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ACE Screening as a Tool for Improving Health Access and Outcomes for Children and Youth in California: Pediatric Developmental Screening

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Executive Summary

Childhood traumatic events and exposure to stress-inducing social or household conditions can have profound and lasting impacts on development, health, and social functioning. Adverse childhood experiences (ACEs) have been associated with developmental delays and long-term health challenges. ACE screening is a valuable tool in mitigating the effects of toxic stress and supporting children's health and well-being.

In 2019, California launched the statewide ACEs Aware initiative to standardize the screening of and response to ACEs within the state's Medi-Cal population. To date, more than 20,000 Medi-Cal providers are certified to bill for ACE screening activities, with steady program uptake.

Early implementation of ACEs Aware has demonstrated that routine screening improves provider responses for patients with complex social needs. New state programs have the potential to further expand the reach of reimbursable ACE response activities within primary care settings and in the community.

This brief summarizes an analysis of electronic health record (EHR) data from pediatric patients ages 0 to 3 within the Los Angeles County Department of Health Services (LA DHS) that examines the relationship between ACE screening and pediatric developmental assessment metrics.

Pediatric primary care patients screened for ACEs were significantly more likely to also receive age-specific developmental and autism screenings when compared to those not screened for ACEs. In addition to supporting the identification of and response to childhood trauma, ACE screening may support early identification of developmental concerns, timely referrals to support services and resources, strengthen preventive healthcare practices, and support stronger engagement of families in services for children who are identified with developmental delay or autism spectrum disorder.

Key Takeaways:

- Screening California's children for ACEs can facilitate identification of developmental delays, which can lead to earlier interventions and better supports for children with developmental disorders.
- Opportunities exist to enhance partnerships between Medi-Cal managed care organizations (MCOs) and affiliated practice groups to leverage ECM and other CalAIM initiatives as part of the clinical response for children identified with developmental delay or autism.

Recommendations:

1. Policymakers should support ongoing efforts to integrate ACE screening into pediatric care, particularly among Medi-Cal recipients, who have traditionally experienced less access to primary care and developmental services. This includes supporting and incentivizing ACE screening and response training in conjunction with Managed Care Organizations (MCOs).
2. To optimize pediatric developmental outcomes, policymakers should encourage expanded ACE screening as part of primary care practices to improve early identification and intervention for developmental and allocate funding to help bridge the identification of childhood trauma, developmental concerns, and early intervention service needs.

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Background

Adverse Childhood Experiences and Developmental Delays



Adverse Childhood Experiences (ACEs) are exposures to traumatic events, such as abuse, neglect, or family stressors like domestic violence or substance misuse, that occur before the age of 18.¹ These experiences can lead to toxic stress, which can negatively impact a child's development, and the risk of developing toxic stress increases as ACE scores rise.² Given the rapid neurological development that takes place during the first few years of life, early childhood represents a critical period that is foundational to a child's development.³

Prior research shows that children facing compounded adversity present with more cognitive, social and/or emotional developmental concerns than their peers with fewer adverse experiences.⁴⁻⁵ The 2011 National Survey of Children's Health (NSCH), for example, estimated that 24.2% of children with no ACEs are at risk of co-occurring developmental delays, as compared to 42.2% of children exposed to four or more ACEs.⁶ Several studies have shown a dose-dependent association between ACEs and developmental delays: as the number of ACEs a child experiences increases, the likelihood of having an identified developmental delay increases,⁷⁻⁸ while the likelihood of receiving preventive healthcare decreases.⁹ Additionally, ACEs are positively associated with neurodevelopmental conditions, including autism spectrum disorder (ASD).¹⁰ Exposure to ACEs during the earliest years of childhood is most strongly associated with developmental delays.¹¹

Prior findings underscore the relationships between ACEs, toxic stress exposure, and child development, health, and well-being. Recognizing this important association, California launched the ACEs Aware initiative, a statewide program to promote routine ACE screening and response activities among Medi-Cal recipients to mitigate the long-term effects of trauma and improve child health outcomes.¹²

Developmental Screening as Preventive Healthcare

Developmental delay is diagnosed when a child does not attain skills in language, cognition, motor, or social-emotional domains as would be expected for their age and overall developmental stage.¹³ Developmental delays can be isolated (only one domain is impacted) or multiple (several impacted domains), and are typically diagnosed before a child reaches pre-school age. For some children, delays can be early signs of developmental disorders, which are mental, physical, or social impairments in childhood that impact major areas of life functioning.¹⁴

[i] Developmental disorders are typically diagnosed in pre-school or school-aged children because these settings provide an opportunity to assess children relative to their peers can help clarify or expose the degree of impact. Developmental delays can also signal the presence of neurodevelopmental disorders – conditions that impact the brain and nervous system, like autism.

Not all children with developmental delays have developmental disorders or neurodevelopmental conditions. However, even delays can contribute to social and academic difficulties. Early intervention (EI) services during the first three to five years of life, such as behavioral therapy, occupational therapy, and parent support, have been shown to improve children's skill development and reduce the negative impacts of developmental delay, developmental disorders, and neurocognitive disorders.¹⁵



Developmental screening is an essential preventive healthcare practice in pediatric primary care. The American Academy of Pediatrics (AAP) recommends including developmental assessments in all routine well-child visits, regardless of concerns, to ensure early identification of delays. Screening for developmental concerns is a structured process using validated tools to assess children's progress toward critical developmental milestones (9, 18, and 30 months for general development and 18 and 24 months for Autism Spectrum Disorder).¹⁶ If a developmental concern is detected, timely follow-up evaluations and referrals to EI services are essential to support healthy child development.

While routine screenings are intended to enable early identification of and response to developmental concerns, many children remain unscreened and/or undiagnosed until school age. National estimates show that only 30.4% of children ages 9 to 35 months received a parent-completed developmental screening, with significant state-level variation—from 17.2% in Mississippi to 58.8% in Oregon.¹⁷ Among those who screen positively for developmental concerns, not all children are referred to EI services. Nationally, only 17% of children under five with developmental delays receive related services,¹⁸ and EI referrals are low even among children that receive regular pediatric visits or preschool attendance.¹⁹

Care for Children with Developmental Challenges

Households with children that have developmental delays, developmental disorders, or neurodevelopmental conditions can face challenges navigating the health care system, including insufficient time for appropriate assessment, inflexible service models, lack of care continuity, poor service coordination or collaboration, and lack of access to up-to-date information on available services.²⁰⁻²¹ Optimizing care for children with complex needs requires care coordination, optimized access, and a strong support system that includes the health care team and community supports.

To deepen our understanding of how ACE screening contributes to integrated health care access among youth enrolled in managed care, this brief examines the relationship between ACE screening and completion of pediatric developmental assessments.



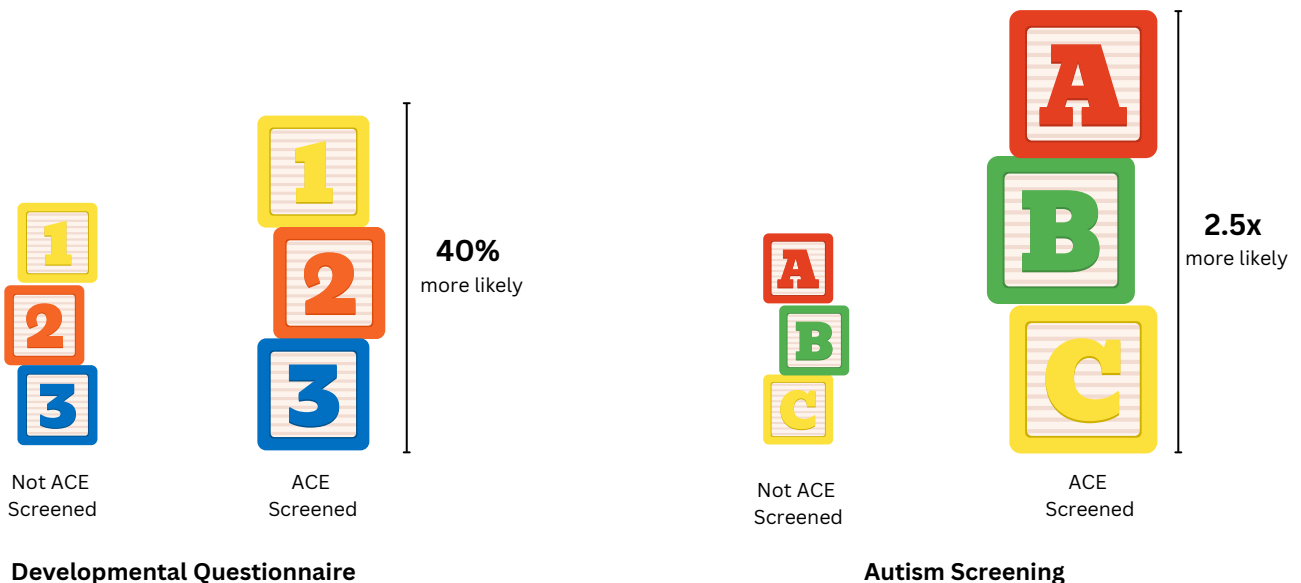
Methods

The current analysis was conducted using electronic health record (EHR) data from Los Angeles County Department of Health Services (LA DHS) pediatric patients ages 0 to 3 years served between 2020 and 2023 to examine the associations between [ACE screening](#) and completion of pediatric developmental screenings using the Ages & Stages Questionnaires,® Third Edition ([ASQ®-3](#)) and the Modified Checklist for Autism in Toddlers ([M-CHAT](#)). The associations between ACE screening and completion of pediatric developmental screening were assessed using multivariable logistic regressions. Pediatric patients who were screened for ACEs were propensity score matched on child characteristics and primary care factors to patients who did not receive an ACE screening.

Findings

Primary care patients who were screened for ACEs were more likely to receive routine developmental screenings and autism screening. Compared to pediatric primary care patients seen in the same care setting who were not screened for ACEs, children who were screened for ACEs were 40% (1.4 times) more likely to have complete developmental assessments, and 2.5 times more likely to have autism screenings completed at recommended intervals.ⁱ

Figure 1. Primary care patients screened for ACEs were more likely to undergo pediatric developmental assessments compared to those not screened.



Discussion

ACE screening creates a framework for health care providers that supports relational conversations with families, allowing them to better understand a child's risk for toxic stress and to learn about the level and types of services a family may need to improve their child's health and wellbeing. Providers who screen for ACEs have undergone training to develop skills in universal ACE education and relational conversations, a key response to ACE screening that supports the development of patient-provider trust.²² When implemented appropriately, ACE screening and response activities support improved care for patients through these relational conversations that destigmatize ACEs and toxic stress, connect past experiences to current patient needs, and increase access to education and referrals.²³ This approach is critical for successful management of pediatric patients with developmental disorders.

[i] Results were statistically significant at $P < 0.05$

Key Takeaways

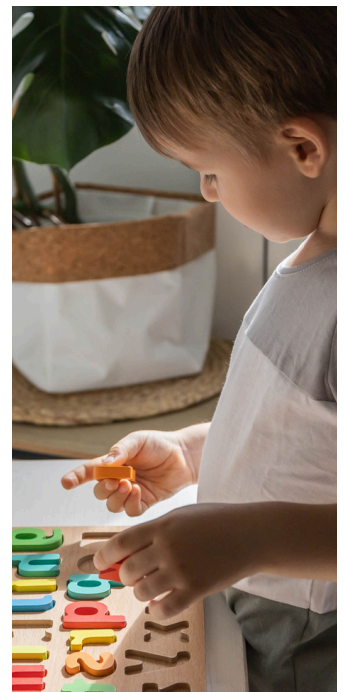
1 Screening California's children for ACEs can facilitate identification of developmental delays, which can lead to earlier interventions and better supports for children with developmental disorders.

This finding adds to prior evidence that clinicians who participate in trainings to implement ACE screening and who have integrated ACE screening into their routine clinical practice are more likely to have integrated other routine screenings in their practice, such as vaccination status, compliance with well child visits, and referrals for social services. This analysis adds developmental assessment to the list. When performed with a trauma-informed approach, ACE screening builds trust between patients/families and clinicians, and those who trust their medical providers and systems tend to engage more fully and comprehensively with primary care and other providers.

2 Opportunities exist to enhance partnerships between Medi-Cal managed care organizations (MCOs) and affiliated practice groups to leverage ECM and other CalAIM initiatives as part of the clinical response for children identified with developmental delay or autism.

Given the known associations between ACEs and developmental disorders, ACE screening represents a critical tool that can be used to build trust, facilitate guideline-recommended screenings, and identify risks for children likely to experience difficulties in cognitive, emotional, and social functioning. With better identification, healthcare providers can intervene earlier and more effectively, reducing the downstream impacts of developmental disorders.

While the use of developmental screening tools in pediatric clinics has tripled between 2002 and 2016, leading to increased referrals for children with developmental concerns,²⁴ many children are still not being screened or referred for further evaluation. Training and supporting clinicians to integrate ACE screening into pediatric care can enhance the reach of developmental assessments and ensure that more children receive the timely support they need to thrive. Further, the integration of ACE response activities into clinical care for children identified with developmental needs based on their ASQ and MCHAT screens may also support better overall care. Beyond the initial diagnosis of developmental delay or autism, an understanding of ACEs and toxic stress can help providers better meet the holistic needs of patients and families.



Recommendations

- 1 **Policymakers should support ongoing efforts to integrate ACE screening into pediatric care,** particularly among Medi-Cal recipients, who have traditionally experienced less access to primary care and developmental services. This includes supporting and incentivizing ACE screening and response training in conjunction with Managed Care Organizations (MCOs).
- 2 **To optimize pediatric developmental outcomes, policymakers should also:**
 - Encourage expanded ACE screening as part of primary care practices to improve early identification and intervention for developmental concerns.
 - Allocate funding to help bridge the identification of childhood trauma, developmental concerns, and EI services. Given that families of children with developmental disorders face difficulty receiving needed health system support and resources and that early intervention is critical to reducing impacts of these conditions, finding ways to reduce barriers to care critical. The integration of behavioral health teams into primary care settings has the potential to serve such a function.

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