic stress.

Role of Pediatrics in Promoting Protective Factors

Pediatricians are in a unique position to support families in building resilience and promoting the protective factors. The relationships they have with families give pediatricians the opportunity to observe behaviors and determine when and if a family may need additional support. The 4th edition of the American Academy of Pediatrics' *Bright Futures Guidelines for Health Supervision of Infants, Children, and Adolescents*, focuses on the theme of strength-based health visits and protective factors promotion.[23] "The Bright Futures Health Supervision Visits provide various opportunities for health care professionals to identify risks, but also to address strengths and promote protective factors."[23] While providing anticipatory guidance (information provided by the health care professional to parents/caregivers to assist them in understanding a child's development at each stage of life) may be sufficient for some families, other times it may be important to provide additional support to families in order to ensure they access needed services and supports. It is vital to identify strengths with families and provide feedback to families about what they are doing well. Parents need to understand that they can influence the healthy development of their children even if they are facing difficulties.[23]

Pediatricians can promote the protective factors in their practices by developing an understanding of each protective factor, what it looks like in families, and how to talk to parents using simple language that promotes support and understanding with the families in their care. The following chart outlines the role of the pediatrician for each protective factor and suggests specific ways to promote each one.

Pediatric practices can screen for maternal depression, developmental progress, and social and emotional development, and obtain family mental health histories for all patients.

Protective Factor	Pediatric Role in Promoting Protective Factors
Parental Resilience	• Ask parents questions about their experience and how they are coping • Check in on parents' mental health and conduct maternal depression screens • Identify families' socio-economic family stressors • Encourage use of positive coping strategies to ease stress
Social Connections	• Encourage parents to develop and nurture positive relationships in their lives • Provide information about parenting groups and other social opportunities in the community you are serving • Encourage families to visit a local library or play groups • Consider posting community information in waiting rooms
Knowledge of Parenting and Child Development	• Share age-appropriate child development knowledge in an easy-to-understand manner • Honor each family's race, language, culture, history, and approach to parenting • Point out positive things the parent is already doing • Model developmentally appropriate interactions • Encourage parents to ask questions about parenting issues and techniques
Concrete Support in Times of Need	• Encourage families to feel comfortable talking about stressors such as crises, illness, money, housing situation, transportation, ability to afford diapers, trauma history, and guilt • Remind parents that there is nothing wrong with asking for help—this is good parenting • Respond immediately when families are in crisis (facilitate linkages) • Provide information and connection to community supports and services • Check back with families to make sure they received adequate help
Social and Emotional Competence of Children	• Promote attachment between parents and children • Model nurturing care when possible • Encourage families to take the time to sit and read with their child • Provide resources and information about developing nurturing relationships and skills • Encourage parents to ask questions about their child's behavior • Help parents understand how to buffer their child during stressful times

Source: Center for Social Policy: Primary Health Partners: Promoting Children's Health and Resiliency: A Strengthening Families Approach: https://cssp.org/resource/strengtheningfamilies101/

Additionally, pediatric practices can screen for maternal depression, developmental progress, and social and emotional development, and obtain family mental health histories for all patients. Through screening, practices ensure a mechanism to identify trauma exposure and effectively respond when a child has experienced trauma.

The entire pediatric office can be involved in protective factors promotion. Waiting rooms can be set up to encourage interaction between patients and staff and to allow patients to network with each other. Parenting and child development information can be provided in waiting rooms and should be available in the languages of the families that the practice serves. Toys and games can be offered that encourage parent-child interaction.[24] It is also imperative for pediatric practices to be knowledgeable about their communities' programs that support families, such as family resource centers, parent education and support groups, care coordination organizations, home visiting programs, and libraries. In addition, many states have centralized resource and referral organizations such as 211 and HMG. Practices can reach out to these centralized support systems and familiarize themselves with appropriate referral processes and procedures to maximize patient linkage to supports. When making referrals, practices should follow up with patients in a timely manner to ensure patients are getting the support they need.

A Novel Project to Strengthen Pediatric Capacity to Mitigate the Impacts of Toxic Stress

As described previously, HMG National received funding from The JPB Foundation to support a large, multi-site initiative to enhance the capacity of pediatric primary care practices to mitigate the impact of toxic stress and promote protective factors. In part, HMG National was well suited to lead this work on the basis of the models' structure and engagement with child health services.

About Help Me Grow

The HMG model comprises four core components: a centralized access point; family and community outreach; child health care provider outreach; and data collection and analysis. In a given community, the centralized access point assists families and professionals in accessing appropriate programs and services by incorporating:

1) care coordinators trained to support resource and referral activities with families of young children; and

2) a comprehensive resource directory that regularly identifies, vets, and refines items such as program availability, eligibility, and scope of service to inform family linkages.

Child health outreach is a core part of Help Me Grow implementation and involves relationship-building with promotion of relevant knowledge and resources with and to pediatric practices.

Child health outreach is a core part of HMG implementation and involves relationship-building with promotion of relevant knowledge and resources with and to pediatric practices. Such activities ensure that HMG communities are primed to adopt and scale innovations that lead to health services transformation, such as new and emerging constructs for addressing and mitigating the impacts of toxic stress.

HMG was developed by Paul Dworkin, MD, and was first piloted in Hartford, Connecticut, in 1997 and has since expanded to 28 states. Communities implementing the model do so with fidelity to the core components described on page 19, ensuring appropriate local adaptations that promote greater uptake and utilization of the system. HMG National regularly scans for and diffuses emerging innovations and best practices with the potential to strengthen the HMG system.

Project Participant Selection

The HMG National Center recruited communities for this project on the basis of their engagement with related initiatives, such as the Early Childhood Learning and Innovation Network for Communities (EC-LINC) of the Center for the Study of Social Policy. EC-LINC is a network of more than fourteen communities that operate as a learning laboratory for identifying innovative solutions to pressing challenges in early childhood and ensuring kindergarten readiness. EC-LINC Help Me Grow affiliates in California, Connecticut, and Vermont identified six pediatric practices to participate (two in each community, respectively). Representatives from HMG National and CHDI provided project facilitation and oversight, developed and delivered modules, and trained local project leads. At the local level, each community in the project committed to an eight- to nine-month implementation timeline consisting of gaining familiarity and expertise with module content, diffusing Educating Practices and PQI to each of the six practices, completing related project reporting requirements, and participating in required project meetings.

Methodology

To support local training and quality improvement activities in practices, the three HMG affiliates in California, Connecticut, and Vermont committed an HMG liaison to the project. While the liaisons held different project titles within their HMG systems, all were selected on the basis of their experiences engaging in outreach and working directly with health care providers in their communities. Once liaisons were identified, they in turn recruited pediatric providers to participate in the intervention using a combination of word-of-mouth and formal Requests for Applications. In large part, practice selection was driven by a practice's interest in, and perceived capacity to take on, this work. Practices were provided with stipends over the course of the project in order to offset time and effort to participate in practice-based training and consultation activities. The stipends were not tied to performance in the project, but instead were contingent on overall engagement and participation.

The following table describes the composition of each of the healthcare practices that participated in the project. CHDI staff acted as the HMG physician outreach liaison to the pediatric practices in Connecticut and also provided technical assistance to the other participating program liaisons in California and Vermont. This technical assistance bolstered the existing physician outreach experience and activities of liaisons and ensured ongoing facilitation of this particular project at the local level.

Participating Practices

Practice	Type of Practice	Geographic Area Serviced	Language of Patient Base	Volume of Patients Served per Year (Pediatrics)	# of Participating Pediatricians
Asian Health Services	Community health clinic primarily serving Asian community ages 0-65+	Oakland, CA Chinatown	Chinese Vietnamese English	8,919	4/5
La Clinica Transit Village	Large community health center serving ages 0-65+	Oakland, CA Fruitvale District	Spanish Mam (Mayan Language) English	7,444	7/7
Connecticut Children's Primary Care	Off-site community-based Children's hospital pediatric primary care practice serving infants, children, and adolescents, from birth to 18 years of age. Treats patients from urban and suburban communities.	East Hartford, Hartford, and Manchester CT	English Spanish 2% Other (<1%) Nepali, Creole	8,031	3/3
Connecticut Children's Primary Care	Off-site community-based children's hospital pediatric primary care practice serving infants, children, and adolescents, from birth to 18 years of age. Treats patients from urban and suburban communities.	West Hartford, Hartford, Farmington, and New Britain CT	English 95% Spanish 1% Vietnamese 1% Hindi 1% Other <1% (Albanian, Arabic, Japanese, Nepali, Sign)	5,360	1/1

Practice	Type of Practice	Geographic Area Serviced	Language of Patient Base	Volume of Patients Served per Year (Pediatrics)	# of Participating Pediatricians
University of Vermont Children's Pediatric Primary Care	Off-site community-based children's hospital pediatric primary care practice serving infants, children, and adolescents, from birth to 18 (or 21) years of age. The majority of patients are from rural and suburban communities.	Chittenden County, Burlington, and Suburban towns in VT	Mainly English speaking	2,400	2/4
University of Vermont Children's Pediatric Primary Care	Hospital-based pediatric primary care practice serving infants, children, and adolescents, from birth to 18 (or 21) years of age. The majority of patients are from urban and suburban communities. This practice includes the Pediatric New American Clinic, which provides primary care to children relocated to the Burlington area through the U.S. Refugee Resettlement Program.	Burlington, VT and some surrounding towns in Chittenden County, VT	Bosnian, Bhutanese (Butanese-Nepali), Arabic (Syria, Iraq, Sudan, others), Karen (Burma), Somali, Maay-Maay, Swahili, Vietnamese	4,600	6/8

Module Components

As described previously, the approach to promoting protective factors in primary care combined two complementary strategies: Educating Practices, an in-office academic detailing session to the entire office staff at each practice, and PQI, a corresponding quality improvement project that required each practice to collect, review, and identify opportunities to improve performance on a set of designated project metrics.

Strengthening the Protective Factors Educating Practices Module

CHDI developed a "Strengthening the Protective Factors" educational module in partnership with the Connecticut Children's Center for Care Coordination (the Center). Staff from the Center completed prior training in the protective factors through the National Alliance of Children's Trust and Prevention Funds.

The module included the following topics:

- In-depth review of the protective factors framework and how providers could make small changes in their day-to-day interactions with the families they serve;
- Information on ACEs, the concept of toxic stress, brain development, and the social determinants of health and how they affect families;
- Questions providers can use to promote the protective factors;
- Identification of state and local resources to support patient referrals; and
- Review of Practice Quality Improvement project requirements.

In February 2018, CHDI and HMG National facilitated a webinar to train the HMG liaisons on the Protective Factors module. This included a "train the trainer" approach in which liaisons became equipped with the knowledge and resources needed to subsequently deliver the training to their local practices. Each affiliate updated the module to reflect their individual state programs and augmented their HMG programs with referral resources. By the end of March 2018, all six of the participating practices attended the "Strengthening the Protective Factors" training, which provided baseline knowledge for subsequent quality improvement activities.

Strengthening the Protective Factors PQI Project

In order to ensure the uptake and utilization of knowledge gained during the educational sessions, practices subsequently completed a six-month quality improvement project. The PQI module for this topic identified and prompted practice change around specific project measures. Quality improvement measures were identified by the project team and reviewed and vetted by the Connecticut Children's Medical Center Maintenance of Certification (MOC) Committee. As a portfolio sponsor for MOC, Connecticut Children's leverages the Committee, which is composed of individuals across a variety of clinical disciplines and organizations in Connecticut, to serve as a review and approval entity for all MOC Part IV projects offered through the Connecticut Children's portfolio.

Project measures emphasized concepts as reviewed during the training, focusing on the degree to which providers discussed the protective factors with patients and families. While many PQI projects relate to provider approaches, such as documented rates of screening or elicitation of accurate patient histories, this module was unique in that it relied on whether or not families perceived their provider as having addressed the protective factors during their visit. As such, in addition to provider documentation of having addressed the protective factors with families, practices also completed an exit survey with parents to solicit parent perspectives on these five factors. This strategy facilitated an opportunity to correlate practices' documentation of addressing the protective factors with families' perceptions that such protective factors were available to them to draw upon in facing life stressors. The following questions were suggested to providers to prompt discussion specific to each of the five protective factors.

Protective Factors Questions asked in Participating Practices

Question to Ask Patient	Corresponding Protective Factor
How do you handle stress when you are faced with the challenges of parenthood?	Parental Resilience
Do you have a support system in your life?	Social Connections
How is your child feeding, growing, sleeping, and playing?	Knowledge of Parenting and Child Development
Do you know where to ask for help?	Concrete Support in Times of Need
How do you comfort your child when he/she is upset?	Social and Emotional Competence of Children

Medical Chart Audit

For six consecutive months, participating practices selected 20 consecutive medical records from well-child visits of patients seen for a well-visit between the ages of 1 and 12 months. Practices reviewed medical records and entered information from the records into a data collection form on QInsight, a secure, web-based data collection system maintained by Connecticut Children's Office for Community Child Health's PQI program.

Specifically, providers were asked to document in their charts that they discussed protective factors questions with parents/caregivers of 1- to 12-month old infants during well-child visits. As part of the practice quality improvement project, providers asked families about at least two protective factors per visit. Providers were also asked to document any referrals made to HMG or another community resource as a result of information gained about the protective factors.

In addition to the patient chart audit, the practice quality improvement project included a parent/caregiver exit survey (see below) that asked parents to report on the degree to which protective factors were present and/or available as a resource to them. Surveys were available in English, Spanish, and Chinese. For the same six consecutive months, providers were asked to select 20 parent/caregiver exit surveys and enter information from these surveys into QInsight. The survey included questions about the parent/caregiver's experience at their well-child visit, specifically, whether their child's health provider asked about each of the five protective factors and made a referral to HMG or other community resources/services as warranted. The parent/exit surveys did not contain protected health information and were not linked to patient medical records or specific health care providers. The goal of the parent/exit survey was to determine whether there was a change in the percentage of parents who reported having protective factors in place over the duration of the project, a plausible indicator of the providers' attention to protective factors.

To support continuous quality improvement activities, the QInsight system produces run charts to depict practices' progress during each monthly data cycle for each of the measures. These run charts allowed practices to review their data and discuss strategies for quality improvement and practice workflow improvements. In order to receive MOC credit, providers are required to participate in at least two structured discussions within the practice that review practice performance and identify strategies for improving performance.

Follow-Up Survey for "One Month to 12-Month-Old" Well-Baby Visits

Please complete this survey only if you had a "one month to 12-month-old" well-baby visit today. Your name and your child's name are NOT on this survey. Thank you.

In what month is your visit today?

◯ January ◯ February ◯ March ◯ April ◯ May ◯ June
◯ July ◯ August ◯ September ◯ October ◯ November ◯ December

Please circle the number that describes how much you agree or disagree with the statement below:

	Strongly Disagree	Mostly Disagree	Slightly Disagree	Slightly Agree	Mostly Agree	Strongly Agree
I know how to handle stress when I am faced with the challenges of parenthood.	1	2	3	4	5	6
I have others who will listen when I need to talk about my problems.	1	2	3	4	5	6
I know how to help my child learn.	1	2	3	4	5	6
I know where to turn if my family needed food or housing.	1	2	3	4	5	6
I am able to soothe and comfort my child when he/she is upset.	1	2	3	4	5	6

Please circle one answer for each question below:

At your visit today, **did you need or want help with a parenting question or with meeting your needs or your family's needs**?	Yes	No	I Don't Know
If you answered "Yes" to the last question, **did someone tell you about *Help Me Grow* as a resource that could help you**?	Yes	No	I Don't Know

IMPACT

Results

Each participating practice approached the project differently. While all of the providers agreed that it was important to discuss protective factors with their patients, they each identified and implemented workflows that they believed would work in their practice site. The following chart provides an overview of the implementation process for each participating practice.

Practice	Protective Factor Patient Discussion Workflow	Parent Exit Study, Survey Workflow	Documentation in Patient Charts	Lessons Learned from Plan, Do, Act (quality improvement monthly chart reviews)
Asian Health Services, Oakland, CA	Handed out parent exit survey at 6-month well-child visit during patient check-in. Used parent survey as a tool to discuss the protective factors with families during the well-child visit. After two months, practice started giving out the parent survey at 2-month well-child visits in addition to the 6-month well-child visit. After the visit, families filled out the last two questions of the exit survey.	Used parent exit survey as a screening tool to prompt discussions of protective factors with patients.	Scanned parent survey into the electronic medical records.	Found that using the parent survey was very useful to start conversations with parents related to protective factors. Practice identified more "stressed" parents needing support and providers were able to see value in referrals to Help Me Grow.
La Clinica Transit Village, Oakland, CA	Each participating provider was responsible for creating protective factors question templates in their electronic medical record. They started this with the 9-month well-child visit then added the methodology to 2- to 12-month well-child visits prompts.	Each participating provider was responsible for handing out the parent exit surveys after the visit.	Each provider used pre-populated visit notes in the electronic medical record to document each protective factor discussed.	Practitioners felt they needed a protective factors screening tool or prompts in their electronic medical records to start conversations related to protective factors. Practice was successful in collecting parent exit surveys after they assigned the task of giving it out and collecting to a staff person other than the pediatrician.

Practice	Protective Factor Patient Discussion Workflow	Parent Exit Study, Survey Workflow	Documentation in Patient Charts	Lessons Learned from Plan, Do, Act (quality improvement monthly chart reviews)
Connecticut Children's Primary Care at East Hartford, CT	The practice added one protective factor question to their patient pre-visit questionnaires for well-child visits from ages 1-12 months. (Whom can you count on to help and support you?) The questionnaires were used as tools for providers to start conversations with their patients.	Medical assistant was assigned with the task of giving out the parent exit surveys before immunizations were given and collected them each month.	Pre-visit questionnaires were scanned into electronic medical records. In addition, some participating providers entered notes in the "social" section of the electronic medical record related to protective factors.	Incorporating questions into the pre-visit questionnaires for ages 1-12 month visits helped practice open discussion of protective factors with patients. However, some providers did not document the discussions. Practice suggested adding prompts to the electronic medical record to ensure each provider is discussing protective factors with patients.
Connecticut Children's Primary Care at West Hartford, CT	The practice added one protective factor question to their patient pre-visit questionnaires for well-child visits from ages 1-12 months (Whom can you count on to help and support you?). The questionnaires were used as tools for providers to open up conversations with their patients.	Nurse assistant was assigned with task of giving out the parent exit surveys before immunizations were given and collected them each month.	These pre-visit questionnaires were scanned in their electronic medical records. In addition, some participating providers entered notes in the "social" section of the electronic medical record related to protective factors.	Incorporating questions into the pre-visit questionnaires for ages 1-12 visit questionnaires for ages 1-12 month visits helped practice open discussions of protective factors with patients. However, some providers did not document the discussions. Practice suggested adding prompts to the Electronic Medical Record to ensure each provider is discussing protective factors with patients.
University of Vermont Children's Pediatric Primary Care, Williston, VT	Developed a screening tool that asked questions about social determinants of health that also opened up conversations related to the protective factors. They always ask their patients about feeling isolated and if they have someone to turn to when they have problems. They also always discuss parenting and child development.	Practice did not give out parent exit surveys due to language barriers.	Screening tool was scanned in electronic medical record.	Found module interesting and relevant to other work they are doing with their patients related to social determinants of health. Language barriers of proposed protective factors questions were a big problem for this practice since they see so many refugees.
University of Vermont Children's Pediatric Primary Care, Burlington, VT	Developed a screening tool that asked questions about social determinants of health that also opened up conversations related to the protective factors. They always ask their patients about feeling isolated and if they have people to turn to when they have problems.	Practice did not give out parent exit surveys due to staffing issues.	Screening tool was scanned in electronic medical record.	Found module interesting and relevant to other work they are doing with their patients related to social determinants of health. Due to staffing changes, it was difficult to incorporate protective factors questions and parent exit surveys into workflows.

Aggregated Practice Results of Provider Discussions with Patients

While the project required the standardized implementation of a specific training module and set project measures, each practice was allowed the flexibility to determine how to implement the module in a way that worked best for the practice, including whether and how the module could be tied to other areas of focus. This resulted in an important shift in the approach taken by the Vermont practices, in which they ultimately employed a screening tool that included questions related to the social determinants of health (SDOH). The Vermont practices serve a large refugee population and felt that using the SDOH tool would better enable them to identify the specific needs of their patients. Along with the SDOH tool, the practices asked their patients if they felt isolated or have people to turn to for help; subsequently, the Vermont practices exhibited high rates of documenting their discussions of the protective factors that address Concrete Support in Times of Need and, in addition, Knowledge of Parenting and Child Development. However, the practices did not document discussions of the other three protective factors. Due to the fact that the Vermont practices adapted the module in such a unique way, the following aggregated results do not include their data.

Although participating practices adopted unique workflow processes for talking with their patients about the protective factors, many of the practices showed longitudinal improvement over the course of the project. Six months of medical record review recorded by practices showed that participating providers improved on the number of medical records that contained documented discussion of at least three protective factors: parental resilience, social connections, and knowledge of parenting and child development. Providers did not document many discussions concerning the protective factors of Social and Emotional Competence of Children or Concrete Support in Times of Need. In addition, in months 3, 4, and 6 of the project, referrals to HMG increased for those medical records that had documented concerns. A limitation of our project was that patient chart reviews did not consider or document the use of other interventions that could promote protective factors, such as Reach Out and Read (a practice-based intervention that incorporates books into pediatric care and encourages parents to use them at home) or the Ages and Stages Questionnaires (a tool used to support developmental and social-emotional screening).

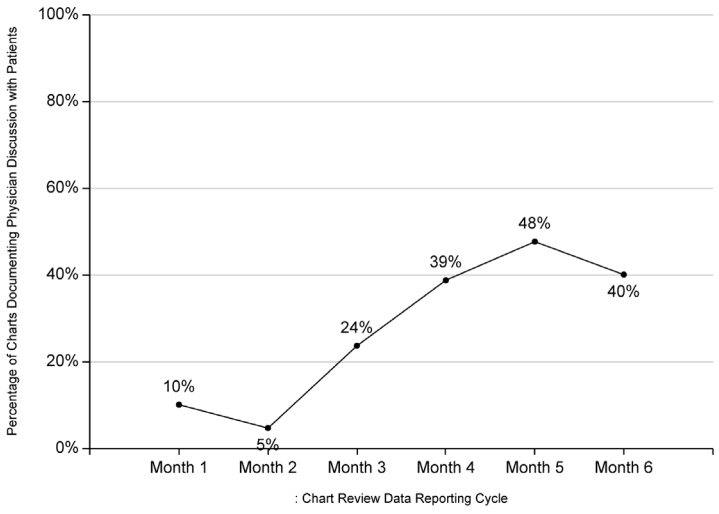
The following charts show aggregated results.

Number of Charts Entered in Each Data Reporting Cycle

Chart Review Data Reporting Cycle	Number of Charts Entered
1	105
2	105
3	109
4	102
5	97
6	98

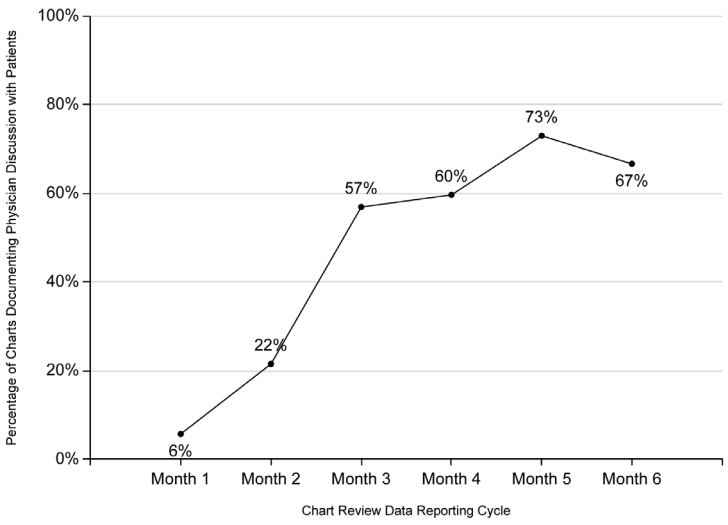
Physician Documentation in Charts of Discussion of Parental Resilience

How do you handle stress when you are faced with the challenges of parenthood?



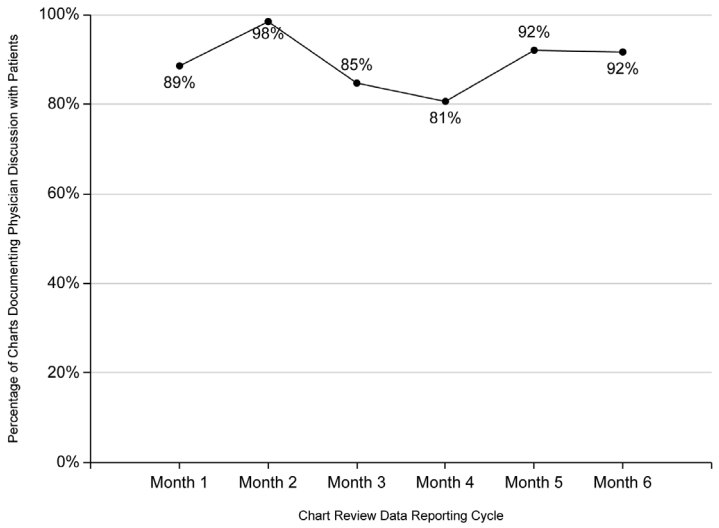
Physician Documentation in Charts of Discussion of Social Connections

Do you have a support system in you life?



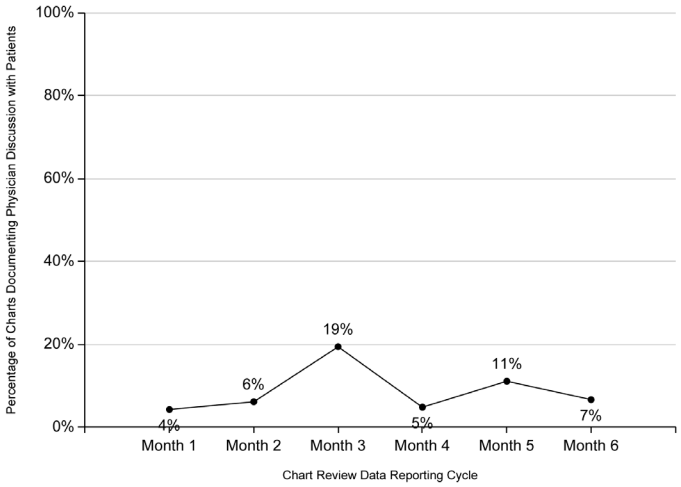
Physician Documentation in Charts of Discussion of Knowledge of Parenting and Child Development

How is your child feeding, growing, sleeping and playing?



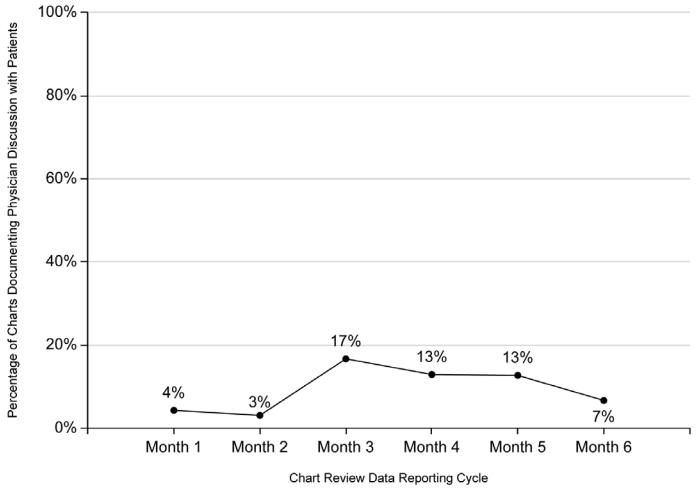
Physician Documentation in Charts of Discussing Concrete Support in Times of Need

Do you know where to ask for help?



Physician Documentation in Charts of Discussing Social and Emotional Competence of Children

How do you comfort your child when he/she is upset?



Parent Exit Survey

Each participating practice (excluding Vermont) handed out parent exit surveys at some time during the patient visit. Due to the non-standardized way in which practices implemented the patient surveys, the results provide a limited window into patients' views about the extent to which protective factors are in place. Most parents indicated on the surveys that they mostly agreed or strongly agreed with the statements related to each protective factor.

Lessons Learned

- **Protective factors facilitate a universal, strength-based approach focused on health promotion and early detection of concerns, as compared to a deficit-based approach that focuses on screening for adverse events.** An emphasis on protective factors can ensure that families have access to supports that can mitigate the impacts of current or future stressors.
- **HMG served as an important vehicle to diffuse pediatric interventions related to protective factors in two distinct ways:**
  1) By design, HMG offers seamless access to helpful community-based services and supports and helps pediatric practices meet child and family needs. This ensured the availability of a community-based care coordination resource in the presence of concerns or needs identified during well-child visits.
  2) HMG child health provider liaisons were key in leveraging existing or establishing new relationships with local practices to support adoption of the protective factors framework.
- **HMG liaisons working with pediatric practices to introduce interventions, such as protective factors, must build bidirectional trust with practices.** An effective strategy that emerged was to identify a practice champion to convey enthusiasm for the work, serve as a peer mentor to practices, and secure buy-in for the project and subsequent workflow changes that increase practice performance on specific project measures.
- **Practice and process workflows, including those imposed by electronic medical records, can help or hinder implementation of new services, including discussions about protective factors.** The barriers posed by existing workflows and electronic medical records may be less disruptive to efforts if identified and addressed early in implementation.
- **Valid measures of protective factors, and their use within a quality improvement process, are challenging to identify.** While several measures were designed and tested for this project, it is clear that there is a need for more feasible and/or valid measures that can be used to determine whether practices sufficiently addressed protective factors, and whether that, in turn, influenced parent knowledge, confidence, or behavior.

- **Two of the five protective factors were determined to be more challenging for practices to fully adopt: Social-Emotional Competence in Children and Concrete Support in Times of Need.** This suggests that practices need strategies to better support their patients in promoting social-emotional development and ensuring that their patients know how to access help and supports if and when needed.

Recommendations

1) **Disseminate the protective factors framework broadly to educate parents, providers, and other health system partners in the most effective strategies for strengthening families and promoting children's optimal health, development, and well-being.** The protective factors framework offers a promising, universal approach to informing providers, parents, and the field at large about critical factors that buffer against adversity and increase the likelihood for positive outcomes. Broadly disseminating knowledge of the protective factors among pediatric primary care providers will require substantial infrastructure investment. Payment reform, including an increased investment in promotion, social determinants of health, and connections to community resources, can support practices in addressing protective factors with families.

2) **Develop, test, and disseminate strategies to measure and understand how to best communicate with families about social-emotional competence.** The precise definition of social-emotional development is an evolving concept, as are tools to evaluate its presence in children and the ability of interventions to improve it. Throughout this project we found that providers did not document their discussions with families about social-emotional competence, which suggests that a greater focus on promoting a shared understanding on how best to communicate and measure social-emotional development in children, together with the role of the pediatric provider in promoting this, is needed.

3) **Explore the use of technology to assist child health providers in promoting the protective factors.** Many pediatric providers are using electronic health records, which include prompts for gathering and reviewing specific health information during patient visits. Many of these electronic medical record systems do not prompt providers to solicit or discuss family strengths and/or social needs. Providers participating in this project suggested that updating the electronic health record to include protective factors or other strength-based prompts would ensure that they discuss them during visits.

4) **Introduce the concept of the protective factors early in pediatric residency training to continue to ensure that a strength-based, promotion-focused approach to care is and remains a part of training.** While screening for risk and adversity is a piece of the puzzle, there is nevertheless evidence to suggest the importance of a universal approach in addressing both positive and negative social, environmental, and behavioral factors that contribute to health outcomes.

5) **Ensure funding for rigorous research demonstrating the link between protective factors and long-term outcomes.** As described previously, the protective factors embedded in this project emerged from an evidence base grounded in child abuse and neglect. Further research can and should investigate the impact of these and other protective factors in ensuring positive outcomes for all children. The more understandable the relationships between positive protective factors and their ability to reduce the risk for long-term negative outcomes, the greater the capacity to ensure that interventions, training, and screening efforts are maximally effective. This evidence base will also further enable the use of protective factors as a proxy measure for more elusive, long-term outcomes.

6) **Incorporate child health services within the broader early childhood system, leveraging an "all-sectors-in" approach to strengthening families.** While access to child health care providers is nearly universal, this sector is far from the only one to play a critical role in the early years of life. Promoting resiliency and protective factors can take place in other settings such as home visiting and early care and education, and through a variety of emerging roles such as community health workers, parent mentors, care coordinators, and patient navigators.

7) **Strengthen the physician outreach component of all HMG systems by engaging child health providers in early childhood systems development, implementation, and evaluation.** Use the protective factors as a catalyst for connecting child health providers to developmental and behavioral services and family support opportunities in their communities.

Conclusion

Researchers and practitioners are continuing to better understand the complex interface between early trauma and adverse events, protective factors, and children's lifelong social, emotional, and academic trajectories. What we are learning suggests that resilience plays a critical role in influencing the degree to which children are able to resume healthy mental and physical states following their exposure to adverse or stressful events in their lives. Such stressors will always be a part of children's development; as such, it is critical that parents, providers, and others who play an ongoing role in children's development understand the role of protective factors in mitigating the impacts of stress.

Results from the project discussed in this IMPACT demonstrated that it is feasible for pediatric providers to promote the protective factors with their patients and to monitor their progress in doing so through a quality improvement process. These findings suggest that pediatric practice change related to the mitigation of toxic stress can be effective, especially when implemented as part of a comprehensive system of health promotion, early detection, and connection to services. HMG National provided the system to support the work reviewed in this report. The Strengthening Families Protective Factors Framework provided a feasible strategy for building the capacity of child health care providers to adopt a strength-based, multi-generational approach that addresses social as well as biomedical determinants of health. By regularly embedding conversations about the importance of things such as parental resilience, knowledge of parenting and child development, social connections, concrete supports in times of need, and children's social-emotional competence, providers can influence the degree to which parents serve as supportive buffers and prevent the negative long-term outcomes that we know can arise from repeated exposure to stress.

References

[1] Center for the Study of Social Policy and American Academy of Pediatrics: Primary Health Partners. *Promoting Children's Health and Resiliency: A Strengthening Families Approach*. Accessed October 15, 2018 (no longer available).

[2] Center for the Study of Social Policy: Strengthening Families. *The Protective Factors Framework*. https://cssp.org/our-work/project/strengthening-families/. Accessed November 28, 2018.

[3] Well-child visits. Child Trends Databank. 2014. http://www.childtrends.org/?indicators=well-child-visits. Accessed October 12, 2018.

[4] Center on the Developing Child, Harvard University. In Brief: *The Science of Neglect*. https://developingchild.harvard.edu/resources/the-science-åof-neglect-the-persistent-absence-of-responsive-care-disrupts-the-developing-brain/. Accessed October 15, 2018.

[5] American Board of Pediatrics, Maintenance of Certification information website. https://www.abp.org/content/maintenance-certification-moc. Accessed October 16, 2018.

[6] Center for the Study of Social Policy: *Parental Resilience*. https://cssp.org/wp-content/uploads/2018/08/HO-2.1a-CW-Parental-Resilience.pdf. Accessed November 28, 2018.

[7] Center for the Study of Social Policy: *Social Connections*. https://cssp.org/wp-content/uploads/2018/08/HO-2.1b-CW-Social-Connections.pdf Accessed November 28, 2018.

[8] Center for the Study of Social Policy: *Knowledge of Parenting and Child Development*. https://cssp.org/wp-content/uploads/2018/08/HO-2.1c-CW-Knowledge-of-Parenting-and-Child-Development.pdf. Accessed November 28, 2018.

[9] Center for the Study of Social Policy: *Concrete Support in Times of Need*. https://cssp.org/wp-content/uploads/2018/08/HO-2.1d-CW-Concrete-Support.pdf. Accessed November 28, 2018.

[10] Center for the Study of Social Policy: *Social Emotional Competence of Children*. https://cssp.org/wp-content/uploads/2018/08/HO-2.1e-CW-Social-Emotional-Competence.pdf Accessed November 28, 2018.

[11] Nowakowski, RS. Stable neuron numbers from cradle to grave. Proceedings of the National Academy of Sciences of the United States of America. 2006;103(33):12219-12220.

[12] Center for the Developing Child, Harvard University. *Brain Architecture*. https://developingchild.harvard.edu/science/key-concepts/brain-architecture/ Accessed October 15, 2018.

[13] Center on the Developing Child, Harvard University. *Toxic Stress, Key Concepts*. https://developingchild.harvard.edu/science/key-concepts/toxic-stress/ Accessed November 7, 2018.

[14] ZERO TO THREE. *Making it Happen, Overcoming Barriers to Providing Infant-Early Childhood Mental Health*. https://www.zerotothree.org/resources/511-making-it-happen-overcoming-barriers-to-providing-infant-early-childhood-mental-health Accessed October 15, 2018.

[15] Center on the Developing Child, Harvard University. In Brief: *The Science of Early Childhood Development*. https://developingchild.harvard.edu/resources/inbrief-the-science-of-early-childhood-development/ Accessed October 15, 2018.

[16] Evans GW, Kim P. Childhood poverty, chronic stress, self-regulation, and coping. *Child Dev Perspect*. 2013;7(1):43-48.

[17] National Clearinghouse on Child Abuse and Neglect Information. *Understanding the effects of maltreatment on early brain development*. Washington, D.C.: Author. 2011.

[18] Scheeringa, M, Gaensbauer, T. Posttraumatic stress disorder. In C. Zeanah, Jr (Ed.), *Handbook of Infant Mental Health* (2nd ed.). New York: Guilford Press; 2000:369-379.

[19] Felitti, Vincent J, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. *American Journal of Preventive Medicine*. 1998;14(4):245-258. doi:10.1016/s0749-3797(98)00017-8.

[20] Essentials for Childhood: Steps to Create Safe, Stable, Nurturing Relationships and Environments. https://www.cdc.gov/violenceprevention/pdf/essentials_for_childhood_framework.pdf Accessed October 16, 2018.

[21] Artiga, S, Hinton, E. Henry J. Kaiser Family Foundation: May 2018 Issue Brief: *Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity*. http://files.kff.org/attachment/issue-brief-beyond-health-care Accessed October 16, 2018.

[22] Fenton. Health Care's Blind Side. Robert Wood Johnson Foundation: https://www.rwjf.org/en/library/research/2011/12/health-care-s-blind-side.html Accessed October 16, 2018.

[23] Hagan JF, Shaw JS, Duncan PM, eds. *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*, 4th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2017.

[24] Center for Social Policy: Primary Health Partners: *Promoting Children's Health and Resiliency: A Strengthening Families Approach*. https://www.cssp.org/reform/strengthening-families/messaging-at-the-intersection/Messaging-at-the-Intersections_Primary-Health.pdf Accessed October 15, 2018 (no longer available).

IMPACT

IMPACT Online

Child Health and
Development Institute
of Connecticut, Inc.

270 Farmington Avenue
Suite 367
Farmington, CT 06032

860.679.1519
info@chdi.org
www.chdi.org