

Trauma-Informed ACEs Screening and Intervention Evaluation (TASIE)
Project: Final evaluation report
Center for Community Health and Evaluation
September 2024

Table of Contents

TASIE Project evaluation report: Executive summary 1

Trauma-Informed ACEs Screening and Intervention Evaluation (TASIE): Final evaluation report 5

Key takeaways 8

 Practices 10

 Providers..... 22

 Patients 27

Considerations 29

Appendix A: TASIE Project program adaptations 31

Appendix B: Evaluation data collection, purpose, and sample 32

Appendix C: Practice information 36

TASIE Project evaluation report

Executive summary

September 2024

The TASIE (Trauma-Informed ACEs Screening and Intervention Evaluation) Project ECHO® was a partnership between the Center for Youth Wellness (CYW) and the New Jersey Chapter, American Academy of Pediatrics (NJAAP) with funding support from the Health Resources and Services Administration (HRSA). The program implemented a virtual model for teaching and supporting pediatric providers in screening for adverse childhood experiences (ACEs) and providing relevant response and referral.



Program Reach

- 46 primary care practices participated in three cohorts from November 2021 – May 2024
- Practices located in 17 states across the United States and the District of Columbia
- About half of practices had an annual pediatric population between 1,000 and 4,999 patients, with most other practices reporting more

Support Provided

- Between \$10,000 and \$15,000 stipend
- Individualized coaching
- Monthly data review to monitor improvement and track progress
- Monthly ECHO sessions for information sharing and peer exchange, including case presentations (i.e., providers sharing experiences and lessons with screening)
- Optional “office hours” to connect with experts and other relevant resources

Methods

The evaluation used a mixed methods approach to understand progress, facilitators, and barriers to implementing ACEs screening and response in pediatric primary care. Evaluation data collection focused on the three groups the program sought to influence: practices, providers, and patients. Data included monthly clinical data reporting, a provider survey and focus groups, patient and caregiver surveys, and document review. The evaluation was conducted by the Center for Community Health and Evaluation at the Kaiser Permanente Washington Health Research Institute.

Evaluation findings

- 1 All 46 practices successfully implemented pediatric ACEs screening in primary care, in various settings and with different contextual considerations.

The TASIE Project supported each of the 46 practices to begin ACEs screening and response in their pediatric population of focus. **Over half (55%)** of TASIE Project practices' eligible patients were screened for ACEs during the program.

Two factors were associated with higher screening rates: the level of **organizational readiness** the practice reported at program start and the size of the practice's chosen eligible population. This underscores the importance of **preparing the care team** for ACEs screening implementation and starting with a small group of patients to learn about ACEs screening and adjust workflows before expanding.

- 2 Practices provided most patients with relevant response based on their screening results. Providers reported increased familiarity with local resources and encountered challenges when referring patients to additional services.

Across all risk categories, **75% of patients received patient education**. A majority (82%) of patients at intermediate- or high-risk for negative outcomes, based on their ACEs score, received anticipatory guidance about the seven Domains of Wellness (see figure on the right). Most (80%) in the high-risk category also talked with their provider about receiving a referral or follow-up appointment.

At program start, only 22% of providers were *Familiar* or *Very familiar* with local resources to refer patients who screen positive for ACEs. At program end, **88% of providers were *Familiar* or *Very familiar* with available resources**, though they identified challenges when referring patients, including: lack of availability or access (e.g., long wait lists, not accepting new patients), especially for mental health services.

Seven Domains of Wellness



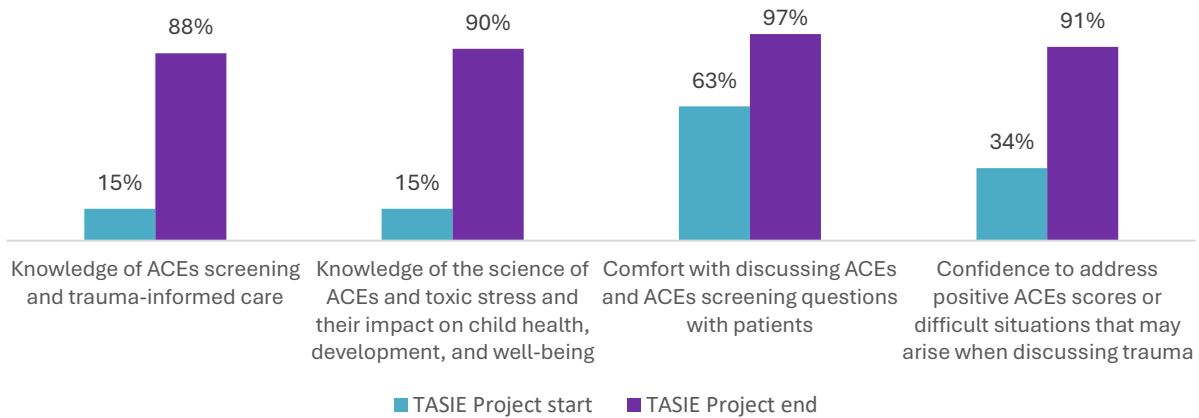
- 3 Providers increased their knowledge of ACEs and became more comfortable and confident in conducting and responding to ACEs screening in conversations with patients and families.

During the TASIE Project, providers grew their knowledge about trauma-informed and responsive care. Just 15% indicated they were *Very* or *Extremely knowledgeable* at program start, which increased to 88% by the end.

A similar number reported being *Very* or *Extremely knowledgeable* about the science of ACEs and toxic stress and their impact on child health, development, and well-being by the end of the program, compared to 15% at the beginning. A comparable result was found in providers feeling *Comfortable* or *Very comfortable* discussing ACEs and ACEs screening questions with patients and providing anticipatory guidance and education.

Providers increased their knowledge, comfort, and confidence with ACEs screening

Percent of providers selecting *Very or Extremely knowledgeable, Comfortable or Very comfortable, Confident or Very confident*



4 The TASIE Project supports contributed to providers' abilities to implement ACEs screening.

Nearly all respondents found the monthly ECHO sessions and participating in a cohort of practices working towards common goals to be *Moderate* or *Significant* contributors to their ACEs screening work.

Participants rated their overall experience with the ECHO sessions as *Very good* and a valuable use of their time. Specifically, participants indicated sessions increased providers' understanding of ACEs screening implementation and provided information immediately applicable to their ACEs screening work.

5 Patients and caregivers were predominantly positive about their experiences with ACEs screening, reporting very few concerns or challenges. They stated it provided useful information and helped improve communication and relationships with providers.

Patients and caregivers overwhelmingly reported a positive experience with ACEs screening. They indicated they learned new information and stated their relationship with their provider did not change or get worse; some even experienced an improved patient-provider relationship.

They perceived the information from the **ACEs screening questions as important for the provider to know about themselves or their child** – 96% at least *Somewhat agreed* (and 78% *Agreed*).

When asked what they appreciated about discussing ACEs or toxic stress with their medical provider, patients and caregivers gave examples related to improving trust and feeling supported by the provider and how the conversation helped them feel comfortable talking about challenges.

Considerations

Based on evaluation findings across the TASIE Project’s three cohorts, along with reflections from program partners and CCHE’s experience evaluating other similar programs, the evaluation team offers the following considerations related to ACEs screening in pediatric care settings.



ACEs screening, when done well, is an important and useful care delivery intervention.



Effective ACEs screening implementation goes well beyond administration of the screening instrument. Key factors for successful ACEs screening implementation include:

1. Organizational readiness such as leadership engagement and clear care team roles and supports.
2. Provider and care team training on trauma, toxic stress, and ACEs and their connection to health outcomes.
3. Clear guidance and supports for effective response.
4. Use of external referral and community resources where relevant and possible.
5. Universal screening approach and messaging positioning ACEs screening as standard practice.
6. Adopting a quality improvement (QI) approach when implementing ACEs screening.



More detailed information about the findings and considerations in this summary can be found in the full TASIE Project evaluation report that follows.

Trauma-Informed ACEs Screening and Intervention Evaluation (TASIE): Final evaluation report

The TASIE (Trauma-Informed ACEs Screening and Intervention Evaluation) Project ECHO® was a partnership between the Center for Youth Wellness (CYW) and the New Jersey Chapter, American Academy of Pediatrics (NJAAP) with funding support from the Health Resources and Services Administration (HRSA). The program implemented a virtual model for teaching and supporting pediatric providers in screening for adverse childhood experiences (ACEs) and providing relevant response and referral. According to the TASIE Project, “ACEs are exposures in childhood to abuse, neglect, parental incarceration, divorce, or domestic violence that have been shown to affect virtually every domain in which a child functions. ACEs are associated with health impairment across the life course and are strongly related to the prevalence of numerous health problems.” The TASIE Project supported pediatric healthcare teams to integrate ACEs screening, trauma-informed, and strengths-based interventions into diverse pediatric primary care settings across the United States.

Box 1: The TASIE Project provided practices with the following support:

- \$10,000 - \$15,000 stipend
- Individualized coaching support
- Monthly data review to monitor improvement and track progress
- ECHO sessions for information sharing and peer exchange, including case presentations
- “Office hours” to connect with experts and other relevant resources

Through an application process, the TASIE Project recruited three cohorts of practices that participated in the program between November 2021 and May 2024. Practices accepted into the program were required to attend monthly, virtual training sessions over a 9-month period. The program utilized the ECHO model (more information [here](#)) with subject matter experts from CYW and NJAAP, as well as other pediatric experts serving as the ECHO Hub faculty. The TASIE Project used a quality improvement (QI) approach to systematically improve implementation through ongoing learning. It also provided additional support to participating practices, outlined in Box 1. While the TASIE Project was generally implemented consistently across its three cohorts, there were minor adjustments to program delivery and support over time. These were largely the result of participant feedback or requests and lessons learned by TASIE Project staff (see Appendix A for more information on program adaptations).

About the evaluation

This evaluation report presents results summarized across all years and cohorts of the TASIE Project. Conducted by the [Center for Community Health and Evaluation](#), the TASIE Project evaluation design was aligned with the logic model the program team developed and HRSA accepted. Evaluation aims were to:

1. Support the study of how pediatric primary care practices can best screen and provide care to children impacted by ACEs including strengths, limitations, and implementation challenges.
2. Contribute to producing a scalable model that can help pediatric primary care providers effectively integrate screening with strengths-based, trauma-informed care, and services in primary care.

Evaluation data collection focused on the three groups the program sought to influence: practices, providers, and patients. Data collection from these tools is described in more detail in Appendix B.

Influenced group	Practices	Providers	Patients
Data collection activities	<ul style="list-style-type: none"> • Enrollment form (application) • ACEs screening clinical data via QIDA (Quality Improvement Data Aggregator) • Coaching logs 	<ul style="list-style-type: none"> • Provider survey • Provider focus groups • Case presentations • ECHO session evaluations 	<ul style="list-style-type: none"> • Caregiver and adolescent survey

About TASIE Project ACEs screening

TASIE Project staff worked with participating practices to implement ACEs screening with the Pediatric ACEs and Related Life-events Screener (PEARLS) tool, which includes 17 potential adverse experiences. More information about PEARLS can be found [here](#). Practices selected their model of PEARLS implementation from three potential approaches (see below). In general, evaluation findings are not stratified by the model of PEARLS employed, though it is noted when providers' reflections are known to be specific to a particular model.

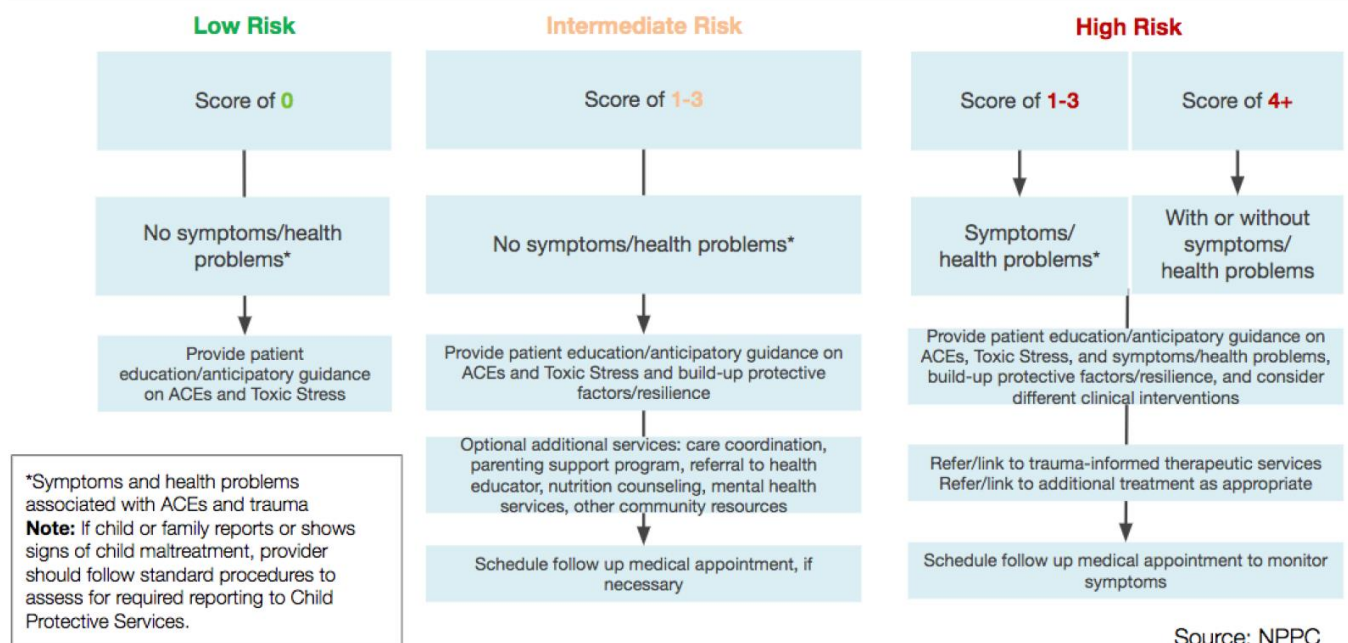
1. **De-identified PEARLS tool.** Patients or caregivers count the number of adverse experiences that have happened to their child or themselves (if using the self-report version) and write down the total number (they do not specify which adverse experience happened).
2. **Identified PEARLS tool.** Respondents specify which experience(s) happened to their child or themselves (if using the self-report version) by choosing "yes" or "no" for each question.
3. **Hybrid PEARLS tool.** For the first ten questions (the "core" 10 ACEs), respondents count the number of experiences, and for the nine questions in Part II, respondents specify which experience(s) happened to their child or themselves by choosing "yes" or "no" for each question.

Responses to the PEARLS tool were categorized by three levels of risk using an algorithm that included specific response suggestions for providers. According to the TASIE project algorithm (see Figure 1), patients in all risk categories should receive patient education, and patients who score in the intermediate- and high-risk categories should also receive anticipatory guidance related to one or more of the seven Domains of Wellness (DOW) (see Box 2). Patients who score in the high-risk category should be offered additional support, for example a referral to community resources.

Box 2: The Seven Domains of Wellness

1. Balanced nutrition
2. Moving your body
3. Practicing mindfulness
4. Sleeping well
5. Spending time in nature
6. Supporting mental health
7. Supportive relationships

Figure 1: TASIE Project algorithm (Source: TASIE Project Training and Technical Assistance Guide)



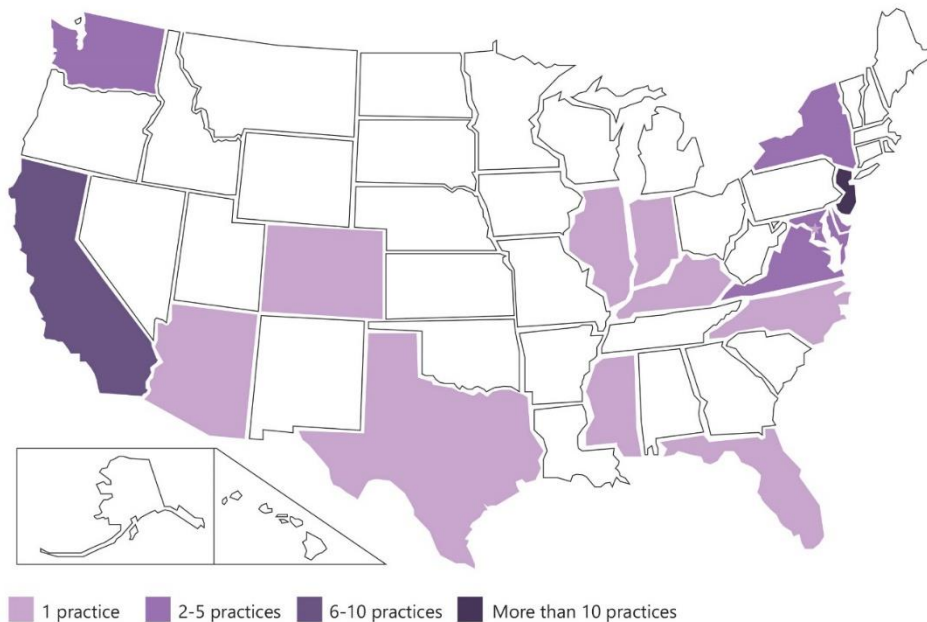
Source: NPPC

About the pediatric practices who participated in the TASIE Project

During the three TASIE Project cohorts, 46 practices participated: 17 practices in Cohort 1, 13 practices in Cohort 2, and 16 practices in Cohort 3.¹ Approximately half of the practices identified as an *Independent primary care practice* (n=25, 54%) and nearly half served between 1,000 and 4,999 pediatric patients annually (n=21, 46%) (see Appendix C for more details on participating practices). Six practices included medical residents.

TASIE Project practices were mostly in suburban and urban settings and located in 17 states and the District of Columbia (see Figure 2). The largest share of practices was located in New Jersey (n=17, 36%). California had the second largest representation, with seven practices total (15%). The remaining states represented each had fewer than four practices.

Figure 2: States with practices participating in the TASIE Project, Cohorts 1-3, N=46
(Source: Enrollment data)



Within participating practices, 71% of providers had been in practice for more than 10 years and 51% at least 20 years.² Most providers indicated they were of *Non-Hispanic* ethnicity (88%); 41% identified their race as White, 37% Asian, and 13% Black or African American. Eighty-two percent identified as female.

While there was typically just one provider per practice who completed the provider survey and was therefore identified as a TASIE Project participant, additional providers were often involved in ACEs screening. The number of screening providers varied by practice and across cohorts. In Cohorts 1 and 2, on average 4 providers per practice conducted ACEs screening in all months, ranging from 1 to 19 providers. In these cohorts, the average number of providers per practice conducting screening increased by about 1.4,

¹ One practice withdrew from Cohort 1 in the first few months due to capacity constraints.

² Source: Pre- and post-provider survey, n=68 provider responses across Cohorts 1-3. See Appendix B for more detail.

from a little over 3 providers in the first data reporting cycle, to nearly 5 providers in the last cycle. In Cohort 3, on average 6 providers per practice conducted ACEs screening in all months, ranging from 1 to 40³ providers. In this cohort, the average number of providers participating in screening increased by about 6, from nearly 3 providers in the first cycle to about 9 in the final months.

Practices implemented ACEs screening and response in the pediatric population of their choice, including younger children (e.g., 3-5 years old), adolescents (e.g., 12-15 years old), or all age groups. Across TASIE Project cohorts, practices screened a variety of ages. About half of practices screened children up to age eleven, 17% screened ages 12 and older, and 15% screened children of all ages. The remaining practices screened select ages both under and over 12 (e.g., at well child visits), but not all ages.

Key takeaways

The evaluation identified five main takeaways, into which this report is organized. The takeaways fall broadly into learnings about the three groups the program sought to influence: practices, providers, and patients.

Practices	<ol style="list-style-type: none"> 1. All 46 practices successfully implemented pediatric ACEs screening in primary care, in various settings and with different contextual considerations. 2. Practices provided most patients with relevant response based on their screening results. Providers reported increased familiarity with local resources and encountered challenges when referring patients to additional services.
Providers	<ol style="list-style-type: none"> 3. Providers increased their knowledge of ACEs and became more comfortable and confident in conducting and responding to ACEs screening in conversations with patients and families. 4. The TASIE Project supports contributed to providers' abilities to implement ACEs screening.
Patients	<ol style="list-style-type: none"> 5. Patients and caregivers were predominantly positive about their experiences with ACEs screening, reporting very few concerns or challenges. They stated it provided useful information and helped improve communication and relationships with providers.

In addition to these takeaways, the evaluation reflects that **the TASIE Project itself may be a scalable model to help pediatric primary care providers effectively integrate ACEs screening**. The TASIE Project consisted of ACEs screening tools and approaches, a tool scoring algorithm, and recommended follow-up strategies—including the seven Domains of Wellness—combined with delivery of various program elements (e.g., Project ECHO, peer network, data tracking, QI approach). The TASIE Project was consistently and effectively implemented across three cohorts of different types of practices across the country.

Overall, participants reported that the TASIE model contributed to their ability to successfully implement ACEs screening. While there were minor adaptations in content or approach in response to participant feedback from one cohort to the next (see Appendix A), these did not meaningfully change program outcomes. Key findings related to screening implementation, provider knowledge and confidence, and caregiver and adolescent experiences were similar across all three cohorts. This suggests implementation of a similar model could generate similar outcomes if core elements are kept intact, even if specifics (e.g.,

³ This included medical residents.

ECHO topics or sequencing) are slightly modified to respond to the context of the cohort or developments in the field of ACEs screening.

Limitations

One key limitation of the evaluation is the 9-month length of the TASIE Project. Given the relatively short duration of the program, the evaluation was unable to assess contribution of the program to longer-term changes in behavior and health outcomes of patients and families. In general, the theory of change is that individuals first gain knowledge about ACEs and their potential impact on health and then change related attitudes and behaviors. Results of this evaluation suggest that caregivers and adolescents were open to conversations about ACEs and toxic stress, and while there may have been initial signals of behavior change, the evaluation could not capture the duration or impact of any changes made (e.g., downloading a mindfulness app versus using a mindfulness app every day for two months that resulted in improved mental health). Though the evaluation collected information about the types of changes some patients and families made because of ACEs screening and response, the relatively short program length limits our ability to fully understand long-term changes. It is also unknown at this time whether practices will sustain their ACEs screening implementation beyond the initial startup period reflected in the program.

Practices

1 All 46 practices successfully implemented pediatric ACEs screening in primary care, in various settings and with different contextual considerations.

Screening implementation: results

Each of the 46 practices in the three TASIE Project cohorts began ACEs screening and response in a specific pediatric population they designated as eligible for ACEs screening. Eligibility was typically defined by the patient's age and visit type (e.g., well child visits for patients 3-5 years old). The TASIE Project promoted universal screening, so while practices often started with a subset of providers, the eventual goal would be to screen all patients within the eligible population. During the TASIE Project, 13,623 patients were eligible for ACEs screening.⁴ Over half (65%) were between the ages of 3 and 11 years old. Eighteen percent were *Black or African American*, 36% were *White*, and close to half (46%) indicated their ethnicity was *Not Hispanic/Latinx*. Notably, 28% of patients either *Declined to State* their race or the practice did not have those data.⁵ There was minimal variation in patients' race and ethnicity across cohorts.

Over half (55%) of TASIE Project practices' eligible patients were screened for ACEs during the program (see Figure 3). In all cohorts, practices reported low rates of patients who declined ACEs screening; less than 2% for all eligible patients.⁶ **Risk status for screened populations was generally low.** Approximately 75% of patients screened low-risk, 13% intermediate-risk, and 9% high-risk for negative outcomes based on their PEARLS score. The distribution of risk status was consistent across cohorts.

Figure 3. Eligible patients by screening status, N=46 practices (Source: QIDA)

Cohort	Number of eligible patients	Patients that declined to be screened	Patients screened	Patients that were not offered the screening
1	5,616	29 (1%)	2,688 (48%)	2,899 (52%)
2	3,271	138 (4%) ⁵	2,341 (72%)	792 (24%)
3	4,736	91 (2%)	2,526 (53%)	2,119 (45%)
Total	13,623	258 (2%)	7,555 (55%)	5,810 (43%)

Among TASIE Project practices, screening rates were variable, though many (20 of 46 practices) screened more than 75% of their eligible patients (see Figure 4). Two factors were associated with higher screening rates: the level of organizational readiness the practice reported at the start of the program and the size of the practice's eligible patients. Other practice characteristics such as geography, urbanicity, presence of medical residents, size of annual pediatric population, age of eligible population, or choice of screener type (i.e., de-identified or identified PEARLS) did not appear to be associated with screening rates. The

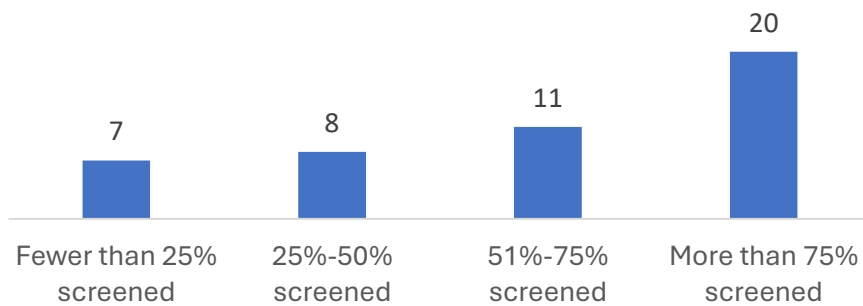
⁴ Due to set-up delays in the QIDA data collection tool, Cohort 1 practices were only able to provide 6 months of program data, while Cohorts 2 and 3 provided 7 months of data.

⁵ Due to the nature of the QIDA data collection tool, some race/ethnicity data are affected by practices' data entry errors.

⁶ In Cohort 2, a single practice comprised over half of declines, which skewed the overall rate of screening refusal for the cohort upward. This practice attributed their high number of refusals to their electronic screening system and front desk staff not checking whether all the screenings for their adolescent age group were complete before the visit. In Cohort 3, one practice indicated their rate of declines was skewed upward due to miscoding.

higher average screening rate reached by Cohort 2 (see Figure 3) can likely be attributed to these practices' higher levels of readiness and smaller number of eligible patients.

Figure 4. Number of practices by screening rate, N=46 practices (Source: QIDA)



Disclosing ACEs using the identified or de-identified PEARLS screening tool

TASIE Project practices could choose whether to use an identified screener, a de-identified screener, or both. TASIE Project staff suggested using the de-identified tool based on their previous experience finding patients and caregivers more likely to report exposure to ACEs with this tool. Additionally, this nonspecific approach aligns with the PEARLS design to detect the presence of toxic stress, rather than the specific stressor. As a result, most TASIE Project practices implemented the de-identified screener. At program end, providers shared two main reflections:

- **Some patients resisted disclosing ACEs (i.e., completed the screener with all 0s) regardless of tool type**, even when the provider—due to knowledge of and history with the patient—knew them to have experienced ACEs. Providers suggested using patient-centered workflows and scripts to introduce the screener could likely influence disclosure on the form, more than whether the practice used an identified or de-identified screening tool.
- When completing de-identified screeners, **many patients still indicated which specific ACE was true for them despite instructions not to**. As a result, providers questioned whether the de-identified tool really provided anonymity and discretion, and if this was necessary given patients could always (and sometimes did) report 0 on both tool types when they did not want to share. Several providers wondered if the identified screener would ultimately have been a better choice for their practice.

When obtaining details about specific ACEs (whether through the identified tool or inadvertently through the de-identified tool), providers felt this information allowed them to provide more tailored care, referrals, and resources. Once screening was underway, few practices changed from the de-identified to identified tool or vice versa.

Screening implementation: what it takes

Practice readiness. Effective ACEs screening practice is supported by foundational practices and capacities like organizational leaders providing the resources for screening implementation (e.g., technology, staffing, training); providing education or training to all staff and providers on trauma and resilience and implications for care; and defining roles, responsibilities and workflows for care team

members related to screening processes. These items are outlined in Machtinger, et. al. (2024) and are associated with uptake of ACEs screening.^{7,8}

Providers from 36 TASIE Project practices responded to the provider survey and rated their practice’s level of readiness related to 14 items using a 5-level scale.⁹ An overall score of practice readiness was calculated by taking the average response of all items for each practice. Practices were grouped into five stages based on their score: *Beginning, Emerging, Developing, Implementing, Institutionalizing*. Practices in the lowest readiness stage at the start of program engagement were more likely to have lower average screening rates during the program ($p<0.05$) (see Figure 5). This underscores the importance of preparing the care team and the organization in these foundational practices and capacities as they get ready for ACEs screening implementation. Practice readiness also seemed to outweigh the influence of a comfortable and confident provider on screening implementation, suggesting that having a provider champion is not sufficient to successfully implement screening if overall readiness is low, since successful screening requires care team and organizational support.

Figure 5. Average screening rate by practice starting readiness, n=36 practices (Source: QIDA & Provider survey)

Readiness stage at program start	Number of practices	Average screening rate
Beginning (1.0-1.99) <i>Practices are at the very beginning of their journey related to screening for and responding to trauma. They are lacking most or all the essential elements.</i>	15	47%
Emerging (2.0-2.99) – 12 practices <i>Practices have started to get the essential elements for screening and response in place, but it is not yet very robust or consistent.</i>	21	74%
Developing (3.0-3.99) – 8 practices <i>Practices are somewhere in the middle of the process towards screening and response. They may have some essential elements in place but are not yet doing things systematically or consistently. Or they are doing some things really well while struggling in other areas.</i>		
Implementing (4.0-4.99) – 1 practice <i>Practices have most or all of the essential elements for screening and responding to trauma in place, but it might not be fully consistent or systematic. There might be a couple individual elements where they continue to struggle.</i>		
Institutionalizing (5.0) – 0 practices <i>All essential elements for screening for and responding to trauma are fully in place. Practice is well positioned for robust, systematic screening (and is likely already doing some level of screening).</i>		

Note: 36 of the 46 practices had providers who responded to the pre- and post-survey with readiness ratings.

⁷ Machtinger EL, Eberhart NK, Ashwood JS, Jones M, Sanchez M, Lightfoot M, ...McCaw B. Clinic Readiness for Trauma-Informed Health Care Is Associated with Uptake of Screening for Adverse Childhood Experiences. Perm J. 2024 Mar 15; 28(1):100-110. doi: <https://doi.org/10.7812/tpp/23.085>

⁸ The TASIE Project provider survey asked about 14 of the 16 items because the full list was still under review at the start of the program.

⁹ The rating scale for these questions ranged from 1 = low/not in place, 3 = medium/variable, and 5 = high/in place.

Starting small. Most TASIE Project practices began ACEs screening with a pilot, selecting a limited group of pediatric patients who would be offered the ACEs screening, e.g., patients aged between 3 and 5 years, or implementing the workflow with only a few providers or care teams. This method allowed practices to use a QI approach to learn about ACEs screening and adjust workflows before expanding. When practices started small, represented by a lower volume of eligible patients during the program, average screening rates appeared to be higher ($p < 0.05$) (see Figure 6). This underscores the importance of beginning screening with a manageable scope to try things out, learn, and make necessary changes, regardless of the size of the overall practice.

Start with a small select group. We started with three-year-olds. That worked very well and gave us the opportunity to [try this out] and our rate of high risk was fairly low. As we got into the older age groups, we saw more in terms of at-risk patients. But at that point we were more fluent.
 – Provider focus group

Figure 6. Average screening rate by eligible patient volume, n=46 (Source: QIDA)

Number of eligible patients	Number of practices	Average screening rate
Under 100	12	70%
Between 100 and 299	16	70%
Between 300 and 499	11	60%
500 or more	7	42%

Other implementation facilitators. While some implementation techniques emerged as more prominent discussion points in certain cohorts (e.g., electronic vs. paper), practices across all cohorts largely experienced similar facilitators and challenges to screening implementation. Implementation facilitators, as reported by providers in focus groups and coaching sessions, included:

- The support and education provided by the TASIE Project, e.g., tools such as scripts to have fruitful conversations with patients
- Staff and provider training and support to build buy-in and screening implementation knowledge
- Having previous experience conducting pediatric screenings, e.g., developmental screenings
- Practice interest in and prioritization of trauma-informed care
- Having a champion for implementing screening and for advancing trauma-informed care approaches within the practice
- Having resources in place for patient referrals, including access to internal resources and services (e.g., behavioral health supports)
- Establishing trusting relationships with patients and families

The TASIE Project also supported practices to grow in the foundational practices and capacities necessary for ACEs screening. At the beginning of the program, providers rated their practice's readiness on average between *not in place* and *variable* (2.3 out of 5). By the end of the program, provider ratings of their practices on these foundational elements increased by over 1.5 levels to between *variable* and *fully in place* (4.1 out of 5) (n=36 practices).¹⁰ This increase demonstrates that the TASIE program grew organizational readiness and capacity for change through teaching, coaching, and supporting the screening implementation process.

Implementation techniques

Practices had a variety of approaches for administering ACEs screening, from distributing electronic forms prior to or at the start of appointments, to various care team members (e.g., front desk, providers, medical assistants) guiding patients step by step on paper or laminated forms. Some practices had dedicated staff (e.g., health educator, community health worker, case manager) who followed up with patients/families after screening and helped connect them to additional services or resources, though most did not have the capacity to support this dedicated type of follow-up.

Most practices discussed electronic administration as the gold standard and what they were working towards—but for many, the technological barriers were too great to tackle during the program, and most used a combination of paper and manual entry into the patient record. Practices made improvements to their electronic health record (EHR) to better track screenings and provide patient education more consistently.

In focus groups, some providers discussed how developing the ACEs screening process required attention, practice, and intentionality because of the potentially challenging nature of the screening. They also reflected that they continue to examine and refine these workflows on an ongoing basis.

“I went through different ways of screening through the project because there were a lot of hiccups, it was a work in progress the whole time.” – Provider focus group

Implementation challenges. During the TASIE Project, practices experienced a handful of challenges to implementing ACEs screening:

Limitations to staff capacity (e.g., illness, turnover, understaffing). For many practices, staffing and capacity constraints led to inconsistent administration of screening and patient education. Turnover also required practices to train new staff on the rationale for and process of ACEs screening—this influenced practices' ability to maintain high levels of staff knowledge, education, and buy-in.

Time constraints. Many providers discussed the challenge of finding time in appointments to conduct the screen and have follow-up conversations. Providers reported this was particularly challenging when there were many other forms they needed to complete as part of the visit. A few practices told their coach that staff members were overwhelmed by the number of screenings they had to administer. However, nearly

We had a hard time implementing the screenings effectively. A lot of push back from the staff initially. It's really hard in a small practice sometimes to get the staff on board when they are doing 6 million other things. – Provider focus group

If you have staff meetings broaching the trauma-informed care approach, which is that many of us are coming here with instances of hurt or abuse or loss; by teaching that, I think it becomes easier to accept passing out these surveys and recognizing that this is what's going on in patients' lives. – Provider focus group

¹⁰ 36 of the 46 practices had providers who responded to the pre- and post-survey with readiness ratings. The rating scale for these questions ranged from 1 = low/not in place, 3 = medium/variable, and 5 = high/in place.

all providers felt that the screening conversation added value to the visits, improved patient care, and was worth the time to review with patients.

Lack of staff and provider buy-in. Many practices experienced initial implementation challenges due to staff and provider buy-in. They reported that many staff initially lacked confidence in discussing the topic with patients, and this made it more difficult to consistently implement. Most practices and providers reported overcoming this challenge through training and communication, including discussions about the value of ACEs screening.

Establishing workflows. Establishing a simplified, replicable screening workflow—including setting up the EHR system, tracking paper forms, and some families’ desire to not use electronic screening systems—was an implementation challenge for practices. Many practices tried different approaches during the program. Most felt that implementing through the EHR, while ideal for long term sustainability, was not feasible during the TASIE Project timeframe. Despite this, all practices found systems that worked for them that allowed for effective implementation.

Fear of patient resistance. Many providers reported that their practice’s concerns about patient buy-in and patient acceptance of the screener slowed implementation and was an initial challenge. However, this concern subsided once practices and providers began screening and found patients were overwhelmingly supportive of and accepting of the screener.

Screening implementation: introducing ACEs screening to patients and families

Overall, providers perceived positive responses from patients and caregivers to the screener and subsequent conversations. Providers reflected in focus groups that they found most patients and families were receptive to ACEs screening. When families were receptive, providers perceived those patients felt more cared for, expressed gratitude, and were appreciative of the screening itself, handouts, and patient education. In practices that screened older children, there was a perception that adolescents liked being asked directly about their health. Many providers were surprised by the lack of resistance to the ACEs screening and low refusal among adolescents.

I feel like the program helped us expand the language we use with patients to make them more receptive to the form and also see the big picture with it, that we care very much about your family, but we also care very much about the future of all families who could be using this form.
– Provider focus group

“I also wouldn't be surprised if this time next year [scores are higher]...because some of the families we've heard some inklings of trauma and yet [the screener] is showing “no.” I think part of it is building that mutual trust on both sides.
– Provider focus group

Among resistant families, providers perceived patients or caregivers as unwilling to discuss trauma, experiencing screening fatigue, or finding the screening questions too personal. Providers across practices commented on noticing scores of “zero” on the screener when, given their historical knowledge of the patient, they believed the patient or caregiver was not wholly disclosing stressors. Most providers noted strategies for navigating hesitance, including allowing patients to opt out of the screen until a later time and still providing patient education and conversation without an ACEs score. In focus groups, providers emphasized the importance of setting a supportive and non-judgmental tone when introducing the screening. They also underscored the importance of establishing trust stating that trusting relationships with patients and families was a facilitator in their ACEs screening implementation. Information about the nature of the in-visit conversation between providers and families is discussed later in this report.

Involving adolescents in ACEs screening

Across all three cohorts, half of TASIE practices screened adolescents. This consisted of both the caregiver and adolescent completing the screening tool independently. These practices found the experience to be both surprising and fruitful. **Providers perceived adolescents as appreciative of being asked about their health and felt they were often more forthcoming than caregivers during screening and follow-up conversations.** Zero adolescent survey respondents had negative things to say about the screening process or their provider. Rather, they stated that the screening opened up conversations with their provider and allowed them to learn new things. Providers noted a couple of specific adolescent screening challenges:

- **Reading level of the PEARLS screening tool can be a challenge for adolescents.** A few providers found that the screening tool's reading level was too advanced for adolescents, requiring additional support to ensure comprehension of concepts.
- **Providers must address discrepancies between responses offered by adolescents and their caregivers.** When responses or information gathered during the screening differed between adolescents and their caregivers, either in the number or types of ACEs, providers generally tried to clarify through conversation. When both the adolescent and caregiver were in the room, a few providers reported awkwardness. However, some providers found these discrepancies enabled constructive conversations between adolescents and their caregivers.

“Everyone should take screening because it may be life changing.”
– Adolescent survey respondent

Screening implementation: sustaining and spreading

By the end of the TASIE Project, 99% of providers thought it was *Important* or *Very important* to implement universal pediatric ACEs screening in their practices, which was similar to providers' sentiments at the start of the program.¹¹ Unsurprisingly, participation in the TASIE Project attracted providers who already thought ACEs screening was important. At the end of the program, 93% reported they were already implementing universal screening in pediatrics or were at least *Somewhat* likely to do so in the future. Practices with higher screening rates were more likely to say they would implement universal screening ($p < 0.05$), which suggests that practices need to first be successful in initial implementation before they are ready to expand.

Providers stated that organizational systems change was necessary to grow, expand, and sustain ACEs screening, such as:

- Moving from paper to EHR and electronic survey system
- Incorporating resiliency conversations into the visits
- Training additional providers to conduct screenings to grow implementation

As long as I have support and other staff members on board with implementing ACEs screening routinely for all patients, it can be a very useful tool in our practice.
– Provider survey

We're developing a more formal workflow because we realized we didn't have anything in place for sustainability [for pediatricians who come after the program].
– Provider focus group

¹¹ Among providers in Cohorts 2 and 3, 94% thought it was *Important* or *Very important* to implement universal pediatric ACEs screening in their practices at the start of TASIE. This question was not asked of Cohort 1 providers at program start.

Among the 16% of providers who indicated they were only *Somewhat likely* or had other reasons for not implementing universal ACEs screening, they identified the following as barriers:

- Time constraints, including adding one more screening tool to an already long list
- Being short staffed (nurses, administrative)
- Securing patient and caregiver buy-in to conduct ACEs screening in additional ages
- Paper or manual workflows perceived as unsustainable
- Reimbursement

The conversation regarding sustainability and screening expansion in ECHO sessions, coaching calls, and provider focus groups seemed to grow as the TASIE Project developed. While in the first cohort sustainability came up minimally as a topic of interest, by the third cohort, many practices were discussing their plans for continuing and growing ACEs screening, as well as their efforts to bring ACEs education to their community and community partners. TASIE Project coaches suggested this growth could be due to the broadening of case presentations to include system-level scenarios in addition to patient-level examples in cohorts 2 and 3. Additionally, the Sustainability and Spread ECHO session occurred slightly earlier for cohorts 2 and 3.

2

Practices provided most patients with relevant response based on their screening results. Providers reported increased familiarity with local resources and encountered challenges when referring patients to additional services.

At the beginning of the program, half of all participating TASIE Project providers (50%) anticipated the challenge of not knowing what to do with a patient if they screen positive. The TASIE Project algorithm described on page 6 outlines specific response suggestions for the provider to offer patients and families from patient education, anticipatory guidance, and referrals to internal practice or community supports.

Responding to ACEs: in-visit response

Of the 7,555 patients screened during the three TASIE Project cohorts, 7,320 had a known risk status.¹² Across all known risk categories, 75% of patients received patient education as called for in the program algorithm (n=5,506; see Figure 7). The provision of patient education increased over time across all cohorts and participating practices. During the first month of the program’s data tracking, practices reported providing education to 56% of patients, on average; by the final month of the program, that increased to 79% of patients. This increase demonstrates improvements in practices’ and providers’ workflows and their growing comfort with screening and follow-up conversations.

Additionally, of the 1,663 patients who scored intermediate- or high-risk, 82% received anticipatory guidance. These rates were consistently high from the outset of the program. Providers’ experiences speaking to families about ACEs and toxic stress are discussed in other sections of this report.

Of the 667 patients that scored high-risk, 80% talked with their provider about receiving a referral or follow-up appointment. They also noted that some patients who scored high-risk were already connected to supports (42%).

Figure 7. Number of patients with known risk status* receiving and/or offered intervention by risk status n=7,320 (Source: QIDA)

Item	Low (n=5,657)	Intermediate (n=996)	High (n=667)	Total (n=7,320)
Received patient education	4,129 (73%)	806 (81%)	571 (85%)	5,506 (75%)
Received anticipatory guidance		784 (79%)	587 (88%)	1,371 (82%)
Offered follow-up appointment, referral, or already receiving services [^]			535 (80%)	
No referral offered /no documentation			132 (20%)	

*Risk status was unknown for 196 patients; risk status was not reported/missing for 39 patients.

[^]Patients may receive more than one type of intervention.

Over 80% of caregivers and adolescents who responded to the patient survey recalled receiving anticipatory guidance in the form of information about one or more of the seven Domains of Wellness (DOW). These respondents indicated most often discussing *Better nutrition, Improved sleep habits, and Exercising* (see Figure 8). Most of these caregivers (82%) and adolescents (74%) found the information *Helpful or Very Helpful*.

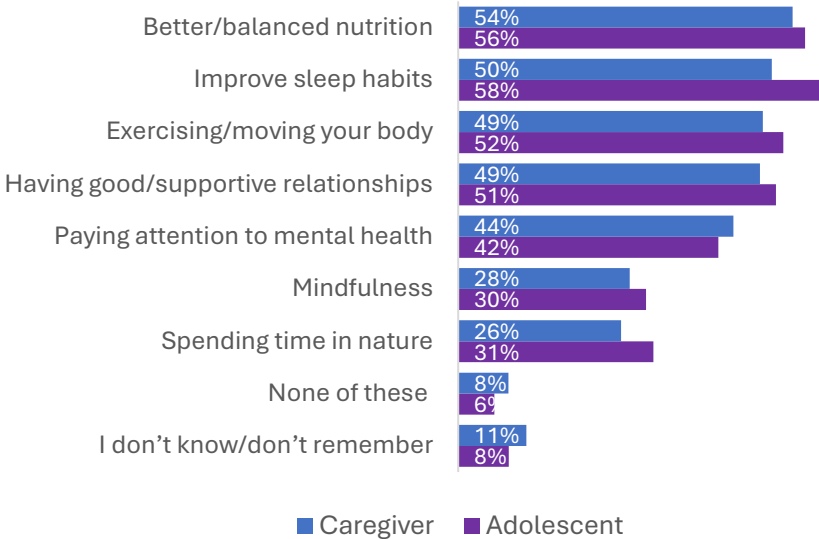
What was more helpful for the families was the framework of the [DOW] and to know they can do things on their own, because we also saw that for families, referrals could be a little overwhelming when we give a lot of them.
– Provider focus group

¹² Risk status was unknown for 196 patients and missing for 39 patients.

At the time of the survey, some caregivers (38%) said they had not made changes related to the DOW; 22% of adolescents reported making no changes. This could be due to when the patient survey was administered; many respondents indicated their visit with the provider was less than one week before receiving the survey. Even so, a majority of those who remembered receiving information about the DOW said they made changes and found them to be *Helpful* (61% of caregivers and 71% of adolescents). The rest made changes but found them to be *Not Helpful* (8 caregivers and adolescents; about 3%).

In Cohorts 2 and 3, adolescents and caregivers were asked to provide an example of a change they made related to the DOW. Forty-one caregivers provided examples they made on behalf of their child, including setting earlier bedtimes and encouraging better sleep habits, going outside more regularly, changing the foods their family eats, and spending quality time together as a family; a few mentioned improved communication with and listening to their children. Ten adolescents provided examples, including exercising more, implementing a better routine to get more sleep, eating better meals, and accepting themselves as they are. The duration and impact of these changes is unknown.

Figure 8. Information received about the various Domains of Wellness
 (Source: Caregiver & Adolescent survey; Caregivers n=210, Adolescents n=86)



Everybody understands that just screening by itself wasn't going to be enough. We really had to make sure that we have those resources in place for families to really feel supported. – Provider focus group

Responding to ACEs: referral to additional resources

By the end of the TASIE Project, most providers (88%) were *Familiar* or *Very Familiar* with local resources to which they could refer patients who reported experiencing toxic stress (see Figure 9). This was a shift from the start of the program when 78% were less than *Familiar*. In focus groups, many providers said that identifying and putting additional resources in place was a positive outcome of participating in the program and this process strengthened their connections to community partners.

In clinical data, providers most commonly reported making external referrals. Typical referrals were for mental health (e.g., psychology/psychiatry, counseling, therapy), followed by other medical care

specialties (e.g., neurology, ophthalmology), and other non-medical services (e.g., play therapy, housing, food pantry, community resources, social work). A few practices also reported external referrals to speech/occupational therapy and school-based services (e.g., Individualized Education Program).

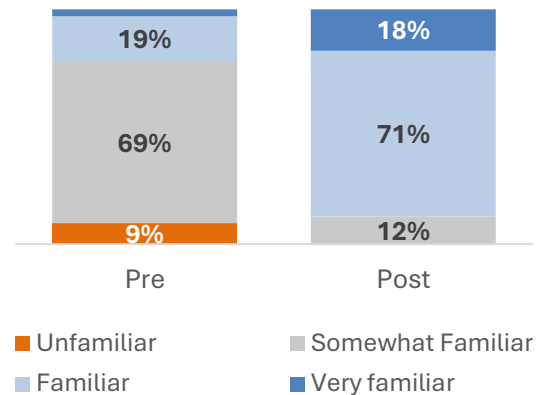
In focus groups and clinical data, providers perceived that the main barriers to referring patients to additional resources was the lack of availability (e.g., insufficient community resources, long wait lists, not accepting new patients), especially for mental health services, and insurance requirements. These challenges were similar for both external and internal referrals, across cohorts, and across practice types. Some providers noted the difficulty of navigating complex referral systems, especially for families with limited English language proficiency. To overcome these challenges, practices employed several strategies, including:

- Having a central list of resources
- Leveraging local school district support for counseling
- Building connections to services in the area by taking a local therapist out to coffee to spread the word that your practice is looking for resources
- Maintaining communication with patients while they were waiting to be seen by the other service provider(s)

For both internal and external referrals, providers shared that sometimes patients would decline a referral to additional supports, either because they were already connected to services or because they did not see a reason for it. Providers also perceived that some families who did receive a referral chose not to follow through with scheduling a follow-up appointment or not attending appointments they scheduled. Clinical data supports this finding.

When practices tracked referral and follow-up appointment outcomes among high-risk patients, they found that on average 66% of patients who received a follow-up appointment attended the appointment, 61% of patients received services from external referrals, and about half received services from internal referral sources (see Figure 10). Referral outcomes were tracked for high-risk patients and allowed for an 8-week follow-up appointment window to transpire.

Figure 9: Provider familiarity with local resources to refer patients who reported experiencing toxic stress, pre and post program
(Source: provider survey; n= 68 providers)



I find that with the waitlists everywhere, there's just nothing you can do to get people in quickly.
– Provider focus group

Some of our families connected with mental health providers and developmental resources very quickly. Others faced challenges. Sometimes it was insurance based. Sometimes it was just based on specialists that we had... and those barriers seem to be growing rather than decreasing in our area.
– Provider focus group

Figure 10. Number of known high-risk patients receiving/attending follow up or referral (Source: QIDA)

	Offered a follow-up appointment	Attended follow-up appointment	Offered INTERNAL ^b referral	Received INTERNAL services	Offered EXTERNAL ^b referral	Received EXTERNAL services
Cohort 1 ^a	43	31 (72%)	10	5 (50%)	46	32 (70%)
Cohort 2	67	45 (67%)	24	10 (42%)	41	27 (66%)
Cohort 3	50	22 (44%)	46	20 (43%)	66	35 (53%)
All Cohorts	144	95 (66%)	65	32 (49%)	152	93 (61%)

Note: Patients may receive more than one type of intervention.

^a Cohort 1 piloted referral tracking and only practices with established referral systems tracked referrals and follow-ups. It is likely for this reason the data show Cohort 1 with greater success offering follow-up and patients accessing services.

^b The evaluation defined an INTERNAL referral as an in-practice support like internal behavioral health, case managers, or care coordinator; EXTERNAL referral as a support offered outside the practice including community-based behavioral health providers, supports for social needs (e.g., housing, food, or legal aid), or another organization/resource, including virtual resources (e.g., mindfulness apps).

Among the nearly 300 caregivers and adolescents who completed a post-visit survey, the majority of caregivers (70%) and half of adolescents indicated they were not provided a referral. This would be expected from the TASIE Project algorithm: only patients categorized as high-risk were provided with additional resources beyond patient education and anticipatory guidance, and just 9% of all patients were categorized as high-risk.

Of the 18% of caregivers and 28% of adolescents who indicated that they received a referral to additional services¹³, a majority reported that they connected with the resource (57% caregivers; 79% adolescents). Ninety-five percent of the 21 caregivers and 19 adolescents who connected with the referral or service found it at least *Somewhat Helpful*.

Tapping into a community web of referrals & resources

A consistent challenge throughout all three TASIE Project cohorts was ensuring adequate follow-up services to address screened patients' needs. The program supported practices in better understanding available community-based resources, even though resource capacity and accessibility often remained limited. One participating practice took an innovative approach to building out their referral network.

Hunterdon Family Medicine (Hunterdon) in Flemington, NJ leveraged the existing Hunterdon County Partnership for Health, a collaboration of over 70 multidisciplinary organizations focused on improving the health of the residents of Hunterdon County by building a repository of local and regional resources. Hunterdon identified relevant resources, met with community leaders, and integrated the repository into their practice's workflows. This included providing handouts with resources and resource repository information to patients and families and using the EHR system to quickly access the repository and referral tool, which the practice regularly updates.

Hunterdon also educates and encourages discourse among community partners about ACEs and their effects on youth. Hunterdon presented their TASIE Project work—about ACEs screening and why it is important—to the Hunterdon County Partnership for Health to prompt community collaboration. Hunterdon works with several organizations, including educating volunteers at a local food pantry on ACEs.

¹³ 12% of caregivers and 22% of providers said they did not remember if they received a referral to additional services.

Providers

3

Providers increased their knowledge of ACEs and became more comfortable and confident in conducting and responding to ACEs screening in conversations with patients and families.

Increased knowledge of the science of ACEs and toxic stress

At the start of the TASIE Project, participating providers were asked how knowledgeable they felt about ACEs screening and trauma-informed care, as well as the science of ACEs and toxic stress and their impact on child health, development, and well-being. Most (85%) rated themselves *Moderately knowledgeable* or less in the areas of trauma-informed and responsive care, with just 15% indicating they were *Very knowledgeable* (see Figure 11). At the conclusion of the program, 88% rated themselves *Very knowledgeable* or higher, with just eight of 68 providers stating they were only *Moderately* or *Slightly knowledgeable*.

Similarly, 90% of providers ended the program feeling *Very* or *Extremely knowledgeable* about the science of ACEs and toxic stress and their impact on child health, development, and well-being. At the start of the TASIE Project, 85% rated themselves as *Moderately knowledgeable* or below (see Figure 12). A few providers talked about this in focus groups, noting, “There are 19 providers in our practice, and many of them had not heard of ACEs before. It was an eye opener for them to hear about and to learn about ACEs. I think that was really helpful.”

Figure 11: Knowledge of ACEs screening and trauma-informed care, pre- and post-program
(Source: provider survey; n= 68 providers)

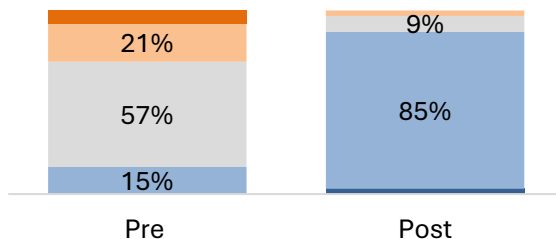
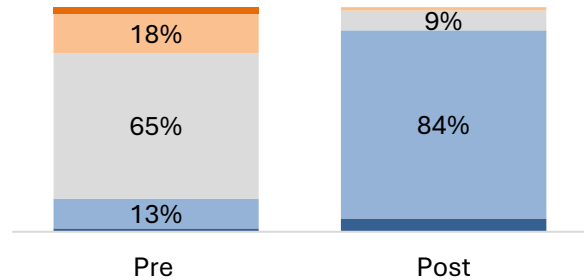


Figure 12: Knowledge of the science of ACEs and toxic stress and their impact on child health, development, and well-being, pre- and post-program
(Source: provider survey; n= 68 providers)



■ Extremely ■ Very ■ Moderately ■ Slightly ■ Not at all

■ Extremely ■ Very ■ Moderately ■ Slightly ■ Not at all

Increased comfort with screening for ACEs and toxic stress, confidence in speaking to families about ACEs and toxic stress, and ability to provide adequate response to ACEs screening

At the start of the TASIE Project, providers were asked how comfortable they felt discussing ACEs and ACEs screening questions with patients. Nearly two-thirds (63%) rated themselves *Comfortable* or *Very comfortable* but 36% said they were *Uncomfortable* (see Figure 13). At the end of the program, that reduced to just two providers (3%) who said they felt *Uncomfortable* and the remaining 97% feeling *Comfortable* or *Very comfortable*.

While some providers shared that they were initially unsure about ACEs screening, over the course of the program their perceptions became mostly positive. In coaching conversations and focus groups, providers

indicated that ACEs screening helped them build empathy and better know their patients. It also prompted more holistic care approaches including:

- Normalizing the topic of trauma and reducing stigma by talking directly about the connection between stress and health.
- “Opening up” the in-visit conversation to go beyond physical health and include mental health. This allowed providers to make connections between health issues and things going on in patients’ lives.
- Identifying patient needs that might otherwise go undetected. This was particularly true in the *Intermediate-risk* category; they found patients in the *High-risk* category were typically already connected to services.
- Offering an opportunity to talk to patients and families about the positive things they were already doing, strengths, and resiliency.

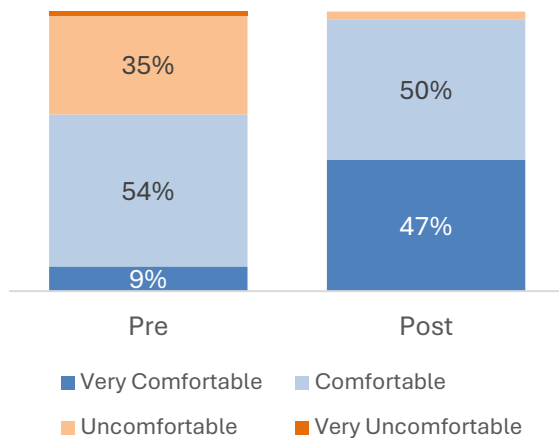
It’s a conversation starter. It reinforced that message: we care about your family, and this is just a continuation of all the things that we’re looking for in your child’s health – it’s not just the physical exam, there’s so many more aspects of it.
– Provider focus group

“I’m much more aware of the things people carry... that we’re all carrying something and so even for the negative screens, it’s made me more aware that I need to remember there’s more going on than the reason on the paper.”
– Provider focus group

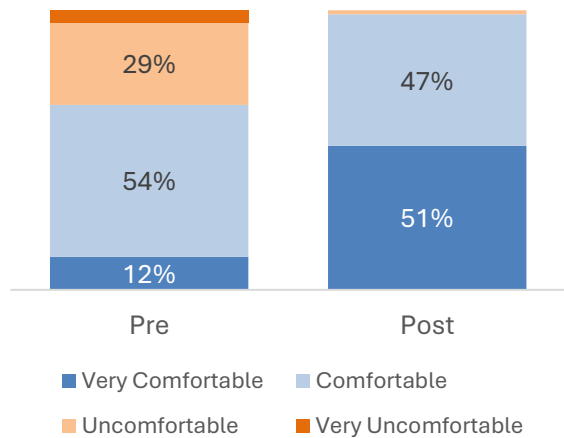
Some providers noted that screening helped them slow down and have deeper conversations with patients and these conversations about ACEs were often more important than the PEARLS score itself. Providers reported being more “in tune” with patients’ mental health and better positioned to address health needs such that patients and families had increased access to supports. Many providers talked about how these conversations improved their relationship with patients and families. Overall, they found patients and caregivers were open to follow-up care and addressing issues related to positive scores. As one provider explained,

“Our office has been able to learn a lot more about our patients, even patients that have been coming here since birth. By using the screener, we find out backstories from them and past traumas that would not have been found had we not had that screener, because there’s no fit for it unless the patient brings it up. So, we’ve been able to really help them through.”

*Figure 13: Comfort with discussing ACEs and ACEs screening questions with patients, pre- and post-program
(Source: provider survey; n= 68 providers)*



*Figure 14: Comfort with communicating and providing anticipatory guidance and patient education, pre- and post-program
(Source: provider survey; n= 68 providers)*



Even when families did not indicate any ACEs in their lives, providers said that screening allowed them to “plant seeds” for future conversations and characterized it as an ongoing process or dialogue. Some providers found the conversations to be “emotional,” but indicated that it got easier over time and helped build trusting relationships between the care team and families in ways that could buffer stress. One provider discussed how she thought screening helped caregivers “feel more connected and more heard,” which she believed was a good foundation for deeper conversations in the future.

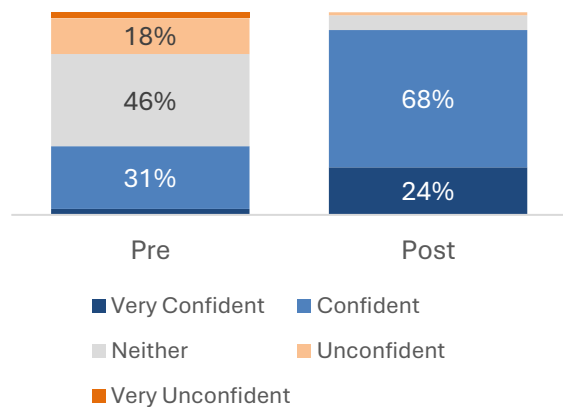
Similar to conversations about ACEs, nearly all providers (99%) ended the program feeling *Comfortable* or *Very comfortable* communicating about and providing anticipatory guidance and patient education. At program start, 34% rated themselves as *Uncomfortable* or *Very uncomfortable*, which reduced to just 1% (1 provider) continuing to feel *Uncomfortable* at the end of the program (see Figure 14). In focus groups, many providers shared that using the Domains of Wellness with patients empowered them to know how to talk about ACEs with families. Providers reflected that the DOW provided framing to help patients and families identify free or easy-to-access supports (e.g., apps, parks, trails). In the absence of concrete referrals to offer, DOW gave something to work on or towards. In focus groups, a few providers also noted that scripts were helpful as a starting point to engage families in conversations about ACEs and toxic stress.

I was really hesitant when I saw the ACEs questionnaire. But the saving grace was being able to give those seven domains of wellness and feel like I had something to offer them after finding a positive score.
 –Provider focus group

Providers were initially less than *Confident* in their ability to address positive ACE scores or difficult situations that may arise when discussing trauma with patients and families; just 34% indicated they felt *Confident* or *Very confident* in when starting the program (see Figure 15). At program end, 91% said they felt *Very confident* or *Confident*. A couple focus group participants reflected that the screening process challenged assumptions they had about patients not wanting to discuss trauma or difficult life experiences. Providers gained confidence when conversations with willing and grateful patients went well. By the end of the TASIE Project, one provider encouraged others new to screening to have confidence:

“I think in the majority of situations the screening actually helps to build the therapeutic relationship with the patient and the family as a whole...It really opens up the discussion to recognize early a more vulnerable family and put a little extra effort on those topics as opposed to some of the other topics you have to cover in your child visits. I would say, don't be afraid of the sensitive topics. Use it to build that therapeutic relationship early on with those families.”

Figure 15: Confidence to address positive ACEs scores or difficult situations that may arise when discussing trauma, pre- and post-program (Source: provider survey; n= 68 providers)

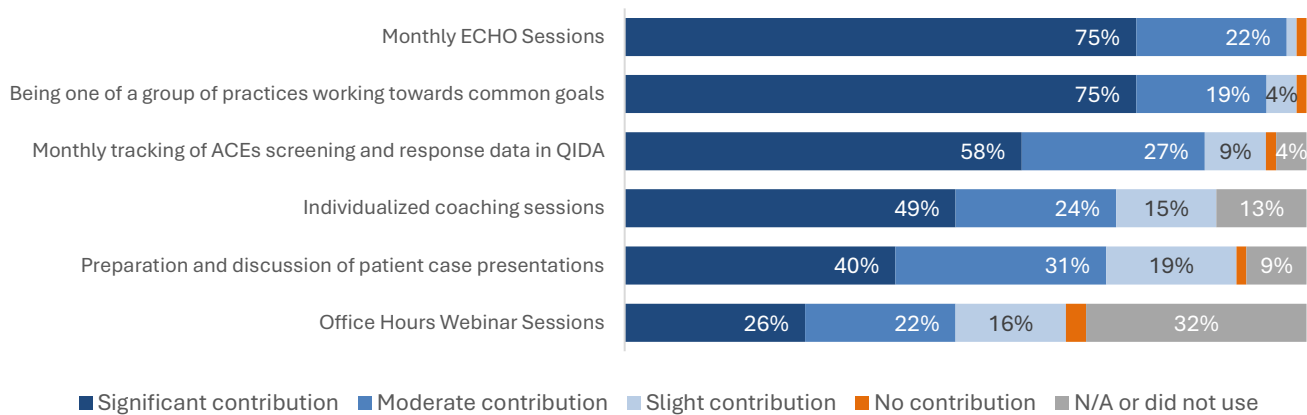


4

The TASIE Project supports contributed to providers' abilities to implement ACEs screening.

All but two of the 68 providers reported in the provider survey that they were *Engaged* or *Very engaged*, both with TASIE Project activities (e.g., ECHO sessions, coaching) and implementing ACEs screening within their practice. All the required TASIE Project program components¹⁴ had at least a *Moderate contribution* to ACEs screening work for most survey respondents (at least 70%) (see Figure 16).

Figure 16: Contribution of TASIE Project supports to advancing practices' work related to implementing ACEs screening (Source: provider survey, n=68)



Project ECHO® sessions & peer group: Nearly all survey respondents considered the monthly ECHO sessions and participation in a cohort of practices with shared goals to be *Moderate* or *Significant* contributors to their ACEs screening work. In particular, practices appreciated hearing from one another and engaging in peer learning during the sessions. Even apart from the ECHO sessions, two practices in Cohort 2 organized a separate call to discuss implementing ACEs screening in residency programs in which three Cohort 1 practices shared their experiences.

It was helpful to hear about things other clinics were experiencing. Seeing that other clinics are going through the same obstacles and hearing about the positive attributes they added to their clinic [e.g., a social worker]...you could bring it back to your own organization and share that.
– Provider focus group

All the ECHO sessions were highly rated (see Box 3 for a list of topics). On average, the overall experience was rated *Very good* and a valuable use of participants' time. Most providers indicated increased understanding of the program and/or ACEs screening implementation and received information immediately applicable to their ACEs screening work. The seven Domains of Wellness ECHO session received the most favorable feedback on all measures. Other ECHO sessions with high ratings included *Navigating Cultural & Racial Differences* and *Sustainability & Spread*.

¹⁴ Office Hour Webinar Sessions were optional for practices, goal was to provide additional support to those who wanted it.

Monthly data tracking in QIDA: Qualitatively, some focus group participants highlighted the TASIE Project’s QI approach, specifically collecting and reviewing screening data. While participants often appreciated QIDA’s ability to generate run charts, they also experienced various logistical and technical challenges with pulling together and entering the data into the QIDA system (e.g., getting data from the EHR). Several providers mentioned how the assistance from the TASIE Project team, especially when encountering technical data entry errors, was particularly supportive.

Individualized coaching: TASIE Project participants were generally positive about their experience with coaching, citing the QI lens and coaches’ familiarity with their organizational context, their specific ACEs screening process, and available resources. Focus group participants appreciated the individualized troubleshooting and support and the connections to other resources and approaches. Coaching also helped maintain accountability while providing encouragement.

Case presentations: The contribution of case presentations evolved during the three TASIE Project cohorts, with only 45% of providers rating it at least *Moderate contribution* during the first cohort. In response, the TASIE Project team adjusted the structure of case presentations so they focused more on implementation processes and supporting structures and systems versus individual patient cases. The shift prompted higher ratings for Cohorts 2 and 3 (81% and 77% rating it *Moderate contribution*, respectively).

Office hours (optional): Providers indicated office hours webinar sessions as less useful, with about one-third of respondents (32%) indicating that they did not use this resource, or it was not applicable to them.

Implementation resources: Along with the program components, TASIE Project participants cited implementation resources from the project that provided a good “blueprint” for getting started with screening. This included conversation scripts, patient education handouts, waiting room posters, and the TASIE handbook and orientation packet.

Some participants suggested additional supports that would have bolstered ACEs screening implementation. These suggestions included additional ACEs orientation or training for staff who join after project start or aren’t directly involved in the TASIE Project. Participants also expressed a desire for more opportunities to learn about training, workflow, and processes from other practices.

Box 3: TASIE Project ECHO® sessions

The TASIE Project was delivered virtually and included a program orientation and ACEs 101 webinar followed by seven monthly ECHO sessions. The ECHO sessions included content delivery for a range of topics related to ACEs screening, as well as a data review component, a practice case presentation, and opportunity for peer-to-peer exchange. ECHO topics included*:

- Becoming a Trauma-Informed Care Clinic
- Navigating Cultural and Racial Differences in Understanding and Responding to Adversity and Trauma
- Patient and Parent Perspectives on Screening
- Neurobiology and Domains of Wellness
- Burnout, Compassion Fatigue, and Secondary Trauma
- Sustainability and Spread

**While most topics were consistent across the three cohorts, there were three special issue topics that were conducted based on participant requests and feedback: Common barriers to ACEs screening and how to move past them (Cohort 1), Review of the ACEs and toxic stress literature (Cohort 2), and Teen Talk (Cohort 3).*

Patients

5

Patients and caregivers were predominantly positive about their experiences with ACEs screening, reporting very few concerns or challenges. They stated it provided useful information and helped improve communication and relationships with providers.

Across the three TASIE Project cohorts, 351 caregivers and adolescents completed a post-visit survey about their experiences with ACEs screening.¹⁵ These surveys gathered perspectives directly from caregivers and adolescents regarding their experience in-clinic and with their providers. Caregivers and adolescents overwhelmingly reported a **positive experience** with the ACEs screening. As a result, they learned new information, and some experienced an improved patient-provider relationship. Patient and caregiver survey respondents who recalled receiving the screening (77%) or talking about toxic stress (74%) with their provider reported:

- Learning new things. About half of caregiver (51%) and adolescent (49%) survey respondents said they learned *a few* new things about ACEs and toxic stress at their visit, while 18% of caregivers and 35% of adolescents said they learned *a lot* of new things. One respondent said the screening “*opened my eyes to things that I didn't know.*”
- That it is important for medical providers to know about ACEs and toxic stress – 96% at least *Somewhat agreed* (and 78% *Agreed*) that this information was needed to offer better care to patients and families (see Figure 18 & Figure 19).
I think this reinforced that we can talk about everything with our doctor. – Caregiver survey
- Their relationship with their provider did not change or get worse after receiving the ACEs screening form or talking about toxic stress with them (see Figure 17). Additionally, around 14% of caregivers and 27% of adolescents reported that receiving the ACEs screening and/or discussing toxic stress **improved their relationship** with their provider by creating space for information sharing and improved communication. Some respondents reflected feeling supported by the provider, noting that the conversation increased their comfort talking about challenges and improved trust.
“These are difficult topics to discuss...I liked that our provider was willing to discuss these and identify any issues.” – Caregiver survey

A majority of respondents (84% of caregivers and 65% of adolescents) agreed that ACEs and toxic stress can affect a person’s physical, emotional, and mental health, though fewer (78% of caregivers and 53% of adolescents) *Agreed* that individuals and families can lessen the effect of ACEs on children (see Figure 18 & Figure 19). Fewer than half of respondents *Agreed* that ACEs or toxic stress is common (43% of caregivers and 39% of adolescents); a similar amount *Somewhat agreed* (41% of caregivers and 45% of adolescents).

¹⁵ Some practices in each cohort screened adolescent patients ages 12 and older directly. In those cases, patients were invited to complete the post-visit survey, rather than their caregivers. For patients younger than 12, caregivers were invited to complete the survey. More caregivers than adolescents completed the survey overall (238 caregivers versus 113 adolescents). Number of respondents was relatively consistent across cohorts with the exception of Cohort 1 having notably more adolescents than other cohorts (65 respondents in Cohort 1 versus around 25 each in other two). Of the 46 participating practices, 36 had at least one survey response.

Caregivers and adolescents were overwhelmingly positive about the screening process. They expressed gratitude towards their providers for helping them learn more, and for caregivers specifically, they valued receiving advice on supporting their children. Very few respondents elevated concerns about the screening process. The few concerns mentioned involved the sensitive nature of the topics and worrying that they might be judged or penalized for their responses, that results would not be kept confidential, or that they would not know how to address any issues that emerged. As one caregiver explained, *“I was a bit nervous answering the questions and hesitated to admit that I have had mental health issues in the past because it made me worry they'd try to take my kid away or something.”*

Figure 17: Relationship with provider after ACEs screening (Source: Caregiver & Adolescent Survey, Caregiver n=210, Adolescent n=86)

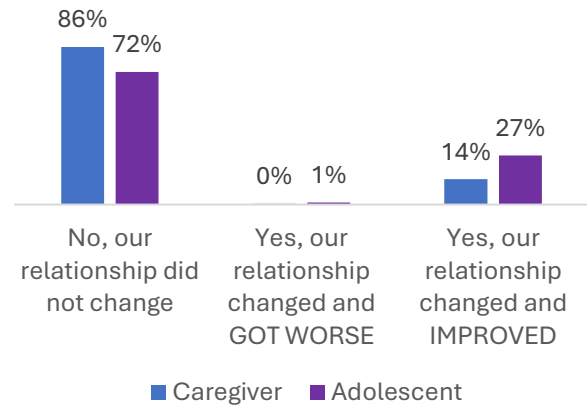


Figure 18: Caregiver Knowledge and Attitudes (Source: Caregiver Survey, n=203-205)

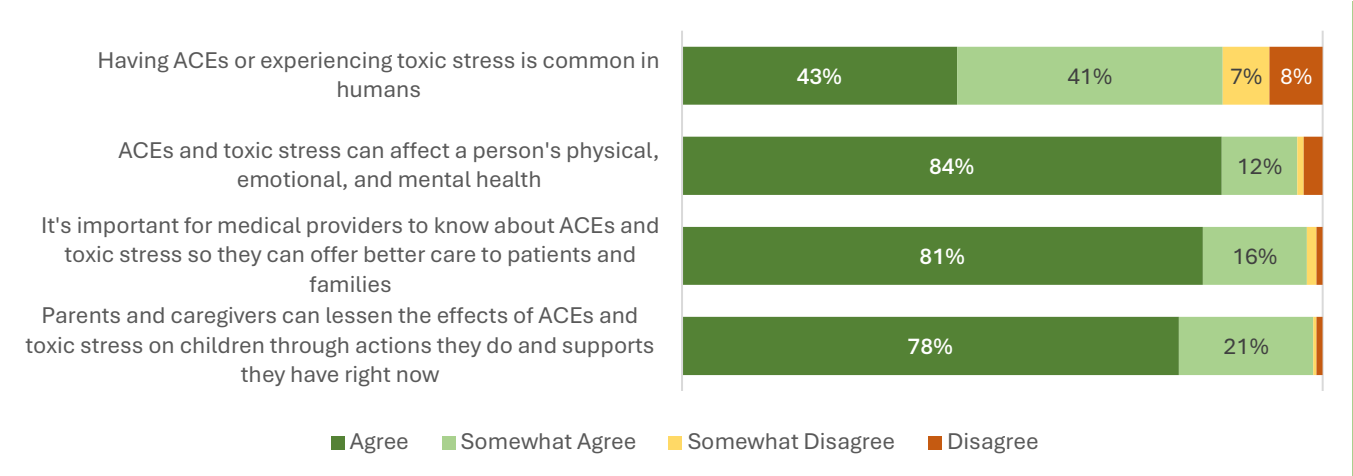
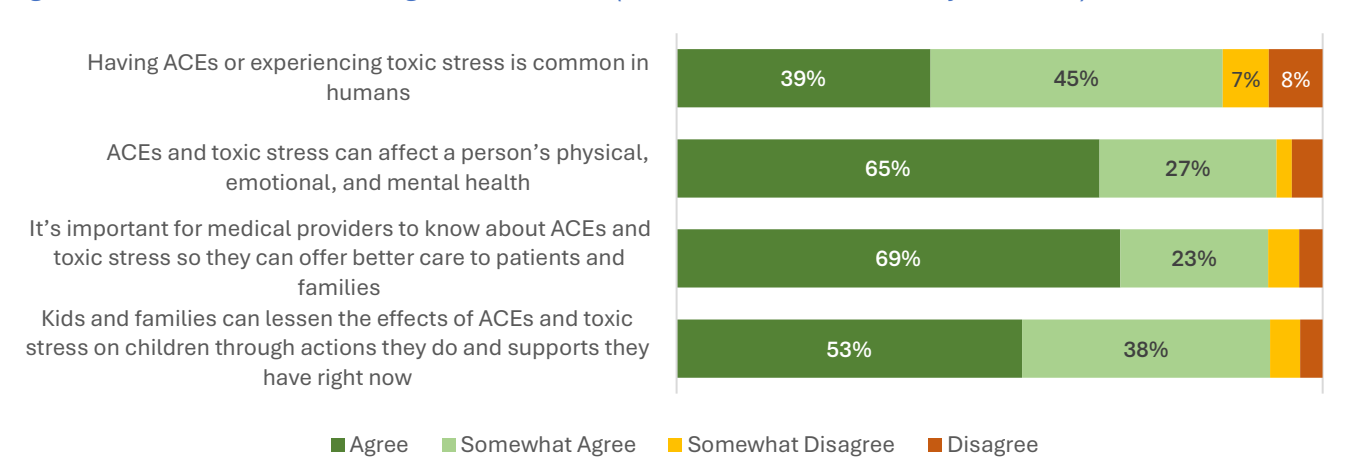


Figure 19: Adolescent Knowledge and Attitudes (Source: Adolescent Survey, n=83-86)



Considerations

Based on evaluation findings across the TASIE Project's three cohorts, along with reflections from program partners and CCHE's experience evaluating other similar programs, the evaluation team offers the following considerations related to ACEs screening in pediatric care settings. These considerations are applicable to pediatric practices, as well as potential ACEs screening program implementers and funders.

ACEs screening, when done well, is an important and useful care delivery intervention. While more study is needed to determine longer-term impacts of ACEs screening and its contribution to health outcomes, shorter-term effects of programs like the TASIE Project are still worthwhile. These effects include: increases in providers' knowledge of the concept of trauma and its connection to health outcomes; more comfort in having deeper conversations with patients and employing more holistic care approaches; uncovering and addressing previously unknown or unreported patient needs; and positive patient experiences that can strengthen relationships with providers and care teams.

Critically, **effective ACEs screening implementation goes well beyond administration of the screening instrument** and requires attention at all stages of the process, including the environment in which screening occurs. Lack of attention to these elements can decrease the effectiveness of screening, produce inaccurate results, and inflict harm on patients and families, as well as providers and care teams. Key factors for successful ACEs screening implementation include:

- **Organizational readiness** such as leadership engagement, practice awareness and understanding of trauma, clear care team roles and supports, systematic and data-driven care processes, and patient-centered care practices. Programs like the TASIE Project can help bolster some of these elements.
- **Provider and care team training** on trauma, toxic stress, and ACEs and their connection to health outcomes. Additional training on workflows, tool administration, and relevant response with scripts and patient resources help build buy-in and confidence. Providers and care teams must understand both *why* it is important to screen for ACEs and *how* to do it in a respectful and effective way.
- **Clear guidance and supports for effective response.** Providers are often initially hesitant to start screening due to fear of "*opening up a can of worms*" and not being able to respond to patient and family needs. Findings from the TASIE Project align with program evaluations of other ACEs screening efforts that indicate that this fear is largely unfounded. The conversation(s) associated with ACEs screening and use of interventions like the seven Domains of Wellness are concrete strategies that provide support to patients. These approaches also build provider confidence and morale when they are successful in connecting with patients and families and meeting their needs.
- **Use of external referral and community resources** where relevant and possible. External referrals are an important resource and common barrier. Practices consistently reported lack of mental health resources for patients, particularly in pediatrics, in both availability and accessibility. While this points to a larger issue in the health care landscape, programs like the TASIE Project can prompt increased familiarity with and connection to existing resources among practices and support improved processes for internal referrals and coordination of care.
- **Universal screening approach** and messaging positioning ACEs screening as standard practice (i.e., screening all patients) helps ensure equitable implementation of screening practices and assure patients and families that they are not being singled out.
- **Adopting a quality improvement (QI) approach when implementing ACEs screening.** Adding ACEs screening into pediatric care benefits from using principles and strategies associated with

clinical QI including change management, starting small and piloting to learn and adapt and then scaling and spreading, and tracking and using data to understand progress and outcomes.

When done well, **patients and families are receptive to ACEs screening**. They are willing to respond the questions and are grateful that the practice is taking an interest in their lives and approaching care more holistically. When intentionally administered in a context like the TASIE Project, with supports for providers, care teams, patients, and families, findings suggest that ACEs screening is not perpetuating or causing trauma to patients during their clinic visit.

The TASIE Project evaluation was conducted by the Center for Community Health and Evaluation (CCHE). CCHE designs and evaluates health-related programs and initiatives throughout the United States. For more information, please contact Lisa Schafer at Lisa.M.Schafer@kp.org or Monika Sanchez at Monika.A.Sanchez@kp.org.

This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling \$960,000 with no percentage financed with non-governmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government. For more information, please visit HRSA.gov.

Appendix A: TASIE Project program adaptations

While TASIE was generally implemented consistently across its three cohorts, there were minor adjustments to program delivery and support over time. These were largely the result of participant feedback or requests and lessons learned by TASIE Project staff. This included changes in:

- Project ECHO content and sequencing. Each cohort included one ECHO session that was unique, and the order of individual sessions varied somewhat across cohorts. Slight changes in content for standard sessions occurred throughout. Additionally, the program team added an acknowledgement about the sensitive nature of the topics and an invitation for participants to take care of themselves at the beginning of each session to model trauma-informed care approaches.
- Case presentation structure. The program shifted its approach to the case presentations between cohorts 1 and 2 so that they focused more on aspects of screening implementation and supportive structures and systems in addition to individual patient or family situations (i.e., background, diagnoses, results, and response). Additionally, the number of case presentations participants were required to submit decreased for Cohorts 2 and 3.
- Coaching. There was a shift in individual program staff providing coaching due to staff transitions.
- Implementation resources. The specific screening implementation resources provided to teams evolved to include new/different resources as well as different content and formats (e.g., patient education materials, data tracking documents).
- Quarterly Learning Community (QLC) meetings. After Cohort 1, the TASIE Project implemented the QLC—an optional quarterly meeting of TASIE Project participants from any cohort past or present. These meetings provided additional opportunity for peer learning and networking and access to experts in the early childhood development community.

Appendix B: Evaluation data collection, purpose, and sample

The table below presents details on each data collection method, what it entailed, who participated, and how the data were analyzed. Each data source was first analyzed independently (per the descriptions below) before triangulating across methods.

Data collection activity & purpose	Sample
<p>Practice enrollment form / program application</p> <p><i>Gather data about practice characteristics, including type, patient volume, location, etc. Submitted at the start of the program by all practices.</i></p>	<p>46 participating practices in 3 cohorts submitted information about their practices’ characteristics as part of their initial program application.</p> <ul style="list-style-type: none"> • Cohort 1: 17 practices • Cohort 2: 13 practices • Cohort 3: 16 practices <p>Averages were calculated for the three cohorts using Microsoft Excel. Some data were used as controls in statistical analysis using SAS 9.4 that tested the contribution of practice characteristics (from the practice enrollment form and provider survey) to screening success (average screening rate from QIDA). When significant differences were present, it is noted in the text.</p>
<p>ACEs screening clinical data submission via QIDA</p> <p><i>Gather quantitative data about ACEs screening and intervention occurring and qualitative data about referral types and barriers to implementation.</i></p>	<p>46 practices submitted monthly screening data; 43 practices did so for all months. All 46 practices submitted cumulative referral outcome data for high-risk patients.</p> <ul style="list-style-type: none"> • Cohort 1: All 17 practices submitted monthly screening data starting in month 3 (delayed by one month due to delayed receipt of the HRSA quarterly report template). Most (15/17) submitted data for all 6 data cycles. Two practices missed 1 data cycle. Eight volunteer practices tracked and submitted cumulative referral outcome data for high-risk patients between January and April 2022 to allow for an 8-week follow-up appointment window to transpire. • Cohort 2: All 13 practices submitted monthly screening data starting in month 2. Almost all practices (12/13) submitted data for all 7 data cycles. One practice missed 1 data cycle. All 13 practices submitted cumulative referral outcome data for high-risk patients seen between October 2022 and February 2023. • Cohort 3: All 16 practices submitted monthly screening data starting in month 2 for all 7 data cycles, as well as cumulative referral outcome data for high-risk patients seen between October 2023 and February 2024. <p>Aggregate practice-level data were submitted via the AAP’s Quality Improvement Data Aggregator (QIDA) and downloaded into spreadsheets; patient-level data were not shared. Averages were calculated for the three cohorts using Microsoft Excel. Overall screening rate for each practice was used as the outcome measure for statistical analysis in SAS 9.4 that tested the contribution of practice characteristics (from the practice enrollment form and provider survey) to screening success.</p>

Data collection activity & purpose	Sample
<p>Coaching log</p> <p><i>Provide context about individual practices including type of screening tool used and facilitators and barriers to screening.</i></p>	<p>Coaches completed logs for all 46 practices following a template. Each coaching call was documented.</p> <ul style="list-style-type: none"> • Cohort 1: Median of 6 calls with individual practices (range: 3 to 7) • Cohort 2: Median of 6 calls (range: 4 to 7) • Cohort 3: Median of 7 calls (range: 3 to 8) <p>CCHE conducted a thematic analysis of coaching logs that was combined with qualitative data from provider focus groups and case presentations.</p>
<p>Case presentations</p> <p><i>Provide examples of either provider interactions with patients and caregivers during screening and response, or practice experiences implementing screening and requests for additional support.</i></p>	<p>41 of 46 practices submitted or presented case presentations.</p> <ul style="list-style-type: none"> • Cohort 1: Providers were asked to submit 3 case presentations during the program. All 17 practices had at least 2 case presentations submitted. One practice submitted 6 cases, but the rest had fewer. Cases were at the patient level. • Cohort 2: Case presentations were discussed during 6 of the monthly ECHO sessions; 10 of 13 practices presented and each presented only once. Cases could be at the patient or practice level, or both. • Cohort 3: Case presentations were discussed during 6 of the monthly ECHO sessions; 14 of 16 practices presented and each presented only once. Cases could be at the patient or practice level, or both. <p>CCHE conducted a thematic analysis of case presentations that was combined with qualitative data from provider focus groups and coaching logs.</p>
<p>Provider focus group</p> <p><i>Obtain reflections on implementing ACEs screening in their practices and overall feedback on the program.</i></p>	<p>10 focus groups conducted at the end of each cohort with 44 participants from 42 of 46 practices.</p> <ul style="list-style-type: none"> • Cohort 1: Three focus groups with one participant from 14 of 17 practices. • Cohort 2: Four focus groups with at least one participant from all 13 practices. Two practices had 2 representatives attend a focus group which was accounted for during analysis to not overweight responses from those practices. • Cohort 3: Three focus groups with one participant from 15 of 16 practices. <p>Focus groups were digitally recorded and transcribed. CCHE coded and conducted a thematic analysis of the transcripts. Codes were developed <i>a priori</i>, based on the focus group protocol, and empirically, based on emergent themes. Transcripts were coded in Atlas.ti 9.</p>

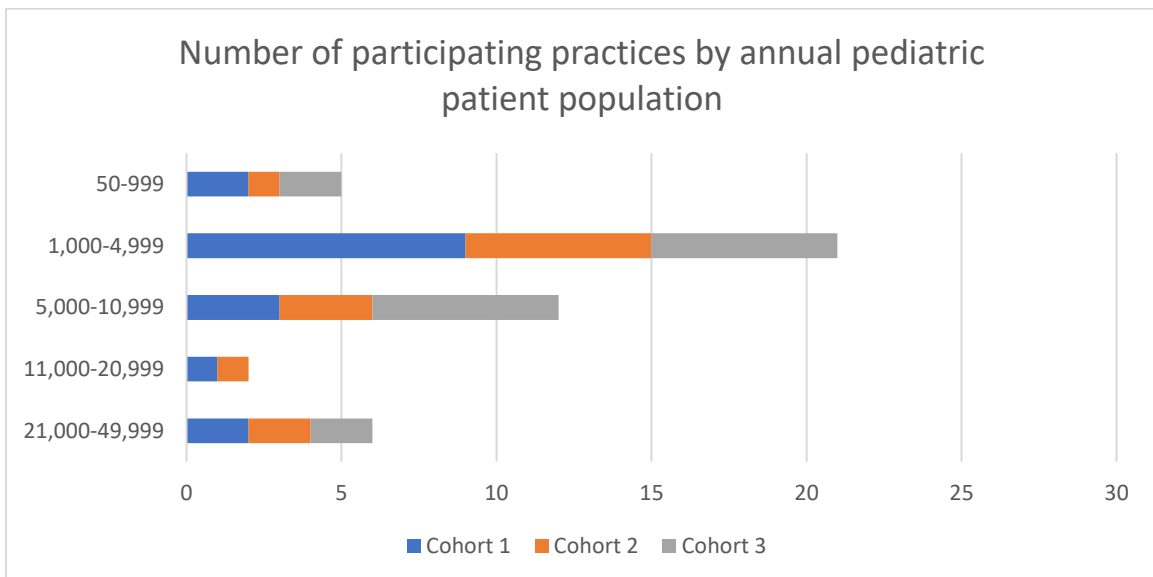
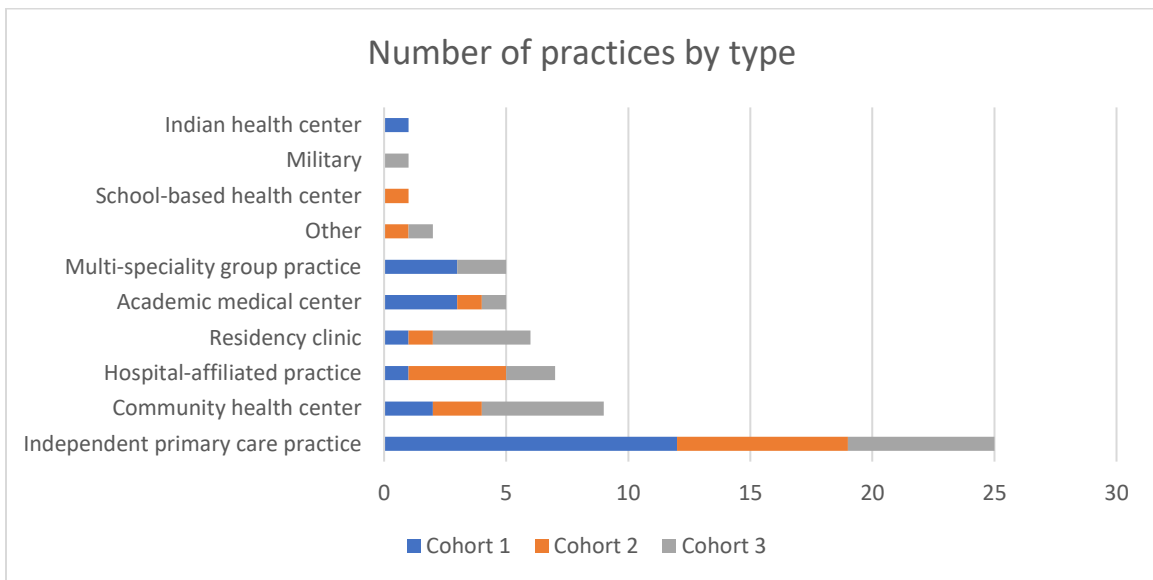
Data collection activity & purpose	Sample
<p>Provider survey</p> <p><i>Assess knowledge, attitudes, and behaviors related to ACEs screening implementation and interventions.</i></p>	<p>68 matched pre- and post-survey responses representing providers from 36 of 46 practices. Only providers with both a pre- and post-survey were included in analysis.</p> <ul style="list-style-type: none"> • Cohort 1: 20 TASIE Project participants completed both the pre- (November 2021) and post- (July 2022) surveys. Matched respondents represent 13 out of 17 practices (76%) with multiple responses from 6 practices. • Cohort 2: 26 TASIE Project participants completed both the pre- (October 2022) and post- (May 2023) surveys. Matched respondents represent 11 out of 13 practices (85%) with multiple responses from 5 practices. • Cohort 3: 22 TASIE Project participants completed both the pre- (October 2023) and post- (May 2024) surveys. Matched respondents represent 12 out of 16 practices (75%) with multiple responses from 6 practices. <p>Averages were calculated for each item at the provider-level for the three cohorts using Microsoft Excel. Practice-level information was calculated by taking the average of all provider respondents for each practice site. At the practice level, statistical analysis was performed using SAS 9.4 software that tested the contribution of practice characteristics (from the practice enrollment form and provider survey) to screening success (average screening rate). When significant differences were present, it is noted in the text.</p> <p><i>Note: Survey results primarily reflect perspectives of participants who were actively engaged throughout the program, but statistical analysis indicates results are not likely to be biased upward. Those who were not engaged enough to respond to the post-survey were not materially different from engaged participants and likely did not respond due to factors such as turnover.</i></p>
<p>ECHO session evaluations</p> <p><i>Provide feedback about each ECHO session.</i></p>	<p>Participants completed a session evaluation individually after each ECHO session.</p> <ul style="list-style-type: none"> • Cohort 1: Respondents ranged from 15-31 per session. • Cohort 2: Respondents ranged from 37-49 per session. • Cohort 3: Respondents ranged from 21-38 per session. <p>Averages were calculated for each item at the participant-level for the three cohorts using Microsoft Excel.</p>

Data collection activity & purpose	Sample
<p>Caregiver and adolescent survey</p> <p><i>Provide feedback on how parents/ caregivers and adolescents felt about the ACEs screening overall and intervention provided.</i></p>	<p>351 respondents (238 caregiver; 113 adolescent) from 36 of 46 practices. The TASIE Project program team provided links and QR codes to practices to distribute the online survey to patients, which was available in English and Spanish. Respondents received a \$25 Amazon gift code as a “thank you” for their time.</p> <ul style="list-style-type: none"> • Cohort 1: 150 surveys completed, representing 15 of 17 practices, ranging from 1 to 29 responses per practice. Survey was open the last month of the program. <ul style="list-style-type: none"> ○ Caregiver: English = 81; Spanish = 4 ○ Adolescent: English = 64; Spanish = 1; Eight adolescent responses were removed from one practice due to a teen sharing the survey QR code inappropriately. • Cohort 2: 103 surveys completed, representing 12 of 13 practices, ranging from 1 to 23 responses per practice. Survey was open the last 6 weeks of the program. <ul style="list-style-type: none"> ○ Caregiver: English = 68; Spanish = 11 ○ Adolescent: English = 19; Spanish = 4 • Cohort 3: 99 surveys completed, representing 11 of 16 practices, ranging from 1 to 15 responses per practice. Survey was open for 8 weeks, closing 2 weeks before the end of the program. <ul style="list-style-type: none"> ○ Caregiver: English = 52; Spanish = 22 ○ Adolescent: English = 17; Spanish = 8 <p>Averages were calculated for each item at the individual-level for the three cohorts using Microsoft Excel.</p>

Appendix C: Practice information

TASIE Project practice characteristics, Cohorts 1-3, N=46 (Source: Enrollment data)

Geography	N (%)	Pediatric Patient Population Size	N (%)
Northeast	26 (57%)	50 - 999	5 (11%)
West	9 (20%)	1,000 - 4,999	21 (46%)
Southeast	7 (15%)	5,000 - 10,999	12 (26%)
Southwest	2 (4%)	11,000 - 20,999	2 (4%)
Midwest	2 (4%)	21,000 - 49,999	6 (13%)
Urbanicity		Medical Residents	
Suburban	20 (43%)	None	39 (85%)
Urban	19 (41%)	Yes	6 (13%)
Rural	7 (15%)	Unknown	1 (2%)



Cohort	Practice Name	# of sites	Practice Type	Annual pediatric patient population	# of providers screening at program end	ZIP Code
1	Advocare Wayne Pediatrics	1	Independent primary care clinic	5,000 - 10,999	1	07470
1	Bellevue Pediatrics	1	Independent primary care clinic	5,000 - 10,999	4	8628
1	Care for the Homeless	20	Community health center	50 - 999	4	10016
1	Central Nassau Pediatrics	1	Independent primary care clinic	1,000 - 4,999	1	11756
1	Colts Neck Pediatrics	1	Independent primary care clinic	1,000 - 4,999	3	07722
1	Cooper Pediatrics	6	Academic medical center	11,000 - 20,999	14	8103
1	Eastern Shore Pediatrics	1	Independent primary care clinic	1,000 - 4,999	2	21801
1	East Carolina University Physicians	1	Academic medical center	21,000 - 49,999	2	27834
1	Essex Pediatrics	2	Independent primary care clinic	5,000 - 10,999	3	07017
1	Feather River Tribal Health	2	Multi-specialty group clinic, Community health center, Indian Health Service	1,000 - 4,999	1	95965
1	Global Pediatrics & Family Medicine	1	Independent primary care clinic, Multi-specialty group clinic	1,000 - 4,999	1	08816
1	Just Kids Pediatrics	1	Independent primary care clinic	1,000 - 4,999	4	19713
1	Neptune Pediatrics	1	Independent primary care clinic	1,000 - 4,999	1	07753
1	Pediatric Multicare West	1	Independent primary care clinic	1,000 - 4,999	1	85929
1	Smoketown Family Wellness Center	1	Independent primary care clinic	50 - 999	2	40203
1	University of California Davis Pediatric Ambulatory Care	1	Hospital-affiliated clinic, Academic medical center, Residency Clinic	1,000 - 4,999	11	95817
1	Watchung Pediatrics	3	Independent primary care clinic	21,000 - 49,999	19	07059
2	AltaMed Health Services Corporation	23	Community health center (e.g., Federally Qualified Health Center)	11,000-20,999	2	90040
2	Cedar Pediatrics	1	Independent primary care practice	1,000-4,999	16	14202
2	Children's Aid	8	Independent primary care practice, School-based health center	1,000-4,999	1	10026
2	Coastal Family Health Center	1	Community health center (e.g., Federally Qualified Health Center)	5,000-10,999	1	39530
2	Harsha P. Sheth MD Inc.	1	Independent primary care practice	1,000-4,999	2	91710
2	Infinity Pediatric and Adolescent Medicine	1	Independent primary care practice	1,000-4,999	3	23430
2	Kids First Pediatrics	1	Independent primary care practice	5,000 - 10,999	8	75024
2	Nirmala Inc. DBA Sunshine Pediatrics of Florida	2	Independent primary care practice	5,000 - 10,999	5	33548
2	Pediatric Primary Care at the DePaul Center	1	Hospital-affiliated practice, Residency practice	1,000 - 4,999	7	07503

Cohort	Practice Name	# of sites	Practice Type	Annual pediatric patient population	# of providers screening at program end	ZIP Code
2	Pediatrics Northwest	4	Hospital-affiliated practice	21,000 - 49,999	3	98405
2	Prairie Pediatrics	1	Independent primary care practice	50-999	1	80249
2	UCLA Children's Health Center	1	Hospital-affiliated practice, Academic medical center	21,000 - 49,999	11	90095
2	Virginia Hospital Center (VHC) Health Pediatrics	1	Hospital-affiliated practice	1,000 - 4,999	4	22204
3	Bayhealth Pediatrics	1	Hospital-affiliated practice	1,000 - 4,999	3	19963
3	Dewi S. Sudjono Santoso MDPA	2	Independent primary care practice	5,000 - 10,999	10	08512
3	Healthy Home Pediatrics	1	Other (house calls & office visits)	50 - 999	1	20020
3	Hunterdon Family Medicine Residency Program	2	Residency Clinic	1,000 - 4,999	20	08822
3	Kids Care Pediatrics	2	Independent primary care practice	5,000 - 10,999	1	07060
3	Lovelight Pediatrics	1	Independent primary care practice	1,000 - 4,999	1	21550
3	Lynchburg Pediatrics	1	Independent primary care practice	5,000 - 10,999	6	24551
3	Naval Medicine Center San Diego General Pediatrics	1	Military	5,000 - 10,999	30	92134
3	Northeast Valley Health Corporation	18	Community health center	21,000 - 49,999	6	91340
3	NuHeights	2	Independent primary care practice	5,000 - 10,999	6	07012
3	Pediatrics Health Center at Cooperman Barnabus RWJF	1	Hospital-affiliated practice; Community health center; Residency clinic	1,000 - 4,999	2	07052
3	Pediatrics of Morristown	1	Independent primary care practice	1,000 - 4,999	1	07960
3	Rutgers Department of Pediatrics	1	Multi-specialty group practice; Hospital-affiliated practice; Academic medical center; Residency clinic	21,000 - 49,999	5	07103
3	Southern Indiana Community Health Care	6	Community health center	50 - 999	2	47454
3	UI Health Mile Square L.P. Johnson Clinic	1	Multi-specialty group practice; Community health center; residency clinic	1,000 - 4,999	40	61104
3	Zufall Health	14	Community health center	5,000 - 10,999	1	07801