



# CALIFORNIA ACES LEARNING AND QUALITY IMPROVEMENT COLLABORATIVE (CALQIC) INITIATIVE-LEVEL FINAL EVALUATION REPORT

*December 2021*

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# EXECUTIVE SUMMARY



## Initiative Background

The California ACEs (Adverse Childhood Experiences) Learning and Quality Improvement Collaborative (CALQIC) was a 16-month learning collaborative that was launched in July 2020. CALQIC was led by the University of California San Francisco (UCSF) Center to Advance Trauma and Resilience-informed Healthcare, in partnership with the Center for Care Innovations (CCI), the RAND Corporation, and the Los Angeles County Department of Health Services.



### REACH

- 15 safety net organizations across California
- 48 clinic sites
- 250,000 patients covered by Medi-Cal



### GOAL

- To integrate screening and response for ACEs into health care settings in a way that:
- Enhances relationships between patients and health care teams
  - Connects patients to needed services
  - Leads to better outcomes, reduced health disparities, and positive care experiences



### SUPPORT

- Through the learning collaborative, participating organizations received:
- Up to \$70,000 in grant funding
  - Individualized coaching support
  - Virtual sessions for information sharing and peer exchange
  - Connection to experts and resources

## Methods

The CALQIC evaluation included an initiative-wide evaluation across all participating sites and a “deep dive” evaluation on selected clinic sites. This report presents findings from the initiative-wide evaluation that spanned across all 15 organizations and 48 clinic sites participating. The evaluation used a mixed methods approach to understanding progress, facilitators, and barriers, including quarterly clinical data reporting, a clinic capacity self-assessment, interviews with clinic representatives, and document review.

# EXECUTIVE SUMMARY

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## Evaluation Findings

Based on analysis of these data, the evaluation identified five key findings:

01

Organizations and clinics built or enhanced the necessary infrastructure to support ACEs screening and response. Key facilitators included: establishing buy-in, developing and implementing workflows, providing training and support, building quality improvement and data structures, and approaching the work as part of a larger organizational commitment to trauma-informed care and health equity.

02

Organizations and clinics advanced their ACEs screening and response practices. By the end of the initiative, all 15 organizations and 88% of clinic sites were screening.

03

The learning collaborative contributed to organizations' and clinics' progress advancing ACEs screening and response during the pandemic.

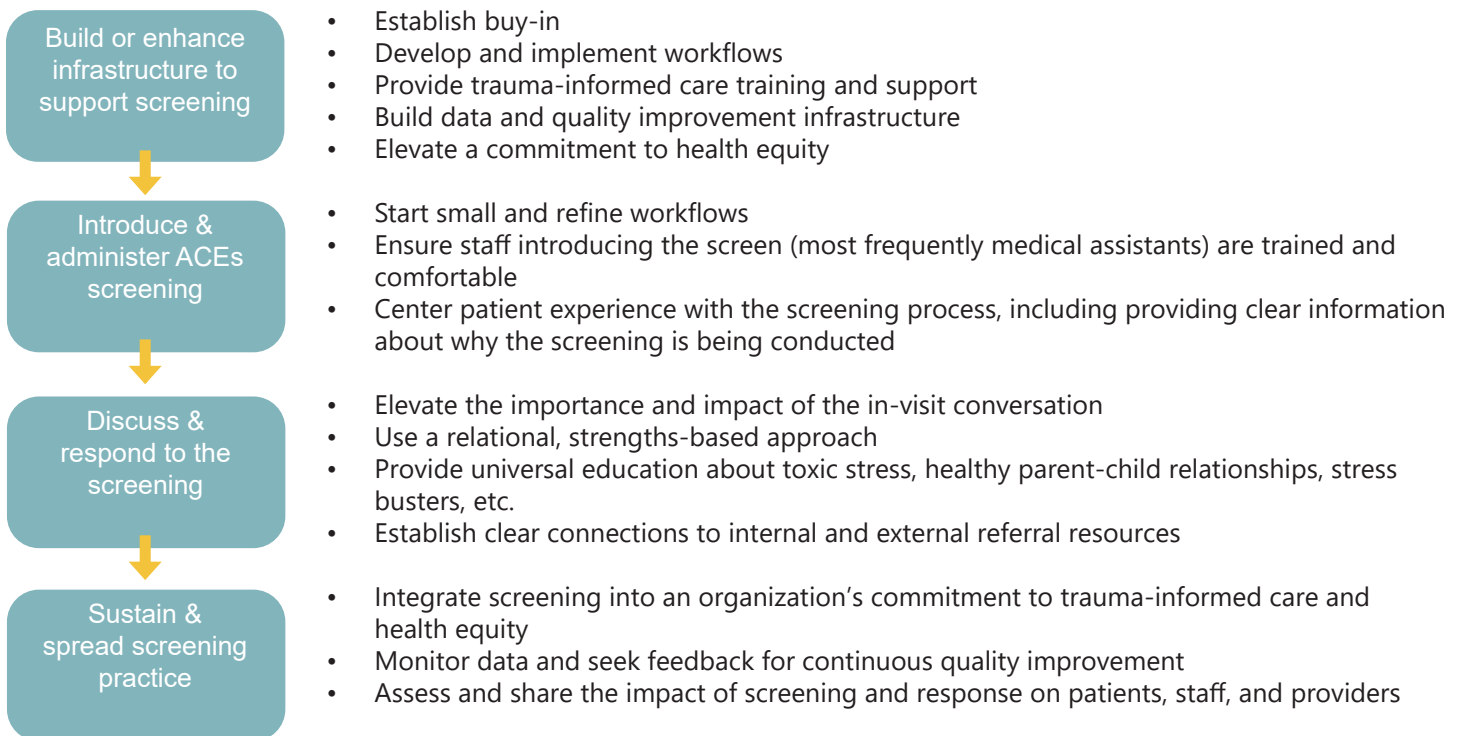
04

Organizations and clinics were committed to building trauma-informed organizations and sustaining and spreading their ACEs screening and response practices.

05

Providers and medical assistants indicated that screening had a positive impact on them, their clinics, and their patients.

The evaluation found the following facilitators contributed to effective ACEs screening and response



## EXECUTIVE SUMMARY

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### Considerations & next steps

Based on the evaluation findings, the following considerations are offered to increase adoption and acceptability of ACEs screening and response across the state:

1.

Position ACEs screening and response within the context of creating trauma-informed organizations, including focusing on improving health equity and staff wellbeing.

2.

Support clinics to develop the necessary foundation and environment for effective screening.

3.

Promote the formation of multi-disciplinary teams to build buy-in and be accountable for advancing ACEs screening and response within the clinic.

4.

Build primary care providers' confidence and comfort discussing screening results with patients and families, including skills for empathetic communication.

5.

Encourage clinics to start with small pilots and refine workflows before spreading.

6.

Provide implementation support to clinics, including dedicated FTE/protected time, access to subject matter experts, tools, resources, and opportunities for peer learning.

7.

Focus on structural challenges within primary care, including addressing visit length and increasing integrated behavioral health services.



# INITIATIVE BACKGROUND



## Initiative Background

The California ACEs (Adverse Childhood Experiences) Learning and Quality Improvement Collaborative (CALQIC) was a 16-month learning collaborative<sup>1</sup> comprised of teams from 15 safety net organizations across California (Figure 1). These organizations engaged 48 of their clinic sites across seven California regions that collectively serve nearly 250,000 patients covered by Medi-Cal on an annual basis (see Appendix A for details). The learning collaborative was established to identify promising practices, tools, resources, and partnerships to inform future phases of California’s ACEs Aware initiative, a project of the Office of the California Surgeon General and the California Department of Health Care Services.

CALQIC was led by the University of California San Francisco (UCSF) Center to Advance Trauma and Resilience-informed Health Care, in partnership with the Center for Care Innovations (CCI), RAND Corporation, and the Los Angeles County Department of Health Services. CALQIC’s approach to ACEs screening and response<sup>2</sup> was guided by its **TRIADS framework** (Trauma and Resilience-informed Inquiry for Adversity, Distress, and Strengths), which was developed by Dr. Alicia Lieberman in partnership with other members and organizations on the CALQIC team. TRIADS describes an evidence-informed approach for screening, provider response, and patient education about ACEs in health care settings. It aims to build, support, and strengthen relationships between patients, families, communities, and health care teams based on a holistic understanding of a patient’s experiences of adversity, their signs of distress, and their sources of strength.

**Figure 1: Location of CALQIC participating organizations**



<sup>1</sup> A learning collaborative is a strategy for implementing new practices in health care. They typically identify a topic of focus and bring together multidisciplinary teams from participating organizations to work together on the topic. The teams attend sessions where they learn from experts and peers. In between sessions, teams implement changes in their own organizations, typically using small-scale changes, measuring the effects, and making changes for improvements. Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2677044/>

<sup>2</sup> ACEs screening is the routine assessment of ACEs; response refers to the ways providers and clinics respond to the results of ACEs screening.

## INITIATIVE BACKGROUND

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The goal of the learning collaborative was to integrate screening and response for ACEs into health care settings in a way that enhanced relationships between patients and health care teams, connected patients to health and social services, led to better outcomes, reduced health disparities, and more positive care experiences. During the learning collaborative, organizations worked to advance the following aims:

- Increase the percentage of primary care providers (PCPs) at participating clinics who were trained and credentialed by the required state training, which allowed Medi-Cal providers to request payment from the state for ACEs screening
- Increase the number of clinics that are screening for ACEs
- Improve their organization's capacity to conduct ACEs screening in a relational and trauma-informed way
- Improve their rate of screening (percent of patients screened from the total eligible population)
- Improve their ability to collect, report, and use ACEs screening and response data, and be able to segment the data by race and ethnicity

CALQIC provided teams with customized support (Box 1) aligned with their level of experience with ACEs screening and response.

During the 16 months of CALQIC, the world experienced significant adversity related to the COVID-19 pandemic. Participating clinics experienced additional stressors related to wildfires, political polarization, high profile racial tensions, a transformation of the health care delivery system to telehealth, and pressure to care for increased acuity of need in the communities they served. To be responsive to the changing external environment, CCI and UCSF redesigned all learning collaborative activities to be virtual. The virtual sessions and coaching were designed to provide clinics with practical guidance and support for ACEs screening and response, while also modeling how to incorporate trauma-informed practices in clinics and team interactions (e.g., building in mindfulness exercises, highlighting strengths/ accomplishments, allowing time for reflection).

### *Box 1: CALQIC provided teams with the following support:*

- Up to \$70,000 in grant funding
- Individualized coaching support
- Virtual sessions for information sharing and peer exchange
- Connection to experts and other relevant resources

Lessons from the learning collaborative were collected, analyzed, and used to inform the development of best practices, tools, and other resources to support future implementation of ACEs screening and response in clinics throughout California.

## Methods

The CALQIC evaluation included an initiative-wide evaluation across all participating sites and a "deep dive" evaluation on selected clinic sites in Los Angeles County and rural Northern California.

The Center for Community Health and Evaluation (CCH), part of Kaiser Permanente Washington Health Research Institute, conducted the initiative-wide evaluation that spanned across all 15 organizations and 48 clinic sites participating. This report presents findings from the initiative-wide evaluation.

The evaluation goals for the initiative-wide evaluation were to assess: (1) changes in organizations' capacity related to implementing ACEs education, screening, and response, and (2) clinic-level facilitators and barriers related to screening and response. To measure progress, CCH used a mixed methods approach to collecting and analyzing data. The data informing this report is described in Table 1. More information can be found in Appendix B.

# INITIATIVE BACKGROUND

Table 1: CALQIC initiative-wide evaluation data collection methods

Method	Description
Quarterly clinical data reporting	<p>Clinics submitted five quarterly data reports covering the period between July 1, 2020 through September 30, 2021. Reports included the following aggregate, clinic-wide metrics:</p> <ul style="list-style-type: none"> <li>• <b>Percent of Medi-Cal Primary Care Providers (PCPs) attested to the state ACEs training.</b> PCPs included doctors, nurse practitioners, and physician assistants and was intended to capture people managing a panel of patients and acting as a primary care provider.</li> <li>• <b>Screening rates—percent of eligible patients screened for ACEs.</b> Eligible patients were defined by each site to reflect patients the site intended to screen, e.g., patients aged 0-5 receiving annual well-child visits from 5 providers at Main Street clinic. Screening tools included PEARLS for pediatrics and ACE-Q or other tool for adults.</li> <li>• <b>Percent of screened patients with 4 or more ACEs.</b> Screened with PEARLS for pediatrics and ACE-Q or other tool for adults. Four or more ACEs applied to Part 1 for PEARLS.</li> <li>• <b>Response rates—percent of patients warranting follow up who received a response.</b> Patients warranting follow up was defined by each site to reflect patients the site intended to provide follow up or referral due to their screening result, e.g., ACE score of 2. Responses included in-visit conversation, internal or external referral, literature or other “take away” resources, etc. 25% of clinics screening for ACEs (5 of 20) were unable to track response at the beginning of the initiative. Details on clinical data collection and definitions can be found in Appendix C.</li> </ul>
Clinic capacity assessment	<p>Multi-disciplinary teams from the clinic sites collaboratively used the <b>CALQIC Clinic Capacity Assessment</b> tool to self-assess their capacity to effectively integrate education, screening, and response for ACEs. This report includes results from the baseline and final assessments completed in September 2020 and September 2021 by 41 of the 48 clinic sites.</p>
CALQIC team interviews	<p>CALQIC team interviews (n=15) were conducted twice, in February and September 2021, to assess progress, changes in organizational characteristics and practices, and lessons related to implementing ACEs screening and building trauma-informed cultures of care. Generally, 2-4 people from the team participated in the interview.</p> <p>The term “<b>CALQIC team</b>” refers to the <b>4-6 member multi-disciplinary, implementation team that led the organization’s CALQIC efforts</b>. Most teams included clinical leaders, primary care providers, behavioral health providers, clinical operations staff, and data/QI staff. Some teams also included medical assistants, nurses, or other care team members (e.g., health educators, care managers).</p>
Clinic interviews	<p>Interviews with medical assistants (MAs) (n=13) and providers (n=14) were conducted in July and August 2021 to understand clinic implementation, success factors and challenges, and staff/clinician perceptions and experiences with ACEs screening and response. Participants were selected from 12 organizations based on sampling criteria that balanced experience with implementation prior to CALQIC, and pediatric/adult and in-person/telehealth workflows to ensure the diverse breadth of clinic experiences were represented. Three organizations were excluded due to their participation in RAND “deep-dive” interviews.</p>
Document review	<p>Documents from the learning collaborative — including coaching logs, coach survey on team engagement, and team materials (e.g., workflows, storyboards, roadmaps) — were reviewed to capture goals, strategies, accomplishments, challenges, and lessons learned.</p>
Team lead survey	<p>An online survey was sent to each organization’s CALQIC implementation team lead to understand teams’ capacities to collect, use, and report data on ACEs screening and response (July 2020; April and September 2021) and usefulness of learning collaborative supports (e.g., virtual learning sessions, coaching) (September 2021).</p>
Case studies	<p>Case studies compiled data across all sources into one organized and comprehensive analytic framework for each participating organization (n=15). The goal was to understand and describe each organization’s intervention and the real-life context in which it occurred. Qualitative coding and analysis of the completed case studies was used to identify themes presented in this report.</p>



## INITIATIVE BACKGROUND

CCHE approaches evaluation as a partner deeply engaged in program implementation. For CALQIC, this entailed working closely and collaboratively with the CALQIC leadership team, CCI, coaches, and learning collaborative implementation teams to design and implement the evaluation. CCHE participated in monthly CALQIC All Team meetings to share results, had regular coordination calls with CCI to integrate the evaluation activities and findings into the learning collaborative, and attended all the learning collaborative events to understand content and hear from participants. The evaluation periodically shared formative feedback with CALQIC partners to inform the learning collaborative as it was being implemented.

Like the learning collaborative, the evaluation was designed to align with trauma-informed practices and to balance the benefits of requesting information with the value they provided to learning collaborative participants. For clinical data metrics, CCHE sought input about the metrics and reporting process throughout the initiative and facilitated “data communities of practice” to discuss challenges and potential solutions for capturing the required data. CCHE also prioritized sharing individualized organizational data back with participants through: (1) customized clinical data dashboards for each organization to show progress and identify opportunities for improvement, and (2) organizational reports on their responses to the clinic capacity assessment at baseline and final administrations. Additionally, CCHE used a strengths-based, relational approach to interviews, focusing on building trust and providing an opportunity for participants to reflect on their progress, celebrate successes, and identify facilitators and barriers. When requests were made of non-grant funded staff, such as with the provider and MA interviews, \$100 gift cards were provided to thank people for their time.

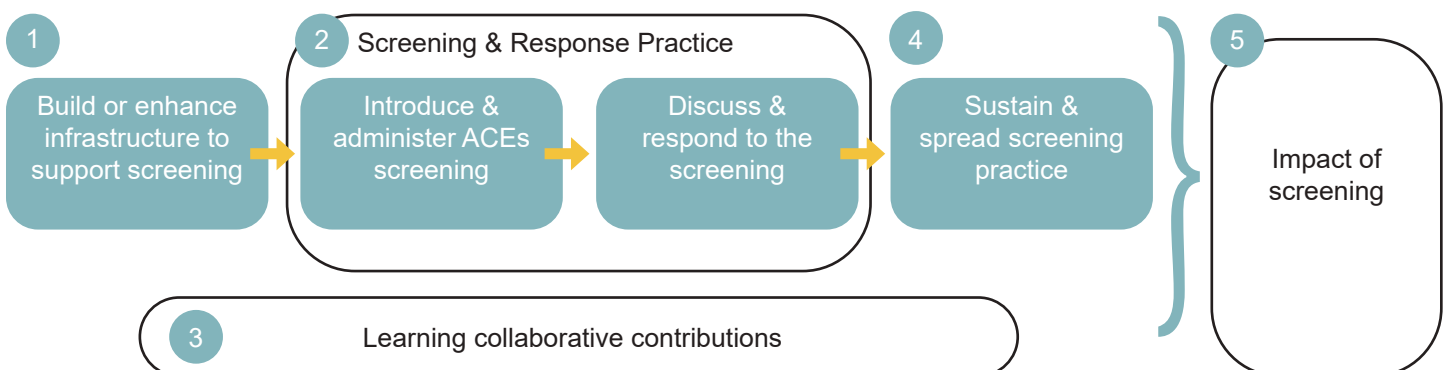
### Evaluation findings

Based on analysis of these data, the evaluation identified five key findings:

1. Organizations and clinics built or enhanced the necessary infrastructure to support ACEs screening and response.
2. Organizations and clinics advanced their ACEs screening and response practices.
3. The learning collaborative contributed to organizations’ and clinics’ progress advancing ACEs screening and response during the pandemic.
4. Organizations and clinics were committed to building trauma-informed organizations and sustaining and spreading their ACEs screening and response practices.
5. Providers and medical assistants indicated that screening had a positive impact on them, their clinics, and their patients.

These findings were derived from qualitative and quantitative analyses of each data source and triangulation across methods. The key findings and the remainder of this report are organized using the visual depicted in Figure 2, which mirrors CALQIC clinics’ journeys to implement ACEs screening and response efforts during the initiative.

*Figure 2: Organizing framework for key evaluation findings*



# 01 BUILD OR ENHANCE INFRASTRUCTURE TO SUPPORT SCREENING



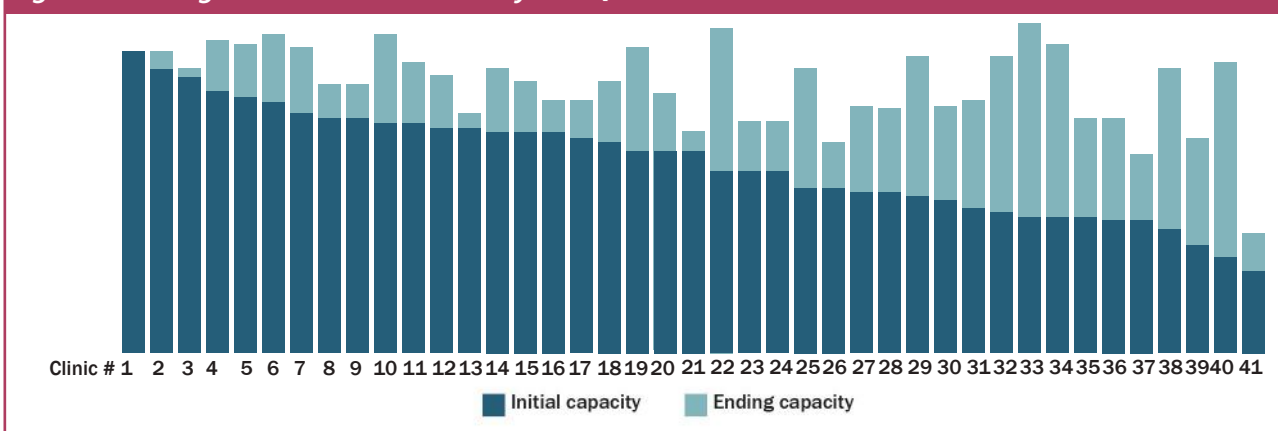
CALQIC aimed to assist clinics in establishing an ACEs screening practice that enhanced relationships between patients and care teams and supported healing. Participants indicated that implementing screening was more effective when they framed ACEs screening and response as part of organizational cultural change to become more trauma informed. For many organizations, this overarching cultural change was the starting point—it established the vision for the work and helped to explain why they were doing screening. Once the vision was articulated, organizations needed to establish the infrastructure for ACEs screening and response, which is described further in this section.

## Clinics increased their capacities in essential practices related to ACEs screening and response

Participating clinics completed the CALQIC Clinic Capacity Assessment at two time points during the initiative. The Clinic Capacity Assessment was developed to align with the five domains of the CALQIC **TRIADS framework** of trauma-inquiry: Foundation, Environment, Patient Education, Screening & Assessment, and Response<sup>3</sup>. It consisted of 56 items and clinics rated items on a 5-point scale with an option to select “unsure.” For more details about the assessment methodology and a link to the full tool, see Appendix B.

Of the 56 total assessment items, the evaluation identified a subset of 16 that reflected capacities and practices deemed critical to effective screening practice and that CALQIC was seeking to influence. This “Core Capacity Index” included items from each of the five TRIADS domains (see Appendix D for a list of the 16 items by domain). At baseline, clinics started with very different levels of capacity in the Core Capacity Index items. Regardless of where they started, almost all clinics reported increases their capacity over the course of the initiative (Figure 3). Thirteen of the 16 Core Capacity Index items grew by at least one full point from baseline to final and among all 56 assessment items, the five with the largest change during the initiative (1.5 points or more) were all in the Core Capacity Index.

Figure 3: Change in Core Index items by CALQIC clinic



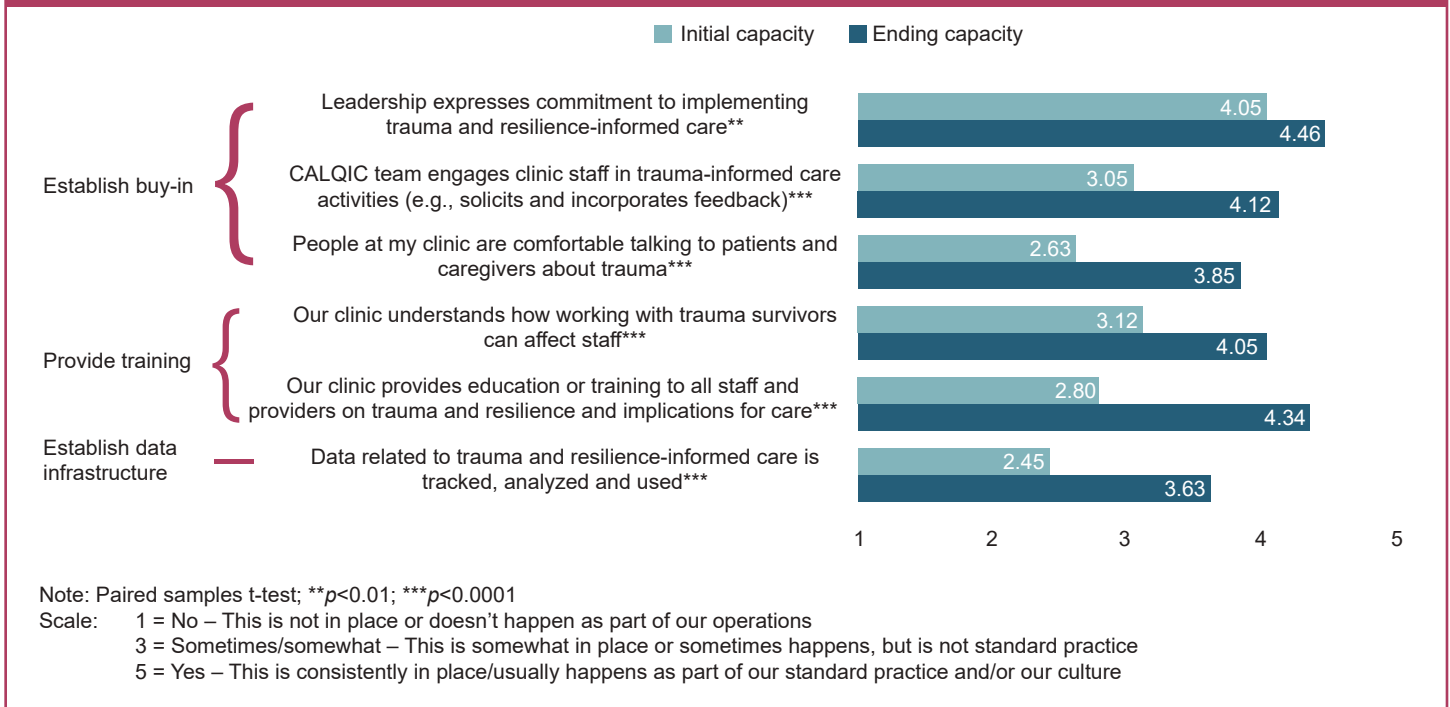
<sup>3</sup> Machtinger EL, Davis KB, Kimberg LS, Khanna N, Cuca YP, Dawson-Rose C, Shumway M, Campbell J, Lewis-O'Connor A, Blake M, Blanch A, McCaw B. From Treatment to Healing: Inquiry and Response to Recent and Past Trauma in Adult Health Care. *Women's Health Issues*. 2019 Mar-Apr;29(2):97-102. Doi: 10.1016/j.whi.2018.11.003. Epub 2018 Dec 31. PMID: 30606467.

<sup>4</sup> CCHE in collaboration with CCI, UCSF, CALQIC implementation coaches, and the CALQIC Clinical Advisory Committee

# 01 BUILD OR ENHANCE INFRASTRUCTURE TO SUPPORT SCREENING

Six of the 16 Core Capacity Index items fell into the TRIADS domains that were specifically related to building infrastructure—Foundation and Environment domains. These items were related to buy-in, training, and data infrastructure, and CALQIC clinics on average rated their capacity significantly higher at the end of the initiative in these areas (Figure 4). Ratings for the remaining Core Capacity Index items are presented in later sections of this report that discuss screening and assessment, patient education, and response.

**Figure 4: Average score of Core Capacity Index items related to infrastructure (Foundation and Environment domains), initial and ending capacity**



## Clinics identified key facilitators for supporting effective ACEs screening and response

In addition to establishing buy-in, providing training and support, building quality improvement and data structures (reflected in the Core Capacity Index discussed above), CALQIC teams also qualitatively highlighted developing and implementing workflows and approaching this work with a focus on health equity as key facilitators of effective ACEs screening and response. Each of these are discussed in more detail below.

### Buy-in was needed at multiple levels across an organization

CALQIC teams identified buy-in and commitment from organizational leaders and staff at all levels as an essential step to implementing ACEs screening and response.

Support from senior leaders was identified as a key facilitator to clinics' progress. Senior leaders were the ones to establish screening as a priority and set the tone for developing a trauma-informed culture. They provided resources and dedicated time for providers and staff to advance screening and response. Many CALQIC teams reported their leaders were actively supportive, while others reported either passive commitment without resource allocation or that they were still working on establishing active leadership buy-in.

*"This is not going to happen if you don't have operations onboard. And you need the C-suite to be bought in because it's about culture change for a clinic."*  
 -CALQIC team member

# 01 BUILD OR ENHANCE INFRASTRUCTURE TO SUPPORT SCREENING

Buy-in and commitment from care teams<sup>5</sup> was also identified as essential. Many CALQIC teams reported that primary care providers and staff initially had mixed reactions to the idea of implementing ACEs screening and response, particularly for adult populations. Some CALQIC teams reported increased buy-in for screening due to a heightened awareness of the connection between trauma and health revealed by the multiple traumas experienced in 2020 when the initiative began (e.g., COVID-19 pandemic, wildfires, events leading to a growing racial justice movement). Some organizations also noted that PCPs and staff with stronger connections to their patient community often brought more energy and commitment because they understood community needs and potential benefits.

CALQIC teams reported that the primary challenges to building buy-in and commitment were: 1) provider and staff concern about workload, and 2) the potentially difficult conversations that could result from screening. More specifically, PCPs and MAs wanted to understand the reasons for screening, feel supported, understand workflows, and be comfortable with the range of potential patient reactions. MAs also wanted clear talking points or prompts to introduce the screener and an opportunity to reflect on their personal experiences with ACEs before having to introduce the screener to patients. PCPs also needed to understand available resources to respond to screening results.

*“Getting buy-in from our MAs was critical and probably the thing that I am most proud of.”*

-CALQIC team member

CALQIC teams who were able to overcome these challenges, reported doing so in various ways, including:

- Engaging a multi-disciplinary team (e.g., care team members, quality improvement, data analytics, operations staff) to ensure diverse perspectives were considered in planning. This team acted as a dedicated group to be accountable for moving the work forward. Teams were most effective when they included perspectives from all staff groups involved in screening. Two perspectives that were critical, and not consistently engaged, were (1) medical assistants, who often played a critical role in introducing the screener to patients, and (2) data analytic and quality improvement (QI) staff to support a data-informed approach to implementation, learning, and spread.
- Establishing clear workflows and providing adequate training (see later sections for details).
- Ensuring regular care team communication via huddles and individual staff check-ins.
- Prioritizing provider and staff support and wellness activities.

## Workflows were essential to describe standard processes and team member roles

Implementing or spreading any new clinical practice requires a clear workflow that outlines the process and who is responsible for each part. During CALQIC, all organizations established at least one workflow for screening, and many had multiple workflows to address different populations screened (e.g., adult, child, teen), visit types (e.g., well-child, urgent, prenatal), and/or mode of administration (e.g., in person, virtual) (Table 2).

**Table 2: Number and type of workflows reported**

	Workflow type (# of sites with workflow)	Method of administration
Population	Pediatric (34)	<ul style="list-style-type: none"> <li>● ACEs de-identified (26 clinics)</li> <li>● ACEs identified (6 clinics)</li> <li>● Both de-identified &amp; identified (2 clinics)</li> </ul>
	Adult (22)	<ul style="list-style-type: none"> <li>● ACEs de-identified (17 clinics)</li> <li>● ACEs identified (5 clinics)</li> </ul>
Modality	In-person (41)	<ul style="list-style-type: none"> <li>● Paper form (34 clinics)</li> <li>● Laminated form (4 clinics)</li> <li>● Electronic form (3 clinics)</li> </ul>
	Telehealth (15)	<ul style="list-style-type: none"> <li>● Verbally (12 clinics)</li> <li>● Electronic form (3 clinics)</li> </ul>

<sup>5</sup> The term “care teams” is used throughout this report to refer to a group of providers and staff members who collectively take responsibility for patient care. The structure of the care team can vary by clinic and organization. Care teams generally include a primary care provider (PCP) and medical assistant(s); they may also include nurses, pharmacists, social workers, educators, care coordinators, and other staff supporting direct patient care.

## 01 BUILD OR ENHANCE INFRASTRUCTURE TO SUPPORT SCREENING

Of the 42 sites that were screening by the end of CALQIC, nearly all sites had developed an in-person workflow (41 sites), some had both telehealth and in-person workflows (14 sites), and one site had only a telehealth workflow. Of the 42 sites, including both pediatric and adult workflows, most used a “de-identified” screening process that asked patients and caregivers to report the total number of ACEs, rather than indicating which individual ACE applied to them. Additionally, at most sites (85%), a MA or another non-provider member of the care team introduced the screener to patients or caregivers, initiating the screening process.

Many organizations adjusted their workflows as they were being developed to make them more effective and to respond to the changing environment in their clinics. Examples of adjustments included changing who administers the screening, when the screening is administered (e.g., visit types, screening frequency), and how the screening is administered (e.g., identified or de-identified, telehealth or in-person). CALQIC clinics found that workflows were more effective when:

- Implementation teams pilot tested and refined detailed workflows with a small number of care teams prior to broader training and implementation.
- There was flexibility in workflows across clinic sites within an organization to allow for customization, revision, and staff feedback.
- Workflows were supported through practical training for staff and providers, including prompts in the electronic health record (EHR) to boost provider and staff adherence to the workflow.
- Patient education tools (e.g., handouts, clinic signage/videos, broad messaging) and scripts were built in to enhance and support the process.
- Types of resources, referrals, and referral pathways were identified. This often depended on available in-clinic supports (e.g., internal behavioral health clinicians, case managers, care coordinators).

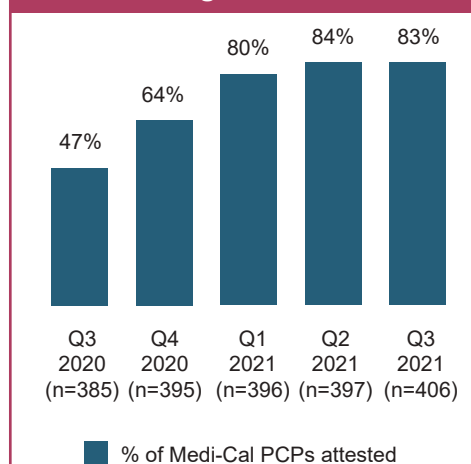
### Clinics invested in training staff and providers on trauma-informed care

CALQIC teams identified training and staff support as key facilitators in successfully introducing the concept of ACEs screening in their clinic sites. Several CALQIC teams also identified accomplishing their training goals as a significant achievement given the challenges during the pandemic.

Organizations approached training in different ways. Common areas of focus for training efforts included:

- **Having PCPs complete the state required training and attestation process:** This process allowed Medi-Cal providers to request payment from the state for ACEs screening. The proportion of PCPs attesting to completing the training nearly doubled during the initiative (Figure 5).
- **Providing practical training on workflows and implementation:** As CALQIC teams developed new workflows (discussed in the previous section), they trained staff and providers on these workflows. Trainings explained the rationale for screening, introduced the workflow and scripts, gave the care team opportunities to practice, and reviewed other details of implementation
- **Providing mentorship:** When spreading screening to new clinic sites, some CALQIC teams provided mentorship to assist with implementation at the new sites. This included onsite availability of CALQIC team members during initial rollout, one-on-one coaching or shadowing, and supporting workflow customization for different sites.

**Figure 5: Percent of Medi-Cal PCPs attested to the state ACEs training**



Source: Quarterly clinical data  
Note: “n” in the figure above represents the denominator for each quarter



## 01 BUILD OR ENHANCE INFRASTRUCTURE TO SUPPORT SCREENING

- **Implementing broader training on trauma-informed care:** CALQIC teams found that training and support was most effective when it was part of a comprehensive effort to establish trauma-informed organizations. Many CALQIC teams reported that trainings were beneficial to provide consistent information to all staff (not just providers), so that they:
  - Understood the impact of ACEs on health and how screening would benefit patients.
  - Were comfortable and confident introducing the screener (mostly MAs) and responding to the screen (mostly PCPs), including approaches for navigating potentially challenging conversations with patients and engaging patients with empathy.
  - Were able to reflect on their own ACEs and responses to the screening questions.
  - Had resources for self-care and support. Examples included: providing support for staff and providers who experienced vicarious trauma, embedding moments of mindfulness into meetings; creating opportunities for reflection; and ensuring staff and providers had access to behavioral health services, wellness coaches, and other self-care resources.

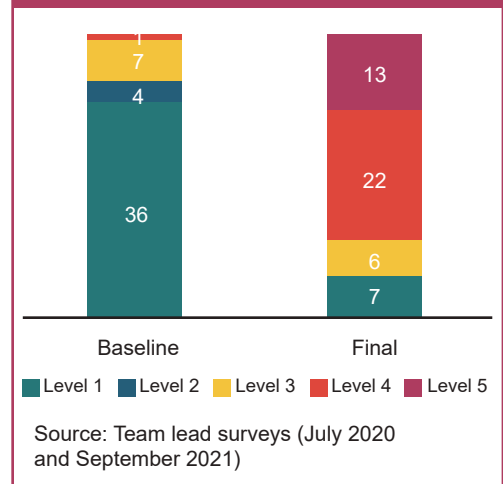
### Effective screening and response practices were supported by data & QI infrastructure

During the initiative, CALQIC participants built their capacity to report and use data about ACEs screening and response. Initially most clinics were unable to use screening data (36/48 clinics were at Level 1 or unable to report screening data).<sup>6</sup> This gradually improved: 35 of 48 clinics were at Level 4 and 5 according to the final survey, meaning that they were either periodically or routinely monitoring, sharing, and using data to assess their practice and inform improvement (Figure 6).

CALQIC teams emphasized the importance of integrating screening into a formal QI processes, including regularly soliciting feedback from providers and staff, using Plan-Do-Study-Act cycles to test new practices, and ongoing monitoring of performance data.

At the end of the initiative, all but one (2%) of the 42 clinics conducting ACEs screening could collect and report clinical data about their screening population, screening rate, prevalence of ACE scores of 4 or more, and the type of response patients received (Appendix C).<sup>7</sup> This was an improvement from 10% that were not able to report data on screening rates at the start of the initiative. There was also improvement in reporting response rates: 25% were unable to report response at the start of the initiative compared to 2% at the end.

**Figure 6: Change in ability to report ACEs screening and response (n=48 clinics)**



<sup>6</sup> Reporting abilities: Level 1 – Unable to report/not reporting screening data; Level 2 – Able to report data but have concerns about quality or high proportion of missing data; Level 3 – Able to report data, confident in data quality; Level 4 – Periodically sharing and using data to inform improvement efforts; Level 5 – Routinely monitoring, sharing, and using data to assess current practice & inform improvement.

<sup>7</sup> The one clinic unable to report data had just begun screening in a new population during the last quarter of the initiative and was still building their EHR reporting mechanisms at the time data reporting was due. All other clinics in this organization were able to report data during the initiative.

# 01 BUILD OR ENHANCE INFRASTRUCTURE TO SUPPORT SCREENING

CALQIC teams developed their data collection and reporting capabilities, they reported that EHR integration streamlined implementation by:

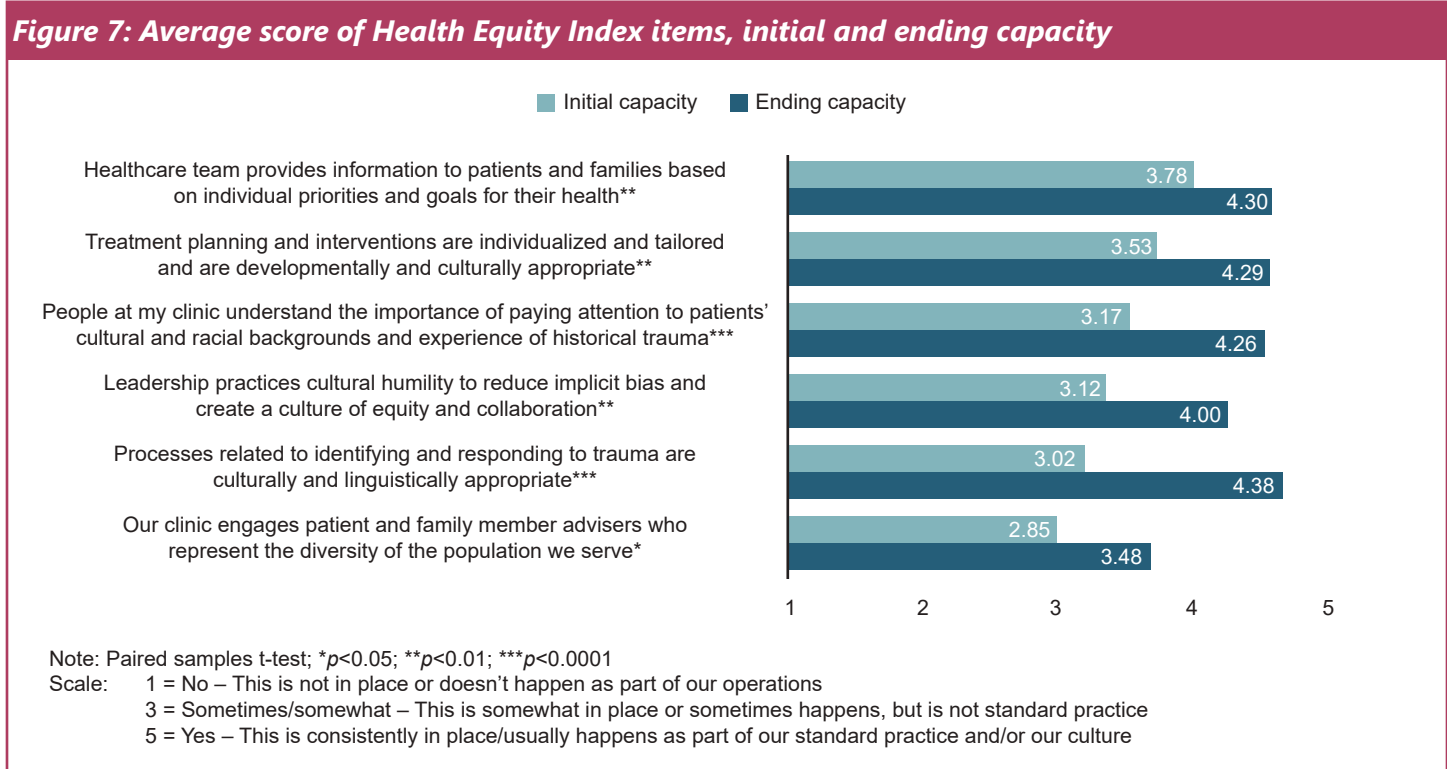
- Providing prompts and reminders
- Having clear fields for recording screening scores and documenting any response or referral
- Making data more readily and consistently available for billing and monitoring performance

Some organizations focused on building their EHR templates before launching screening to aid implementation, while others started tracking data manually for their pilot, using that to inform how to best build the EHR templates. A few CALQIC teams reported the process to integrate screening into the EHR was more time consuming or complex than anticipated. A few others noted that the technical assistance provided by CCI and the peer sharing facilitated through the learning collaborative was valuable in helping them create customized templates.

*"We created amazing EHR templates that make everybody screen correctly, put the correct codes in for billing, and remind providers what to cover in terms of treatment."*  
 -CALQIC team member

## Equity was considered in many aspects of ACEs screening and response

The evaluation identified six items in the clinic capacity assessment that measured each team’s ability to implement ACEs screening and response in an equitable way. This “Health Equity Index” included items from each of the five domains in the Clinic Capacity Assessment (see Appendix D for a list of the six items by domain). Clinics significantly improved their capacity on all these items, rating them higher at the end of the initiative (Figure 7).



## 01 BUILD OR ENHANCE INFRASTRUCTURE TO SUPPORT SCREENING

In the team interviews, CALQIC teams talked about operationalizing health equity, both through patient care and for providers and staff. For patients, CALQIC teams noted the importance of customizing language and patient resources to increase receptivity and encouraging flexibility in the screening process to meet patients where they are.

For staff, equity considerations included establishing Equity, Diversity, and Inclusion (EDI) committees and implementing EDI training. Other examples of how teams were operationalizing their commitment to health equity are listed in Box 2.

A few CALQIC teams reported that being involved in this initiative helped them see the inequities that existed among their clinic sites regarding access to community resources, availability of case management, and the impact of the pandemic on staff.

Generally, CALQIC teams had a high level of commitment to implementing screening in a thoughtful and equitable way.

As one CALQIC team member shared, *“We’re trying to be very strategic about it, trying not to rush... we are taking our time to make sure we’re doing it right so that equity will be there.”*

### **Box 2: Examples of how CALQIC teams are considering and operationalizing health equity**

For patients:

- Ensuring language access (e.g., materials in languages other than English, bilingual staff)
- Addressing resource accessibility
- Making clinic environments more welcoming, reflective of the community served, and more trauma-informed
- Assessing how staff and providers may or may not reflect the patient population

For staff and providers:

- Implementing staff trainings on equity, diversity, and inclusion (EDI) topics
- Establishing EDI committees
- Instituting flexibility with ACEs screening implementation
- Ensuring more equitable policies for providers & staff by working with human resources

## 02 SCREENING & RESPONSE PRACTICE PART 1: INTRODUCE & ADMINISTER ACES SCREENING



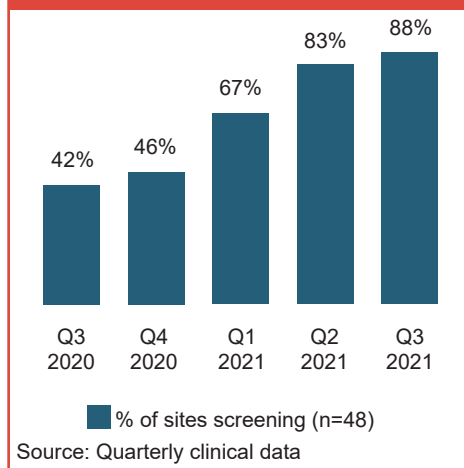
All 15 CALQIC organizations were screening by the end of the initiative

During the first quarter of the initiative (July-September 2020), 20 clinic sites (42%) across 9 organizations indicated they were conducting ACES screening with either pediatric or adult patients. Most of these were clinic sites that already had some introduction to ACES screening and response prior to CALQIC. By the end of the initiative (September 2021), the number of clinic sites that were screening increased to 42 (88%) of the 48 participating clinics—at least one clinic at each organization (Figure 8).

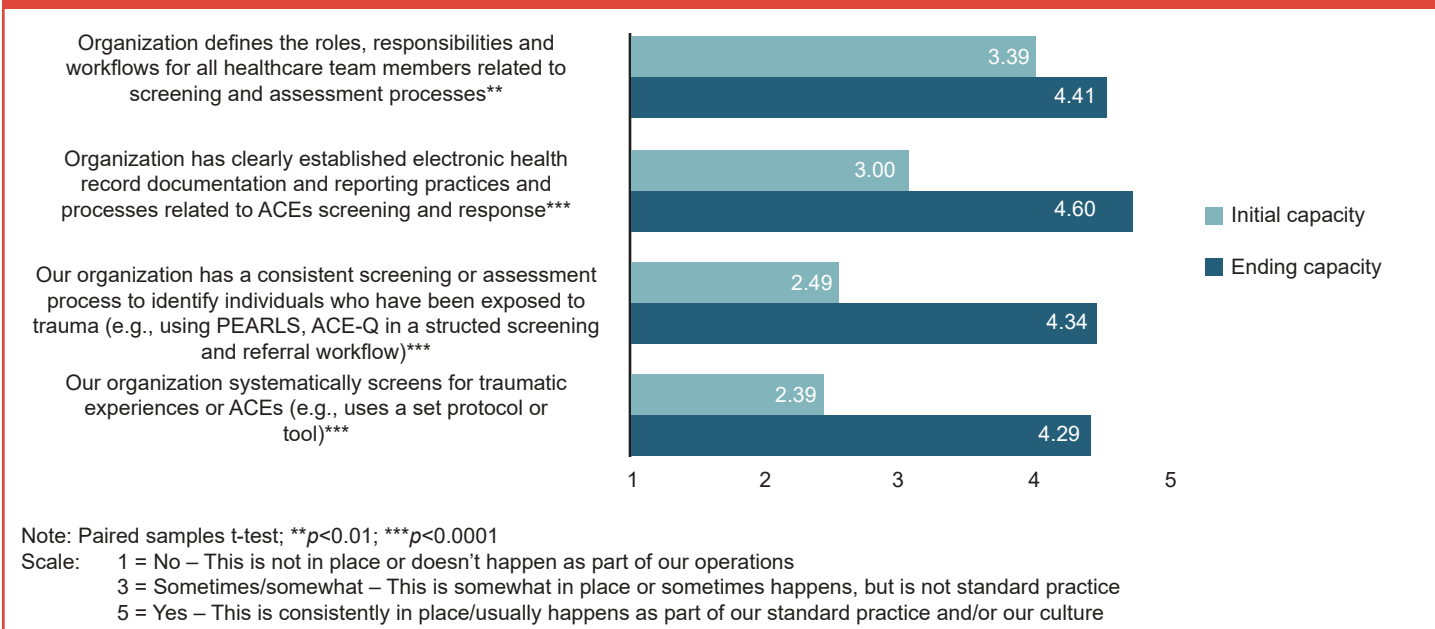
Of the 42 clinic sites screening at the end of CALQIC, 20 (49%) were focused on pediatric patients, eight (20%) on adult patients, and 14 (34%) were screening both pediatric and adult populations. For most clinic sites, screening was conducted within primary care or pediatrics; three indicated some screening occurred in behavioral health.

Among the assessment's Core Capacity Index items related to screening and assessment, clinics improved significantly during the initiative. These items were related to screening consistently and systematically, defining roles and responsibilities, and establishing documentation (Figure 9).

**Figure 8: Percent of sites screening in either pediatrics or adults**



**Figure 9: Average score of Core Capacity Index items related to screening and assessment, initial and ending capacity**



## 02 SCREENING & RESPONSE PRACTICE PART 1: INTRODUCE & ADMINISTER ACES SCREENING

While screening had spread among participating clinics, the volume of patients screened was low in teams that were still piloting and testing their screening workflows. In the last quarter of the initiative, 57% of clinics were screening fewer than 100 patients over that three-month period.

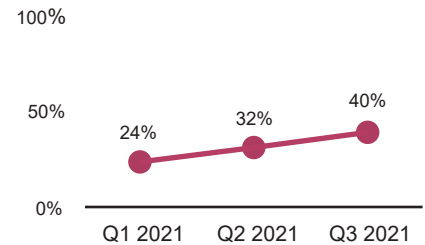
In clinics that had been implementing screening for longer periods of time, screening rates increased. Clinics that were screening in pediatrics at the start of 2021 increased their combined screening rate from 24% to 40% of eligible patients by the end of the initiative (see Figure 10). This included clinics with both high and low screening volumes at the end of the initiative (range of 17 to 453 screenings) and eligible populations of varying size (range of 21 to 1,192 eligible patients). Though each clinic could have a different definition of which patients were eligible for screening (e.g., annual well child checks beginning at 11 years old; 9-month, 18-month, or 3-year well child checks; patients seeing certain providers), most clinics had an internally consistent definition over time.

CALQIC teams found that effective screening implementation required attention to how screening was implemented not just whether it occurred. Screening efforts were more effective when clinics:

- Started small and refined workflows, which allowed time to learn before wide implementation
- Built staff and primary care provider comfort navigating screening and response and using empathetic communication skills
- Centered patient experience by explaining why screening is being performed, why it is important, normalizing screening, ensuring explanations of the screener were culturally appropriate, and allowing patients and caregivers time alone to complete the screener

In addition to screening for ACEs, four organizations (12 clinic sites) were screening for resilience, strengths, and/or protective factors. At the end of CALQIC, three organizations were actively investigating adding a resilience question to their screening workflow, and an additional five organizations saw the value in screening for resilience and were interested in adding resiliency screening questions in the future. Whether or not they were formally screening for resilience factors, all organizations reported that discussing strengths and/or resilience with patients was part of their workflow for response conversations. Many CALQIC teams also emphasized that they would like to find ways to enhance their process to be more strengths-based, which they recognized as a best practice.

**Figure 10: Change in pediatric screening rates at sites screening for longer periods**



Source: Quarterly clinical data  
Note: Reflects 25 clinics from 11 organizations that began pediatric screening in Q1 2021 or earlier. Q1 2021=10,265 eligible patients; Q2 2021=11,717 eligible patients; Q3 2021=11,776 eligible patients. One clinic screening fewer than 100 patients began screening in Q4 2020 paused in Q1 2021 due to staffing issues before resuming in Q2 2021.

*"It was really important for people to feel confident saying these things—having whatever script works for them and feels good and authentic—because we recognize this isn't just another screening."*

-CALQIC team member

*"Introducing resiliency screening prior to ACEs screening allows patients to first acknowledge and understand their inherent strengths and assets and empowers them to believe they can overcome what has happened to them."*

-CALQIC team member



## 02 SCREENING & RESPONSE PRACTICE PART 1: INTRODUCE & ADMINISTER ACES SCREENING

### Clinics faced various challenges in implementing ACEs screening

When screening didn't occur, the most frequent reason reported by PCPs and MAs was there was not enough time in the typical 15-minute primary care visit to add a discussion of ACEs screening to the short visit. Time constraints were amplified when there was more to manage during the visit (e.g., medically complex patients, visits when patients were completing multiple screeners, and if the screener needed to be administered verbally). As one PCP noted, *"Our biggest resource for [screening] response is provider time...and until we're not expected to see 10 to 12 visits per half day, that's going to be really hard...we don't have the time or the payment structure that really rewards or enforces that, especially since we're launching this with Medicaid populations."*

Other challenges included:

- **MA and nursing shortages and absences:** Staffing shortages impacted clinics' ability to consistently conduct screenings and staff turnover resulted in loss of knowledge, expertise, and momentum.
- **Response to COVID-19:** The need to respond to the pandemic slowed the pace of implementation because of competing priorities and staffing challenges. Organizational leaders were hesitant to add "one more thing" to providers and staff who were overextended and were dealing with other pandemic stressors.
- **Patient comfort disclosing ACEs:** Many CALQIC teams perceived that patients and caregivers were not always comfortable disclosing ACEs. Some providers and MAs noted incongruence between the screening form and disclosures made verbally.
- **Buy-in for screening adults:** CALQIC teams often found it more difficult to establish motivation and buy-in from providers for screening adults (compared to screening in pediatrics). From provider interviews, the primary concerns that were elevated were that: (1) patients may not want to discuss past trauma for various reasons (e.g., they addressed it in other ways; it may cause pain to revisit), and (2) that it was more difficult for providers to see the benefit of screening (e.g., patients may already be experiencing adverse health effects; it may not directly impact their treatment plans for patients with chronic conditions).
- **Virtual screening via telehealth:** Screening via telehealth presented a number of challenges and most clinics preferred screening in-person (Box 3).

### Box 3: ACEs screening in telehealth

The pandemic required all health care organizations to explore new approaches to delivering care, including transitioning to telehealth. CALQIC teams had to determine whether and how to do ACEs screening virtually. As a result, some organizations paused or delayed screening efforts to develop digital tools for screening, while others decided to only screen at in-person visits, especially in pediatrics.

During CALQIC, nine organizations attempted screening via telehealth. Seven of these reported they preferred in-person screening. As CALQIC teams were weighing the benefits and challenges of implementing screening virtually they discussed:

#### Benefits

- Allowed clinics to reach patients who may not be able to come to the clinic
- Patients and caregivers may be more forthcoming without children listening and hearing the questions

#### Challenges

- More time intensive for clinics with less opportunity for patient education
- De-identified ACEs was more challenging to administer when conducted verbally
- More difficult to establish trust and rapport with patients virtually
- Patients may be distracted, less willing to engage and take time to reflect

## 02 SCREENING & RESPONSE PRACTICE PART 1: INTRODUCE & ADMINISTER ACES SCREENING

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### Clinic sites that were not able to initiate screening faced additional barriers

The six clinics (across four organizations) that were not able to start ACEs screening implementation during the initiative described the following barriers to beginning screening (these themes were mentioned by more than one organization)<sup>8</sup>:

- **Staffing issues:** including leadership transitions, turnover of provider champions, and significant staff turnover across their organization that made it challenging to rehire and retrain.
- **Lack of resources and support:** including EHR infrastructure, access to internal and external referrals, and training for staff and providers.
- **High-need patient population:** At these sites, ACEs screening was perceived to not add value due to availability and use of extensive case management and assumption that most patients have high levels of adversity.
- **Brand new to trauma-informed care and culture:** Implementation took longer than anticipated, and they did not have sufficient time during the initiative to establish the needed foundation at all their CALQIC sites.

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<sup>8</sup> Themes include a seventh clinic where screening was minimal, and the clinic indicated they would not continue screening. They shared many of the same barriers (3 of the 4 themes) as the sites not yet screening, so were included in this summary.

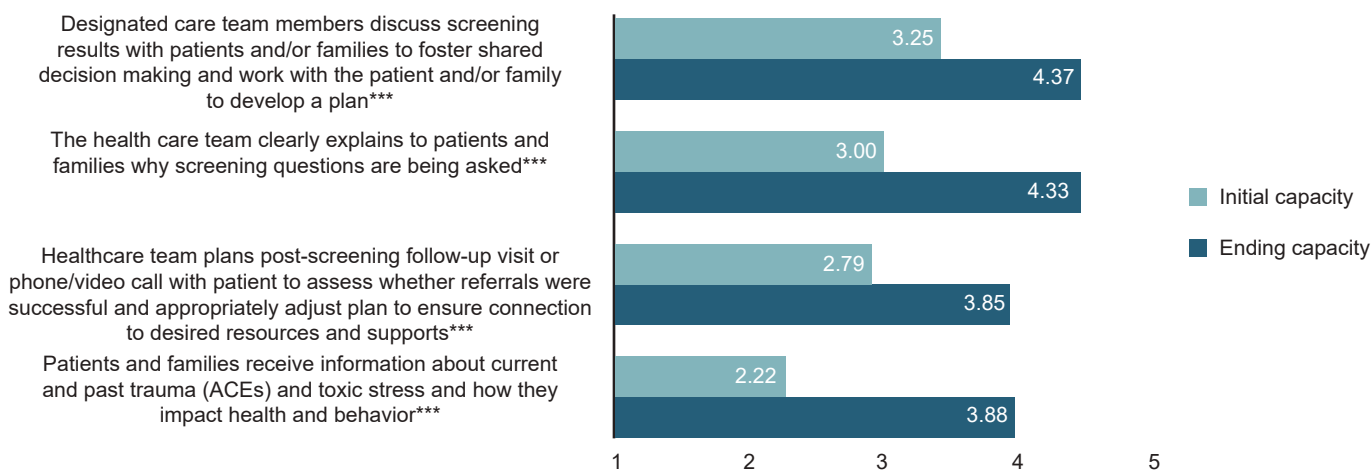
## 02 SCREENING & RESPONSE PRACTICE PART 2: DISCUSS AND RESPOND TO THE SCREENING



### Clinics' capacity for response and patient education increased

The CALQIC **TRIADS framework** for trauma inquiry emphasizes that, to be effective, screening should occur within a non-judgmental relationship among patients and their health care team (i.e., PCP, MA, and other care team members). Clinics rated their capacity significantly higher at the end of the initiative on most Core Capacity Index items related to communicating with patients and providing education and resources (Figure 11). Two items in this area that did not increase were related to providing warm hand-offs to internal supports or resources, which was already highly rated at baseline, and providing warm hand-offs for referrals to community-based specialists. Challenges that clinics experienced related to connecting patients to referrals are discussed later in this section.

**Figure 11: Average score of Core Capacity Index items related to patient education and response, initial and ending capacity**



Note: Paired samples t-test; \*\*\* $p < 0.0001$

Scale: 1 = No – This is not in place or doesn't happen as part of our operations  
 3 = Sometimes/somewhat – This is somewhat in place or sometimes happens, but is not standard practice  
 5 = Yes – This is consistently in place/usually happens as part of our standard practice and/or our culture

## 02 SCREENING & RESPONSE PRACTICE PART 2: DISCUSS AND RESPOND TO THE SCREENING

### In-visit conversations about the ACEs score were the most frequent response to screening

According to aggregate data submitted by CALQIC clinics, 50% of adult patients and 79% of pediatric patients whose screen warranted a response (per their workflows) had an in-visit conversation with a member of the care team that included discussion of their ACE score, trauma, toxic stress, strengths, and resilience (Figure 12).<sup>9</sup>

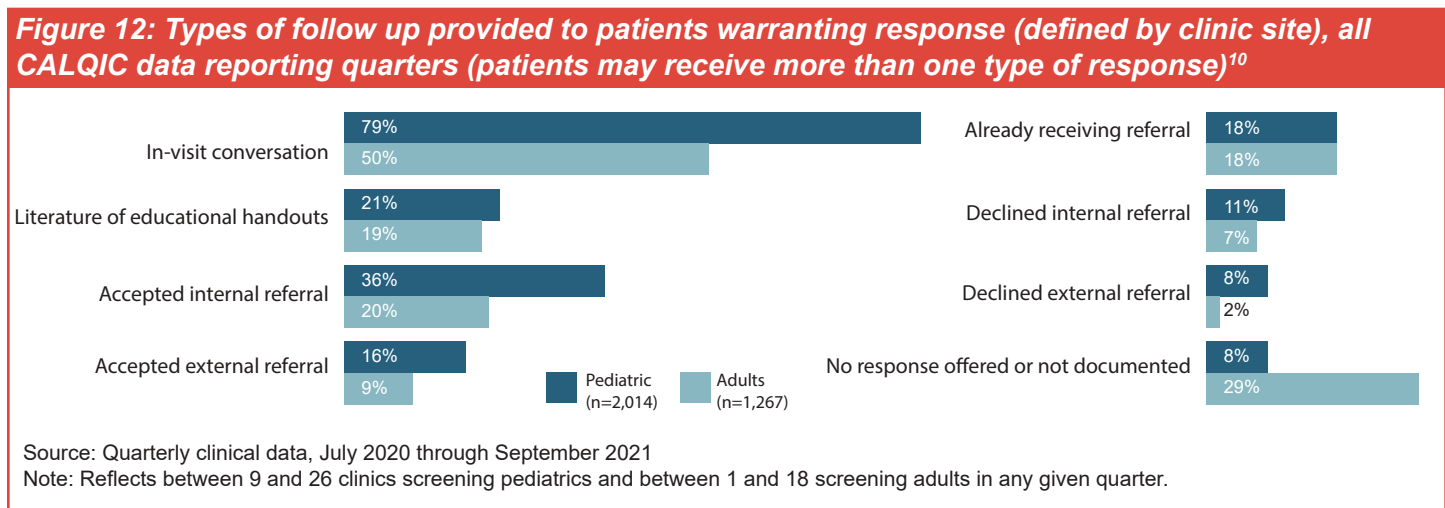
Many CALQIC teams reported that primary care providers found having a conversation and listening to their patient’s experience to be a worthwhile and sufficient response and were shifting away from their belief that a referral was always needed. In interviews, PCPs described their role in ACEs screening as:

*“We’re slowly learning that sometimes it’s not that we have to refer people somewhere, we can start a conversation with them about the things that they’ve been through and help them feel heard and understood.”*  
-CALQIC team member

- Building a trusting relationship with patients and families
- Destigmatizing discussions about ACEs and toxic stress and beginning a conversation about the impact of trauma on health
- Listening empathetically
- Connecting past ACEs to current care plans and identifying resources for acute needs
- Recognizing the power of acknowledging ACEs and being okay with not being able to “fix it”
- Providing universal education and educational handouts about toxic stress, healthy parent-child relationships, stress busters, etc.

### Providers connected patients to internal and external resources when needed

In addition to having a relational conversation with patients and providing them universal education, care teams offered referrals when additional support was needed. The most common was internal referrals, which often was to internal behavioral health services. Internal referrals were provided more often for pediatric than adult patients (Figure 12).<sup>9</sup>



<sup>9</sup> Each clinic site set their own definition of which screening results warrant response. While this often aligned with the state’s definition of high-risk (i.e., 4 or more ACEs), some clinic sites were more inclusive and identified larger groups of patients that warrant a response, e.g., patients with one or more ACE. Clinic sites reported data in aggregate to CCHE.

<sup>10</sup> Referrals are listed here as “accepted” for clarity; referrals may or may not receive active acceptance by the patient, e.g., if given a list of local food banks.

## 02 SCREENING & RESPONSE PRACTICE PART 2: DISCUSS AND RESPOND TO THE SCREENING

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Integrated behavioral health (IBH) resources were present at most participating clinics. In such clinics, being able to provide warm hand-offs to IBH helped primary care providers feel supported in starting a conversation about ACEs. About half of participating organizations noted challenges due to limited IBH capacity at their organization or challenges with coordination when behavioral health providers were working remotely.

In addition to IBH, other internal support included:

- Resource navigation or referral support through patient navigators or similar positions, though the staff member's title or official role varied.
- Various classes, programs, and support groups; the availability of these resources varied by clinic.

Fewer than 15% of patients whose screen warranted response accepted an external referral. While a variety of external supports were identified by clinics, including behavioral health and social needs (e.g., housing, food, legal aid), most organizations pointed out gaps in the resources available to patients externally and had limited capacity to follow up on whether external referrals were accessed by the patient.

CALQIC teams that mentioned referrals to Child Protective Services (CPS) noted that they had not seen an increase in CPS referrals since starting ACEs screening.



# 03 LEARNING COLLABORATIVE CONTRIBUTIONS



CALQIC teams reported that the learning collaborative contributed to their progress by enabling them to dedicate time for the team to meet, creating opportunities to learn from peers, and providing expertise and resources from CALQIC coaches, program staff, and subject matter experts. The funding and support provided by the learning collaborative was particularly important given the competing demands that clinics faced including responding to the pandemic.

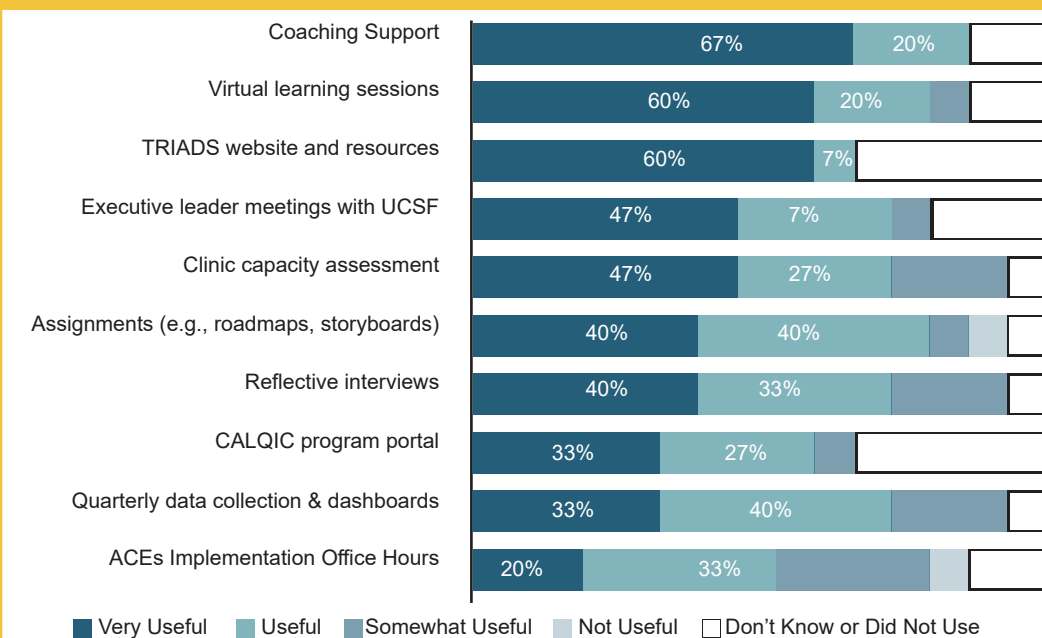
## The learning collaborative provided critical implementation support and resources

All CALQIC teams indicated that participating in the learning collaborative was a valuable use of their time and contributed to their ability to advance their ACEs screening and response. Specifically, participating in the learning collaborative enabled teams to prioritize and dedicate time for advancing ACEs screening and response efforts in their organizations. Most CALQIC teams indicated that they would not have been able to make the same level of progress without the funding, time, focus, accountability, and support provided by the learning collaborative, especially given the stressors of doing this work during the pandemic.

In addition to general support and funding, CALQIC teams appreciated the grant’s requirement that all participating organizations had to form a multi-disciplinary team to lead their CALQIC efforts. Participants reflected that having a multi-disciplinary team lead this work helped establish buy-in, provided support across the clinic, and ensured that they had diverse input throughout the process. As one implementation team member described, *“...the opportunity to bring all these people together in our organization, that’s been huge, because we don’t really have this opportunity with other things that we’re trying to do.”*

CALQIC team members were engaged in the learning collaborative activities and overwhelmingly reported positive experiences with all learning collaborative events and support, indicating that all components were useful (Figure 13).

**Figure 13: Usefulness of support in advancing organizations’ CALQIC work**



Source: Team lead survey (n=15), September 2021

### 03 CONTRIBUTION OF THE LEARNING COLLABORATIVE

Qualitatively, CALQIC teams highlighted the contributions of the top-rated types of support: coaching, virtual sessions (including peer learning opportunities), and the TRIADS framework, which are discussed below.

**Coaching.** The initiative provided one-on-one coaching support for each CALQIC team. Coaching was intended to support organizations in advancing their implementation goals, connect participants to resources and expertise, and provide technical support and guidance. Generally, coaches met virtually with CALQIC clinic teams once per month, ranging from 1 to 25 meetings (average of 13 meetings) with a coach during the duration of the initiative. Often the coach met with the team lead and provided email support and resources between meetings.

*“Our coach has been instrumental in getting our pilot going and making sure we’re not biting off more than we can chew.”*

-CALQIC team member

Participant feedback on coaching was very positive. CALQIC teams described how coaches helped them brainstorm, generate ideas, and problem-solve issues that arose as they advanced their CALQIC work. Coaches also facilitated connections with other teams and to relevant resources — both originating from CALQIC’s virtual sessions and more generally from the field of ACEs screening and response.

*“Our coach has been very supportive along this process and very generous in sharing her knowledge.”*

-CALQIC team member

**Virtual sessions.** The learning collaborative provided a total of seventeen 1-2 hour virtual sessions on a variety of topics (Box 4), which were well attended. The ten initiative-wide sessions had an average of 77 participants (range of 42 to 105). The seven more targeted communities of practice and office hours had an average of 27 participants (range of 17 to 40).

CCI conducted a poll after each event to assess participant satisfaction. During the initiative, there were a total of 497 evaluations returned and participants rated the sessions collectively as a 4.35 out of 5 in terms of experience and a 4.22 out of 5 as a good use of their time

CALQIC teams appreciated that the content was relevant and timely and stated that learning from peers was helpful.<sup>11</sup> One team member noted, *“There hasn’t been a seminar or meeting that I’ve participated in where I didn’t feel like I walked away with a tool in hand or a better understanding of the why and how to communicate that.”*

#### Box 4: CALQIC virtual sessions

10 sessions focused on initiative structure, peer sharing, and content related to the TRIADS framework

2 community of practice sessions related to ACEs screening and response data

5 “office hour” and/or team lead sessions for CALQIC teams to receive support on completing their project roadmap and reporting evaluation data

The virtual sessions also modeled for CALQIC teams how to incorporate trauma-informed practices in their own clinic sites and team interactions. In particular, teams appreciated how the CALQIC meetings were run, how presenters talked about trauma and used a wellness lens, and how staff and presenters worked together and supported one another.

<sup>11</sup> All content from the virtual sessions is available on CCI’s CALQIC portal, and can be accessed here: <https://www.careinnovations.org/calqic-portal/>

### 03 CONTRIBUTION OF THE LEARNING COLLABORATIVE

**Peer learning:** Peer learning mostly happened through breakout sessions during the initiative-wide virtual sessions. The breakout sessions brought together a small number of teams to share accomplishments, challenges, and respond to reflective questions. Teams reported that it was valuable to be able to connect with and learn from other CALQIC teams' experiences and challenges. Several CALQIC teams noted that hearing from their peers helped them see the various ways to implement ACEs screening and response, which helped them ask new questions and consider how they might address them.

*"The times we're able to speak to other organizations and hear what they're going through — their learning curves, their woes, their successes — has really helped us push forward and made us feel like this is something we could do."*

-CALQIC implementation team

**TRIADS framework.** CALQIC teams were introduced to the **TRIADS framework** in September 2020. TRIADS was perceived by most CALQIC teams as a helpful, comprehensive, and valuable resource. As one provider shared, *"For a year I've tried to find out the world of ACEs on my own. And then it was all in the TRIADS document, so that has been glorious."*

Reported benefits of the framework included that it: compiles numerous useful, concrete resources, like workflows; explains the health impacts of ACEs and how to connect screening results and clinical response; and takes a strengths-based approach to developing a more holistic picture of the patient. Many CALQIC teams that were earlier in their journey perceived TRIADS as more helpful than those who were initially further along in understanding the landscape of implementing ACEs screening and response.

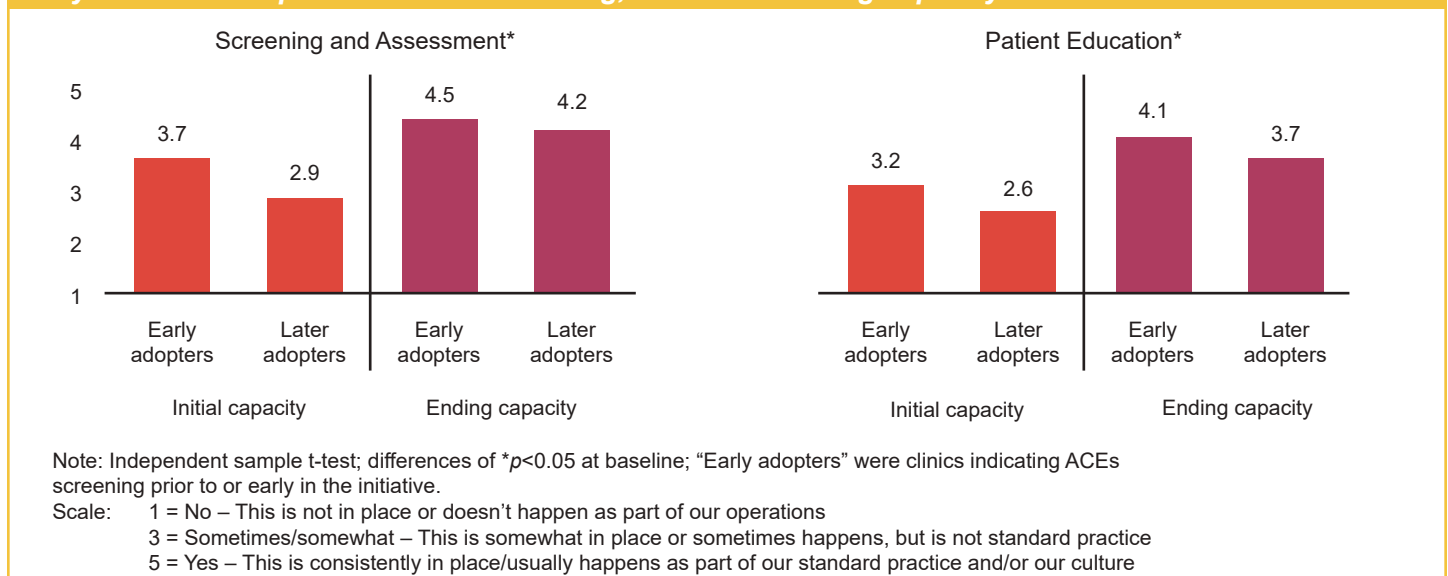
*"They have done a great job compiling some of the most useful and relevant resources for the work [in TRIADS]."*

-CALQIC implementation team

#### CALQIC accelerated capacity building for clinics who were at earlier stages of their journey

The CALQIC capacity assessment indicated that clinics who were early adopters of ACEs screening had higher initial capacity in the Environment, Patient Education, and Screening & Assessment domains than later adopters. By the end of the initiative, average capacity in the Patient Education and Screening & Assessment domains were statistically similar between the two groups. This suggests that the CALQIC learning collaborative helped the later adopters "catch up" to the capacity levels of clinics who had already been screening (Figure 14).

**Figure 14: Average domain score in Patient Education and Screening and Assessment domains for early and later adopters of ACEs screening, initial and ending capacity**



# 04 SUSTAIN & SPREAD SCREENING PRACTICE



Most organizations viewed participation in CALQIC and implementation of ACEs screening and response as part of a larger strategic priority to create a trauma-informed and healing culture within their organizations. They discussed a commitment to continue to spread screening practice to other providers, patient populations, or clinics.

## Participating organizations were committed to sustaining and spreading screening

The majority of organizations were committed to building a trauma-informed culture and saw implementing ACEs screening and response to be a critical part of that journey. Implementation teams did not see participation in CALQIC as a time-bound, grant-funded effort, but rather as part of a longer-term strategy. In final interviews, implementation teams talked about their next steps, which are described below.

*“It is part of who we are. We care for the whole person and we are interested in understanding the impact of past experiences on their physical, emotional, and psychological health. We will continue to meet regularly to study our efforts, successes, and challenges.”*

-CALQIC team member

### Next steps

### Examples

Institutionalizing screening workflows as part of standard care

- Ensuring that screening is a permanent part of their clinic workflow
- Providing ongoing training and coaching on workflow implementation

Providing ongoing trauma-informed care training for existing and new staff and providers

- Integrating trauma-informed care training into onboarding and orientation for all new hires, with the goal of creating a shared language across the organization
- Conducting annual trauma-informed care training for the whole organization

Spreading their screening practices to other providers, patient populations, or clinics

- Spreading ACEs screenings to pediatric clinics and all ages
- Adapting workflows to expand to adult screening
- Spreading to new sites on a rolling basis to ensure there is bandwidth to support providers and staff during implementation

Strengthening referral networks and increasing available resources

- Advocating for increased integrated behavioral health capacity
- Building a network of care between clinics, the health system, and community-based organizations to streamline referral pathways
- Pursuing a partnership with local schools and family resource centers to increase universal education

Improving data systems to continue to monitor data to support implementation

- Creating a smart form in EHRs, and taking steps to improve referral tracking
- Adding ACEs screening data into clinical dashboards to keep progress visible to leaders
- Using validated metrics on ACEs screening and response to share data with care teams



# 05 IMPACT OF SCREENING



In interviews, CALQIC teams, primary care providers, and MAs were asked to comment on the impact of ACEs screening response on them (personally and professionally), their clinics, as well as their perceptions of how screening had been received by patients. Overwhelmingly, interviewees reported that the impact of screening has been positive. The section below provides themes from interviews about how impact was described.

## Impact on medical assistants

When MAs talked about the impact of screening on them, they most commonly talked about how screening:

- Created increased understanding, compassion, and empathy for their patients.
- Contributed to job satisfaction by being part of something that benefits patients and helps connect patients to needed resources.
- Prompted them to reflect on their personal adverse childhood experiences and history. Some found reflecting on their own experiences healing, but they emphasized that they needed to be prepared for an emotional response (especially if reading the questions out loud to the patient).
- Increased their understanding of ACEs, trauma, and resilience and their relationship to health outcomes, so that they can then explain to others in clinic and in the community.

## Impact on primary care providers

The PCPs that were interviewed believed in the need for and potential positive impact of ACEs screening, and that it supported the care they provide. Pediatric providers expressed hopefulness about being able to potentially prevent negative effects of ACEs on their patients. PCPs emphasized that ACEs screening provides an opportunity to:

- Get to the root causes of health issues, which improves the care they provide
- Create a deeper, more empathetic connection with their patients
- Incorporate trauma-informed principles into care more broadly—with patients and their colleagues

*"It brings more light to the patient's current diagnoses and current health issues. Being able to tie it together in that way has been helpful."*

-Medical Assistant

*"I think to some people it is healing... It gives them a way to bring [ACEs] up when they didn't know they could. And in those moments, I feel super connected. I've been in the medical field for 18 years. You don't ever get to that point [of connection] with a lot of patients, and we're getting there quite a bit when we're doing the [ACEs] questionnaire."*

-Medical Assistant

*"It helps tap into empathy when you're otherwise burned out or helping people who have problem lists that are so long and it seems like they're not getting better—having an awareness about their childhood experiences paints them in a different light."*

-Primary Care Provider

*"I think [screening has] improved the care that patients are getting simply by asking about toxic stress and having those conversations... It's not always easy, but when you're able to help patients, it makes you feel good and increases job satisfaction."*

-Primary Care Provider



## 05 IMPACT OF SCREENING

### Perceived impact on patients

Most PCPs and MAs reported that patients and caregivers responded positively to ACEs screening and shared that patients have:

- Expressed gratitude to providers for asking these questions and listening
- Shared information or stories that helped to deepen providers' understanding of the patient or family and connect them to additional resources
- Indicated that they understand the importance of the screening
- Benefited from connecting past experiences to current health
- Been more open to the conversation due to the collective trauma experienced by the community during COVID

Some clinics noted that a minority of patients declined to complete the screener and shared some concern about perceived incongruence between screening form responses and disclosures patients may have made verbally. Nonetheless, in many cases, PCPs felt that patients' initial hesitation or emotional response to screening enabled providers to begin a healing conversation or helped inform care plans. PCPs shared stories of how ACEs screening informed their interactions with patients (Box 5).

*"I get really positive feedback from [screening]. It's taken a long time for people to get onboard about how childhood trauma affects physical health and for patients to put that together has been amazing."*

-Primary Care Provider

*"One parent told me, 'So many people need this so thank you for asking.'"*

-Primary Care Provider

#### **Box 5: Examples of impact from primary care providers**

"When we start talking about a patient's score of 8, there is tearfulness, but it also helps us get to a place of me understanding them. I've been their doctor for a long time and we haven't gotten there because they're so put together; they hold it all in. [For example] for one patient, I diagnosed her with really severe depression. I don't think I would have done the depression screen on her normally, but the ACE score and her reaction to that screening prompted me to assess her for depression. She scored in the severe range and we're now treating her with meds and other self-care techniques."

"What was most impactful to me and one of my patients was when I screened a patient that resulted in a 10/10 score. Through a motivational interview, I was able to introduce the patient to multiple resources and connect with my patient so that now she's less hesitant, more open to discuss her concerns, and is willing to visit our Behavioral Health team. This ACEs screening is a staple of whole-person, trauma informed care."

"If we had not screened this child for adverse childhood events, or asked about past or present stressors, I don't think the mom would have disclosed any of that information to us. Without ACEs, I can see how we can miss so opportunities to help our patients and families who may suffer in silence. If we fail to identify and address ACEs, we're ultimately failing the community we serve by placing them at greater risk for poor outcomes that affect the individual and those they interact with in the present and into their futures."

## 05 IMPACT OF SCREENING

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### Impact on the participating clinics

In addition to talking about individual impact, during interviews, the CALQIC teams provided examples of how implementing ACEs screening within the context of creating a trauma-informed organization impacted their organization. They talked about how this work provided them with a consistent language, improved how they interact with each other, and improved how they approach other sensitive screenings.

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#### Consistent language

*"It's given us a universal language across all staff. Often providers are privy to a training where they're talking about the effects of trauma and being more trauma-informed and it doesn't always trickle down to MAs and front office staff in the way that this work has. We now have a collective vocabulary, and we are all making changes and stopping to reflect."*

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#### Improved interpersonal relationships

*"The biggest thing for me is not just treating our patients in a trauma-informed way but treating people in general, including staff and each other, in a trauma-informed way."*

*"Over the last year and a half, I feel that we're treating each other better, that we're listening to each other better, and seeing each other's skills and talents in a different light. I think that comes from a focus on trauma and resilience informed communications and seeing ourselves and our staff as humans that also have the same biophysiology. I feel like we've given each a lot more grace and acknowledged each other in a different way."*

*"I have noticed personally interacting with staff and patients that there's been a change. When I'm talking to people and they're dealing with a difficult patient, there's a different tone to it now. There's a lot more empathy and understanding of where this might be coming from. That it's just not someone acting out, but there is a reason for it."*

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#### Informing other aspects of care

*"As an organization, [ACEs screening has] positioned us well to think about our trauma-informed care, about sensitive screenings, and how we can best administer them. How we can make sure we're not causing trauma to our staff while we're doing these screenings, how we can move the process forward to help our patients."*

## CONCLUSION



CALQIC launched a 16-month learning collaborative at the beginning of the COVID-19 pandemic. This required everyone — CALQIC leaders and participating teams — to respond and think differently about how they could advance ACEs screening and response in a rapidly changing environment. For many, the pandemic underscored the importance of this work as many staff and patients experienced adverse effects and even trauma from the pandemic and other stressors. CALQIC’s focus on trauma and resilience helped CALQIC teams build buy-in for implementing new screening practices. At the same time, the shift to telehealth sometimes made it more difficult for care teams to connect with patients and build rapport.

While these past 16 months were tremendously challenging for health centers, the CALQIC initiative-wide evaluation found that participating teams made significant progress in advancing ACEs screening and response. At the beginning of the learning collaborative, less than half of the clinic sites were screening (20 of 48 clinic sites). The initiative ended with all 15 organizations and 42 of the 48 participating clinics screening for ACEs.

CALQIC teams invested in building the infrastructure needed to establish and strengthen an equitable ACEs screening and response practice in their organization. In the Core Capacity Index, clinics reported a statistically significant improvement in 14 of the 16 items from baseline to the end of the initiative. Qualitatively, organizations made progress in establishing buy-in, providing training, creating workflows, leveraging QI approaches, and building data infrastructure. Clinic sites intentionally established screening practices that focused on empathetic communication and building trusting relationships with patients and families. As a result, they reported ACEs screening has had a positive impact on patients, medical assistants, and primary care providers.

Participating in CALQIC helped teams stay focused on this work when staff were reassigned to COVID response and vaccination efforts. CALQIC teams reported that the learning collaborative helped by providing dedicated time for the team to meet, creating opportunities to learn from peers, and connecting them to expertise and resources from CALQIC coaches and program staff.

At the end of the initiative, CALQIC teams were committed to continuing this work beyond the initiative’s end. They were focused on building systems to seamlessly integrate ACEs screening into their workflows and, more broadly, continuing their efforts to become more trauma-informed, healing organizations.

## CONSIDERATIONS & NEXT STEPS



Based on the evaluation findings, the following considerations are offered to increase adoption and acceptability of ACEs screening and response across the state:

### **1 Position ACEs screening and response within the context of creating trauma-informed organizations, including focusing on improving health equity and staff wellbeing.**

Organizations were more successful when they framed ACEs screening and response as part of a cultural change to become more trauma-informed organizations. For many organizations, this was the starting point—it established the intention for the work and helped to explain why they were doing screening and was key to establishing buy-in from leaders, providers, MAs. Many organizations talked about integrating their vision of becoming a trauma-informed organization into their strategic plan, which helped staff and providers stay focused on the long-term vision as they approached training and implementation.

Part of creating a trauma-informed organization included creating structures that support the wellbeing of providers and staff. In CALQIC, organizations supported staff and provider wellbeing in various ways, including a focus on mindfulness, creating space for reflection, and access to behavioral health and other resources for self-care.

While equity was a significant focus in CALQIC, there is an opportunity to embed equity more holistically as a critical component of creating a trauma-informed healing culture. This would encourage teams to elevate equity as an integral part of their culture (e.g., ensuring language access, hiring providers reflective of the patient population, creating racially diverse teams to oversee this work, using race and ethnicity data to surface and address disparities in how patients are managed or screened).

### **2 Support clinics to develop the necessary foundation and environment for effective screening.**

Clinics needed to have a supportive infrastructure established to effectively prepare and support staff and providers to implement ACEs screening and response. Key facilitators included establishing buy-in, developing and implementing workflows, providing training and support to staff, building data and QI systems, and approaching the work with a focus on health equity. The 16-item Core Capacity Index developed for CALQIC could help assess the extent to which the necessary infrastructure is in place as clinics are beginning to implement ACEs screening.

### **3 Promote the formation of multi-disciplinary teams to build buy-in and be accountable for advancing ACEs screening and response within the clinic.**

Building infrastructure and supporting implementation of screening was aided by the formation of a multi-disciplinary team to build buy-in and be accountable for advancing ACEs screening and response. The multi-disciplinary team brought diverse perspectives to the implementation process, ensuring that key perspectives were represented. Two perspectives that were critical, and not consistently engaged across all CALQIC teams, were **medical assistants**, who played a critical role in introducing the screener to patients, and **data analytic and QI staff** to support a data-informed approach to implementation, learning, and spread.

## CONSIDERATIONS & NEXT STEPS

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### **4 Build primary care providers' confidence and comfort with discussing screening results with patients and families, including skills for empathetic communication and concrete tools and resources for response.**

The most common response to an ACEs screen was an in-visit conversation with the primary care provider. It is critical that the PCP feels supported and prepared to have the conversations in a way that destigmatizes ACEs, uses a strengths-based approach, and provides appropriate tools, resources, or referrals to meet patient needs. The support should focus on building PCPs' skills in empathetic listening and having relational conversations with patients. These skills will help PCPs create a safe and supported place for patients' emotional responses—not viewing an emotional response as negative, but as part of healing. Finally, PCPs should be reassured that they do not need to cover everything in an initial conversation, nor do they have to “fix” their patients' adverse experiences. There are benefits to acknowledging and destigmatizing ACEs and ACEs-associated health conditions and doing so as part of a patient's care going forward.

### **5 Encourage clinics to start with small pilots and refine workflows before spreading and set realistic expectations for screening volume and rates.**

Clinic implementation went more smoothly when they started with a small pilot. This allowed clinics to test and refine the workflow to resolve issues before spreading to additional PCPs and MAs who may have been more hesitant to start screening. Starting small also allowed clinics to leverage best practices in QI methodology, which most clinics are familiar with from other clinic improvement efforts. However, starting small means that screening volume will initially be low. If this work is supported through grants or learning collaboratives, realistic expectations need to be set, acknowledging that this work takes time to do well, and allowing clinics to roll out screening at a pace that feels appropriate for their clinic context—not only driving towards volume.

### **6 Provide implementation support to clinics, including dedicated FTE/protected time, access to subject matter experts, tools, resources, and opportunities for peer learning.**

Like any change effort, implementing ACEs screening and response requires dedicated time and support throughout implementation. In CALQIC, this support was provided through the learning collaborative. The peer learning opportunities and individualized coaching helped teams get new ideas, share resources, and work through challenges. The funding and grant requirements provided dedicated time and accountability to move the work forward. Without the support from the learning collaborative, clinics would not have been able to make the progress they made, especially while also responding to the COVID-19 pandemic.

### **7 Focus on structural challenges within primary care, including addressing visit length and increasing integrated behavioral health services.**

PCPs reported the primary reason a conversation may not have occurred about the screening was that there was not enough time during the typical 15-minute primary care visit to cover everything and ACEs screening felt like one more thing that they had to address. The preexisting structural limitations and time pressures on the relatively short primary care visit influenced providers' confidence in being able to consistently implement ACEs screening across their clinics.

Additionally, integrated behavioral health services were identified as the most common referral from ACEs screening. PCPs appreciated being able to do a warm hand off to know that the patient was connected with a member of the care team who could provide mental health treatment. However, there were significant concerns about limited capacity of integrated behavioral health services, given that few organizations have sufficient behavioral health providers to meet the needs of their patients.



## APPENDIX A: PARTICIPATING ORGANIZATIONS

Organization Name	Location HQ City, Region	Participating CALQIC clinic sites Name (City if not part of name)	Approx. # of Medi-Cal patients served annually by CALQIC clinic sites
Borrego Community Health	Borrego Springs, San Diego/Inland Empire	1. Arlanza Family Health Center (Riverside) 2. Centro Medico Cathedral City 3. Centro Medico El Cajon	40,000
Eisner Pediatric & Family Medical Center	Los Angeles, Los Angeles	1. Eisner Health Downtown LA 2. Eisner Health Lynwood 3. Eisner Health Panorama City 4. Eisner Health Intergenerational Health Center (Sherman Oaks) 5. Eisner Health Van Nuys	20,000
Family Health Centers of San Diego	San Diego, San Diego	1. Downtown Family Health Center at Connections (San Diego) 2. El Cajon Family Health Center 3. Elm Street Family Health Center (San Diego) 4. North Park Family Health Center (San Diego)	30,000
Harmony Health Medical Clinic & Family Resource Center	Marysville, NorCal	1. Harmony Health Medical Center and Family Resource Center Marysville) 2. Harmony Health Medical Center and Family Resource Center (Yuba City – Plumas) 3. Harmony Health Medical Center and Family Resource Center (Yuba City – Del Norte)	3,000
La Clinica de La Raza	Oakland, Bay Area	1. La Clinica Monument (Concord) 2. La Clinica Oakley 3. La Clinica Pittsburg Medical	8,000
Long Valley Health Center	Laytonville, NorCal	1. Long Valley Health Center (Laytonville)	1,000
Los Angeles Christian Health Centers	Los Angeles, Los Angeles	1. Joshua House (Los Angeles) 2. Pico Aliso Clinic (Los Angeles)	6,000
Los Angeles County Department of Health Services	Los Angeles, Los Angeles	1. East San Gabriel Valley Health Center (Covina) 2. High Desert Regional Health Center Pediatrics (Lancaster) 3. Hubert H. Humphrey Comprehensive Health Center (Los Angeles) 4. Olive View-UCLA Medical Center Hub (Los Angeles) 5. Olive View-UCLA Medical Center Pediatrics (Los Angeles)	11,000
Marin Community Clinics	Novato, Bay Area	1. Novato South Clinic 2. San Rafael Campus Clinic 3. San Rafael Clinic	22,000
Northeast Valley Health Corporation	San Fernando, Los Angeles	1. Canoga Park Health Center 2. Maclay Wellness Center (Pacoima) 3. Newhall Health Center (Santa Clarita) 4. Sun Valley Health Center	15,000
Petaluma Health Center	Petaluma, Bay Area	1. Coastal Health Alliance (Point Reyes Station) 2. Petaluma Health Center 3. Rohnert Park Health Center	20,000

## APPENDIX A: PARTICIPATING ORGANIZATIONS

Organization Name	Location HQ City, Region	Participating CALQIC clinic sites Name (City if not part of name)	Approx. # of Medi-Cal patients served annually by CALQIC clinic sites
Santa Barbara Neighborhood Clinics	Santa Barbara, Central Coast	<ol style="list-style-type: none"> <li>1. Eastside Neighborhood Clinic (Santa Barbara)</li> <li>2. Goleta Neighborhood Clinic</li> <li>3. Isla Vista Neighborhood Clinic</li> <li>4. Westside Neighborhood Medical Clinic (Santa Barbara)</li> </ol>	8,000
Santa Rosa Community Health	Santa Rosa, Bay Area	<ol style="list-style-type: none"> <li>1. Dutton Campus (Santa Rosa)</li> <li>2. Lombardi Campus (Santa Rosa)</li> <li>3. Vista Campus (Santa Rosa)</li> </ol>	28,000*
Sonoma County Indian Health Project	Santa Rosa, Bay Area/ NorCal	<ol style="list-style-type: none"> <li>1. Satellite Clinical Services Manchester/Point Arena Location (Point Arena)</li> <li>2. Santa Rosa Location</li> </ol>	1,500
University of California San Francisco – Fresno	Fresno, Central Valley	<ol style="list-style-type: none"> <li>1. UCSF Family Medicine (Fresno)</li> <li>2. UCSF Pediatrics (Fresno)</li> <li>3. UCSF OB/GYN (Fresno)</li> </ol>	28,000

\* Values reflect patients served by clinic sites participating in CALQIC, except for Santa Rosa, who could only report for their organization.  
Source: Clinic Characteristics forms submitted to CCHE Summer 2020

## APPENDIX B: EVALUATION METHODS

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. The organization-level case studies were used as an analytic tool to triangulate data across methods and inform the key findings presented in this report.

Method	Description & Analysis
Clinical data reporting	<p>CALQIC teams report quarterly on 4 metrics:</p> <ul style="list-style-type: none"> <li>• Percent of Medi-Cal PCPs attested to the state ACEs training</li> <li>• Screening rates (% of eligible patients screened for ACEs)*</li> <li>• Percent of screened patients with 4 or more ACEs)*</li> <li>• Response rates (% of patients warranting follow up who received a response)</li> </ul> <p>* CALQIC teams were asked to report these measures segmented by race and ethnicity</p> <p>Aggregate clinic-level data were submitted to CCHE quarterly using a Microsoft Excel reporting template. CCHE provided data summaries (dashboards) back to each team to validate the data and encourage teams to share and discuss the data within their clinics. Clinic sites used different methods for tracking and reporting these data, for example automated reports from an electronic data system or “hand counting” patient records. Patient-level data were not shared with CCHE.</p> <p>This report includes data from July 2020 through September 2021. Not all clinic sites were able to report on all metrics. Some CALQIC teams screening for ACEs were not able to report data on screening rates (10% at the start of the initiative or 2 of 20 clinics screening, 2% at the end or 1 of 42 clinics screening). Some CALQIC teams reporting data on screening rates were not able to report data on response rates (25% at the start of the initiative or 5 of 20 clinics screening, 2% at the end or 1 of 42 clinics screening). See Appendix C for more detail on clinics reporting screening and response each quarter.</p> <p><b>Analysis:</b> CCHE reviewed data and conducted basic validation checks to identify quality issues and worked with teams to revise erroneous values as needed. The four CALQIC measures were calculated as described above for the cohort overall and for individual clinics. To provide team summaries (dashboards), data were analyzed and presented to show changes over time within a single clinic site. The dashboards displayed comparisons of individual clinics to other clinic sites within their organization.</p>
Team lead survey	<p>Each organization’s CALQIC implementation team lead completed an online REDCap survey to understand teams’ capacities to collect, use, and report data on ACEs screening and response (July 2020, April 2021, and September 2021) and usefulness of learning collaborative supports, e.g., virtual learning sessions, coaching, etc. (September 2021). Survey questions were closed-ended and included the team lead’s level of confidence in data quality, frequency of data use to inform implementation, and usefulness of supports.</p> <p><b>Analysis:</b> Responses were downloaded from REDCap into Microsoft Excel for analysis across the cohort. Basic descriptive analysis was applied to the usefulness questions, while data capacities were grouped into the following levels based on teams’ responses to inform the findings in this report:</p> <ul style="list-style-type: none"> <li>• Level 1 – unable to report/not reporting screening data</li> <li>• Level 2 – able to report data, but have concerns about quality or high proportion of missing data</li> <li>• Level 3 – able to report data, confident in data quality.</li> <li>• Level 4 – periodically sharing and using data to inform improvement efforts</li> <li>• Level 5 – routinely monitoring, sharing, and using data to assess current practice &amp; inform improvement</li> </ul>

## APPENDIX B: EVALUATION METHODS

Method	Description & Analysis
Clinic capacity assessment	<p>The capacity assessment assessed each clinic sites' capacity related to effectively integrating education, screening, and response for ACEs in alignment with the TRIADS framework at the start (August and September 2020) and end of the initiative (August and September 2021). At the clinic-level, the results were intended to help individual teams identify strengths and opportunities to improve clinical practice or organizational culture. Collectively, the results from all participating clinics were intended to describe the cohort's capacity and inform this and future programs regarding what support is needed related to ACEs education, screening, and response. The assessment tool was developed for CALQIC by CCHE in collaboration with CCI and CALQIC partners at UCSF. Questions were adapted from the <b>TRIADS framework</b>, the American Institute for Research <b>Trauma-Informed Organizational Capacity Scale</b>, the <b>System of Care Trauma-Informed Agency Assessment</b>, the <b>National Council for Behavioral Health's Organizational Self- Assessment for trauma-informed primary care</b>, and the <b>Pediatric Integrated Care Collaborative framework</b>.</p> <p>The assessment consisted of 56 items across 5 domains (access the full tool <a href="#">here</a>). Items were clustered by the goal they were seeking to advance. There were between 2-6 goals in each domain. Clinic teams rated items on a consistent, 5-point scale with an option to select "unsure." The following process was followed in administering the assessment at both timepoints:</p> <ul style="list-style-type: none"> <li>• CALQIC teams were sent the assessment as a Microsoft Word document along with a link to a REDCap online survey to submit their responses.</li> <li>• Multi-disciplinary teams were encouraged to collaborate to complete the assessment and submit one consensus response for each item.</li> </ul> <p>At baseline, of 48 participating clinics, 43 completed the assessment. The five sites that did not complete the initial assessment reported they had not yet begun conversations about ACEs screening at their clinic. Forty-one of these clinics also completed a final assessment in 2021. The two missing clinics did not end up participating in the CALQIC initiative, reflecting clinics that both did not start screening and did not receive the CALQIC intervention.</p> <p><b>Cohort-level analysis:</b></p> <ul style="list-style-type: none"> <li>• Clinics' assessment responses were downloaded from REDCap into Microsoft Excel. Responses of "Unsure" were removed from quantitative analysis and exclusively used for qualitative contextualization. Quantitative data were then moved to SAS 9.4 for analysis. Only clinics with both a baseline and final assessment were included in the analysis.</li> <li>• Mean scale scores and standard deviations were calculated using clinic-level responses (vs. organization-level responses) to minimize over-weighting organizations with fewer participating clinics.</li> <li>• Cohort means were calculated for the 56 individual assessment items, the 5 TRIADS domains, the Core index, and the Health Equity index (see Appendix D for more detail about these indices). Comparison of means tests were conducted to detect statistically significant differences on individual assessment items both over time and between groups. Two important groups in the learning collaborative were clinics who reported conducting ACEs screening either prior to or early on in the program, and clinics who began ACEs screening later during the initiative. These "early adopters" formed a group of 20 clinics that reported ACEs screening to CCHE during the first quarter of the initiative. The remaining clinics indicated screening began in the second quarter or later.</li> <li>• Reflections from CALQIC program staff and coaches were used to support quantitative data interpretation.</li> </ul> <p>All CALQIC teams received organizational-level reports with the assessment results for each of their clinic sites at both time points to inform their work as part of the learning collaborative. Organizational- and clinic-level analysis methods are not presented here.</p>

## APPENDIX B: EVALUATION METHODS

Method	Description & Analysis
Team interviews	<p>One-hour CALQIC team interviews (N=15) were conducted at mid-point (in February and March 2021) and at the end of the initiative (September and October 2021) to collect qualitative data on progress, changes in organizational characteristics and practices, and lessons related to screening implementation and building trauma-informed cultures of care.</p> <p>The interviews were conducted with CALQIC team leads and key players involved in the implementation of screening and response. Generally, 2-4 people from the team joined the interviews and most teams had at least one provider champion on the calls.</p> <p>The CALQIC team interview protocol comprised a variety of topics related to screening and response, including:</p> <ul style="list-style-type: none"> <li>• What teams were most proud of</li> <li>• Clarifications related to current screening practices and response</li> <li>• Perceptions of staff, provider, patient, and families' experiences with screening</li> <li>• Facilitators and barriers</li> <li>• Feedback on participation in the CALQIC learning collaborative</li> <li>• Only at end point: Plans or next steps after the initiative ends</li> </ul> <p><b>Analysis:</b> Interviews were digitally recorded and transcribed. CCHE conducted a thematic analysis of the transcripts. Codes were developed <i>a priori</i>, based on the interview protocol, and empirically, based on emergent themes. Transcripts were coded in Atlas.ti 8.4.</p>
Clinic site interviews	<p>CCHE conducted 30-minute interviews with medical assistants (MAs) (n=13) and providers (n=14) with experience implementing ACEs screening and response. Interviews were conducted in July and August 2021 to understand clinic implementation, success factors and challenges, and staff/clinician perceptions and experiences with ACEs screening. Interview participants were selected from 12 organizations based on clinic sampling criteria that balanced experience with implementation prior to CALQIC, and pediatric/adult and in-person/telehealth workflows to ensure the diverse breadth of clinic experiences were represented. One provider and one MA each were recruited from one clinic in 10 organizations and two clinics from 2 organizations. Three organizations were excluded due to their participation in RAND "deep-dive" interviews. Only 1 interview was not able to be scheduled out of the 28 that were planned. Respondents were provided a \$100 gift card as a thank you for their time.</p> <p>MAs were asked about their experience introducing the screener including reactions from patients and families, their feelings about conducting screening, support or training they received, and advice they would share with other MAs.</p> <p>Providers were asked about their experience discussing the ACEs score including reactions from patients and families, clarifications related to the referral process, their feelings about conducting screening and response, support or training they received, and lessons or advice they would share with other providers.</p> <p><b>Analysis:</b> Interviews were digitally recorded and transcribed. CCHE conducted a thematic analysis of the transcripts. Codes were developed <i>a priori</i>, based on the interview protocol, and empirically, based on emergent themes. Transcripts were coded in Atlas.ti 8.4.</p>
Coaching insights	<p>CCHE engaged with the CALQIC coaches to capture insights on organizations' progress, as well as quality improvement and implementation lessons learned. To capture these insights, CCHE reviewed coaching logs monthly, facilitated monthly reflective calls with the CALQIC coaches as a group, and conducted a brief survey at the end of the initiative where coaches rated teams engagement, progress, and the contribution of CALQIC.</p> <p><b>Analysis:</b> Reflections from the coaches were used to prepare for interviews and information from coaching logs and survey was analyzed as part of the organization-level case studies (see below).</p>



## APPENDIX B: EVALUATION METHODS

Method	Description & Analysis
Document review: learning collaborative deliverables	<p>CCHE leveraged learning collaborative deliverables to capture goals, strategies, accomplishments, challenges, and lessons learned.</p> <p><b>Analysis:</b> Organizations' roadmaps, storyboards, and grant applications were synthesized and analyzed as part of the organization-level case studies (see below). Variables from clinic workflow diagrams were input into a Microsoft Excel spreadsheet and aggregated.</p>
Case studies	<p>CCHE compiled data across all sources into one organized and comprehensive analytic case study for each participating organization (N=15). The goal was to understand and describe each organization's intervention and the real-life context in which it occurred, and case studies were used as an analytic tool to triangulate data across methods. All case studies followed a template and were 10-25 pages in length. Case studies were initially developed in July and August 2021 and updated with final data in October and November 2021.</p> <p>Each organization's case study was organized into the following sections:</p> <ol style="list-style-type: none"> <li>1. Summary of the organization</li> <li>2. Clinic characteristics</li> <li>3. Team description</li> <li>4. Readiness to implement</li> <li>5. Project description</li> <li>6. Foundation infrastructure</li> <li>7. Staff training and support</li> <li>8. Screening</li> <li>9. Response</li> <li>10. Health Equity</li> <li>11. Factors influencing implementation</li> <li>12. Sustainability and spread</li> <li>13. Impact on the organization, clinics, or community</li> <li>14. Provider perceptions of screening impact on patient interactions</li> <li>15. Engagement in the learning collaborative</li> </ol> <p><b>Analysis:</b> Case studies were uploaded into Atlas.ti 8.4 for coding. A code list was developed <i>a priori</i> based on the case study structure and updated based on emergent themes with agreement from both coders. Two coders independently coded the first case study and compared their results to establish coder agreement. CCHE conducted a thematic analysis of the resulting codes looking across case studies for areas of agreement and disagreement. The resulting cross-case analysis informed the key findings and results in the final report.</p>

## APPENDIX B: EVALUATION METHODS

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### Limitations

There are several limitations to the findings in this report, which are discussed below by primary data collection method.

**Clinical data on screening and response rates:** Because the learning collaborative encouraged participating clinics to develop their own ACEs screening and response workflows, the measurement approach also varied to align with clinical practices. This complicated how the evaluation could describe screening and response rates because there were differences across organizations in how they defined key metrics (e.g., using different denominators). Clinics were also using quality improvement approaches that led some to adjust criteria for who to screen and what warrants a response, which resulted in changing denominators for a single clinic, likely affecting rates over time. Clinics also reported various challenges related to data quality and completeness over time, including challenges computing a denominator for screening rates, and accurately capturing data in their EHR.

**Clinic capacity assessment:** The clinic capacity assessment was limited by the fact that teams' self-rated their clinics' capacity. Self-reported data is known to be subject to social desirability and social acceptability biases as well as potential differences in how teams interpreted questions. Additionally, teams experienced turnover in team membership between the baseline and final administration, resulting in potentially inconsistent perspectives completing the assessment at the two time points. This could bias the results in either a positive or negative direction, depending on the composition of the respondents at the two time points and their familiarity with the clinic environment and processes being assessed.

**Interviews:** Interviews for the initiative-wide evaluation were designed to capture breadth of experiences—talking to a small number of representatives across all of the participating organizations. As a result, interview data may be limited by the sampling necessary to understand the breadth of ACEs screening and response implementation across 15 organizations. Interviews with care teams typically included just one PCP and MA within an organization, the PCP and MA may or may not have been representative of the perspective of other care teams. While interviews with the CALQIC implementation teams generally included multiple perspectives (i.e., 2-4 people responsible for implementation) at two points in time, participation was not always consistent in the two interviews and may have been limited to participants with more protected time away from patient care. More in-depth information about the perceptions of providers and staff from a subset of CALQIC organizations is provided in the “deep dive” evaluation conducted by RAND.

## APPENDIX C: CLINICAL DATA DESCRIPTION AND DEFINITIONS

The purpose of CALQIC clinical data reporting was to support CALQIC teams in understanding their progress over the course of the initiative and to understand how screening and response practices are advancing across the learning collaborative. CCHE designed a Microsoft Excel data reporting template to collect quantitative data on the four CALQIC clinical measures (described below) each quarter. A 5th CALQIC measure related to the extent of resilience screening was optional; no teams opted to report data on resilience screening. CCHE provided data summaries (dashboards) back to each team quarterly and encouraged teams to share and discuss the data within their clinics.

CALQIC teams provided CCHE with aggregate data by clinic; no patient- or provider-level information was shared. Not all teams were able to report data on all measures. Some teams screening for ACEs were not able to report data on screening rates. Some teams reporting data on screening rates were not able to report data on response rates. When teams were not able to report data, they submitted a blank form; they were not asked to extrapolate or estimate data.

**Considerations:** These data were highly variable and dependent on which specific clinics were able to report screening and response each quarter. The universe of clinics conducting ACEs screening changed every reporting period (see Table 3). Screening and response rates, as well as the distribution of race and ethnicity, changed depending on various factors including the type of eligible population (e.g., small pilot or patients with medical conditions vs. entire clinic population), clinic size and demographics, status of EHR documentation as either established or in its infancy, etc. Response information was only provided for patients the clinic indicated warranted response; not all patients screened may have warranted response according to clinic definitions.

**Table 3: Clinics able to report screening and response data**

	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021
# of clinics screening.....	20	22	32	40	42
# able to report screening rates.....	18	19	30	39	41
# able to report response rates.....	15	16	25	38	41

Percent of Medi-Cal primary care providers (PCPs) attested to the state ACEs training

- **Denominator:** # of PCPs billable under Medi-Cal. Included MDs, DOs, NPs and PAs; intended to capture people managing a panel of patients and acting as a primary care provider.
- **Numerator:** # of PCPs attested to the state ACEs training. The state training referred to certified core ACEs Aware provider trainings. Included MDs, DOs, NPs and PAs; intended to capture people managing a panel of patients and acting as a primary care provider.

Percent of eligible patients screened for ACEs

- **Denominator:** # of eligible patients. Defined by each site. Reflected patients the site intended to screen, e.g., patients aged 0-5 receiving annual well-child visits from 5 providers at Main Street clinic.
- **Numerator:** # of patients screened using ACEs tool. This was aligned with the State of California’s screening tools eligible for reimbursement – PEARLS for pediatrics and ACE-Q or other tool for adults.

Percent of patients with 4 or more ACEs

- **Denominator:** # of patients screened using ACEs tool. This was aligned with the State of California’s screening tools eligible for reimbursement – PEARLS for pediatrics and ACE-Q or other tool for adults.
- **Numerator:** # of patients with an ACE score of 4 or greater. Part 1 for PEARLS.

**Race and ethnicity for screening measures:** Categories were aligned with the Health Resources & Services Administration Uniform Data System categories ([UDS Manual, pages 30-31](#)). Two organizations did not collect race and ethnicity data per the UDS categories and reported “no data” where race and/or ethnicities did not align. One organization was very large with multiple sites and the other much smaller.

## APPENDIX C: CLINICAL DATA DESCRIPTION AND DEFINITIONS

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Percent of patients warranting follow up who received a response

- **Denominator:** # of patients with a screening result warranting follow up/referral. Defined by each site. Reflected the group of patients the site intended to provide specific follow up or referral due to their ACE screen score, e.g., patients with an ACE score of 2. This could also have been identical to the state's definition of a high-risk designation.
- **Numerator:** # of patients receiving any response. Included responses in the following categories:

*o In-visit conversation about ACEs, trauma, toxic stress, strengths, & resilience:* Verbal connection with the patient/caregiver during the visit about the patient's ACE score, ACEs, trauma, toxic stress, family strengths, and resilience, for example: a statement of appreciation that this information allows the provider to understand the patient better and will help provide better care; reflective listening, normalizing, acknowledging and affirming strengths; explanation of how ACEs/toxic stress impact health and wellbeing and the value of building on patient's resources and supports; information about health promoting practices in nutrition, exercise, and sleep hygiene; strategies to regulate the stress response.

*o Literature or other "take away" resources:* For example, pamphlets, handouts, videos, or other broad resources related to ACEs, trauma, toxic stress, strengths, and resilience provided to patients/caregivers as part of the visit. Topics may include, for example: information about health promoting practices in nutrition, exercise, and sleep hygiene; strategies to regulate the stress response.

*o Already receiving/enrolled in appropriate services, no new services offered:* Patient's record indicates they are currently connected to interventions or supports aligned with their ACE screening result and were not offered additional referrals. Sites did not need to indicate whether the patient/caregiver is active in utilizing these supports.

*o Offered internal intervention/service/referral, declined:* The patient/caregiver was offered a referral, intervention, or service available internally at the clinic, for example, mental health support, but declined to participate or be connected to those supports.

*o Offered internal intervention/service/referral, NOT declined:* The patient/caregiver was offered a referral, intervention, or service available internally at the clinic, for example, mental health support, and did not decline the connection. Sites did not need to indicate whether the patient/caregiver followed through on the connection.

*o Offered external intervention/service/referral, declined:* The patient/caregiver was offered a referral, intervention, or service provided externally, outside the clinic, for example, mental health support from a community partner, but declined to be connected to those supports.

*o Offered external intervention/service/referral, NOT declined:* The patient/caregiver was offered a referral, intervention, or service provided externally, outside the clinic, for example, mental health support from a community partner, and did not decline the connection. Sites did not need to indicate whether the patient/caregiver followed through on the connection.

## APPENDIX D: DESCRIPTION OF CORE AND HEALTH EQUITY INDICES

As part of the CALQIC clinic capacity assessment, CCHE, in collaboration with CCI, UCSF, CALQIC implementation coaches, and the CALQIC Clinical Advisory Committee developed a Core Capacity Index and Health Equity Index to examine clinic’s progress more closely in a limited set of essential areas.

- Core Capacity Index: Informed by past evaluations and literature of trauma- and resilience-informed care interventions, the index included 16 assessment items that reflected capacities and practices deemed critical to effective screening practice and that CALQIC was seeking to influence. It included items from each of the five assessment domains deemed critical for effective screening practice. (see Table 4 for a list of items)
- Health Equity Index: Using the existing clinic capacity assessment items, experts identified six assessment items reflecting capacities and practices related to promoting health equity and healing cultures of care. The items selected were not developed specifically for inclusion in the assessment as measures of equity that had been tested or used in other evaluations. They were selected as items that were available in the assessment that had more potential as proxies for attention to equity. These items were intended to provide an exploratory analysis of progress on health equity as a more nascent domain of interest related to ACEs screening and response. It included items from each of the five assessment domains and were pertinent to both the clinic environment and patient interactions. (see Table 5 for a list of items)

**Table 4: Core Index capacity assessment items**

Item	TRIADS domain
Our clinic provides education or training to all staff and providers on trauma and resilience and implications for care	Foundation
Data related to trauma and resilience-informed care is tracked, analyzed and used to address challenges and/or reinforce progress	Foundation
Leadership expresses commitment to implementing trauma and resilience-informed care	Foundation
Clinic champions/core team engages clinic staff in trauma-informed care activities (e.g., solicits and incorporates feedback, communicates about progress related to education, screening and assessment, and response for ACEs and other traumatic experiences)	Foundation
People at my clinic are comfortable talking to patients and caregivers about trauma	Environment
Our clinic understands how working with trauma survivors can affect staff	Environment
Patients and families receive information about current and past trauma (ACEs) and toxic stress and how they impact health and behavior	Patient Education
The health care team clearly explains to patients and families why screening questions are being asked	Patient Education
Our organization has a consistent screening or assessment process to identify individuals who have been exposed to trauma (e.g., using PEARLS, ACE-Q in a structured screening and referral workflow)	Screening & Assessment
Organization defines the roles, responsibilities and workflows for all healthcare team members related to screening and assessment processes	Screening & Assessment
Organization has clearly established electronic health record documentation and reporting practices and processes related to ACEs screening and response	Screening & Assessment
Our organization systematically screens for traumatic experiences or ACEs (e.g., uses a set protocol or tool)	Screening & Assessment
Designated care team members discuss screening results with patients and/or families to foster shared decision making and work with the patient and/or family to develop a plan	Response
Care team members do warm handoffs to internal supports or resources (e.g., co-located mental health personnel)	Response
Our clinic provides a warm hand-off for referrals to community-based specialists	Response
Healthcare team plans post-screening follow-up visit or phone/video call with patient to assess whether referrals were successful and appropriately adjust plan to ensure connection to desired resources and supports	Response



# APPENDIX D: DESCRIPTION OF CORE AND HEALTH EQUITY INDICES

**Table 5: Health Equity Index capacity assessment items**

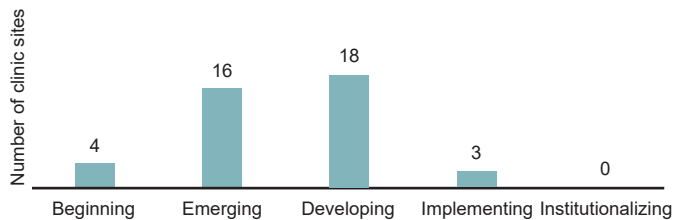
Item	TRIADS domain
Leadership practices cultural humility (including engaging in training and open discussions related to individual and institutional power and privilege) to reduce implicit bias and create a culture of equity and collaboration	Foundation
Our clinic engages patient and family member advisers who represent the diversity of the population we serve	Foundation
People at my clinic understand the importance of paying attention to patients' cultural and racial backgrounds and experience of historical trauma	Environment
Healthcare team provides information to patients and families based on individual patient/family priorities and goals for their health	Patient Education
Processes related to identifying and responding to trauma are culturally and linguistically appropriate	Screening & Assessment
Treatment planning and interventions are individualized and tailored to each patient and family and are developmentally and culturally appropriate	Response

These items were used to create an index score by taking the average of clinic sites' responses to these individual items. All scores were reported on a scale from 1-5 and clinics' average scores were grouped into five stages (see Table 6).

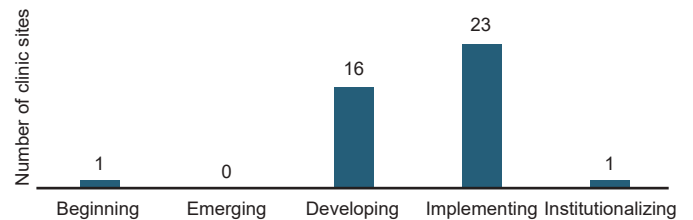
Both the Core Capacity Index and Health Equity Index showed the initial distribution of clinic sites across a bell curve, with a few clinic sites in the "beginning" stage, most clinic sites falling in the middle, and one or none in the institutionalizing stage (Figure 15 and Figure 17).

- The Core Capacity Index showed at baseline that clinics started with very different levels of capacity. By the end of the initiative, 13 of the 16 Core Capacity Index items grew by at least one full point from baseline to final and among all 56 assessment items, the five with the largest change during the initiative (1.5 points or more) were all in the Core Capacity Index. The progression of clinics on these items (Figure 16 shows final assessment) suggests these items may be critical to advancing ACEs screening and response.
- The Health Equity Index provided an exploratory assessment of opportunities to advance ACEs screening and response using the existing assessment. Similarly, there was progress on these items over time. (Figure 18).

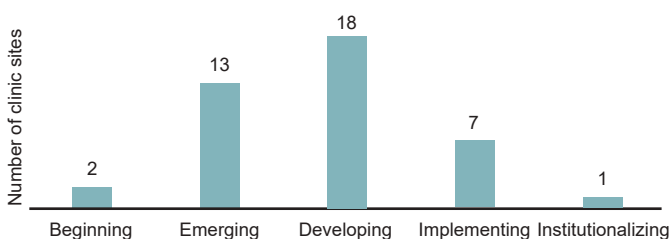
**Figure 15: Baseline distribution of clinic site average scores on Core Capacity Index**



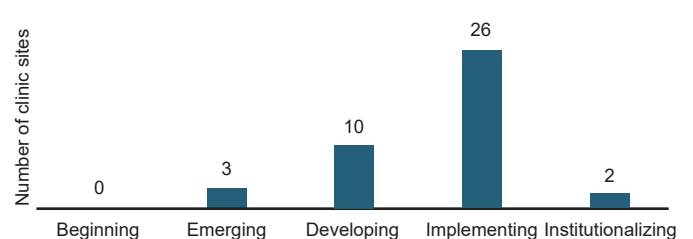
**Figure 16: Final distribution of clinic site average scores on Core Capacity Index**



**Figure 17: Baseline distribution of clinic site average scores on Health Equity Index**



**Figure 18: Final distribution of clinic site average scores on Health Equity Index**



## APPENDIX D: DESCRIPTION OF CORE AND HEALTH EQUITY INDICES

*Table 6: Developmental stages of Core Capacity and Health Equity Indices*

Stage	Average score	Core description	Health Equity description
Beginning	1.0 – 1.99	These clinics were at the very beginning of their journey related to screening for and responding to trauma. They were lacking most or all of the of the essential elements.	These clinics were at the very beginning of their journey related to implementing ACEs screening and response in an equitable way. They were lacking most or all the of the core equity elements.
Emerging	2.0 - 2.99	Clinics wer able to get the essential elements for screening and response in place, but it was not very robust or consistent.	Clinics had started to get the core equity elements for implementing ACEs screening and response in an equitable way, but it was not yet very robust or consistent.
Developing	3.0 – 3.99	Clinics were somewhere in the middle of the process towards screening and response. They had some essential elements in place but were not yet doing things systematically or consistently. They were doing some things really well while struggling in other areas.	Clinics were somewhere in the middle of the process towards implementing ACEs screening and response in an equitable way. They may have had some core elements in place but were not yet doing things systematically or consistently. Or were doing some things really well while struggling in other areas.
Implementing	4.0 – 4.99	Clinics had most or all of the essential elements for screening and responding to trauma in place, but may not had been fully consistent or systematic. There were a couple individual elements where they continue to struggle.	Clinics had most or all of the core elements for implementing ACEs screening and response in an equitable way, but it might not have been fully consistent or systematic. There might have been a couple individual elements where they continued to struggle.
Institutionalizing	5.0	All essential elements for screening for and responding to trauma were fully in place. Clinics were well positioned for robust, systematic screening (and likely was able to do some level of screening).	All essential elements for implementing ACEs screening and response in an equitable way were fully in place. Clinics were well positioned for this work and were likely already doing it.