

**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
HEALTH RESOURCES AND SERVICES ADMINISTRATION**

REPORT TO THE HOUSE COMMITTEE ON APPROPRIATIONS

**SCREENING AND INTERVENTIONS FOR ADVERSE CHILDHOOD EXPERIENCES
IN PRIMARY CARE SETTINGS DEMONSTRATION PROJECT**



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I. Introduction

The Health Resources and Services Administration (HRSA) is providing this report to Congress as outlined in the Explanatory Statement for the Consolidated Appropriations Act, 2021 (P.L. 116–260), which included funds for a “study focused on the implementation of screening protocols and evidence-based interventions for individuals who have experienced adverse childhood experiences, as described in House Report 116–450.” The referenced House Report states, in pertinent part:

The Committee includes \$1,000,000 within SPRANS [Special Projects of Regional and National Significance] to fund a study focused on improving child health by implementing screening protocols and evidence-based interventions to individuals who have experienced adverse childhood experiences (ACEs)...to yield a model for integrating ACEs screening and trauma-informed strength based care into primary care settings. The Committee directs HRSA to submit a report with the results of this study to the Committee within three years of enactment of this Act.

Adverse childhood experiences (ACE) are potentially traumatic events that occur in childhood, such as experiencing violence, abuse, neglect, witnessing violence in the home, or having family members attempt or die by suicide.¹ A landmark research study on ACEs published in the *American Journal of Preventive Medicine* in 1998 showed that the number of ACEs is associated with adult health outcomes,² and a high number of ACEs is associated with increased risky behaviors and poorer adult health.

Screening for ACEs in children and adolescents within the primary care setting is a topic of ongoing research. Such screening can identify children who have experienced ACEs, which can allow for timely intervention or referral to therapeutic or community services that can support the child and family and mitigate the impact of adverse experiences. In the short term, screening for ACEs could result in more tailored, holistic care for the child and family. In the long term, early identification and intervention might mitigate some of the known associations between ACEs and poor adult health. While there are questionnaires and tools to measure ACEs in adults, standardized and validated tools for children and adolescents are less common.^{3,4} Merely counting the number of ACEs as a screening tool does not give a primary care provider sufficient information about frequency of exposure to ACEs, duration of exposure, severity, and age of

¹ Felitti VJ et al. Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*. Volume 14, Issue 4, 1998, Pages 245-258, ISSN 0749-3797. doi: 10.1016/S0749-3797(98)00017-8.

² See Footnote 1.

³ Loveday S, Hall T, Constable L, Paton K, Sanci L, Goldfeld S, Hiscock H. Screening for Adverse Childhood Experiences in Children: A Systematic Review. *Pediatrics*. 2022 Feb 1; 149(2): e2021051884. doi: 10.1542/peds.2021-051884.

⁴ Barnes AJ, Anthony BJ, Karatekin C, Lingras KA, Mercado R, Thompson LA. Identifying adverse childhood experiences in pediatrics to prevent chronic health conditions. *Pediatr Res*. 2020 Jan; 87(2): 362-370. doi: 10.1038/s41390-019-0613-3.

onset.⁵ Without this basic information, it can be difficult for a pediatric provider to select an appropriate referral. Even if a primary care provider identifies a child who has experienced ACEs, the provider might not have the requisite training or referral sources available to provide adequate intervention.⁶ In addition, some parents or caregivers may feel concerned about the implications of ACEs screenings, especially if parents or caregivers could be seen as responsible for their children’s exposure. While screening for ACEs in primary care settings has some potential benefits, it also comes with challenges and limitations.

This report to Congress summarizes progress to date of a pilot project funded in 2021 to implement ACEs screening protocols and evidence-based interventions in pediatric primary care settings for the purpose of improving child health. Initial data collection suggests that it is feasible to embed ACEs screening into pediatric primary care settings, that providers can increase their confidence and comfort in screening for ACEs with training, and that parents and caregivers whose children are screened find value in discussing ACEs with their providers. There is a need for further study to evaluate whether screening for ACEs results in improvements in child health.

II. Implementing screening protocols and interventions

In 2021, HRSA awarded a cooperative agreement (HRSA-21-109) to Safe and Sound (formerly the Center for Youth Wellness), referred to herein as the recipient, to implement the “Screening and Intervention for Adverse Childhood Experiences in Primary Care Settings Demonstration Project.” The recipient developed and implemented a quality improvement initiative to recruit, train, and coach primary care practices and their providers to routinely screen children for ACEs and intervene when indicated.

The recipient titled their project the TASIE (Trauma-Informed ACEs Screening and Intervention Evaluation) Project Extension for Community Healthcare Outcomes (ECHO®⁷), which they undertook in partnership with the New Jersey Chapter of the American Academy of Pediatrics. The program implemented a virtual model for teaching and supporting pediatric providers in screening for ACEs and providing relevant response and referral. Primary care practices applied to participate in the TASIE Project ECHO® and the recipient selected certain U.S.-based primary care practices serving children and adolescents. Practices in Cohorts 1 and 2 are located along the eastern coast of the United States, in some southern states (Mississippi, Florida, and Texas), and in some western states (California, Washington, Arizona, and Colorado) as seen in Figure 1. The practices served different types of communities: 47 percent were urban, 40 percent were suburban, and 13 percent were rural. Most practices identified themselves as independent (63 percent), although certain practices identified as hospital-affiliated (16 percent),

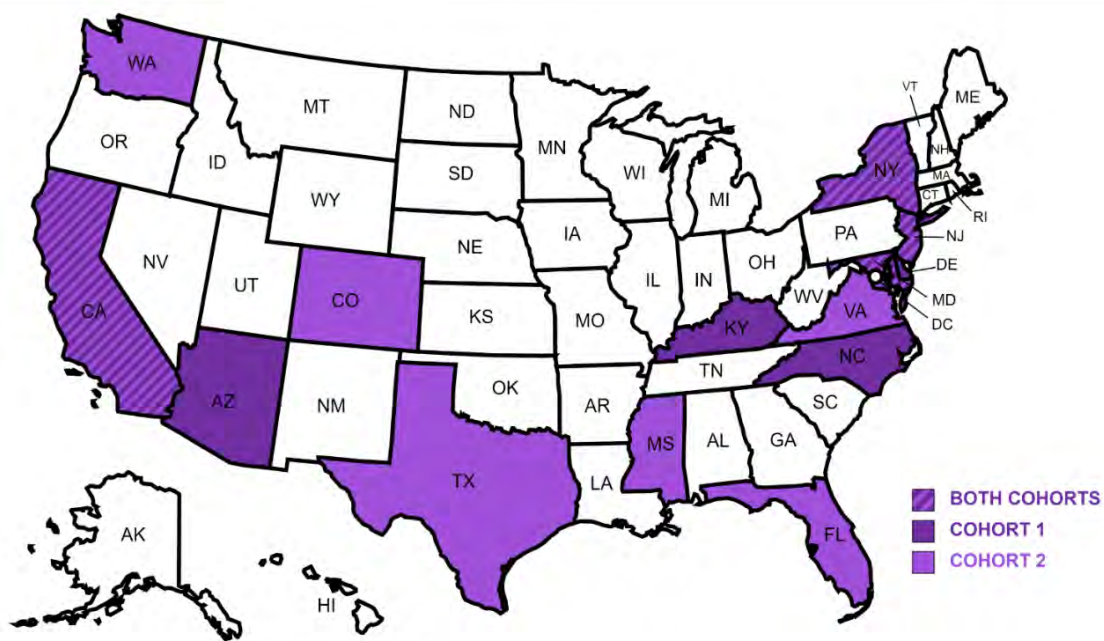
⁵ Amaya-Jackson L, Absher LE, Gerrity ET, Layne CM, Halladay Goldman J. (2021). Beyond the ACE Score: Perspectives from the NCTSN on Child Trauma and Adversity Screening and Impact. Los Angeles, CA and Durham, NC: National Center for Child Traumatic Stress. <https://www.nctsn.org/resources/beyond-the-ace-score-perspectives-from-the-nctsn-on-child-trauma-and-adversity-screening-and-impact>.

⁶ See Footnote 3.

⁷ Arora S, Thornton K, Jenkusky SM, Parish B, Scaletti JV. Project ECHO: linking university specialists with rural and prison-based clinicians to improve care for people with chronic hepatitis C in New Mexico. *Public Health Rep.* 2007; 122 Suppl 2: 74-7. doi: 10.1177/00333549071220S214.

academic-affiliated (13 percent), and community-based (13 percent). Participants could select more than one practice type to describe their workplace setting.

Figure 1. Map of participating practices (n=30) by geographic location in the United States



Selected practices attended an orientation workshop, a 2-hour ACEs training workshop, and eight monthly 75-minute ECHO® sessions, which fostered peer-to-peer learning among providers. Participating practices also had access to quality improvement coaches for individualized technical assistance.

All participating practices selected and implemented one of three models of screening for children, described below. The recipient defined a standard intervention protocol for all participating practices to follow. Below are a description of the screening and intervention models and a summary of study progress to date.

ACEs screening protocols

The participating practices had a variety of baseline experiences with screening for ACEs; some described themselves as already screening for ACEs while others used the pilot to learn how to screen for ACEs and would then work up to screening eligible patients over time. The recipient trained all participating pediatric primary care practices to use the *PEdiatric ACEs and Related Life Events Screener (PEARLS)* tool. Parents or caregivers for children 11 years or younger complete the *PEARLS* tool, and both the parent or caregiver and adolescent complete the *PEARLS* tool for those aged 12 years and older.

Participating practices implemented one of three variations of the *PEARLS* tool:

- (1) **Blind.** Respondents do not specify which ACEs the child experienced, but rather only report the total number of ACEs the child experienced (one, two, three, etc.).
- (2) **Unblind.** Respondents do specify which ACEs the child experienced by selecting “yes” or “no” for each question of the *PEARLS* screening tool.
- (3) **Hybrid.** For the first 10 questions, respondents do not specify which ACEs the child experienced. For the last nine questions, respondents do specify which ACEs the child experienced by selecting “yes” or “no” for each question.

Between October 1, 2022, and June 30, 2023, 8,887 patients were eligible to receive ACEs screening from the participating pediatric primary care providers. Among the 8,887 eligible patients, 5,196 (58 percent) were offered the screening and of these, 167 (2 percent) declined to be screened. Among the 5,029 screened patients, 3,791 (75 percent) were categorized as low risk, 613 (12 percent) as intermediate risk, 438 (9 percent) as high risk, and 187 (4 percent) patients’ risk status was unknown either due to the practice’s data entry error or when a practice has indicated a patient was screened but their risk status was not documented in the medical record.

Implementing interventions

Building on a previous pilot program,⁸ the recipient devised the following approach for pediatric primary care providers to intervene based on the results of ACEs screenings using the *PEARLS* tool. First, the screening scoring algorithm categorized screening respondents as low, intermediate, or high risk. Next, patients within each risk category received the following interventions:

- (1) **Low Risk:** Patient, parent or caregiver receives patient education materials.
- (2) **Intermediate Risk:** Patient, parent or caregiver receives patient education materials and anticipatory guidance resources.
- (3) **High Risk:** Patient, parent or caregiver receives patient education materials, anticipatory guidance resources, a referral for follow up, and/or referral for additional services.

The pediatric primary care providers offered all children, adolescents, and families, even those with no reported ACEs or life stressors (referred to as “low risk”), general education on ACEs and toxic stress. For parents or caregivers and adolescents who identified some ACEs and life stressors (referred to as “intermediate risk”), providers offered general education on ACEs and toxic stress and these patients received anticipatory guidance related to the seven domains of wellness. This is a holistic, evidence-informed approach to supporting overall health and resiliency and includes fostering supportive relationships, prioritizing sleep, healthy nutrition, exercising to reduce stress hormones, practicing mindfulness, spending time in nature, and caring for mental health and wellbeing. Providers were also prompted to consider whether a follow-up medical appointment would be helpful and whether additional supports were needed, such as

⁸ Center for Youth Wellness. (2019). *National Pediatric Practice Community on ACEs Pilot Site Program*. [NPPC-Case-Studies-Package-Cohort-1-Final-Evaluation-Report-CCHE.pdf](https://www.nppc.org/Case-Studies-Package-Cohort-1-Final-Evaluation-Report-CCHE.pdf) ([njaap.org](https://www.njaap.org)).

linkages to a care coordinator, health educator, nutrition counselor, mental health provider, peer or parent supports, and community resources. For parents or caregivers and adolescents who identified several ACEs and life stressors (referred to as “high risk”), providers offered the same supports as those for “intermediate risk” and providers were prompted to schedule a follow-up medical appointment in 2-6 weeks and/or refer the patient to trauma informed therapeutic services. Some practices were able to link patients to integrated behavioral health specialists within the same practice, and other practices referred to community-based behavioral health providers and social service providers.

Per the intervention protocol described above, the recipient collected data on the number of patients receiving intervention by risk status. Patient education was provided to 2,630 patients (69 percent) in the low risk category, 464 patients (76 percent) in the intermediate risk category, and 353 patients (81 percent) in the high risk category. Anticipatory guidance was provided to 493 patients (80 percent) in the intermediate risk category and 376 patients (86 percent) in the high risk category. Per the intervention protocol for patients in the high risk category, providers scheduled a follow up appointment within the next 2-8 weeks for over half (237 or 54 percent) of the patients in the high risk category and 244 patients (56 percent) received a referral for additional services. Participating practices have noted that patients experienced the following types of barriers in accessing follow-up appointments and referrals: transportation, busy schedules and lack of family follow-through, wait lists, and insurance challenges (e.g., the lack of services that accept Medicaid).

III. Improving child health

The recipient collected quality improvement feedback surveys to determine the knowledge, attitudes and behaviors of providers, and families who were screened.

Provider and family survey responses

The recipient conducted pre- and post-quality improvement feedback surveys of the providers to see if there was any self-reported change in knowledge, attitudes, and/or behaviors. Separately, providers were asked to offer parents and caregivers an opportunity to provide feedback to assess satisfaction with their practices’ implementation of the screening and intervention tools.

In general, during the pilot, providers increased their knowledge of ACEs, as well as comfort and confidence conducting and responding to ACEs screening. Providers self-reported increases in knowledge of trauma-informed and responsive care (from 17 percent of providers in the pre-survey to 91 percent of providers in the post-survey rating themselves as “extremely” or “very” knowledgeable). Providers also reported increases in knowledge of ACEs and their impact on child health (from 15 percent of providers in the pre-survey to 93 percent of providers in the post-survey rating themselves as “extremely” or “very” knowledgeable). Providers described increases in comfort discussing ACEs (from 63 percent of the providers in the pre-survey to 96 percent of providers in the post-survey rating themselves as “comfortable” or “very comfortable” discussing ACEs and ACE screening questions with patients).

Parents and caregivers generally thought ACEs screening provided useful information to providers about their child and 70 percent responded that they learned something new about

ACEs as a result of screening. The majority of parents and caregivers (99 percent) who received an ACEs screening “somewhat agree” or “agree” that it is important for medical providers to know about ACEs.

Health Outcomes

To understand the relationship between ACEs interventions provided at a child’s primary care visit and the impact on adult health outcomes, longitudinal studies outside the scope of this study would be necessary. Future research of child health outcomes could help answer questions that remain, such as (1) Did the intervention(s) provided reduce the effects of any ACEs the child currently has; (2) Did the intervention(s) prevent future ACEs from occurring; or (3) Did the intervention(s) prevent or lessen any future negative health outcomes that would occur as a result of their ACEs?

IV. Conclusion

Initial data collection suggests that it is feasible to embed ACEs screening into pediatric primary care settings, that providers can increase their confidence and comfort in screening for ACEs with training, and that parents or caregivers whose children are screened find value in discussing ACEs with their providers. There is a need for additional research to understand if screening for ACEs results in any improvement in child health. Specifically, more data are needed on the association between the number or type of ACEs and specific adult health outcomes. Federal agencies that are currently investing in the prevention of ACEs and child trauma treatment can continue to share evidence, systematically review literature, and propose ways to precisely study the relationship between ACEs, child health, and poor adult health.