



Pediatric ACEs Screening and Referral: Facilitators, Barriers, and Opportunities for Improvement

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Abstract

Despite well-documented associations between adverse childhood experiences (ACEs) and lifelong impairments in health and well-being, few studies have examined how to facilitate implementation of ACEs screening and referral programs in pediatric settings. We sought to identify facilitators and barriers related to screening for and addressing ACEs in a large integrated healthcare delivery system in Southern California. Using a developmental evaluation approach, we conducted twenty semi-structured interviews with pediatricians, nurses, social workers, and community referral organization staff. Interviews took place across six pediatric clinic pilot sites in Kaiser Permanente Southern California, where more than 7,000 pediatric patients were screened for ACEs between July 2018 and December 2019. Thematic analysis was conducted to identify themes. Key facilitators for screening and referrals for pediatric ACEs screening included providing clinician education to normalize conversations about ACEs, using screening data to provide more holistic and compassionate care, and collaborating across different types of clinicians. Key barriers included screening tool challenges related to patient confusion and cultural differences, capacity limitations, training issues, and care team silos. When used in the context of a trauma- and resilience-informed workforce, ACEs screening may be a powerful tool to support more collaborative and impactful care decisions that move away from symptom management to address root causes and promote prevention.

Keywords Adversity · Screening · Adverse Childhood Experiences · Social Determinants of Health · Implementation

Introduction

Adverse childhood experiences (ACEs) are potentially traumatic events that occur before the age of 18 years and can have lasting negative effects across a lifetime. ACEs

typically fall into three categories: abuse (emotional, physical, or sexual), household challenges (e.g., domestic violence, substance abuse, mental illness in household, parental divorce, incarceration of a household member), and neglect (emotional or physical) (Felitti et al., 1998). ACEs

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can profoundly effect on a child's immediate and long-term health status. Immediate impacts can include behavioral or learning challenges; long-term impacts include chronic diseases (e.g., depression, heart disease, cancer, obesity), risky health behaviors (e.g., smoking, substance use/abuse), and socio-economic challenges (e.g., unemployment, lower educational attainment) (Merrick et al., 2019).

The original ACEs study was conducted from 1995 to 1997 at Kaiser Permanente, an integrated healthcare system in the United States, among a patient population of more than 17,000 adults in Southern California. This study had three key findings: (1) ACEs are common across all populations, with two-thirds of the original study participants reporting at least one ACE and more than one in five reporting three or more ACEs; (2) certain populations are more vulnerable to ACEs, such as racial/ethnic minority groups; and (3) as the number of ACEs an individual experiences increases, the risk for negative health outcomes also increases (Felitti et al., 1998). These findings within the adult population have been confirmed in larger, more representative populations and explored within the pediatric population (Merrick, Ports, & Guinn, 2018). Approximately 46% of children in the United States have experienced at least one ACE, with significantly higher rates among Hispanic (51.4%) and black (63.7%) children, compared to white children (40.9%) (Merrick, Ports, & Guinn, 2018; Bethell et al., 2017; California Department of Public Health, 2022). Research over the last 20 years has both confirmed the original study findings and expanded the definition of ACEs from individual-level trauma to adverse community experiences (e.g., discrimination, economic immobility, low social capital, poor housing quality, violence) (Ellis & Dietz, 2017). ACEs are often considered a critical unaddressed public health threat, making practice-based solutions and research on the topic of utmost importance (Sherin et al., 2022).

Despite robust evidence of the high prevalence and strong dose-response relationship between ACEs and negative health outcomes, debate continues about screening for ACEs in healthcare settings (Bhushan et al., 2020). Research has shown some benefits to ACEs screening in healthcare settings, including improved patient-clinician communication, enhanced clinical assessments, and better treatment planning (Flanagan et al., 2018; Rariden et al., 2021). However, sparse evidence exists related to efficacy, and the ACEs score can be misused in healthcare settings as a screening or diagnostic tool for individuals, even though it was designed as an epidemiologic tool to identify population-level health risks (Anda et al., 2020). Ethical concerns also pertain to screening without the ability to follow up with evidence-based intervention resources (Finkelhor, 2018). Clinicians and researchers also emphasize that screening is only a small part of a comprehensive approach

to addressing childhood trauma and highlight the need to adjust narrow definitions of trauma to include more systematic factors (e.g., racism, poverty), ensure workforces are trained in trauma-informed care, and that the public resource infrastructure, especially for child mental health, is strengthened (Bartlett, 2020; Racine et al., 2020). Finally, it is worth noting that similar screenings, such as for social determinants of health and mental health, in primary care settings have mixed results in terms of efficacy (O'Connor et al., 2009; Yan et al., 2022).

Recent policy-based efforts have mobilized the healthcare sector to implement clinical practices that are responsive to ACEs. For example, in 2017 the California Office of the State Surgeon General passed legislation (Assembly Bill 340) and launched a statewide initiative (ACEs Aware) to encourage nonprofit healthcare clinicians to screen pediatric and adult patients for ACEs as the first step toward meeting the goal of cutting ACE prevalence by 50% in one generation (ACEs Aware, 2023; Department of Health Care Services, 2019). These efforts seek to both identify and address ACEs at the individual level and lower healthcare costs by intervening early, given the association of ACEs and costly chronic conditions. As of January 2022, the ACEs Equity Act (California SB 428) expanded coverage for ACEs screenings by requiring all health insurance plan contracts covering pediatric services and preventive care to also cover ACE screenings (Office of the California Surgeon General, 2021).

While efforts towards recognizing and addressing ACEs in healthcare settings are promising, the urgent calls for universal ACEs screening, especially in pediatrics settings, should be accompanied by a better understanding of implementation, including factors that facilitate and create barriers to address the impact of ACEs and responding to positive screening results. Challenges remain related to understanding the appropriateness and feasibility of ACEs screening in a pediatric setting, educating and training clinicians, and making diverse resources available for those who may need them. This study aimed to address some of these knowledge gaps in a practice-based setting by evaluating a pilot pediatric ACEs screening and referral program in a large integrated healthcare organization. The overarching research question was: what are the perceptions and experience of the Pediatric ACEs Screening and Referral Pilot program among providers (pediatricians, nurses, social workers) and staff members at community referral organizations? The study aims were to understand facilitators, barriers, and opportunities to improve efforts to screen for and address ACEs in pediatric healthcare settings.

Methods

Setting

Kaiser Permanente Southern California is a large, diverse integrated healthcare organization with 13 medical centers serving approximately 4.6 million members, including 1.5 million children (Koebnick et al., 2012). The Kaiser Permanente Southern California Institutional Review Board approved this study.

Intervention

The pediatric ACEs screening and referral pilot program began in July 2018 at a single pediatric clinic in Southern California (Digangi & Negriff, 2020). The pilot expanded to 6 pediatric clinics serving racially diverse patient populations across the region. The pilot screened children at well-child visits at ages 3, 5, 10, and 13 years, using the 10-question ACEs questionnaire based on the original Kaiser Permanente/Centers for Disease Control and Prevention ACEs questionnaire with the wording adapted from the Center for Youth Wellness ACE-Q questionnaire. Clinic staff administered the ACEs screening tool and explained that answers would be blinded and that only scores, not specifically noted adverse events, would be recorded. A parent or caregiver completed the 10-question ACEs screening questionnaire for 3-, 5-, and 10-year-olds. Thirteen-year-olds completed the questionnaire themselves. A nurse then entered the ACE score into the electronic medical record and a pediatrician reviewed it before the visit. If the ACE score was 0, no action was taken. If the ACE score was 1–3 without symptoms (e.g., behavioral or emotional issues), the pediatrician provided education materials on ACEs. If the ACE score was 1–3 with symptoms or ≥ 4 , the pediatrician provided education and a referral to social medicine or psychiatry/behavioral health.

Training on operational workflows was provided, and some physicians also voluntarily participated in the online ACEs Aware provider training developed by the State of California.

Design

Using a developmental evaluation approach, the first author conducted 30- to 45-minute semi-structured telephone interviews with pediatricians, nurses, social workers, and community referral organization staff to assess facilitators and barriers related to ACEs screening and referral and quality improvement opportunities. Interviewees did not receive compensation for participating in interviews, and purposive sampling was used to select interviewees who were involved in the pilot (i.e., nurses, social workers, physicians) or received patient referrals from the pilot (i.e., community organization staff members).

The physician who championed the pilot at each of the six sites identified clinic staff involved in the pilot and forwarded the recruitment email from the first author. Interview invitations were subsequently emailed to all community referral staff members and organizations mentioned by Kaiser Permanente Southern California clinicians during interviews. Interviews were conducted by the first author, who works for Kaiser Permanente Southern California in a research capacity and did not personally know or have any working relationship with interviewees. All interviews were audio recorded and transcribed with participant permission. Interview data were anonymized before analysis.

Measures

Facilitators and barriers related to the pilot screening and referral program were explored using a semi-structured interview guide with questions in three main domains: understanding of ACEs, experience with and perceptions of the pilot program, and opportunities for improvement. Facilitators were defined as what was working well in the pilot and barriers were defined as issues and challenges related to the pilot. Both were explored along multiple dimensions, including general perceptions, workflow, training, and resources. Separate semi-structured interview guides were developed for Kaiser Permanente Southern California clinicians and community referral organizations.

Analysis

Thematic analysis was used to explore facilitators, barriers, and opportunities for improvement of the pilot program. Thematic analysis is a method for identifying and analyzing patterns within data that is accessible and flexible (Braun & Clarke, 2006). Thematic analysis was chosen because it allowed researchers to better consider the context of interviewee experiences, which was important given the practice-based nature of this work and multiple settings (in healthcare and in community organizations). In addition, due to the pilot nature of this work, a hybrid inductive and deductive approach was used, in which themes were identified based on both emerging data (inductive) and a set of *a priori* codes (deductive) (Fereday & Muir-Cochrane, 2006). *A priori* codes were derived from the research questions and related literature and later coupled with emergent codes. Interview recordings were transcribed, and transcripts were uploaded to MAXQDA qualitative analysis software. To facilitate the analytic process, a modified version of the step-wise process proposed by Braun and Clarke (2006) was used: (1) generate *a priori* codes; (2) become familiar with data (review transcripts); (3) assess fit/appropriateness of applying codes and identify emergent codes; (4) create a tool/codebook for coding data; (5) pilot tool and adjust as needed

(three coders validated the codebook before analysis of all interviews); (6) apply tool to the rest of the data; (7) review coded data, write memos on overall themes, patterns, sub-patterns; (8) use additional tools or displays to examine relationship among codes; and (9) write up the findings and use appropriate quote examples to illustrate themes.

After interviews were coded, two analyses were conducted to examine the relationships among codes. First, a role-specific analysis was conducted to separately extract coded segments for pediatricians, nurses, social workers, and community referral organizations. This resulted in themes for each of the four clinician types. Second, a co-occurrence analysis was conducted using a thematic pattern matching approach, resulting in co-occurring themes across clinician types. For example, if more than one type of clinician described content related to the same theme, that theme was considered co-occurring. All themes reported here were co-occurring unless noted as being described by a specific type of clinician.

Table 1 Characteristics of pediatric patients in the aces screening and referral pilot program, *n* (%)

	<i>n</i> = 7098
ACE Score	
0	5720 (80.6)
1	939 (13.2)
2+	439 (6.2)
Sex	
Male	3546 (50.0)
Female	3552 (50.0)
Age in years (only 3-, 5-, 10-, and 13- year-olds were screened in the pilot)	
3	3061 (43.1)
5	2615 (36.8)
10	766 (10.8)
13	656 (9.2)
Race/ethnicity	
Black	854 (12.0)
Hispanic	4327 (61.0)
White	984 (13.9)
Pacific Islander	9 (0.1)
Native American or Alaskan	29 (0.4)
Asian	557 (7.8)
Multiple	60 (0.8)
Other	135 (1.9)
Unknown	143 (2.0)
Pilot site	
1	518 (7.3)
2	1430 (20.1)
3	47 (0.7)
4	3793 (53.4)
5	472 (11.8)
6	838 (6.6)
Child Medi-Cal status (income proxy)	
Medi-Cal	1839 (25.9)
No Medi-Cal	5259 (74.1)

Results

From July 2018 to December 2019, more than 7,000 pediatric patients were screened across the 6 pilot sites. Table 1 summarizes the demographic characteristics of pediatric patients who were screened during the pilot period; additional information is available from DiGangi and Negriff (2020).

Twenty semi-structured interviews lasting 30- to 45- minutes each were conducted in June–August, 2020. Among interviewed clinicians, 7 were pediatricians, including one from each pilot site, 4 were social workers, and 4 were nurses. Five interviewees were from community referral organizations. The interviewee sample was comprised of 19 females and 1 male (pediatrician). Race/ethnicity data was not directly collected from interviewees.

Themes Related to Facilitators

Three overarching themes emerged as facilitating the pediatric ACEs pilot: holistic and compassionate care, normalizing conversations, and clinician collaboration.

Holistic and Compassionate Care Interviewees perceived ACEs screening as increasing empathy for patients and creating a more compassionate culture within the clinic. As one nurse said, “[The screeners] help us be a little bit more empathetic because you just don’t know which is a kid who’s going through some of these things.” (female, clinic site 5) In addition to increasing empathy, all clinician types noted that ACEs screening increased the ability to practice “whole person care.” They highlighted the value of the screening results for generating conversations that could reveal underlying issues or needs with the potential to contribute to the development of chronic disease. A nurse from another clinic said, “...you don’t come to your doctor’s appointment for your child and say, by the way, my brother attempted to commit suicide yesterday. So I think it definitely opens up a door to communicate with issues that you might not think affect your child.” (female, clinic site 1) In addition, all types of interviewees noted the importance of having a familiar clinician administer the screening tool and discuss the results. A pediatrician described it this way: “Having [the patient’s] primary provider administer the questionnaires has been very helpful because there’s already a certain level of trust there.” (female, clinic site 5)

Normalizing Conversations For clinicians trained in trauma-informed care principles, screening helped facilitate the culture of whole person care, including establishing a sense of safety and trust by using invitational language. For example, social workers and community referral organization staff both noted the importance of inviting patients to

share more about their ACE score without forcing disclosures or conversations. As one social worker said:

I don't want our members to feel uncomfortable, and I don't want them again to have a negative connotation of the social worker being pushy or trying to, you know, get information. So, when I get that sense, I just reiterate the purpose of the call...and I just go by what they want to do. (female, clinic site 6)

In addition, providing patients with education about ACEs to normalize conversations helped establish a sense of safety and trust. Pediatricians and social workers emphasized the importance of providing patients with context to clarify why they were being questioned about ACEs.

Clinician Collaboration Collaboration was noted as an integral part of the pilot program. Creating a standardized workflow with various staff performing specific activities reduced the burden of screening on any one staff member and streamlined incorporating the screening protocol into already busy well-child visits. One pediatrician described it this way: “Once it becomes a well-oiled machine people are used to, it doesn’t take as much time as people think.” (male, clinic site 6) These workflows were aided by interdisciplinary collaboration, particularly between pediatricians and social workers. Pediatricians highlighted the value of social work partnerships to provide support and follow-up. Social workers highlighted the importance of warm hand-offs between departments to reduce the fear or stigma often associated with social work in a pediatric setting. As a social worker at the same clinic described:

I always appreciate it when the provider prepares the patient for a social worker to call and especially with our peds families, social work can have a negative connotation because they think we're going to take their children or we're going to go in and criticize or be critical or further assesses their parenting. (female, site 6)

Themes Related to Barriers

Four themes emerged as barriers to the ACEs pilot: screening tool challenges, capacity limitations, training issues, and silos.

Screening Tool Challenges Interviewed clinicians identified several screening tool challenges. They expressed concern about fear or embarrassment among patients and parents completing the questionnaire that could lead to underreporting

of ACEs, particularly if no context was provided before they completed the questionnaire. As one social worker said, “[My patients often ask] are you going to call DCFS [Department of Children and Family Services] on us?”...And I have to tell them, that’s not my role.” (female, clinic site 5) Furthermore, interviewed social workers, nurses, and community organization staff noted barriers related to the linguistic and cultural fit of the questionnaire. In some cases, language was identified as a barrier; in others, clinicians noted variation in people’s willingness to answer the questions on the screening tool across cultural groups because direct linguistic translations may not always resonate or be interpreted similarly across cultures. For example, one nurse said, “The questionnaire that we have is just English and Spanish. We don’t have other languages. And we do see quite a few different languages that are spoken around here right now. So, I can’t say that the parents are understanding it completely if they speak something other than English or Spanish.” (female, clinic site 5) Additionally, clinicians reported that some patients found the screening tool confusing because it asked them to add up a total number of ACEs versus selecting individual adverse events. As one pediatrician at another clinic described it: “I think some families might put zero, but if they thought of it in a different way, they might actually have more.” (female, clinic site 4)

Capacity Limitations Pediatricians, nurses, and social workers identified workloads and resource capacity as barriers. For pediatricians, limited visit time with patients was a barrier. Nurses reported that their workloads made it difficult to consistently remember to distribute the questionnaire, and social workers noted that their caseloads often included more than the pediatrics departments. A pediatrician summarized it this way: “I think we all universally agree that ACEs is the right thing to do... there’s thousands of things that are the right thing to do, but how much can we do in 15 minutes.” (male, clinic site 6) Workloads limited clinicians’ capacity to follow up after a positive ACEs screening, as described by a pediatrician at another clinic: “... [it was] like a vacuum in terms of getting the feedback that they [patients] have gone and that it is helping.” (female, clinic site 1) Lack of internal and external resources also emerged as a key barrier, particularly among pediatricians and social workers who typically made patient referrals with a pediatrician highlighting that, “We need a lot more referral networks built. We need to partner a lot more with the community...we need to build better bridges.” (female, clinic site 4) Furthermore, social workers and community clinicians noted that families often needed resources related to basic social needs, such as food, housing, and economic stability, which were not addressed by ACE-related referrals. For example, if a family was referred to a community organization for trauma-informed therapy but lacked needed transportation or financial help, their ability to access referral resources was limited. As

one social worker said, “Follow-up can be hard if it’s a financial issue where they don’t have the money for copay... Sometimes my parents, they’re just overwhelmed.” (female, clinic site 5)

Training Issues Clinician training emerged as a barrier among pediatricians, social workers, nurses, and community referral organizations. Pediatricians sometimes felt uncomfortable talking about ACEs with patients, social workers noted a general lack of awareness among their colleagues about the impact of trauma on health, nurses did not always feel they had an important role in ACEs screening, and community organization staff noted that buzzwords like “trauma-informed care” were often used unaccompanied by training or standard practices to effectively provide responsive care. As a staff member at one community referral organization described: “Mental health community-based organization providers might classify themselves as trauma informed, but we’re finding that there’s still a lot lacking in that regard.” (female, community site 4) Training issues were also underscored by social workers and community referral organization staff, who were concerned that an ACE score can be misused as a diagnostic tool without considering protective factors or resilience. They noted that when the ACE score is used to diagnose or trigger a referral without taking any other factors into consideration, feelings of shame, fear, and guilt among patients and parents could result. One staff member from a community referral organization summarized the challenge this way:

Number one, don’t pathologize. And I think that that’s obviously an occupational hazard, if you’re a medical professional. But one of the things that makes us successful is there’s no “us”. I talk to everybody about my own experiences as a parent and my own struggles as a parent and my own trauma history, because it’s normalizing and it’s getting rid of the shame and the fear and the guilt... empathy and not othering is really important, but the non-pathologizing of trauma is just important to everybody because it is just a real misunderstanding of what trauma is. (female, community site 4)

Silos Although collaboration was identified by some interviewees as a potential facilitator of ACEs care, others discussed the degree to which the settings for ACEs screening were siloed. For pediatricians, silos existed between pediatrics and other departments; they noted that other clinicians (e.g., those providing care for parents) may not see the results of a pediatric ACEs screen that could inform

recommendations for the family. One pediatrician described it this way:

I might see them [the patient] now, but even if I do the physical now, I’m not really their primary. I’m not going to see them again in the future and unless, the primary is concerned about something. I don’t know if they would look at my notes. (female, clinic site 3)

Discussion

We found that clinicians identified considerable benefits to systematic ACEs screening among pediatric populations that align with national- and state-level calls to action to screen for ACEs. However, the barriers and facilitators they identified have important implications for healthcare organizations attempting to implement systematic ACEs screening. We discuss themes from interviews below while highlighting recommendations for healthcare systems seeking to incorporate ACEs screening into standard pediatric care.

Build Readiness by Training Clinicians

Staff training for the pilot primarily focused on operationalizing the screening workflow in the clinic. Physicians had received some training on ACEs through California ACEs Aware online physician training modules, but other staff members with integral roles in screening workflows had not. Lack of training, especially on the principles of trauma-informed care, was consistently cited as a barrier by all types of clinicians interviewed, who also often cited key tenets of trauma- and resilience-informed care, such as establishing safety and trust, normalizing ACEs screening, and using invitational approaches, as facilitators (National Council for Mental Well-being, 2019). These findings underscore the importance of training healthcare clinicians and clinic teams in trauma- and resilience-informed care (Substance Abuse and Mental Health Services Administration, 2014). Furthermore, it strengthens the arguments noted in the introduction that ACEs screening is only one part of comprehensive, trauma-informed responses to addressing childhood adversity (Finkelhor, 2018; Bartlett, 2020).

Use ACEs Screening to Start a Conversation

A theme, particularly among community referral organization clinicians and social workers, was the importance of using ACEs screening as a tool, not a diagnostic instrument or referral trigger. The ACE score was designed for epidemiological surveillance (Anda et al., 2020; Finkelhor, 2018).

The questionnaire can bring value in clinical settings, but its application may need clarification. A complete ACEs screening involves assessing for the triad of adversity (the ACE score), clinical symptoms of toxic stress, and protective factors (ACEs Aware, 2023). Additionally, standardized workflows emerged as a key facilitator in this pilot, but it is important to recognize which parts of the ACEs screening workflow can be standardized (e.g., screening tool and logistics) and which parts need more collaboration with the patient and parents (e.g., referral types and support).

Caution about widespread ACEs screening is strengthened by the perspectives of interviewed social workers and community referral organization staff members who regularly work with individuals with childhood trauma. The ACEs score from a screening does not reflect the intensity, chronicity, frequency, or developmental timing of exposure, rendering it unsuitable for use as the only assessment of childhood trauma for individuals (Anda et al., 2020). Until more evidence emerges on effective screening practices with resulting improvements in screening tools, healthcare organizations may want to consider the tool as a conversation starter, rather than a true screening tool, and only within the context of a workforce trained in trauma-informed care (Bartlett, 2020; Dubowitz et al., 2022).

Be Intentional About Framing ACEs Screening to Patients

Establishing trust and safety by using an invitational approach and providing patient education about ACEs to normalize conversations in a clinical setting were all noted as key facilitators. Multiple interviewees mentioned the importance of providing context about why they screened and that they screened everyone for ACEs to help reduce the fear or embarrassment associated with questions about child welfare. In addition, depending on the clinicians conducting the screening, discussing results, and making possible referrals, warm handoffs are often needed to reduce possible stigma, such as with social workers (National Pediatric Practice Community on ACEs, 2019).

Embrace and Invest in Culturally Diverse Tools and Referral Resources

A lack of resources, especially culturally responsive ones, and follow up after a positive ACEs screen were often cited as barriers. The availability of a robust and diverse response and referral network is a central principle of a trauma-informed approach (National Council for Mental Wellbeing, 2019). In previous studies, physicians were more hesitant to discuss social needs if they lacked available resources to offer to address the identified needs (Hamity, 2018). Additionally, consistent with other findings, the ACEs questionnaire may require more than direct translation into additional languages,

and cultural adaptations may help to ensure patients understand both why and how ACEs screenings are conducted (Garrow & Wimsatt, 2021). For example, cultural adaptations may include using educational aids (e.g., fotonovelas) that help contextualize ACEs or incorporating different types of adversity, such as discrimination. Finally, a one-size-fits all approach cannot be taken to offering resources. Interviewed community clinicians often noted the breadth of resources needed to adequately address ACEs, from traditional counseling to parenting classes, art therapy, and meeting basic needs such as transportation, income supports, and food assistance. Collaborating with patients on the types of support they want and cultivating a variety of resources are important to ensuring cultural relevance and more effectively addressing the root causes of ACEs and negative health outcomes.

Incorporate Social Needs

Clinicians consistently mentioned basic needs (e.g., economic stability, transportation, food, etc.) during interviews, highlighting the interlinked nature of ACEs and social determinants of health. Clinicians within the health system often cited concerns about families' ability to access various organizations due to economic or transportation constraints, while community referral organization staff members often cited the need to provide more wrap-around services, rather than focusing on healing from trauma in isolation. Increasing evidence highlights the association between ACEs and social determinants and the fact that the ACEs screening tool alone may not tell the full story (Sokol et al., 2019; Sterling et al., 2018). Tools such as the PEARLS screener for the pediatric population, which assesses social needs in addition to ACEs, are gaining favor for providing a more holistic view of a child's experiences, environment, and needs (Thakur, 2020).

Strengthen Clinician Collaboration

Silos among clinicians and departments screening for ACEs were often noted as key barriers. For example, family medicine providers often treat families as a whole, which may more appropriately capture and address the intergenerational nature of ACEs (McKelvey & Edge, 2020). Additionally, ongoing research continues to explore screening pregnant or postpartum mothers to identify, treat, and prevent the impact of ACEs as early as possible (Young-Wolff et al., 2021; Olsen et al., 2021). Healthcare systems with advanced electronic medical record systems may also find value in sharing screening results across clinicians, just like medications or allergies, to help better inform care decisions across families (Barnes et al., 2020). However, a key caveat would be ensuring training for all clinicians.

Finally, our findings have broader public health implications. The well-established links between community and individual health and between ACEs and later medical and mental health problems reinforce the need for more upstream investment (Ellis & Dietz, 2017). ACEs screening is intended as a surveillance tool, and its growing adoption among healthcare organizations will generate aggregate-level data that can help pinpoint disparities and target investments. Sharing aggregate data with public health entities or other surveillance systems may help prioritize investments and public policy agendas.

Limitations

Several limitations deserve mention, including the generalizability of the screening model used in the pilot. The workflow for pediatric ACEs screening is suited for large-scale, integrated healthcare systems that include interdisciplinary care teams. However, the key findings about screening and trauma- and resilience-informed approaches may apply to any clinician or healthcare system. Finally, we did not capture the perspective of patients, and future research should include voices of patients, particularly those with lived experiences with ACEs.

Conclusions

ACEs screening in a pediatric primary care setting can be valuable but only in the context of a trauma- and resilience-informed workforce and system, which requires much more than the implementation of widespread screening. It is critical to build readiness by training clinicians and staff on practicing trauma- and resilience-informed care, conducting ACEs screenings, and utilizing the results to inform, not dictate, care decisions. Healthcare systems should ensure that ACEs screening efforts consider basic social needs and are available in multiple languages and culturally adapted. Finally, it is essential to build a strong network of culturally diverse community resources enabled by clinician collaboration and warm hand-offs. All are critical to incorporating pediatric ACEs screening into care settings, ultimately driving more collaborative, impactful, and prevention-oriented care decisions.

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