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Addressing Childhood Adversity and Social Determinants in Pediatric Primary Care: Recommendations for New Hampshire

Marguerite Corvini

University of New Hampshire, Marguerite.Corvini@unh.edu

Katherine Cox

University of New Hampshire, Katherine.Cox@unh.edu

Molly O'Neil

University of New Hampshire

Jeanne Ryer

University of New Hampshire, jeanne.ryer@unh.edu

Holly Deblois Tutko

University of New Hampshire, holly.tutko@unh.edu

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Addressing Childhood Adversity and Social Determinants in Pediatric Primary Care: *Recommendations for New Hampshire*

Authors

Marguerite Corvini, MSW

Katherine Cox, MSW

Molly O'Neil, MPH Candidate

Jeanne Ryer, MSc, EdD

Holly Tutko, MS

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EXECUTIVE SUMMARY

Research has clearly demonstrated the significant short- and long-term impacts of adverse childhood experiences (ACEs) and the social determinants of health (SDOH) on child health and well-being.¹ Identifying and addressing ACEs and SDOH will require a coordinated and systems-based approach. Pediatric primary care* plays a critical role in this system, and there is a growing emphasis on these issues that may be impacting a family. As awareness of ACEs and SDOH grows, so too does the response effort within the State of New Hampshire. Efforts to address ACEs and the SDOH have been initiated by a variety of stakeholders, including non-profit organizations, community-based providers, and school districts.

In late 2017, the Endowment for Health and SPARK NH funded the NH Pediatric Improvement Partnership (NHPIP) to develop a set of recommendations to address identifying and responding to ACEs and SDOH in NH primary care settings caring for children. Methods included conducting a review of literature and Key Informant Interviews (KII). Themes from these were identified and the findings are summarized in this report.

RESULTS

Implementing a quality improvement approach to addressing ACEs and SDOH requires examining both factors within the clinic, and systems issues outside of the clinic. The below recommendations are organized in each of these areas.

IN-OFFICE CONSIDERATIONS

- **Screening:** In NH, screening in pediatric primary care for ACEs, SDOH, and resilience is not occurring regularly, but tools to do so exist. Primary care clinician buy-in to screening and follow-up for SDOH appears much stronger than for ACEs. Both the literature and KII illuminated the benefits of screening (for example, better clinician understanding of family context) as well as challenges to operationalization (for example, lack of time).
- **Care Planning and Referrals:** Addressing ACEs and SDOH requires a team approach (including, at a minimum, case management and integrated behavioral health), and a culture shift from clinician-based to team-based care delivery. Interventions to address existing needs and build resiliency are critical. Relational and informational continuity among the care team and the family is also key. Although best practices do exist, translational research in operationalizing team-based approaches to screening and response is nascent.
- **Training Needs and Supports:** Some ACEs and SDOH training is currently available in NH, but more clinically-focused training and ongoing supports are needed. Training and skill needs exist at many levels (community, all clinic staff, and clinicians) and for many topics (trauma-informed care/interventions, relational skills, behavioral health integration, etc.). Supports to help clinic staff manage their own trauma and exposure to secondary trauma need to be built.

SYSTEM-LEVEL CONSIDERATIONS

- **External Resources and Referrals:** Evidence underscores the importance of pediatric primary care clinic linkage with a range of community-based partners to support a family experiencing the negative effects of ACEs and/or SDOH. Awareness of community needs, available local resources to address these needs, and simple referral and follow-up

ADVERSE CHILDHOOD EXPERIENCES (ACEs)

Traumatic exposures during childhood such as abuse, neglect, and household dysfunction that have been shown to impact both short- and long-term health and well-being.

Source: Adverse Childhood Experiences Study

SOCIAL DETERMINANTS OF HEALTH (SDOH)

Conditions in the places where people live, learn, work and play that affect a wide range of health risks and outcomes.

Source: Centers for Disease Control and Prevention

*Throughout this report the term pediatric primary care includes both pediatric and family medicine clinics.

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processes are key. In NH, though established referral processes are in place for crises, referral resources to prevent at-risk families from experiencing a crisis are few and are not always known or trauma-informed.

- **Policy and Infrastructure:** The need for coordination of systems, electronic health record (EHR) functionality to incorporate ACEs and SDOH, lack of access to services and resources, lack of public awareness about issues, necessary changes to reimbursement and funding to address these issues, stigma, and workforce capacity and training all require policy-level attention to resolve barriers to ACEs and SDOH identification and treatment.
- **Cultural Considerations:** Trauma exposure and symptoms can vary depending on culture, race, gender, region, and language. Availability of ACEs and SDOH tools in a variety of languages and norming to different cultures is sparse. Availability of translation services and culturally-competent workforce and practices in both the clinic and community settings are needed to deliver effective care.

RECOMMENDATIONS

IN-OFFICE CONSIDERATIONS

- Engage several respected clinician champions to facilitate dialogue with their colleagues about SDOH and ACEs.
- Provide continuing education and training opportunities for all clinic staff to learn about trauma-informed care and how to use this approach to engage with patients. These trainings should also inform clinic staff of internal resources to support those experiencing ACEs, SDOH, and/or the effects of secondary trauma.
- Provide training and education to practicing clinicians and undergraduate and graduate medical, nursing, allied health and human services students to have a better understanding of and comfort with discussing, assessing, and responding to trauma.
- Facilitate sharing of best practices and conduct research to fill in knowledge gaps to help clinics operationalize team-based care to address ACEs and SDOH.

SYSTEMS-LEVEL CONSIDERATIONS

- Involve major stakeholder groups in conversations about the in-office and systems opportunities for improvement.
- Create public awareness about ACEs and SDOH through the promotion of educational resources for families and communities.
- Conduct additional psychometric analysis to assure reliability and validity of screening tools, and increase availability of tools for multiple languages and cultures.
- Develop a “clearinghouse” (or enhance an existing system, such as 2-1-1) of available local resources and services for clinicians and community organizations.
- Facilitate conversations with primary care clinics and family-serving organizations to identify what information, in what form, and through what vehicle would best support care coordination and monitoring response to treatment.
- Confer with policymakers about strategies to provide additional resources to expand the capacity of community organizations supporting children and families affected by ACEs and SDOH.
- Study current reimbursement structures to understand how billing codes do (or do not) support time for care coordination and integration of behavioral health.
- Create trauma-informed communities through training of local organizations including schools, social services, law enforcement, court systems, and others.
- Continue to build capacity statewide to provide evidence-based services to prevent and mitigate trauma.
- Facilitate sharing of best practices in cultural competence.

INTRODUCTION

PROJECT BACKGROUND

Research has demonstrated significant short- and long-term impacts of adverse childhood experiences (ACEs) and the social determinants of health (SDOH) on child health and well-being.¹ The American Academy of Pediatrics (AAP) released a policy statement in 2012 discussing the critical role of the pediatric medical home in the early identification and response to ACEs and SDOH.^{1,2}

In late 2017, the Endowment for Health and SPARK NH funded the NH Pediatric Improvement Partnership (NHPIP) to develop a set of recommendations for identifying and responding to ACEs and SDOH in NH primary care settings caring for children. To develop the recommendations, the NHPIP: 1) conducted a literature review of evidence-based tools and interventions and 2) completed key informant interviews (KII) to understand barriers and opportunities to addressing ACEs and SDOH in pediatric primary care.

ACES AND SDOH OVERVIEW

In 1998, the US Centers for Disease Control and Prevention (CDC) and Kaiser Permanente published a seminal study that first coined the term “Adverse Childhood Experiences” (ACEs) and has since explored the relationships between childhood adversity and health outcomes. The ACE Study is an ongoing collaboration between the CDC and Kaiser Permanente that comprehensively describes the prevalence and effects of ten categories of ACEs, across domains of abuse, neglect, and household dysfunction.³ These ten categories are emotional, physical, and sexual abuse, emotional and physical neglect, mother treated violently, household substance abuse and mental illness, parental separation or divorce, and incarceration of a household member.³ In recent years, many researchers in the field have advocated that ACEs should be expanded to include other childhood adversities, such as witnessing violence, experiencing racism/discrimination, living in unsafe and unsupportive neighborhoods, peer isolation and rejection, experiencing bullying, living in foster care, and losing a family member to deportation.⁴⁻⁷

ACEs make up just one piece of a complex puzzle that are the social determinants of health (SDOH). SDOH are defined by the Centers for Disease Control and Prevention (CDC) as the “conditions in the places where people live, learn, work and play that affect a wide range of health risks and outcomes”.⁸ SDOH include gender, social and economic opportunity, food security, social interactions and relationships, and quality of education.^{9,10} When exposed to ACEs and other negative SDOH, a child’s stress response system is activated, which if prolonged and excessive, can derail healthy development; this is called toxic stress.¹¹ Toxic stress can be buffered and returned to baseline if a child has an environment of supportive and responsive relationships.¹¹

The ACE Study has generated more than 80 publications^{3,12,13} demonstrating that:



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In addition, research suggests that ACEs are harmful for a child's development, stress response, and pediatric health outcomes.^{14–17} Flaherty and colleagues studied the determinants of health by evaluating children between the ages of 6 and 12, matching ACEs against health outcomes during childhood.¹⁸ This study found that ACEs are common in the early years of childhood and generally go unrecognized. ACEs can manifest into ill health and somatization during childhood, following an adverse experience. Furthermore, research indicates that parental ACEs can negatively affect child development.^{19–21} The literature indicates that these repercussions continue to show up decades later.^{22,23} ACEs can be the source of chronic disease, mental illness, and perpetuated cycles of violence in adults.¹ As ACEs link to all the SDOH, they inherently cross medical, social, educational, and justice boundaries.^{4,24} Therefore, putting ACEs science into practice requires communities to form collaborative initiatives that bridge the silos of health care, education, juvenile justice, legal, criminal justice, social service, the peer support community, parent advocates, community advocates, faith-based organizations, and business communities.²⁴

It is important to recognize that many people with multiple ACEs thrive in adulthood. It is possible that ACEs could be balanced out by protective factors.²⁵ Many studies have investigated resiliency as a mitigating factor for ACEs exposure. Interventions that support resiliency factors should be explored as tools to mitigate the negative impact of ACEs.^{26,27} In a recent study, when clinicians took into account the patient's resiliency, the impact of ACEs exposure on health were reduced.²⁸ The key elements of resiliency include: emotional regulation, strong achievement motivation, secure attachments in adulthood, and social support.²⁸ One framework provided in the literature was the Health Outcomes from Positive Experiences (HOPE), which focuses on actively promoting positive childhood experiences that contribute to health development and well-being and mitigate the effect of ACEs and other negative environmental influences.²⁹

ACES AND SDOH RESPONSE IN NEW HAMPSHIRE

As awareness of ACEs and SDOH grows, so too does the response effort within the State of New Hampshire. Various local and statewide initiatives to address ACEs and the SDOH have been initiated by a variety of stakeholders, including, non-profit organizations, community-based providers, and school districts. Stakeholders have identified and begun addressing the co-occurring needs among this population, which include increased support for early childhood education, developmental screenings, social emotional learning, and trauma-informed care, taking a collaborative, strategic, sustainable, and holistic approach to programs and practices that can greatly influence childhood ACEs in New Hampshire. For example:

- The New Hampshire Department of Health and Human Services Medicaid program has provided funding for the New Hampshire Delivery System Reform Incentive Payment (DSRIP) Waiver.³⁰ DSRIP provides funding to integrate care among partners and providers in local communities and statewide. By addressing system coordination, the program can cultivate increased communication and subsequently improve patient care. Additionally, the waiver provides resources for New Hampshire's mental health system and programming funds for the opioid crisis. The combination of support provided by the DSRIP program creates the potential to impact current or future childhood ACEs through enhanced coordination of services and additional service availability for caregivers and children.
- A statewide effort to support ACEs in schools has been spearheaded by the New Hampshire Department of Education, Office of Student Wellness.³¹ The Office was formed in 2014 to support the development of the whole child through collaborative initiatives focused on addressing student wellness. Initiatives include implementation of the Pyramid Model, Safe Schools, Healthy Students, Project GROW, and Project AWARE. Utilization of evidence-based practices, implementation science, resource coordination, and evaluation are occurring at individual schools and systemwide.

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- Initiatives of the Office of Student Wellness are further supported through strategies implemented by SPARK NH, the states' early childhood advisory council.³² In 2011, Governor John Lynch created SPARK NH to fulfill the requirements of a 2007 federal law mandating the establishment of state early childhood advisory councils. SPARK NH committees work to support existing initiatives, provide leadership, and move the needle toward creating a comprehensive, coordinated system of early childcare services throughout the state. SPARK NH is supporting a network of local early childhood initiatives throughout NH, including Project Launch in Manchester. This Federally funded pilot program provides collaborative services to low-income children ages 0-8-years and intends to create the framework for future large-scale initiatives.^{32,33} Project LAUNCH addresses ACEs through their coordination of the Adverse Childhood Experiences Response Team (ACERT). The ACERT team works in conjunction with the Manchester Police Department and the YWCA NH by providing trauma-informed responses and referrals to children.
- Antioch University is training two cohorts of NH mental health clinicians in Child-Parent Psychotherapy (CPP), an evidence-based model for traumatized young children and their caregivers, with funding from the Endowment for Health and the HNH Foundation.³⁴ Additional HNH Foundation funding is also supporting the development of a protocol for Manchester ACERT team members to make referrals to mental health clinicians providing CPP.³⁵
- In partnership with Dartmouth Hitchcock Trauma Center, the Division of Children Youth and Families (DCYF), is working towards building a trauma-informed system of care by educating and training caseworkers on assessment, identification, treatment and evidence-based interventions.³⁶
- Statewide legislative efforts surrounding healthcare policy and early childhood issues are identified and emphasized by the advocacy group, New Futures.³⁷ Through public support of upcoming bills such as SB 592, which provides funding for voluntary services and home visiting for families, New Futures is responding to structural elements that could inhibit or support efforts to reduce childhood ACEs.³⁸
- In New Hampshire, recognition and discussion about the importance of addressing childhood ACEs has only grown since the surge of the opioid crisis. At Dartmouth-Hitchcock Medical Center,³⁹ they are addressing opioid use among pregnant mothers through a program, Moms in Recovery, which provides a variety of services to pregnant and parenting women to help manage their substance use disorder effectively.³⁹

Taking this background into account, this project sought to develop recommendations to address ACEs and SDOH needs in the pediatric primary care community.

METHODOLOGY

LITERATURE REVIEW

The goal of the literature review was to identify evidence-based tools, interventions, and training needs to support primary care providers in addressing ACEs and SDOH in pediatric settings in NH.

Staff consulted with a UNH Library reference librarian to identify specific medical and social sciences databases and search terms to identify primary research materials related to screening for ACEs and SDOH in primary care offices. Literature searches were conducted in an iterative manner from December 2017 through May 2018. Four literature databases, representing diverse disciplines such as policy, social, health, and community services, were accessed. See Appendix 1 for the list of databases and search terms used.

In addition to reviewing the peer-reviewed literature, staff also conducted Internet searches to identify pertinent

“grey literature” relevant to screening for ACEs and SDOH in primary care. For example, the American Academy of Pediatrics and the American Academy of Family Physicians web sites were consulted for policy statements related to ACEs and SDOH. A list of the primary web-based sources of grey literature is included in Appendix 1.

KEY INFORMANT INTERVIEWS

Key informant interviews (KII) were used to collect qualitative data about the status of and context for screening in primary care settings for ACEs and SDOH in NH. Key objectives included identifying: beliefs and attitudes about, barriers to, and benefits of screening; current ACEs, SDOH, and resilience screening and follow-up practices, patterns, and tools; and clinic and system capacity and policy to support screening and follow-up care.

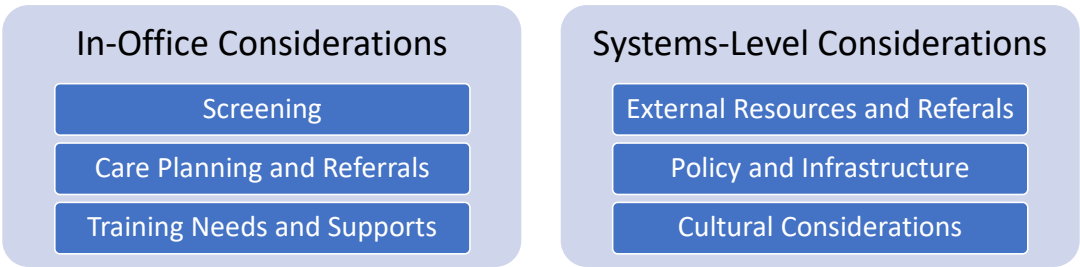
Project staff used purposeful sampling to identify key informants from critical disciplines and perspectives for interviews. Key informants represented a range of a primary care settings (rural/urban, hospital/independent/ Federally-Qualified Health Center, etc.), child/family serving agencies and organizations (child protection agencies/ organizations, pediatric mental health, etc.) and organizations/agencies with a focus on maternal and child health. Interviewees also represented a diverse set of roles, including physical and behavioral health clinicians, case managers/workers, and policymakers. One interview with a national expert, a pediatric clinician currently using quality improvement strategies to address ACEs, was also conducted. Eleven interviews with a total of 31 people were completed. Interviewees possessed significant experience in ACEs and SDOH.

Project staff completed the interviews between January and April 2018. When feasible, interviews were conducted in person. Two project staff attended each interview. Interviews were audio recorded and subsequently transcribed. Necessary research project documentation was submitted to and approved by the UNH Institutional Review Board. See Appendix 2 for the interview script/guide used.

The transcribed texts were uploaded into Dedoose, a qualitative analytic software tool, for identification of key themes and sub-themes. In the first round of coding, two staff dyads used open coding techniques to name and categorize the data. Staff dyads were assigned to review text for interviews that they did not conduct. Initial concepts and categorizations were then discussed among all coding staff to gather input and consensus. For the second round of analysis, staff used deductive coding techniques to look for themes and relationships between the concepts based on project staff prior knowledge, the literature review of best practices, and subject matter experts. During this phase, project staff narrowed the number of themes, refined theme names and definitions, and updated coding through frequent group consensus. See Appendix 3 for a summary of code themes.

RESULTS

Results of the literature review and the KII were grouped into two high-level categories: in-office and systems-level considerations. Within each high-level category, sub-categories of themes were developed as depicted in the below graphic.



IN-OFFICE CONSIDERATIONS

SCREENING

Pediatric primary care providers are a critical component of addressing ACEs and SDOH. Pediatric clinicians are uniquely qualified to address these issues as they regularly interact with children and families, are trusted and respected partners of children's health, and have an appreciation for the role of the family and community in child well-being.²⁶ In a 2013 study only a small proportion (4%) of pediatricians reported asking their patients about seven ACEs⁴⁰ and another study found the majority of physicians did not consider addressing social determinants a responsibility of the clinical setting.⁴¹

The American Academy of Pediatrics (AAP) policy statement on childhood adversity and toxic stress recommends that the pediatric medical home address psychosocial needs, including social determinants and adversity in pediatric patients and families, by:²⁶

1. Strengthening anticipatory guidance to support children's emerging social-emotional-linguistic skills and encouraging the adoption of positive parenting techniques.
2. Screening for precipitants of toxic stress that are common in their practices.
3. Developing, helping secure funding, and participating in innovative service-delivery adaptations that expand the ability of the medical home to support children at risk.
4. Identifying (or advocating for the development of) local resources that address those risks for toxic stress that are prevalent in their communities.

The AAP recommends that before a child is identified as having been exposed to trauma, that the pediatric practice have a response prepared.⁴² If interested in responding to trauma, practices can take several action steps, including building relationships with local supports for families exposed to trauma, gathering materials to explain the impacts of trauma and ways to build resilience, and ensuring that all staff are educated on protocols for referring to child protective services.⁴² If a practice is considering addressing social needs in the primary care setting, the AAP recommends a four-step process prior to implementing. The process requires the practice to answer four questions: 1) why are we looking at this issue, 2) what are we looking for, 3) how do we find it, and 4) what do we do once we have found it?⁴³ The fourth step, identifying the resources already available in the office and community, is critical. Many clinicians do not want to screen for social needs if they do not have something that they can do with that information.³²

Practices choosing to screen for ACEs and SDOH may choose from a variety of screening tools. Fewer tools address family strengths and resiliency (See Appendix 4). Of the screening tools identified in this project, 10 screened for SDOH, seven for ACEs or toxic stress, and four for resiliency. Many of the SDOH tools also include questions about specific ACEs, such as household member substance abuse or mental illness. It is recommended that pediatricians address family strengths, protective factors, and resiliency in conjunction with adversity. Only one of the tools included in the screening tool table screens for both ACEs and resiliency.¹⁸ Most screening tools are only available in English or Spanish, though some are translated into other languages. All but one is free of cost to practices.

Validity assessments of the screening tools are limited, with only eight of the nineteen tools being validated, partially validated (meaning some question are validated, but the tool as whole has not been), or in the validation process. The Health Leads Screening Toolkit has created a resource guide that provides validated questions that range from transportation and financial strain to exposure to violence and social isolation and support.⁴⁴ In practice, many organizations use hybrid tools to only ask questions for which resources are available.⁴⁴ Other considerations for practices that are choosing a tool include: whether they have internal resources to respond to a positive screen,

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if the screen is translated into the language of their patients, if it will be easy for patients to complete, and if it will be easy to include in their workflow.⁴⁴ The Center for Youth Wellness has developed a toolkit for ACEs screening implementation, which includes in-office workflows and scripts for how to introduce the screening and for discussing the results with families.^{21,45}

None of the pediatric primary care or social/mental health organizations interviewed in the KII currently screen for ACEs using a standardized tool. The stakeholders interviewed did not know of any NH pediatric primary care practices screening for ACEs. ACEs are discussed in pediatric primary care as by-products of open-ended questions about home, school, etc. Some primary care settings ask questions (mostly of parents/guardians) about social determinants, for example, questions included in the Bright Future Guidelines,⁴² Medicaid forms for reimbursement, Integrated Delivery Network forms, and risk assessment tools (e.g., Dartmouth Teen Screen, maternal depression screening tools).³⁶ Some pediatric social/mental health organizations interviewed ask about specific social determinants during in-take processes, but do not appear to be using a standardized SDOH screening tool. Use of family resiliency screening tools, such as the Parents' Assessment of Protective Factors, in pediatric primary care appears infrequent.

Screening for and early identification of ACEs, SDOH, and resiliency can support the clinician in better understanding the family's risks and strengths and can be a first step in facilitating targeted support for families. The target population for using ACEs screening tools in pediatric primary care vary. There are three different types: 1) retrospective parent response about their childhood, 2) parent response for their child's ACE score, and 3) teen response for their own ACEs. Most ACEs screening tools are for retrospective parent completion, though there have been few studies on how parent adversity in childhood impacts their offspring (See Appendix 4). A recent study found that parental ACEs do impact a child's development in domains such as problem solving, communication, personal-social, and motor skills.²¹ A systemic review of the relationship between childhood exposure to adversity and pediatric health outcomes demonstrated that exposure to adversity should be considered when diagnosing certain pediatric conditions.¹⁷ Pediatric conditions found to be most consistently associated with adversity include developmental delays, asthma, somatic complaints, recurrent infections, and sleep disruptions.¹⁷

Echoing the peer-reviewed literature, KII voiced the unique supportive position a pediatric primary care clinician can play in the lives of families. They consistently described the role of primary care clinicians in addressing ACEs and SDOH as early identifying factors that may impact child health and functioning and then facilitating intervention(s) to mitigate their effect. Key informants identified the following as benefits of screening:

- Understand better caregiver factors that may impact child health and functioning;

.....

Clinicians who have implemented an ACEs screen into their practice have reported.⁶⁷

- Feeling more empathy towards their patients
- Better communication with family
- A better relationship with the family

.....

BENEFIT OF ASKING ABOUT ACEs

"If you've experienced trauma, I think that regardless of whether someone talks about it or not in the office, that is a fear that's in the back of your head that their experiences are going to affect or are already affecting their parenting skills. And so, having that out in the open and in a non-judgmental way where they feel supported and they feel like somebody gets it and is going to help them through it I think is really liberating for a lot of parents and really helps them to heal."

**-PRIMARY CARE
CLINICIAN**

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- Help prioritize focus of the well-child visit to address the most important factors;
- Provides useful family information that could be shared with other community, mental health, or social service agencies involved with a family; and
- Family is better able to engage in health promotion guidance by addressing the priority ACE and/or SDOH concern they are facing.

Key informants expressed concerns particularly around ACEs screening. For example, in some ACEs studies the screen was used with one adult patient; however, in pediatric practice, the whole family is the “unit of analysis.” Understanding the “realities” of screening families in the pediatric context is nascent (for example, do we screen for parent ACEs, parent complete screen for child, or both?) Concern about the validity and reliability of ACEs screening tools was also expressed. KII also noted that a great deal of screening for other topics (development, depression, autism, etc.) is already occurring, and fitting in another screen is challenging. In addition, many key informants voiced that if a resource/intervention does not exist to address the screen result, clinicians will not screen.

Conversations during KII revealed many considerations about screening timing and process such as:

- Give sufficient time to build parent/clinician rapport before screening.
- The newborn period (e.g., the Period of PURPLE Crying)⁴⁶ provides an ideal opportunity to talk about stressors and resilience.
- With adolescents, discussion about sexual history and contraception provide a natural opportunity for assessing ACEs.
- Develop a standardized protocol for implementing screening, ideally during preventive visits that are not packed with administrative paperwork, other screens, immunizations, etc.
- Thank patients for their openness to share their ACEs history as these are tough topics.
- Do both ACEs and resiliency at same time (otherwise screening is discouraging and does not recognize family strengths).
- Be flexible to change the focus of a visit to discuss ACEs results because asking the questions and not discussing the answers sends the wrong message.
- Develop a standardized and confidential way to record results of ACEs and resilience screening in the Electronic Health Record (EHR).

SCREENING CHALLENGE

“I see as our biggest needs... if you’re going to get anybody to buy-in and to get this to happen around the state ... [in] pediatrics offices but also family practice offices is that, number one, ...that we make it an easy screen for them to do, but number two, is that we are very, very, very clear about what other services they are then able to provide ... One of the things providers have a very difficult time doing is, if we’re going to ask a question, we want to be able to come up with a solution.”

-PRIMARY CARE CLINICIAN

CARE PLANNING AND REFERRALS

Once a trauma exposure is identified in primary care, the clinician must have a plan for how to address it. A clinician’s response may influence the way the family and child perceive the trauma, their hope for recovery, and their desire to seek further treatment.⁴⁷ Some office-based interventions for providers in responding to an identified trauma include educating the family about adverse experiences and their common nature, assuring families that

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they have seen children who have recovered, and encouraging families to partake in self-care, such as exercise and healthy sleeping and eating.⁴⁷

Pediatric primary care clinicians can also play a role in strengthening protective factors that can mitigate child abuse and neglect. Research demonstrates that there are five protective factors associated with lower rates of child abuse and neglect: parental resilience, knowledge of parenting and child development, social connections, concrete supports in times of need, and social-emotional competence of children.⁴² Other strategies primary care providers may use to prevent some of the negative outcomes of adversity include routine anticipatory guidance that strengthen a family's social supports, encouraging a parent's adoption of positive parenting techniques, and facilitating a child's emerging social, emotional, and language skills.²⁶ Examples include the promotion of the 7Cs of resilience (competence, confidence, connectedness, character, contribution, coping, and control), optimism, Reach Out and Read, emotional coaching, and numerous positive parenting programs (e.g., Triple P, Incredible Years, home visiting, and Nurturing Parenting).²⁶

Though much of the literature focuses on in-office interventions implemented by a primary care clinician, the AAP does recommend that care coordination and team-based care be included as part of quality patient and family centered health care for children.⁴⁸ One study found that when families receive in-person help to access services along with follow-up telephone calls for further assistance, families' reports of social needs decrease and children's overall health status improves.⁴⁹ Further, colocation of community-based resources such as Women, Infants, and Children nutrition programs (WIC) can address transportation difficulties, streamline community services for patients, increase patient satisfaction, and provide improved access to and more appropriate use of social services.⁵⁰ Integration of behavioral health into primary care through models such as Healthy Steps is also recommended by the AAP as a way to promote responsive parenting and address common behavioral and developmental concerns.⁴⁸

In NH, the number and type of in-office staffing and supports varies greatly. For example, practicing clinicians interviewed came from a range of settings, including a small office with just one provider and a medical assistant up to a large clinic incorporating care managers/coordinators, behavioral health clinicians, community health workers, interpreters, dental clinic, etc. KII discussed the importance of a team-based approach to addressing ACEs and SDOH in primary care. A clinician does not have the time nor all the discipline-specific knowledge needed to address ACEs and SDOH concerns of their patients' families. KII expressed that at minimum clinicians need access in their office to behavioral/mental health and care management support.

KII expressed varied challenges and concerns in how to operationalize team-based care to mitigate the impact of ACEs and SDOH. Concerns about lack of internal clinic staffing, particularly for behavioral health and care management were raised. KII expressed the need to optimize clinic team functioning to assure all staff know the discipline-specific knowledge and skills each team member possesses and when to bring in team members in care planning and treatment based on screen results. KII also expressed the need to identify best practices for real-time communication of clinic team members as well as any external service providers of updated knowledge about the family and using it to make needed care plan adjustments. Some suggestions include:

..... **IMPORTANCE OF TEAM- BASED CARE**

"If I'm the only one doing it, I definitely can't do it in 20 minutes. But if I have a team, then it becomes a whole different experience and so I feel like that I've been giving that family more time, and that's a good thing. And most providers are going to love that if that's possible."

**-PRIMARY CARE
CLINICIAN**

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- Hospital to out-patient setting care transition: Encourage care transition with primary care provider and clinic care manager/behavioral health clinician due to ACEs risk.
- One child advocacy organization reported great follow-up phone call rates when it started mailing letters to the primary care providers of families they evaluated.
- Use of technology to facilitate communication with referral agencies (e.g., videoconference).

Key informants expressed that the care delivery process is continual and needs to focus on both mitigation of current toxic stress impacts and building family/child resiliency to successfully respond to future stress. Screening and initial planning may take place at one visit; referral follow up and building the social support connections may occur through a variety of channels including phone calls, future appointments with primary care clinician, or at a visit with another provide type (if available) at the clinic. The need for integration of trauma-informed care principles was also voiced. Additionally, there are concerns about short appointment times and the flexibility to extend (and bill for) an appointment if a patient is in crisis. Possible needs include having curbside consults and/or real-time brief visits with staff from other disciplines. Repeatedly, KII noted that care planning and management for families with many needs is time-consuming and hard to do well, given financial pressures for sufficient patient visits. Time and capacity to aggregate clinic-level data on SDOH and ACEs to respond to local needs and/or identify quality improvement opportunities is also limited.

KII also expressed the importance of both relational and information continuity in mitigating the impact of ACEs and SDOH. To strengthen relational continuity, KII voiced support for assuring that the family has a designated primary care clinician and, as much as feasible, consistently has appointments with this clinician. With respect to informational continuity, having an EHR that facilitates easy recording of, locating, and analyzing of social history and current treatment plan is paramount (for example, flags for significant screening results, EHR prompts for potential referrals). KII also voice that pediatric offices need to have connections to and relationships with adult care providers to help parents/caregivers successfully address physical, mental, or substance misuse conditions that impact their ability to successfully parent their child. Lastly, KII also noted that clinics need to proactively build organizational supports for staff to address ACEs and SDOH they are facing and/or secondary trauma exposure.

TRAINING NEEDS AND SUPPORTS

Addressing ACEs and SDOH is an important and critical part of pediatric clinician work, but it cannot be accomplished without a strong community support structure and education/training opportunities to equip clinicians with the needed knowledge and skills. Programs within communities, like the Philadelphia ACE Task Force, identify clinician education as one of three critical components to addressing ACEs. Likewise, the Task Force also

SCREENING CONCERNS OF CLINICIANS

"The other thing to say is that one of the reasons that there are providers that aren't interested in screening for ACEs is they will immediately say to me, 'We don't have anything to do about it ... We can't screen for something that we can't fix,' at which point I point out myself because my job is to work with families with significant psychosocial or mental health problems and I have a colleague who's a nurse who has same role except with significant medical problems. Whatever data they're getting from... screens, they are not making referrals. So, they're dealing with it themselves."

**-INTEGRATED
BEHAVIORAL HEALTH
CLINICIAN**

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stresses that social service providers should be developing their own educational approach to addressing ACEs.⁴

KII and the literature review reveal a void in comprehensive initial and ongoing training around ACEs and SDOH for primary care clinicians throughout their career. The reasons for not addressing ACEs and SDOH vary from clinicians not knowing what resources are available in their area, feeling uncomfortable with addressing SDOH or ACEs situations, or having little to no training around how to use the ACEs screening tool.^{40,51,52} As noted by Kerker and colleagues,⁴⁰ in a study of 1617 pediatricians, “One of the many reasons pediatricians do not ask about ACEs more often may be that they lack the training to do so if physicians do not feel competent in a topic, they do not address it with their patients or their families.”⁴⁰ Moreover, even if physicians value utilizing practices such as trauma-informed care, to address ACEs and SDOHs, there are “gaps in training, confidence, and support structures.”⁵¹ KII reiterated this point. One interviewee stated: “I don’t think residents are necessarily being taught about this very important part of their training...I’ve done some of my own professional development, attending conferences targeted on not ACEs only but social needs in general, as well as going to workshops at other meetings to learn this.”

Training opportunities for primary care clinicians around ACEs and SDOH ideally should be included in medical school curricula and in continuing education. One type of training area that is beneficial to addressing ACEs and SDOH is relational skills training, which refers to the ability to develop a therapeutic alliance through the use of excellent communication and interpersonal skills.^{53,54} Patients of medical providers who are able to develop this strong therapeutic alliance have been shown to “disclose more about themselves to their provider and assign higher satisfaction ratings.”⁵³ Additionally, providers report that they “experience higher levels of well-being and less burnout” when they form a strong therapeutic alliance with their patient.⁵³ Some medical schools are beginning to incorporate such learning into their curriculum beyond the first and second year of residency.⁵⁵ For example, the University of Pennsylvania Pearlman School of Medicine incorporates these best practices throughout their medical education program. Additionally, the incorporation of relational skills training into a medical trainees’ education at all stages of education, with a particular focus on experiential learning,^{53,55,56} will help to decrease the potential for attrition of empathy among providers, which is another factor effecting patient and provider relationships and satisfaction.⁵⁷ Having these strong communication and interpersonal skills are particularly important for addressing ACEs and SDOH with patients and families.

Additionally, the trauma-informed care approach has been identified as an approach that medical care teams can utilize to help prevent or minimize emotional trauma to patients.^{4,51,53} The Substance Abuse and Mental Health Services Administration (SAMHSA) recommends that a comprehensive approach be used with the incorporation of four key components.⁵⁸ (See sidebar) As part of the trauma-informed approach, clinicians learn how to build on family-centered care and may require only a few shifts in knowledge and attitudes to become a more trauma-

CHALLENGES TO DISCUSSING ACEs WITH FAMILIES

“I think that it’s hard to have a conversation about sensitive things with somebody you’ve just met, and that’s sort of hard to follow up. It would be a lot easier to not address that at all.”

-PRIMARY CARE CLINICIAN

TRAUMA-INFORMED CARE

SAMHSA recommends that a comprehensive approach to trauma-informed care is used with the incorporation of four key components:

1. Realizing the widespread impact of trauma
2. Recognizing signs of trauma and how it effects families, patients, staff and the system
3. Responding by integrating knowledge about trauma into all aspects of the organization
4. Actively seeking to resist re-traumatization

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informed medical care team. In addition to these skills, providers and their care teams are also trained to address a clinician's own potential secondary trauma or past trauma in order to better treat patients, which is a critical component to improved provider satisfaction as well as patient wellbeing.^{51,59} While many community provider organizations may use this approach in New Hampshire, primary care clinician teams utilizing this approach appear few and far between.

The importance of cultural sensitivity is another element to consider in addressing ACEs and SDOH. Cultural sensitivity when approaching ACEs is critical at both the clinician and community-level. In an example of how a community took into consideration the cultural needs of the geographic area/community, the Philadelphia Task Force⁴ began developing their regional plan by assessing ACEs. Due to the cultural makeup of their population, the Task Force determined that they needed to expand the ACEs screening to include questions relative to the adversities faced by their community, such as witnessing violence, experiencing racism/discrimination, living in unsafe neighborhoods, bullying, and being in foster care.⁴ This exemplifies that consideration of the cultural makeup of a community is critical in addressing ACEs in different geographic areas, and approaches in NH should be tailored to each community's needs.

Few trainings and support options exist for primary care clinicians to assist in increasing education around ACEs, understanding existing resources, and identifying potential referrals within their community. There are some national trainings and resources, such as the User Guide for the Center for Youth Wellness ACE Questionnaire,⁴⁵ Recommendations for Pediatric Health Care Providers Considering Addressing ACEs in Their Practice,⁴³ The Tennessee Chapter Online Trauma-Informed Care Training Modules,⁶⁰ and the AAP Trauma Toolbox for Primary Care.⁶¹ See Appendix 5 for more resources and trainings available nationally. The body of knowledge is growing, but much of the information is not always clinician-specific or geared toward community providers.

Review of training programs offered specifically for primary care clinicians in NH reveal that training programs on trauma-informed care are needed. Research identified a few presentations for physicians. As an example, the Southern New Hampshire Area Health Education Center (AHEC) offered a training in partnership with the NH Coalition Against Domestic and Sexual Violence. Trainings do exist in NH specifically around trauma-informed care, but they are not explicitly developed for primary care clinicians. Currently there are no ongoing programs specifically for primary care clinicians and no data on how many NH clinicians have attended these program offerings. See Appendix 5 for a list of NH trainings.

In a KII with a primary care practice, clinicians interviewed noted that while some colleagues do receive information about the necessity of addressing ACEs, it is very hard for them to build that work into their practice. In the moment, they might be more inclined to address the health-related issues the child is exhibiting, but not explore whether the underlying root cause could be toxic stress. This is partly due to the lack of training (and possibly resources) as noted earlier, but also because even if clinicians receive training, there is little follow up and reinforcement from those trainings.

.....

LISTENING AS INTERVENTION

*"I think that there's
extraordinary power in
just listening to people's
stories"*

**-PRIMARY CARE
CLINICIAN**

SYSTEMS-LEVEL CONSIDERATIONS

EXTERNAL RESOURCES AND REFERRALS

Pediatric primary care settings provide a crucial platform for connecting patients to interventions and external resources focused on addressing ACEs and SDOH to prevent and mitigate negative health outcomes.¹ Many

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studies described their intervention approach as building a referral process with community-based partners to help support a family experiencing negative effects of ACEs and/or SDOH. When referring patients to external resources, the literature reinforces the importance of connecting families and patients to resources that match their risk and need.^{62,63}

All of the KII discussed referring to a behavior health specialist (if available within their organization) or to external mental health and community-based supports to address SDOH and negative effects of ACEs with either parent or child. In addition, key informants called attention to the range of agencies and professionals (e.g., Child Advocacy Centers (CAC), law enforcement, DCYF, foster care, courts, child abuse pediatricians) with very specific roles, that are embedded into existing processes to respond to current child maltreatment, intimate partner violence, and other crises. Key informants reiterated that many child-serving agencies and organizations (e.g., schools, churches, community-based programs, juvenile justice agencies, and health care organizations) report seeing children experiencing ACEs. In general, KII communicated an understanding of patient needs but were not always sure of how to get patients connected to existing services, or how to get services in place. Often, referral processes can be confusing and lack warm hand-offs between clinicians. Referrals can lead to a lack of follow-through on the part of both the referral agencies (i.e., some people may “fall through the cracks”) and the patient (i.e., lack of understanding/willingness on how to access services). In addition, KII stated that Community Mental Health Centers (CMHC) provide many services that could help address ACEs, but they may not be accessible due to capacity, geography, or stigma. In addition, KII knew of and cited many evidence-based interventions such as Child-Parent Psychotherapy, support groups, public education, and parenting classes.

Access to a formal inventory of a community’s available resources is often reflected as an intervention strategy. This could be accessed by a case manager, behavioral health specialist, or health navigator/coordinator.^{19,64} KII indicate that many of the external resources could be more “integrated” or connected, referring to community-based organizations communicating more directly with health care professionals about the status of and updates on the patient. While handing out resource guides to patients is often one of the most widely used interventions, literature indicates that the patient is more likely to connect with services when the provider understands the benefit application process, and they receive information in a culturally and linguistically appropriate manner.⁴⁴ Additionally, Garg and colleagues⁶⁵ found that parents who received an intervention that included provider access to a resource binder discussed more psychosocial topics, had fewer unmet desires for discussion, and greater odds of having contacted community resources. However, this same study went on to indicate that it was also the training providers received that improved a patient’s likelihood of reaching out to community-based services.⁶⁵ The Safe Environment for Every Kid (SEEK) Model suggests not only providing parents handouts with resources, but also suggests training primary care clinicians in trauma-informed care and providing referrals to appropriate resources.⁶⁶

Although access to external resources is one of the most prevalent approaches, many studies indicate that having conversations with patients about screening scores, social history, current environment, circumstances, and general needs can be an effective tool for patients that do not require immediate interventions.^{9,44,64,67,68} Collaborating with

.....
*Every patient, practice,
and community is
different. There is not a
one-size-fits-all approach
to addressing ACEs and
SDOH.*

**-AMERICAN ACADEMY
OF FAMILY PHYSICIANS⁶³**

.....
NAVIGATING SYSTEMS

*“We have confusing
systems out there that
are funded differently,
and that’s why this ... all
exists. So, there’s not an
easy way for providers to
navigate to the services
that we do have.”*

-CARE COORDINATOR

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families to develop care plans is essential to building rapport, acknowledging barriers, and looking for solutions together.⁶⁹ Involving patients in their treatment process is a clinical trauma-informed approach to care.⁵¹

KII asserted that more services (community-based services, schools, clinics, etc.) should be trauma-informed. They noted that patients may be routed to appropriate services, but they may not receive them in a way that is helpful or sensitive to their experiences. In addition, KII stated if no current community-based service capacity exists or funding to sustain existing resources is not available, screening alone is not going to be sufficient.

Repeatedly KII mentioned home visiting as one of the best prevention and early intervention tools; they went on to indicate these programs are currently underfunded in NH. Home visiting programs have a long history of mitigating ACEs, such as decreased incidents of child abuse and neglect and less maternal behavioral impairment due to alcohol and drug abuse, decreased poverty through increased length of maternal employment, and decreased use of welfare.⁷⁰ KII emphasized the importance of strengthening families from within.

Another external resource cited in the literature was access to medical-legal partnerships to address legal needs, such as public benefits, housing issues, access to adequate education, and other associated social determinants of health. All are examples of health-harming issues with legal remedies that could be addressed through robust medical-legal partnerships.^{71,72} A pilot study of medical-legal partnerships in primary care found that these programs improve child health outcomes, reduce unnecessary urgent visits, and raise overall child well-being.⁷³ One KII discussed one of the benefits of a medical-legal partnership as building trust with the family. If a clinician identifies legal resources for a family, the family may better trust the clinician and then be more open to other services such as counseling.

POLICY AND INFRASTRUCTURE

All the KII discussed policy and infrastructure factors that impact how the primary care office and the community can address ACEs and SDOH. Policy and infrastructure factors were stratified into seven categories: coordination of systems, electronic health record (EHR), lack of access to services and resources, public awareness, reimbursement and funding, stigma, and workforce.

Policy and infrastructure factors are noted as challenges in much of the literature. The AAP cites financial difficulties for primary care offices implementing “more with less” and the need to advocate for payment reform to allow for medical homes to take on the additional responsibilities associated with addressing ACEs, SDOH, and resiliency.²⁶ Many of the KII noted reimbursement and funding issues as major barriers in addressing ACEs and SDOH in New Hampshire. Reimbursement concerns focused on lack of funding for the time that is needed to spend with the patient and family to build relationships, discuss and address concerns, and coordinate the care. The current payment model accounts for the time needed to address the physical health of the patient, but not the social and emotional health.

In addition to enhancing health care financing, the expansion of funding for quality and evidence-based early childhood programs and family benefit programs is recommended.⁴⁸ Concerns were raised during the KII about the lack of funding for prevention programs, including home visiting and Division of Children, Youth, and Families (DCYF) programs, that could support high-risk families before (as opposed

HEALTH CARE PAYMENT MODEL CHALLENGES

“If a medical provider has 15 minutes to do a health maintenance visit on a 4-year old, how much of that is going to be spent on SDOH? It might not be that they don’t want to do it. It’s just they have an employer who says you have to produce this many units of care and you can’t spend 20 minutes on visits you have to spend 15.”

-PEDIATRIC SPECIALIST

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to after) a crisis has occurred. Due in part to the current health care payment model and lack of funding for community programs, the ability of pediatric primary care clinics or community mental health providers to add social workers/behavioral health clinicians to their staff is limited. Furthermore, NH currently has no practicing child abuse pediatricians and only two practicing child abuse nurse practitioners.

Lack of access to resources and services was the policy and systems concern most noted during the KII, including limited capacity of community-based resources and services to take new clients without a long waiting list, particularly for CMHCs. Additionally, KII identified the lack of services available to parents experiencing their own mental health issues, access to professionals trained in evidence-based models for trauma, and access to in-person translation services. KII recognized transportation, housing, and mental and behavioral health services as some of the most needed, yet difficult to access services in the state.

Research supports broad-based community collaboration to address ACEs, such as the Philadelphia ACE Task Force, which initially began with a focus on screening for ACEs in health care settings and later realized a community-wide approach was needed to really “move the needle” on mitigating ACEs.⁴ Partnerships between the medical home and other stakeholders are encouraged by the AAP to improve community strategies, improve health, and reduce disparities.⁴⁸ The KII acknowledged the importance of a community-based approach but noted that increased public awareness was needed, along with better coordinated systems of care to do this effectively. Public awareness not only included education for families about what ACEs and SDOH are and how they impact health, but also awareness across community members and organizations about what a strong, resilient family looks like, and the signs and symptoms of an at-risk family. Public awareness was also discussed in the KII as a way to reduce some of the associated stigma by educating communities and providers about how common ACEs and SDOH are.

Key informants discussed that when a child is referred to a community-based organization, the practice often does not receive feedback unless they call and request it. Furthermore, mental health agencies and organizations within a locality have different referral processes and forms to be completed which creates complication for the pediatric primary care office. EHR can support the coordination of care through informational continuity in a practice or health care system as well as providing context and critical information for community organizations that do not have access to that history. Though not mentioned in any of the KII, confidentiality and privacy are essential considerations when discussing coordination of and communication between systems.

CULTURAL CONSIDERATIONS

Trauma and trauma-related symptoms intersect in many different ways with culture, race, gender, region, and language.⁷⁴ New Hampshire’s demographics comprise of racial, ethnic, cultural, and linguistic minorities, which include:

VALUE OF COMMUNICATION ACROSS SYSTEMS

“The primary care physician is usually the keeper of the record, and so if we do have children who are presenting at a number of different medical facilities, which is not uncommon when we have kids who are experiencing ACEs or abuse, the majority of those records go to the pediatrician... So I think it’s helpful in our assessment to look through the child’s records with the pediatrician because we might be able to find they’ve had a number of different emergency room visits at a number of different establishments, which is a red flag and an indicator that things could be happening.”

-SOCIAL SERVICE STAFF

“Enhancing cultural competence and encouraging cultural humility are essential to increasing access and improving the standard of care for children, families, and communities.”

- NATIONAL CHILD TRAUMATIC STRESS NETWORK⁷⁴

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- Refugees and immigrants
- Native Americans
- Lesbian Gay Bisexual Transgender Questioning (LGBTQ) individuals
- Disability communities
- Deaf and hard of hearing
- Minority Racial/Ethnic groups (African American, Latino/Hispanic, multi-racial or multi-ethnic, etc.)

In New Hampshire, every individual shares the same concern for health, housing, education, employment, and quality of life. However, not everyone has access to the same health opportunities to help address negative impacts of ACEs or SDOH.^{62,74}

Cultural awareness and understanding must be incorporated throughout an organization to be the most effective in addressing the needs of children, families, and caregivers who have experienced trauma.⁷⁵ KII expressed emphatically that all patients should have access to high-quality health care treatments and interventions served in a culturally appropriate manner and communicated in ways they understand, both linguistically and culturally.

Tailoring the conventional ACE questionnaire to increase culturally competent screening is the best practice to mitigate or prevent negative health outcomes. Clinicians should employ methods that inform ACE scores by utilizing tools that are administered in a relationship-centered context.⁷⁶ In doing so, clinicians can build cultural competency and patient rapport by engaging in discussion about specific issues affecting them (whether individual or community-based) and suggest solutions to alleviate them.

Thorough reflection on context, such as patient ethnicity, language, family dynamics, and age should influence the tool and method in which ACEs are screened. In Latino populations, immigration and generational statuses are known factors impacting ACE scores. However, existing tools do not adequately capture the extent of these experiences and may impact ACE scores.⁷⁶ KII discussed how ACE items endorsed may be different based on culture. Further, there are limited existing validated tools in multiple languages, which also poses a barrier for practices without multi-lingual staff or interpreters, a barrier for providers, as explained by our key informants.⁷⁷

Additional translation of existing tools may influence the validity of patient responses, as the translation of questions may need nuanced interpretation. KII noted home-based approaches can be difficult because there are not many reliable traveling interpretation services. Communication with patients during the course of their treatment is crucial. KII indicate translation services are often inadequate and frustrating to use. To mitigate this issue, key informants discussed building career ladders to support the development of individuals from culturally and linguistically diverse backgrounds.

THE IMPACT OF LANGUAGE AND CULTURE ON SCREENING

"The answers we used to get on our screenings when going in with an interpreter is much different than the information we get when you send someone who is from the same culture. They answer differently; they know that this person has gone through a lot of the same that they went through."

— PRIMARY CARE
CLINICIAN

CREATING A MORE DIVERSE WORKFORCE IN NH

"We are trying hard to encourage our staff to move up the career ladder, so they're moving from community health workers, to being case managers, to being Master's level behavioral staff; we are interested in trying to increase the number of people in the community that do this work from [diverse] communities so it is a better source and benefit [to patients]"

— PRIMARY CARE
CLINICIAN

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The method of screening for adverse childhood experiences should be thoughtful of the space in which the individual being screened lives. Existence of expanded ACE models are appropriate foundations for addressing environmental adversity. For example, the Philadelphia Urban ACE Study, was created specifically for urban settings and is most reflective of experiences of older youth.⁷ The content of the model includes questions about exposure to violence, unsafe/unsupportive neighborhood, and racial discrimination.⁶ Clinicians who approach patients with a relationship-centered focus may more easily recognize the impact and importance of culturally competent screening.

RECOMMENDATIONS

Synthesis of the literature review and KII reveal major findings that should inform a quality improvement approach to addressing ACEs and SDOH in pediatric primary care settings. Major findings include:

1. Successfully mitigating the impact of ACEs and SDOH requires an entire community response, not just a clinic response.
2. Primary care clinician buy-in to screening and follow-up for SDOH appears much stronger than for ACEs. With respect to the latter, clinician support ranges from quite skeptical to firm.
3. Limited reliability and validity testing of screening tools for both ACEs and SDOH have been conducted. Availability of tools in a variety of languages and norming to different cultures is sparse.
4. Addressing ACEs and SDOH requires a team approach, with members from different disciplines and assigned task responsibilities. Additionally, addressing ACEs and SDOH requires a culture shift from clinician-based to team-based care delivery.
5. Training and skill needs cross many levels (community, all clinic staff, and clinicians) and topics (trauma-informed care, behavioral health integration, etc.). Adequate funding, as well as coordination of resources both within and outside the clinic setting to identify and effectively respond to ACEs and SDOH, is a necessity. Public awareness about ACEs and SDOH, and their cross-cutting impact across age, race, gender, and education is paramount. Translational research to support practices in effectively identifying and responding to ACEs is nascent, and gaps exist in how to best operationalize screening and treatment.
6. Availability of translation services and culturally-competent workforce and practices in both the clinic and community settings are needed to deliver appropriate care to diverse populations.

Implementing a quality improvement approach to addressing ACEs and SDOH requires addressing both factors within the clinic and systems issues outside the clinic. The below recommendations are organized accordingly, and can be implemented via a tiered approach based on clinic level of readiness to address ACEs and SDOH.

IN-OFFICE

- Engage several respected clinician champions to facilitate dialogue with their colleagues about SDOH and ACEs. Clinicians hold the opinions and lived experiences of fellow colleagues in high regard.
- Provide continuing education and training opportunities for all clinic staff to learn about trauma-informed care and how to use this approach to engage with patients. These trainings should also inform clinic staff of internal resources to support those experiencing ACEs, SDOH, and/or the effects of secondary trauma.
- Provide training and education to practicing clinicians and undergraduate and graduate medical, nursing,

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allied health and human services students to have a better understanding of and comfort with discussing, assessing, and responding to trauma including:

- Physiologic pathways childhood trauma can lead to poor child (and adult) health and functioning.
- Signs and symptoms of trauma, as well as other indications of adversity and chronic stress.
- The continuum of primary to tertiary prevention interventions that are evidence-based and trauma-informed.
- Relational skill building techniques to equip clinicians with the language and framing to engage patients in conversations about sensitive and potentially painful issues.
- Resources and strategies to support those experiencing ACEs, SDOH, and/or the effects of secondary trauma.
- Facilitate sharing of best practices and conduct research to fill in knowledge gaps to help clinics operationalize team-based care to address ACEs and SDOH, including:
 - Build data on reliability and validity of screening tools
 - Best practices gathered in developing this report:
 - Keeping relational continuity of the family with one primary care provider
 - Using medical-legal partnerships
 - Encouraging child advocacy centers sending letters of follow up to a family's primary care clinician
 - Sharing the resource list in Appendix 5 with clinics
 - Local and national efforts to integrate behavioral health into primary care as well as effective team-delivery models from other disciplines
 - How to effectively use a clinic's EHR system to facilitate the care process (i.e., decision-support systems, follow-up reminders, addition of fields (if needed) to collect and query data, and strengthening confidentiality of information fields as needed.
 - Pilot different strategies to identify operationally and fiscally feasible models for primary care clinics to have the staff and discipline-specific knowledge and skills (such as care management, behavioral health, etc.) needed to serve their local population, especially in small pediatric offices.
 - Test the use of different strategies to conduct real-time communication, consultation, and service scheduling for common challenging care scenarios (such as patient coming in for short visit and finding s/he is in crisis) that cause the least disruption to patient flow.

SYSTEMS-LEVEL

- Involve major stakeholder groups in conversations about the in-office and systems opportunities for improvement, including:
 - Primary care associations, including the NH Pediatric Society, NH Academy of Family Physicians, the NH Nurse Practitioner Association, NH School Nurses' Association, and the NH Society of Physician Assistants
 - Associations of clinic administrators such as the NH Medical Group Management Association, Bi-State Primary Care Association, and others

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- Community and state organizations, including CMHCs, DCYF, Division of Public Health Services, child advocacy centers, legal services
- Minority and refugee health agencies and organizations
- Funders, including policymakers, health care payers (private insurance agencies, Medicaid managed care organizations, etc.), and local charitable foundations
- Create public awareness about ACEs and SDOH through the promotion of educational resources for families (e.g., including information on PURPLE Crying resources)⁴⁶ and communities. Framing ACEs and SDOH as community issues to help all children and families thrive is critical, as they often are viewed as affecting only certain sub-populations such as the socioeconomically disadvantaged or marginalized.
- Conduct additional psychometric analysis to assure reliability and validity of screening tools. Increase availability of tools for multiple languages and cultures.
- Develop a “clearinghouse” (or enhance an existing system, such as 2-1-1) of available local resources and services for clinicians and community organizations including:
 - Referral agencies for children and families experiencing ACEs and SDOH to receive services (including trauma-informed services such as Child-Parent Psychotherapy, trauma-informed CBT, etc.)
 - Consultation services for primary care clinicians managing care of children with ACEs and SDOH (e.g. child advocacy centers to advise if symptoms may be a sign of abuse, CMHCs)
 - Social services available for families (transportation, legal support, food banks, shelters, etc.)
- Facilitate conversations of primary care clinics and family-serving organizations to identify what information, in what form, and through what vehicle would best support care coordination and monitoring response to treatment. From these conversations, discern if standard templates for information content and organization could be developed. Identifying a similar process to share information about in-patient pediatric discharges at high-risk for ACEs to not only the primary care clinician, but another (either case manager/behavioral health) clinic staff member to initiate a team approach that manages both the co-occurring medical and social/behavioral needs).
- Confer with policymakers about strategies to provide additional resources to expand the capacity of community organizations supporting children and families affected by ACEs and SDOH.
- Study current reimbursement structures to understand how billing codes do (or don’t) support time for care coordination and integration of behavioral health.
- Create trauma-informed communities through training of local organizations including schools, social services, law enforcement, court systems, and others.
- Continue to build capacity statewide to provide evidence-based services to prevent and mitigate trauma such as home visiting, Child-Parent Psychotherapy, and Trauma-Informed Cognitive Behavioral Therapy
- Facilitate sharing of best practices in cultural competence from the literature and KII, such as building career ladders to support the development of individuals from culturally and linguistically diverse backgrounds and identifying the strengths and needs of the community to better direct efforts to mitigate the effect of ACEs and SDOH.

APPENDICES

APPENDIX 1: LITERATURE DATABASES AND SEARCH TERMS

LITERATURE DATABASES ACCESSED

- PsychINFO
- PubMed
- MEDLINE
- ScienceDirect

KEY SEARCH TERMS

Search Concept 1	Search Concept 2	Search Concept 3
adverse childhood experiences social determinants of health health related social needs	screening tools screening process referring education support interventions learning training	primary care pediatricians pediatric care family medicine family practice primary care physician

PRIMARY INTERNET SOURCES OF GREY LITERATURE

- American Academy of Family Physicians, The EveryONE Project: <https://www.aafp.org/patient-care/social-determinants-of-health/everyone-project/tools.html#patients>
- American Academy of Pediatrics (AAP), Social Determinants of Health: <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Screening/Pages/Social-Determinants-of-Health.aspx>
- AAP, Resilience Project: <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/resilience/Pages/Resilience-Project.aspx>
- ACEs Connection: <https://www.acesconnection.com/>
- ACEs Too High: <https://acestoohigh.com/>
- Center for the Developing Child: <https://developingchild.harvard.edu/about/>
- Center for Youth Wellness: <https://centerforyouthwellness.org/>

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APPENDIX 2: INTERVIEW SCRIPT AND GUIDE

KEY INFORMANT PROTOCOL

Introduction & Overview of Project (5 minutes)

- Welcome the participant and express appreciation for their time to discuss their experience and expertise with ACEs and SDOH.
- Introductions; “My name is _____, and I’m here on behalf of NH PIP, working on/in _____ (field).”
- “All issues that we will be discussing are of importance to young children and families in New Hampshire. Some of the topics we will be discussing are screening, referral services, your views on the value of screening for ACEs and/or SDOH, concerns and opportunities for pediatrics and family medicine to screen and respond to ACEs and SDOH.”
- “We are interested in your ideas, comments, and suggestions.”
- “This gathering of information is mainly to provide recommendations that will enable funding for quality improvement projects to improve screening and response to ACEs and SDOH.”

Define SDOH and ACEs (2 minutes)

For the purposes of this interview, social determinants of health will be defined as the conditions in the places where people live, learn, work, and play, such as housing, access to transportation, employment, etc. Adverse Childhood Experiences (ACEs) will be defined as abuse, household challenges, and neglect.

Demographics (3 minutes)

How many years has your practice/organization been making ACEs and SDOH a priority?

Possible collection of provider/key informant demographic information, such as profession, education, type of practice, case load, etc.

Interview Questions: Clinical Practices

1. Are you currently implementing a standardized screening tool for ACEs and/or SDOH? If yes, what tool, how often (what visits), what population, reimbursement?
 - a. If you identify a parent/guardian with an elevated ACEs score, how do you use this information when caring for the child and their family?
 - b. If you identify a SDOH need in a family, what is typically your next step to respond to this need? (Note: Referral for services (Psychiatrist, community-based resources Head Start), linking to on-site services such as care manager, social worker, BHC, follow up phone call)
2. What do you see as the purpose for screening for ACEs? Do you see that as the same or different as the social determinants of health? (Note: purpose could be more robust history of the family or to refer to resources, etc.)
 - a. What are the benefits or values of screening?
3. What role do you think providers can play in identifying and addressing these issues?
 - a. Why do/don't you think these are important to address in the clinical setting?
4. What challenges do you anticipate in responding to concerns identified through SDOH and ACEs screening? (Note: For example, parent concern about why SDOH or their ACEs score is important, don't know where to refer family for help and/or to local service accessible, addressing HIPAA/FERPA issues, reimbursement)

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5. What would help you overcome these challenges? (Note: If currently screening, what are your needs for continued screening and response? If not screening, what supports would you need to be able to do this type of work?)
6. How do you accommodate the needs of families such as refugee families, ESL families, or families of different race/ethnicities? (Note: what resources does your clinic use to educate staff, comfort level of staff)
7. Are there any other issues, concerns, or perspectives regarding ACEs and SDOH in our state as we consider mitigation of ACEs and SDOH?

Interview Questions: External Service Providers

1. What do you see as the role of your organization in mitigating the impact of ACEs and SDOH?
 - a. What is your organization's/departments capacity to respond to referral for services?
2. What role do you think primary care providers play in identifying and addressing these issues?
 - a. Why do/don't you think these are important to address in the clinical setting?
3. What do you see as the limitations for your organization to address potential increase in demand for ACEs and SDOH (e.g. policy considerations such as home-visiting services below 21 with Medicaid)?
4. Benefits?
5. Resources available clinicians & families?
6. Are there any other issues, concerns, or perspectives regarding ACEs and SDOH in our state as we consider mitigation of ACEs and SDOH?

Interview Questions: Policymakers

1. What role do you think primary care providers play in identifying and addressing these issues?
 - a. Why do/don't you think these are important to address in the clinical setting?
2. What do you see as the limitations for organizations to address potential increase in demand for ACEs and SDOH (e.g. policy considerations such as home-visiting services below 21 with Medicaid)?
3. What challenges do you anticipate in responding to concerns identified through SDOH and ACEs screening? (Note: For example, parent concern about why SDOH or their ACEs score is important, don't know where to refer family for help and/or to local service accessible, addressing HIPAA/FERPA issues)
4. What would help you overcome these challenges?
5. Current political landscape in NH to addressing ACEs and SDOH?
6. Are there any other issues, concerns, or perspectives regarding ACEs and SDOH in our state as we consider mitigation of ACEs and SDOH?

APPENDIX 3: THEME CODE FREQUENCY TABLE

Codes/Sub-Codes	Applications*	Codes/Sub-Codes	Applications*
Screening	72	External Resources and Referrals	103
Provider Role in Screening	10	Challenges	9
Screening Benefits	14	Community-Based Services	36
Screening Challenges	11	Legal	6
Screening Tools and Use	46	Mental and Behavioral Health Services	26
In-office Care	106	Schools	7
Best Practices	24	Specialty Medical Care	5
Challenges	51	State Agencies	37
Lack of time	16	Policy and System Factors	138
Lack of internal primary care clinic capacity	13	Coordination of Systems	21
Uncertainty about available interventions	15	Electronic Health Record	9
Planning and Referrals	45	Lack of Access to Services and Resources	50
Staffing and Supports	39	Public Awareness	22
Training Needs and Supports	85	Reimbursement and Funding	34
Relational skills training	10	Stigma	18
Training needs	52	Workforce	9
Trainings currently available	17	Cultural Considerations	31
Trauma informed care	10	Solutions	32

*The sum of the sub-codes does not always equal the total for the parent code because an excerpt could be coded with more than one sub-code.

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APPENDIX 4: SCREENING TOOLS FOR ACES AND SDOH

The table below representation of many of the most common tools used in medical settings to screen for ACES and SDOH. This table is not comprehensive and may be missing some tools.




Screening Tool	Topic	Target Population	Available Languages	Cost	Validity
Accountable Health Communities Screening Tool*	SDOH	Parent	English, other languages	Free	Some questions validated
ACEs Family Health History and Health Appraisal Questionnaire	ACEs	Parent	English	Free	No
Adverse Childhood Experiences International Questionnaire (ACE-IQ)	ACEs	Parent	English, other languages	Free	In process
Center for Youth Wellness ACEs Questionnaire (ACE-Q)	ACEs	Child	English, Spanish	Free	No
Bright Futures Pediatric Intake Form (Family Psychosocial Screen)	SDOH and ACEs	Parent	English	Free	No
Child Stress Disorders Checklist	Toxic stress/ Trauma	Child	English	Free	Yes
Childhood Trust Events Survey (CTES)	Trauma	Child	English	Free	Yes
Health Leads Screening Toolkit	ACEs	Child	English, Spanish	Free	No
Hunger Vital Sign Screening Questions	SDOH	Parent	English	Free	No
Income, Housing, Education, Legal Status, Literacy, and Personal Safety (IHELLP)	SDOH	Parent	English	Free	Yes
Resilience Questionnaire	SDOH	Parent	English	Free	No
Parental ACEs Screening Tool	Resiliency	Parent	English	Free	No
Parents' Assessment of Protective Factors	ACEs and Resiliency	Parent	English	Free	No
Protective Factors Survey	Resiliency	Parent	English, Spanish	Free	Yes

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Screening Tool	Topic	Target Population	Available Languages	Cost	Validity
Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE)	Resiliency	Parent	English, Spanish	Free	Yes
Safe Environment for Every Kid (SEEK) Parent Questionnaire	SDOH	Parent	English, Spanish	Free	No
Survey of Well-Being of Young Children (SWYC)	SDOH	Parent	English, Spanish, Chinese, Vietnamese	Varies	In process
Well Child Care, Evaluation, Community Resources, Advocacy, Referral, Education Survey Instrument (WE-CARE)	SDOH	Child	English, Spanish, Portuguese, Burmese, Yoruba	Free	Some questions validated
Whole Child Assessment (WCA)	SDOH	Parent	English, Spanish	Free	No

*This tool is a part of the American Academy of Family Physicians, The EveryONE Project

APPENDIX 5: RESOURCE LIST

RESOURCE TYPE		LINK
Books and Articles		
	The Deepest Well by Dr. Nadine Burke Harris. How to heal the long-term effects of childhood adversity	https://centerforyouthwellness.org/the-deepest-well/
	AAP Policy Statement “Early Childhood Adversity, Toxic Stress, and the Role of the Pediatrician: Translating Developmental Science Into Lifelong Health”	http://pediatrics.aappublications.org/cgi/doi/10.1542/peds.2011-2662
	AAP policy statement “Promoting Food Security for All Children”	https://muse.jhu.edu/article/648742/pdf
	AAP Policy Statement “Poverty and Child Health in the United States”	pediatrics.aappublications.org/content/early/2016/03/07/peds.2016-0339
Videos		
	Nadine Burke Harris Ted Talk “How Childhood Trauma Affects Health Across a Lifetime”	https://www.youtube.com/watch?v=95ovIJ3dsNk
	A SAMHSA-HRSA Center for Integrated Health Solutions webinar: “Impact of ACEs and Adoption of Trauma-Informed Approaches in Integrated Settings”	https://goto.webcasts.com/starthere.jsp?ei=1184921&tp_key=5d667eade3
	Mental Health First Aid National Council for Behavioral Health. Trauma-Informed Care Video. Dr. Bruce D. Perry	https://www.thenationalcouncil.org/topics/trauma-informed-care/
Tools and Toolkits		
	User Guide for the Center for Youth Wellness ACE Questionnaire	https://centerforyouthwellness.org/cyw-aceq/
	Recommendations for pediatric health care providers considering addressing ACEs in their practice.	https://www.aap.org/en-us/Documents/ttb_addressing_aces.pdf
	AAP Trauma Toolbox for Primary Care. Six-part series designed to assist primary care practices in increasing their comfort in communicating with families about ACEs.	https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/healthy-foster-care-america/Pages/Trauma-Guide.aspx#trauma
	NH Coalition Against Domestic & Sexual Violence Trauma-Informed Services. Information as well as specialists who implement trauma informed services to survivors of interpersonal violence.	https://www.nhcadv.org/trauma-informed-services.html

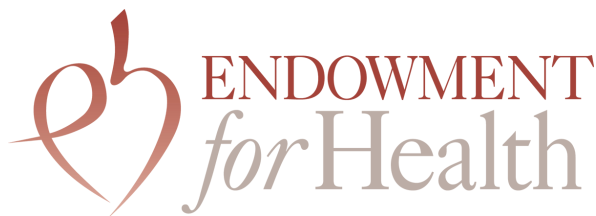
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Tools and Toolkits cont.		
	Link to list of screening tools for pediatric health care providers, including a number of SDOH and ACEs tools.	https://screeningtime.org/star-center/#/screening-tools
	AAP The Resilience Project website including a list of screening tools for ACEs and resiliency	https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/resilience/Pages/Clinical-Assessment-Tools.aspx
	ACEs Connection is a social network aimed at raising awareness around the impact of ACEs. They offer various resources from videos to webinars to trainings. Specific learning community for pediatrics available.	http://www.acesconnection.com/
	Framework for Strengthening Families: Prevention and intervention resources for health care providers to support strengthening of families to reduce	https://www.aap.org/en-us/Documents/resilience_messaging-at-the-intersections.pdf
	The National Child Traumatic Stress Network - Trauma- Informed Care: Culture and Trauma Resources/Toolkits	https://www.nctsn.org/trauma-informed-care/culture-and-trauma/nctsn-resources
On-line Learning Communities		
	National Pediatric Practice Communities on ACEs embraces a co-designed approach that ensures that materials and training are responsive to member needs and that lessons learned as a community are disseminated widely to advance medical practice.	https://nppcaces.org/
	AAP Tennessee Chapter Online Trauma-Informed Care Training Modules	https://www.tnaap.org/programs/behip/online-training-modules
Example Communities		
	Kaiser Permanente is working with 14 primary care organizations on a nine-month program to help create supportive environments for parents effected by ACEs, as well as clinical teams engaged with these families.	https://www.thenationalcouncil.org/trauma-informed-primary-care-initiative-learning-community/
	The Bayview Child Health Center for Youth Wellness. Webpage with resources on advancing clinical practice by applying ACEs screening in the pediatric clinic.	https://centerforyouthwellness.org/advancing-clinical-practice/
	The Philadelphia ACEs Project. Overview, resources and resilience tools created as part of their work	http://www.philadelphiaaces.org/resources

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