

April 24, 2024

Update on CA's Trauma-Informed Systems Transformation

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ADVERSE CHILDHOOD EXPERIENCES (ACES)

Abuse



Physical



Emotional



Sexual

Neglect



Physical



Emotional

Household Challenges



Mental
Illness



Intimate
Partner
Violence



Parental
Separation
or Divorce



Incarceration



Substance
Misuse or
Dependence

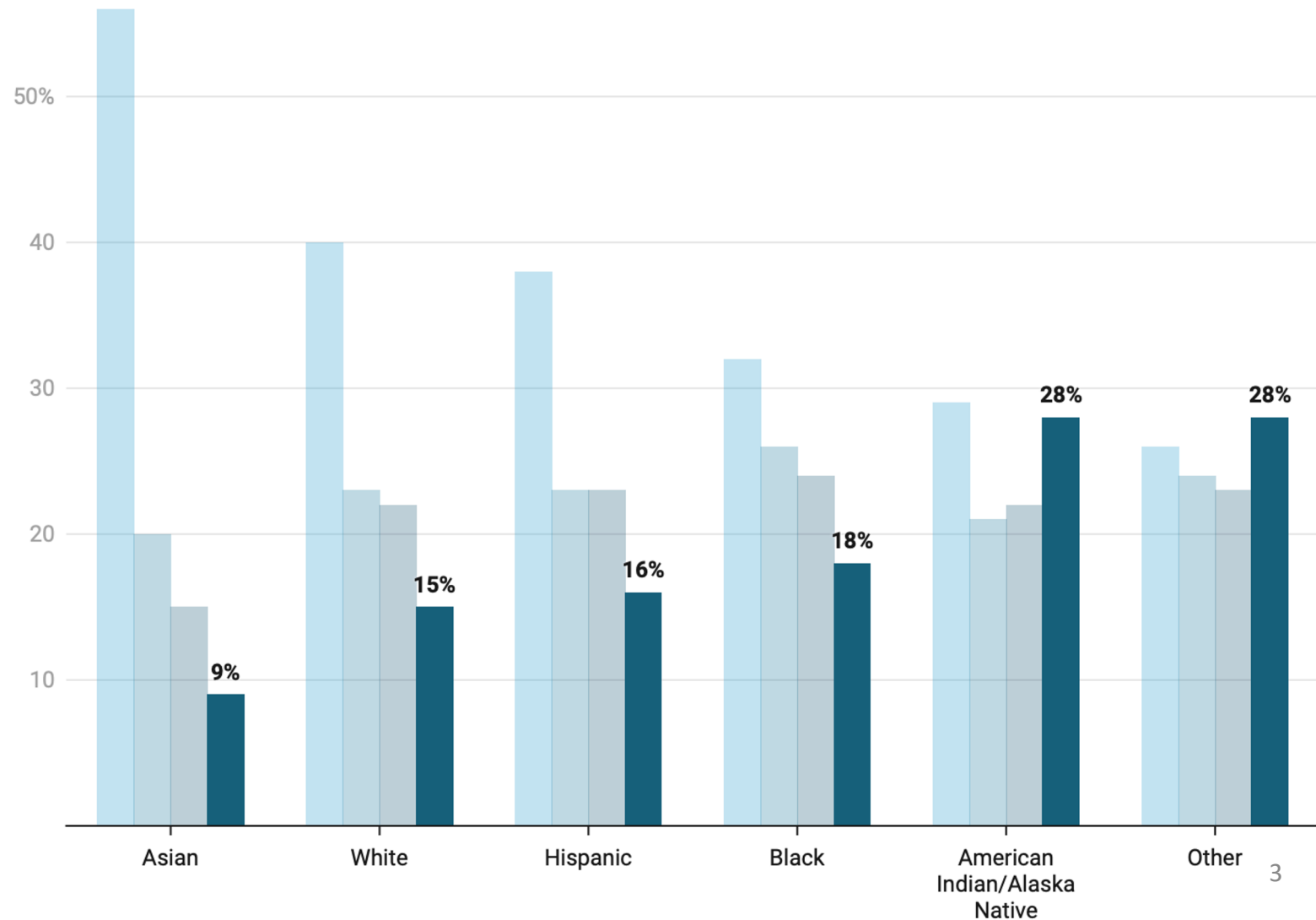
While almost 2/3 of U.S. adults have experienced ACEs, exposure is unequally distributed by race and ethnicity

Sociodemographic characteristics of adults in the study population, by adverse childhood experience score — Behavioral Risk Factor Surveillance System (BRFSS), 25 states,† 2015–2017; Source: US Department of Health and Human Services/Centers for Disease Control and Prevention MMWR / November 8, 2019 / Vol. 68 / No. 44.

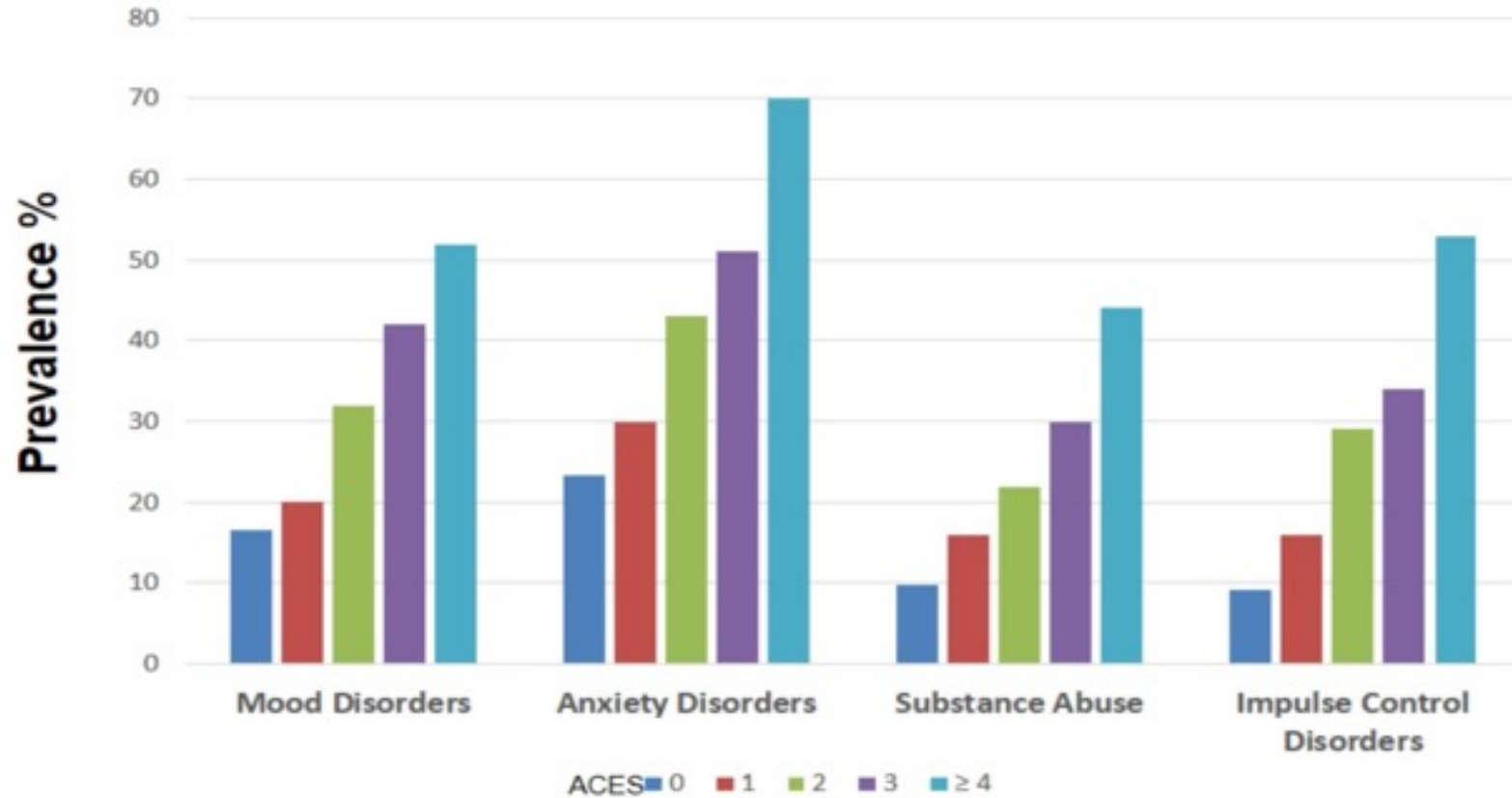
Exposure to ACEs is unequally distributed by race and ethnicity in the United States

Prevalence of ACEs among U.S. adults, by race and ethnicity, 2015-2017

0 ACEs 1 ACE 2 to 3 ACEs Four or more ACEs



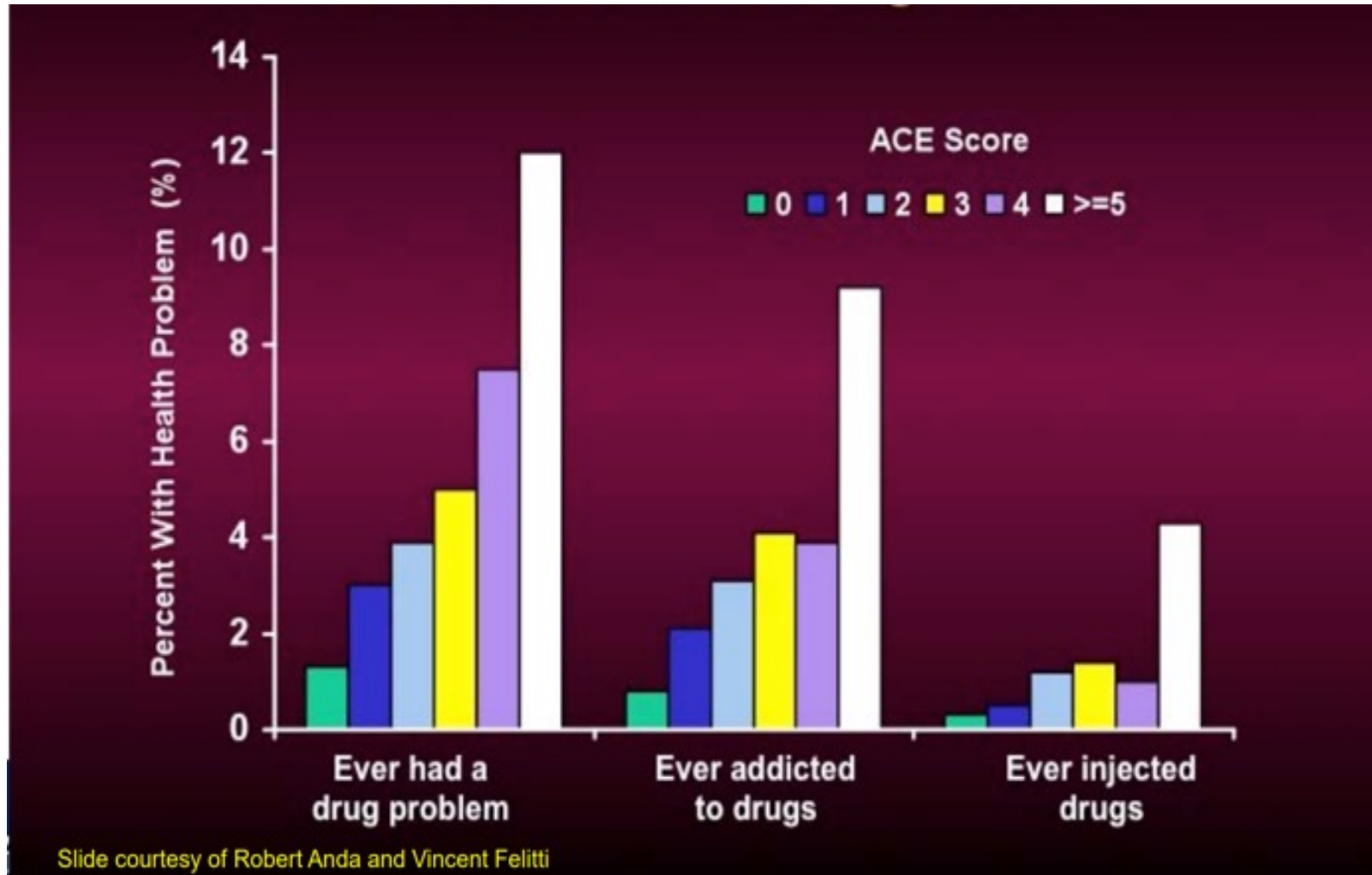
Cumulative ACEs & Mental Health^{1,2}

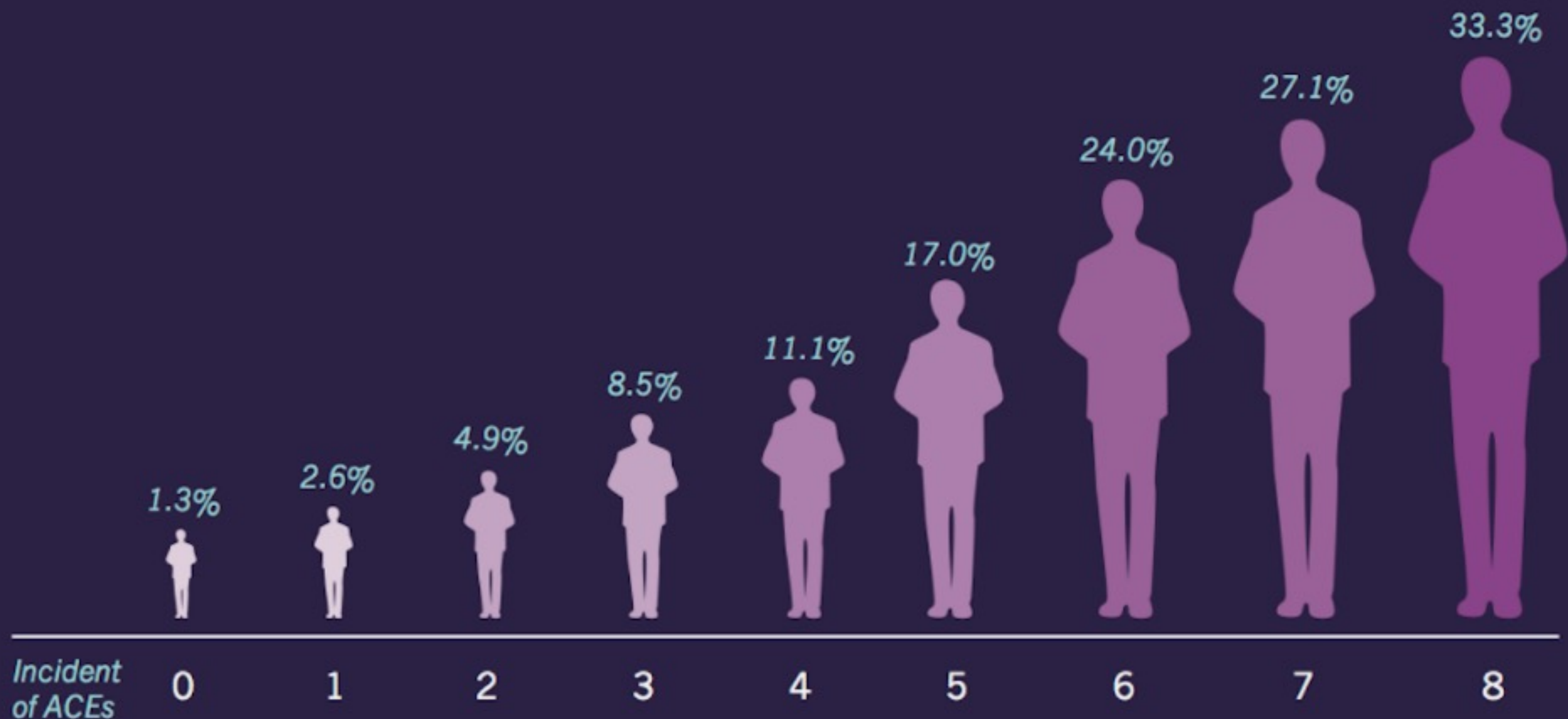


¹Data from the National Comorbidity Survey-Replication Sample (NCS-R).

²Putnam, Harris, Putnam, J Traumatic Stress, 26:435-442, 2013.

ACE Score and Substance Use





ACE Score and Relation to Adult Homelessness

Proportion of Washington residents experiencing adult homelessness (among participants in Washington's Behavioral Risk Factor Surveillance System).³

ACES ARE ASSOCIATED WITH INCREASED RISK FOR 9 OF THE 10 LEADING CAUSES OF DEATH IN THE U.S.

Leading Causes of Death in the U.S., 2021		Odds Ratios for ≥ 4 ACEs (relative to no ACEs)
1	Heart disease	2.1
2	Cancer	2.3
3	COVID-19	Unknown
4	Accidents (unintentional injuries)	2.6
5	Stroke	2.0
6	Chronic lower respiratory disease	3.1
7	Alzheimer's disease or dementia	11.2
8	Diabetes	1.4
9	Chronic liver disease	2.4
10	Kidney disease	1.7

Annual Cost of ACEs in California

**\$1.5
TRILLION!**

Cardiovascular
disease

Smoking

Heavy Drinking

Obesity



Asthma

Arthritis

COPD

Depression

Annual Cost of ACEs in the U.S.

Heart disease

Stroke

Cancer

Diabetes

Arthritis

Asthma

COPD

Kidney Disease

\$14.1
TRILLION

Smoking

Heavy Drinking

Overweight and Obesity

Illicit Drug Use

Anxiety

Depression

Violence

THE BIOLOGY OF

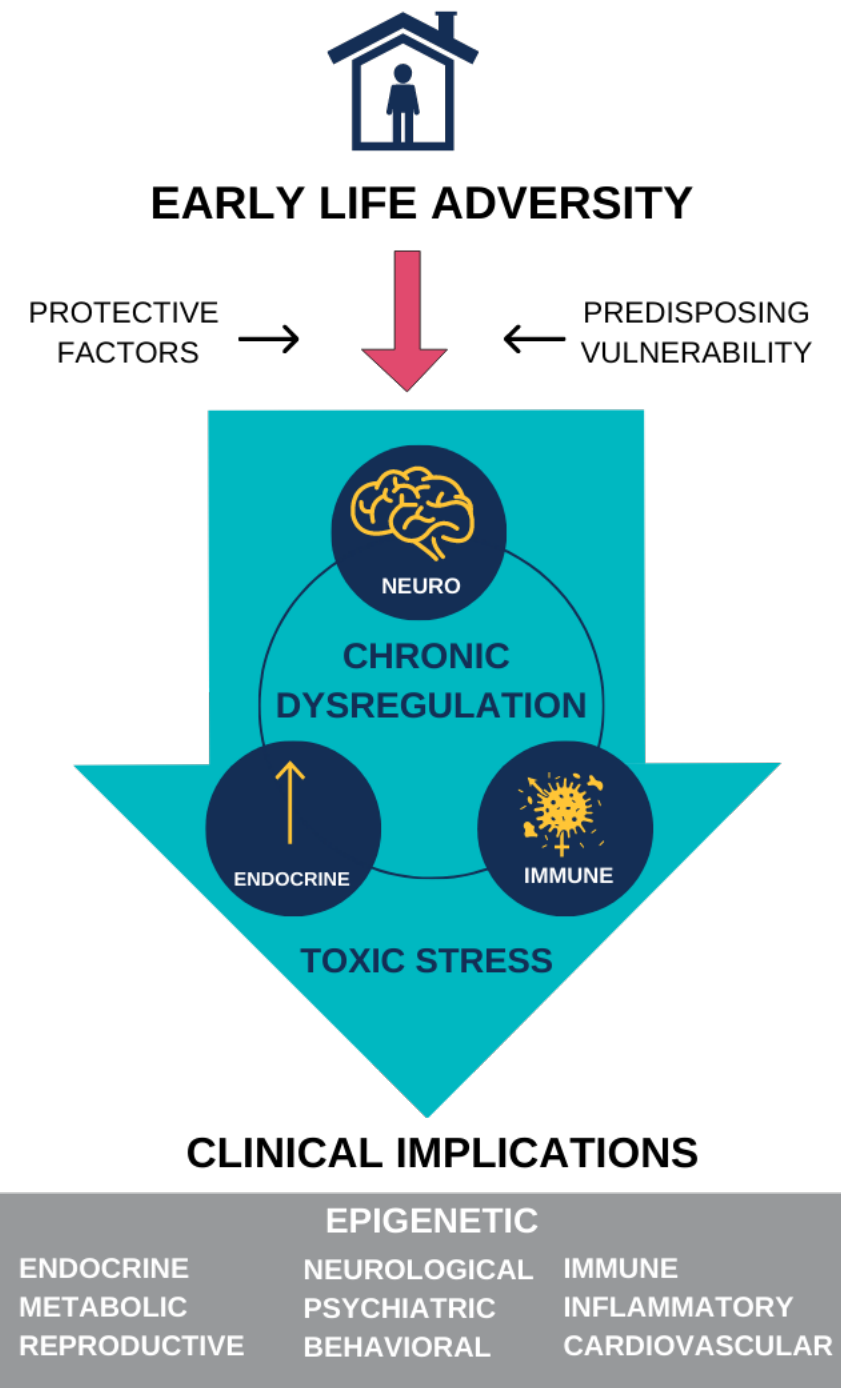
ADVERSITY



THE TOXIC STRESS RESPONSE

“prolonged activation of the stress response systems that can disrupt the development of brain architecture and other organ systems, and increase the risk for stress-related disease and cognitive impairment, well into the adult years...”

Source: National Academies of Sciences, Engineering, and Medicine. Vibrant and healthy kids: *Aligning science, practice, and policy to advance health equity*. Washington, DC: National Academies Press, 2019.; Nelson CA, Bhutta ZA, Burke Harris N, Danese A, Samara M. Adversity in childhood is linked to mental and physical health throughout life. *BMJ (Clinical Research Edition)* 2020; 371: m3048.



S T R E S S R E S P O N S E

POSITIVE	TOLERABLE	TOXIC
Physiological response to mild or moderate stressor	Adaptive response to time-limited stressor	Maladaptive response to intense and sustained stressor
Brief activation of stress response elevates heart rate, blood pressure, and hormonal levels	Time-limited activation of stress response results in short-term systemic changes	Prolonged activation of stress response in children disrupts brain architecture and increases risk of health disorders
Homeostasis recovers quickly through body's natural coping mechanisms	Homeostasis recovers through buffering effect of caring adult or other interventions	Prolonged allostasis establishes a chronic stress response
<i>Tough test at school, playoff game</i>	<i>Immigration, natural disaster</i>	<i>Abuse, neglect, household dysfunction</i>

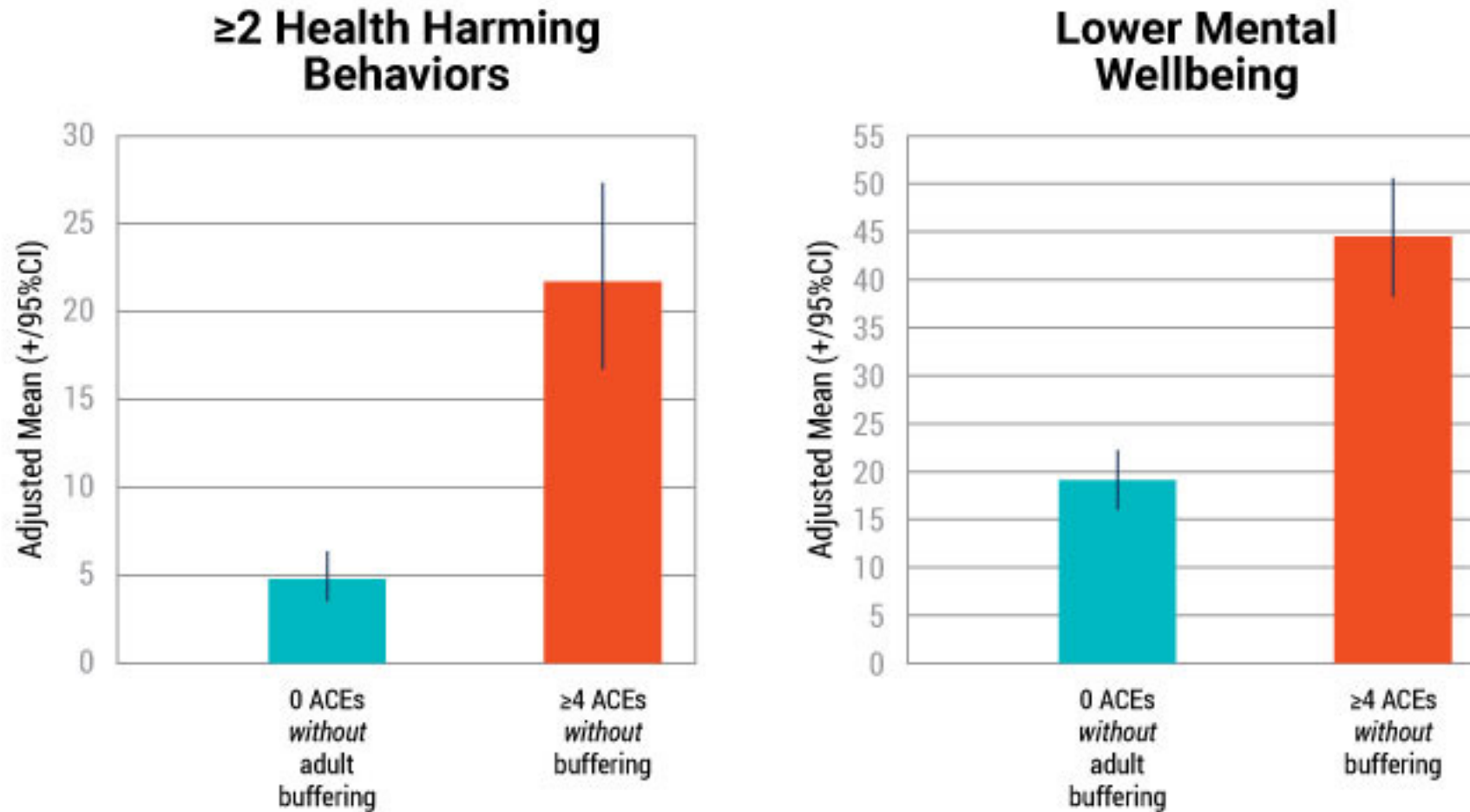
Fig. 2. Spectrum of the stress response: positive, tolerable, and toxic.

Evidenced-Based Buffering Interventions



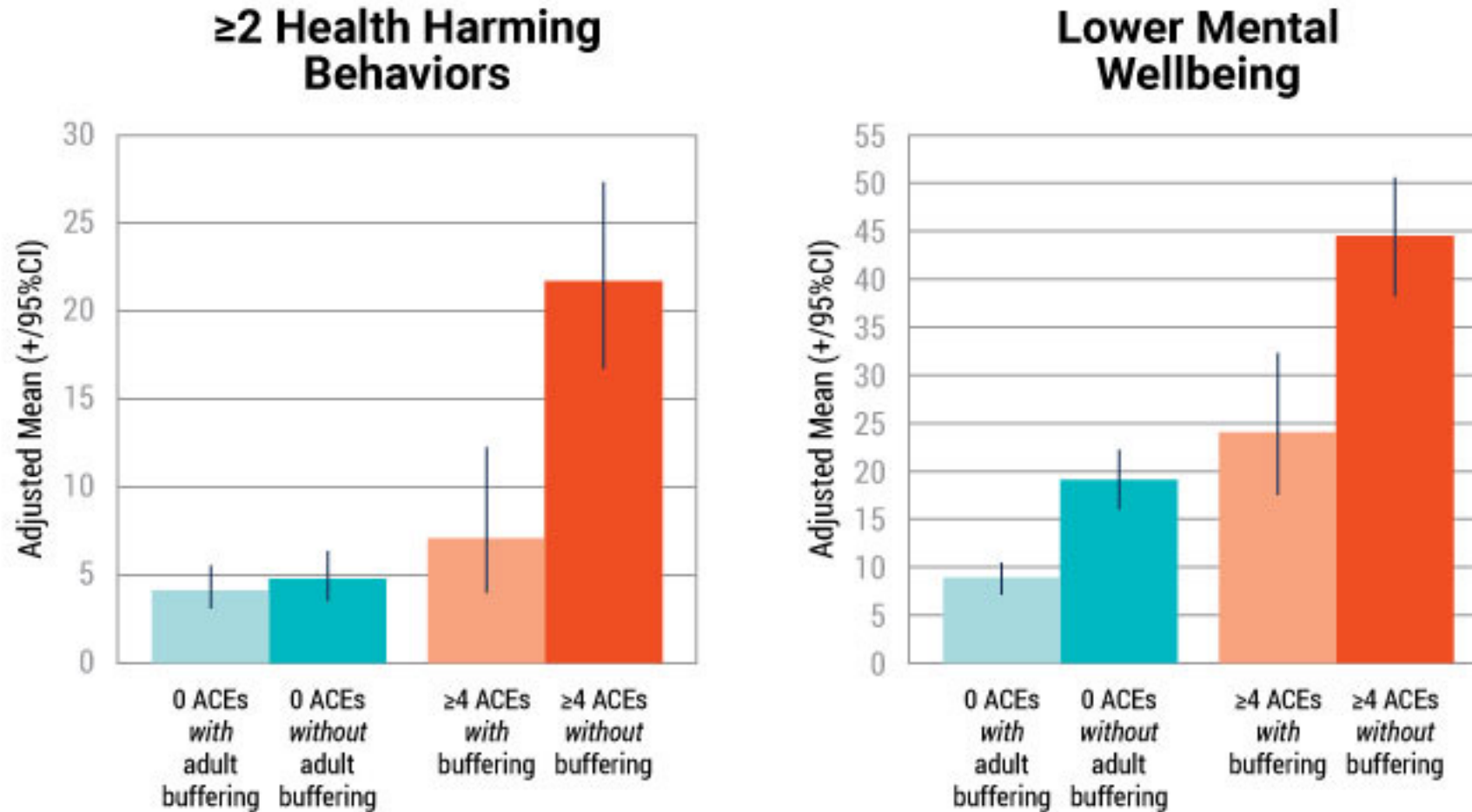
Source: Adapted from Burke Harris, Nadine. *The Deepest Well: Healing the Long-Term Effects of Childhood Adversity*. Boston: Houghton Mifflin Harcourt, 2018.

IMPACT OF ACES



Source: Mark A. Bellis et al., "Does Continuous Trusted Adult Support in Childhood Impart Life-Course Resilience Against Adverse Childhood Experiences - A Retrospective Study on Adult Health-Harming Behaviours and Mental Well-Being," BMC Psychiatry 17, no. 1 (December 2017), <https://doi.org/10.1186/s12888-017-1260-z>.

IMPROVED HEALTH OUTCOMES



Source: Mark A. Bellis et al., "Does Continuous Trusted Adult Support in Childhood Impart Life-Course Resilience Against Adverse Childhood Experiences - A Retrospective Study on Adult Health-Harming Behaviours and Mental Well-Being," BMC Psychiatry 17, no. 1 (December 2017), <https://doi.org/10.1186/s12888-017-1260-z>.

Toxic Stress is Amenable to Treatment

- New opportunities to more precisely interrupt the toxic stress response, break the intergenerational cycle of ACEs and toxic stress, and promote an intergenerational cycle of health.
- Early intervention can improve brain, immune, hormonal, and genetic regulatory control of development.
- Treatment of toxic stress in adults may prevent transmission of neuro-endocrine-immune-metabolic and genetic regulatory disruptions in offspring.

Source: Sources: Chino M, Debruyne L. Building true capacity: Indigenous models for Indigenous communities. *American Journal of Public Health* 2006; 96(4): 596-9.; Bick J, et al. Effect of early institutionalization and foster care on long-term white matter development: A randomized clinical trial. *JAMA Pediatrics* 2015; 169(3): 211-9.; Miller GE, et al. A family-oriented psychosocial intervention reduces inflammation in low-SES African American youth. *Proceedings of the National Academy of Sciences* 2014;

NO SINGLE SECTOR OR CATEGORY OF PREVENTION IS SUFFICIENT ALONE

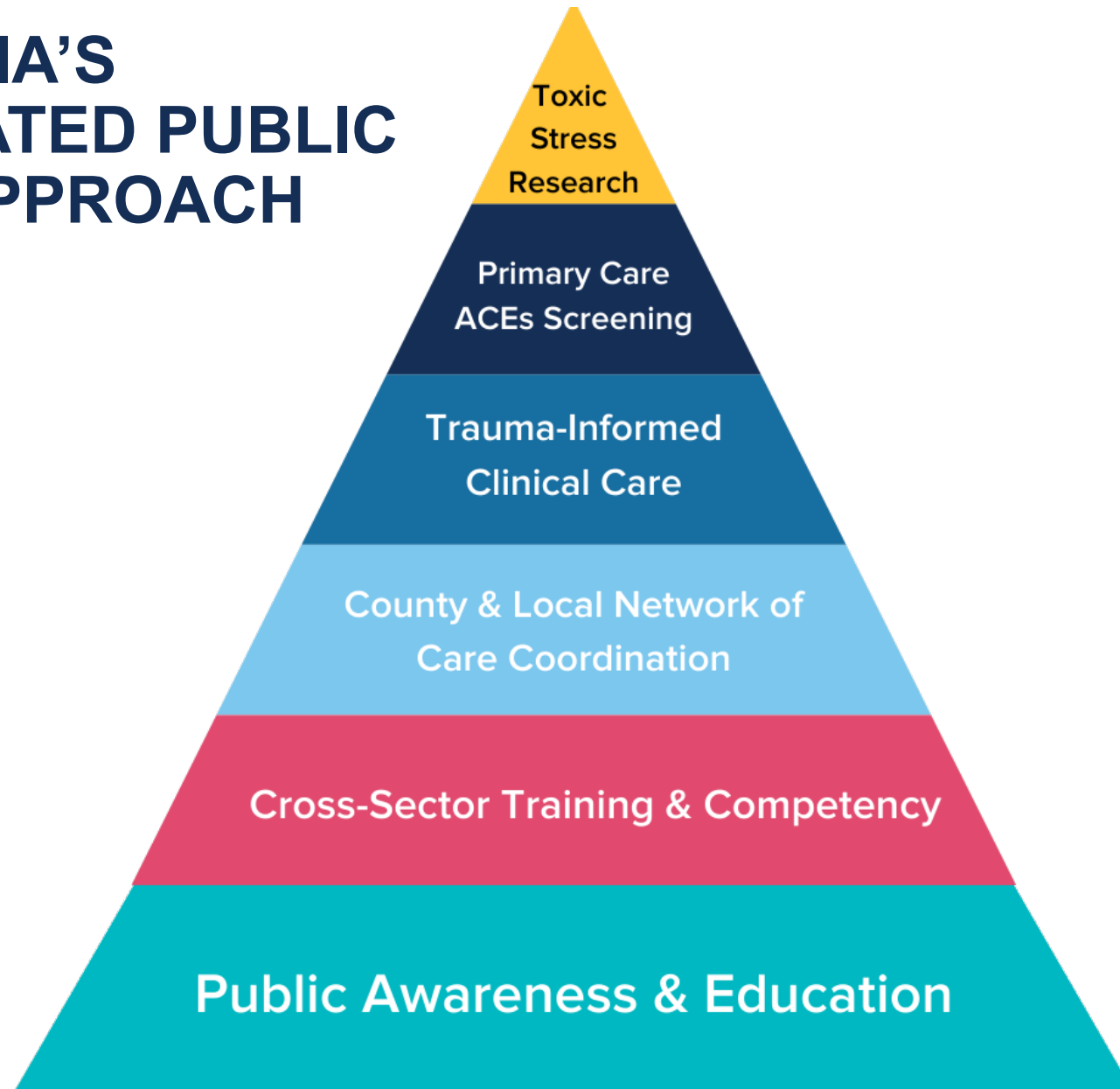


Healthcare	Public Health	Social Services	Early Childhood	Education	Justice
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California's Foundational Response:

- **Establishing the Office of the California Surgeon General (CA-OSG)**
 - Provides a rigorous scientific foundation to guide Cross-Sector Coordination
 - Convened cross-governmental effort – ACE Reduction Leadership Team
- **Evidence-Based Policy-Making**
 - Raising Public Awareness and Strengthening Economic Supports for Families
 - Supporting Parents and Children (Home Visiting Expansion, Trauma informed educator training, Investments in Early Learning and Care)
 - Medicaid and Private Insurer Coverage of ACE Screening for Early Detection
 - Training Primary Care Providers on Evidence-Based Approaches to Screening for ACEs and Treatment of Toxic Stress
 - **Treatment eligibility based on risk of toxic stress**
 - Leveraging Precision Medicine and Stem Cell Research to Advance Toxic Stress Measurement and Discovery of Therapeutic Targets

CALIFORNIA'S COORDINATED PUBLIC HEALTH APPROACH

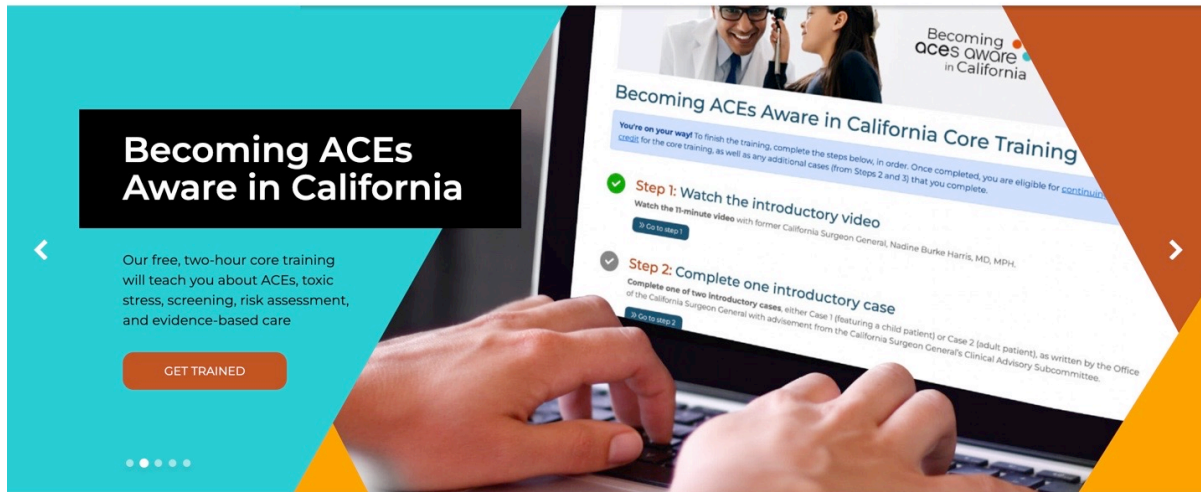


Primary Care ACE Screening and Toxic Stress Risk Assessment



Events Grants Resources Blog About Contact Us **GET TRAINED**

ACE FUNDAMENTALS | LEARN ABOUT SCREENING | IMPLEMENT ACE SCREENING | PROVIDE TREATMENT & HEALING



The ACEs Aware initiative is a first-in-the-nation effort to screen patients for Adverse Childhood Experiences (ACEs) to help improve and save lives.

ACEs Aware strives to create a better world for our children, families, and communities by working together across sectors to prevent

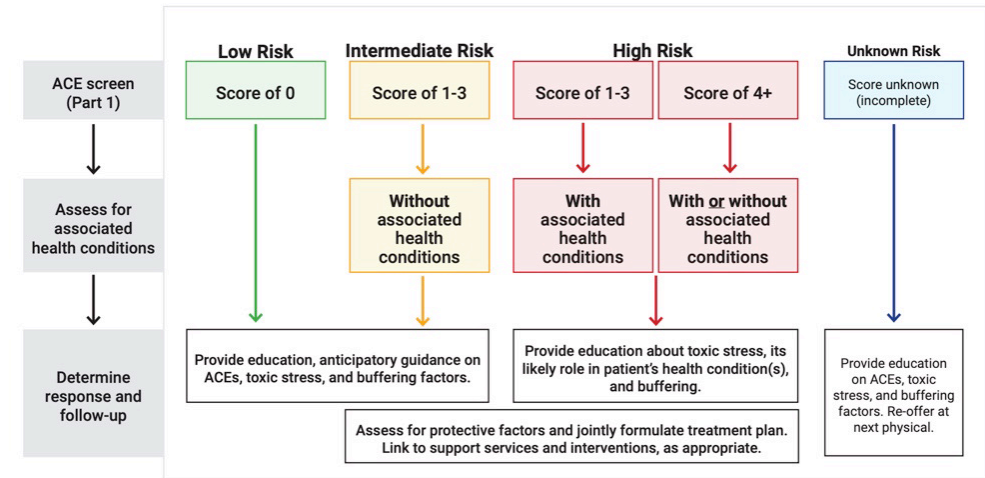
Sign-up to stay ACEs Aware

GET UPDATES



Adverse Childhood Experiences (ACEs) and Toxic Stress Risk Assessment Algorithm

Pediatrics



This algorithm pertains to the ACE score (Part 1 of PEARLS), whose associations with health conditions are most precisely known. Social determinants of health (Part 2 of PEARLS) may also increase risk for a toxic stress response and should be addressed with appropriate services, but should NOT be added to the ACE score for this algorithm. Partial completion may indicate discomfort or lack of understanding. If partial response indicates patient is at intermediate or high risk, follow the guidelines for that category.

If the ACE score is 0, the patient is at "low risk" for toxic stress. The provider should offer education on the impact of ACEs and other adversities on health and development as well as on buffering factors and interventions. If the ACE score is 1-3 without ACE-Associated Health Conditions, the patient is at "intermediate risk" for toxic stress. If the ACE score is 1-3 and the patient has at least one ACE-associated condition, or if the ACE score is 4 or higher, the patient is at "high risk" for toxic stress. In both cases, the provider should offer education on how ACEs may lead to toxic stress and associated health conditions, as well as practices and interventions demonstrated to buffer the toxic stress response, such as sleep, exercise, nutrition, mindfulness, mental health, and healthy relationships. The provider should also assess for protective factors, jointly formulate a treatment plan, and link to supportive services and interventions, as appropriate.

Trauma Informed Clinical Care and Network of Care Coordination



Provide Treatment & Healing

A trauma-informed approach to addressing ACEs and toxic stress

- For Clinicians & Practices
- For Communities
- Stress Mitigation Strategies

This section describes strategies for clinicians, practices, and community organizations to build strong networks of care across the state. For information on clinical treatment of toxic stress, please visit the [Clinical Assessment & Treatment](#) page.

Trauma-informed networks of care form critical connections to cross-sector support

Sign-up to stay ACEs Aware [GET UPDATES](#)



CalAIM

<p>Behavioral Health Initiative</p> <p>Medi-Cal is strengthening mental health and substance use disorder services and better integrating them with physical health care.</p>	<p>Community Supports</p> <p>New services as part of the transformation of Medi-Cal help members address unmet basic needs that can impact their health, whether they're clinical or non-clinical. These include support to secure and maintain housing, and access to medically tailored meals to support short term recovery.</p>	<p>Dental Initiative</p> <p>Medi-Cal is expanding dental benefits for children and those with conditions that are more likely to lead to dental disease.</p>	<p>Enhanced Care Management</p> <p>Medi-Cal is providing high-need members with in-person care where they live.</p>	<p>Incentive Payment Program</p> <p>Medi-Cal is supporting the implementation and expansion of Enhanced Care Management, Community Supports and other initiatives by providing incentives to Medi-Cal managed care plans to invest in improving the quality of care, reducing health disparities, and promoting health equity.</p>	<p>Integrated Care for Dual Eligible Members</p> <p>Medi-Cal is better integrating care for members who are dually enrolled in both Medicare and Medi-Cal.</p>
<p>Justice-Involvement Initiative</p> <p>Medi-Cal is providing services to justice-involved adults and youth while they are incarcerated, and as they re-enter their communities.</p>	<p>Population Health Management</p> <p>Medi-Cal is requiring managed care plans to use a concentrated holistic approach to improving the health outcomes of a group of individuals.</p>	<p>Providing Access and Transforming Health (PATH)</p> <p>PATH funds are an investment in the capacity and infrastructure of local community-based organizations to provide services to Medi-Cal members in their communities.</p>	<p>Statewide Managed Long-Term Care</p> <p>Medi-Cal is introducing a better way to coordinate care for those with very complex or long-term care needs.</p>	<p>Supporting Health and Opportunity for Children and Families</p> <p>Medi-Cal is improving the health of children in California, supporting their families, reducing disparities in care, and strengthening accountability and oversight of children's services.</p>	

Becoming ACEs Aware in California Training



35k+
individuals

trained to identify, screen, and
respond to ACEs and toxic stress



17,100

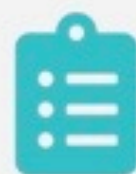
of those trained are
providers eligible for
Medi-Cal payment

ACE Screening by Medi-Cal Providers



2.3 million

ACE screens conducted by
Medi-Cal providers



1.5 million

Medi-Cal members
screened for ACEs



\$66m

paid to Medi-Cal providers
for conducting ACE screens

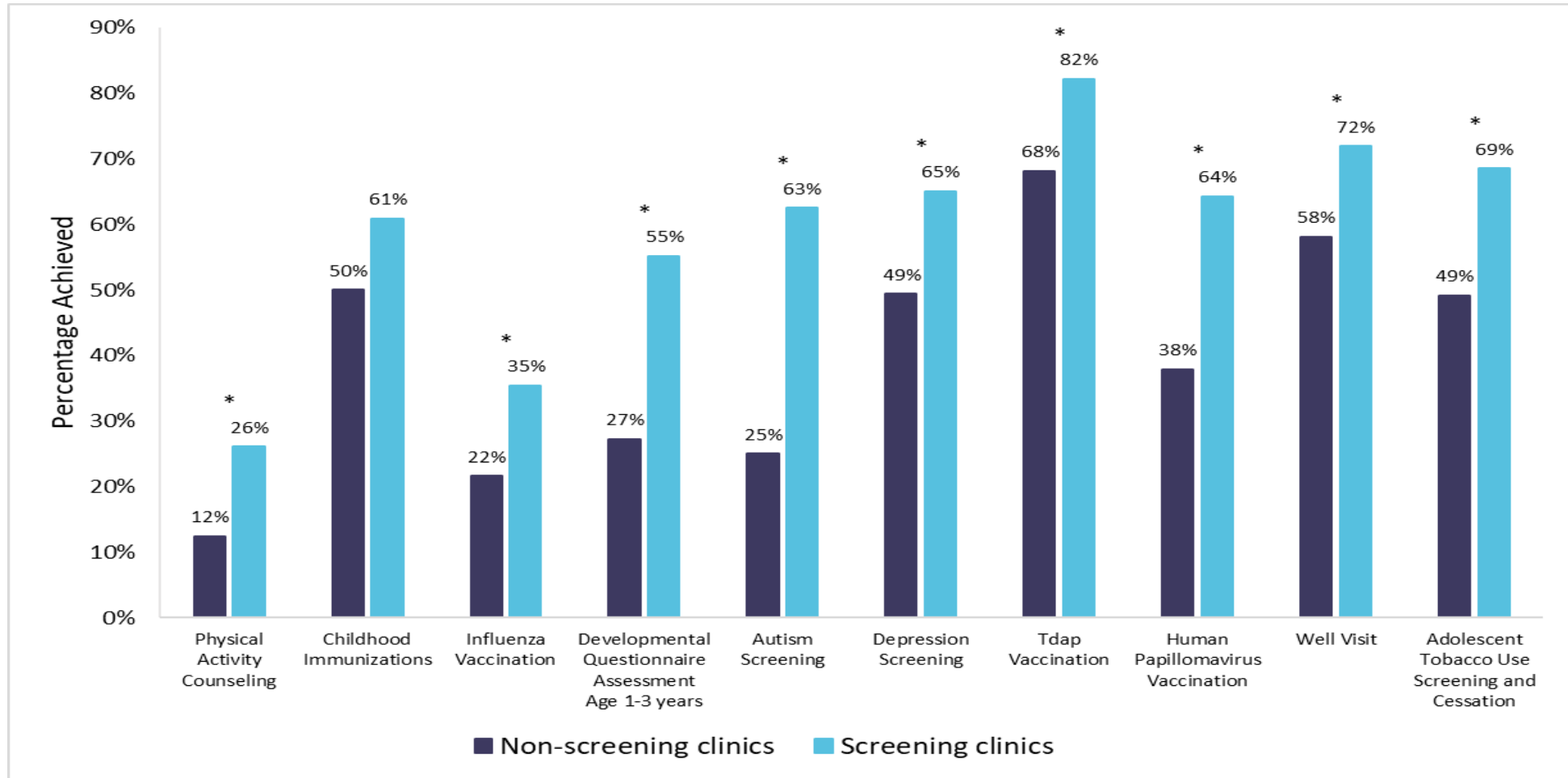


56

California counties in which
ACE screening is being
conducted (out of 58)

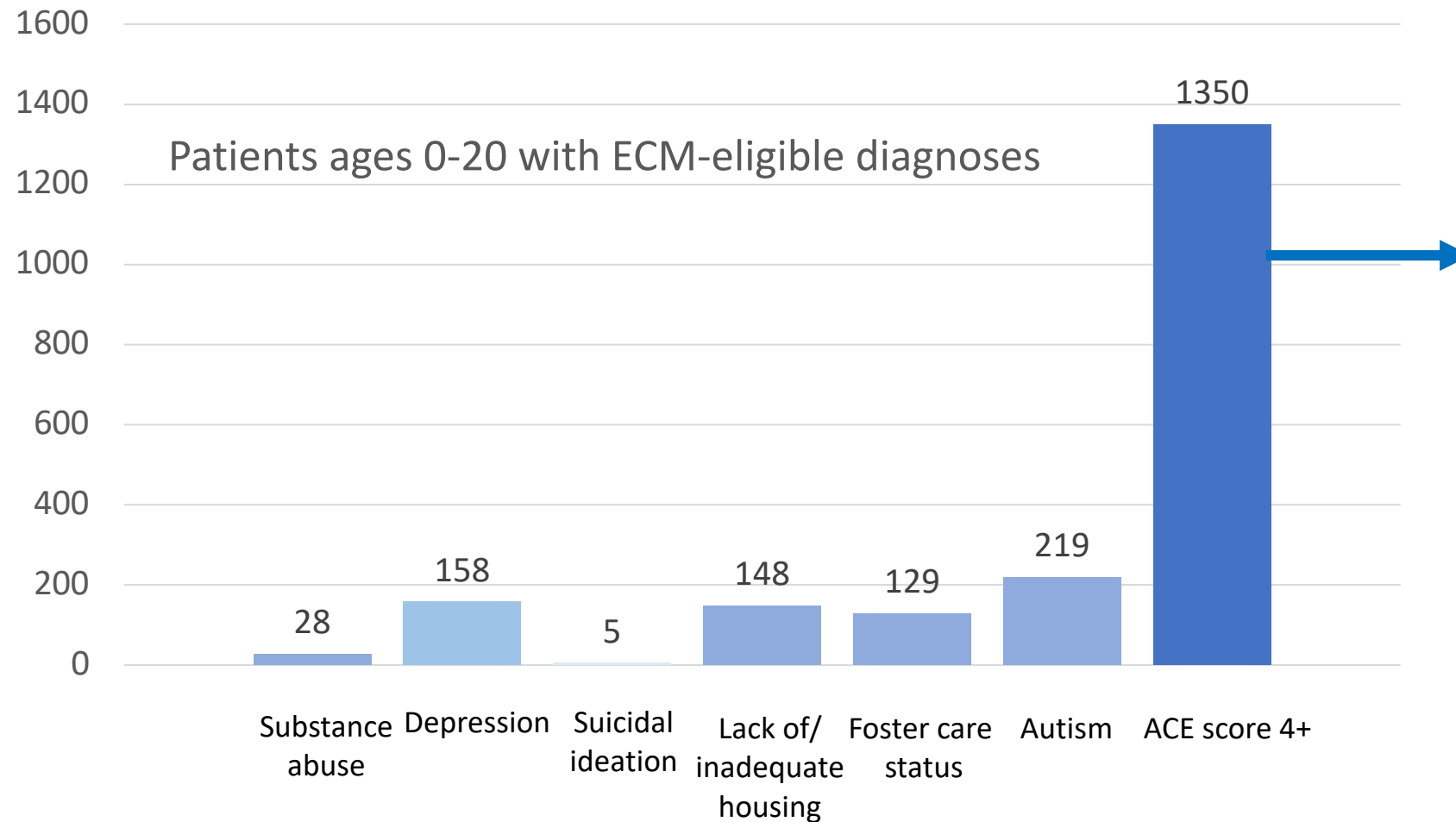
Community Family Medicine Clinics

Improved Pediatric Preventive Health Measures



Note: * indicates statistically significant changes between screening and non-screening clinics (p < 0.05)

Enhanced Care Management Eligibility by Diagnosis at LA County DHS



Only 71 patients with ACE score of 4+ have another of these ECM eligible diagnoses

Cross Sector Training and Competency: Education



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Safe Spaces

Foundations of
Trauma-Informed
Practice for
Educational and
Care Settings

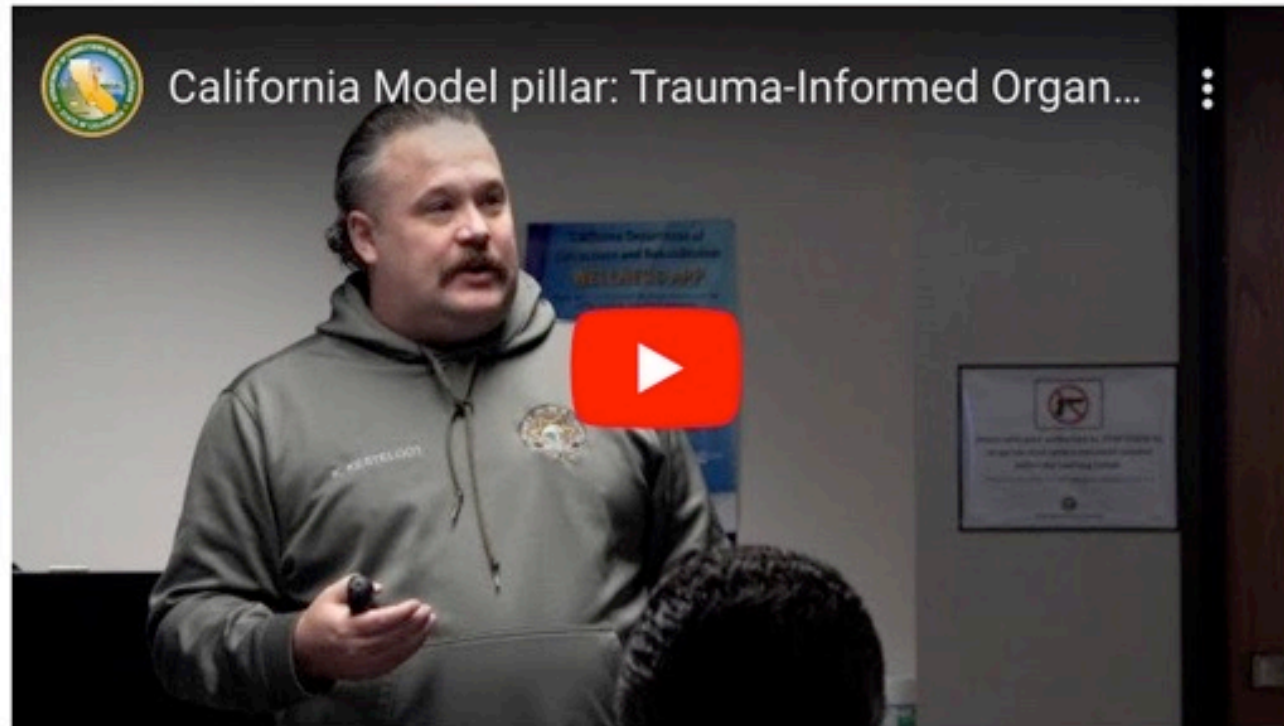


New Training Creates Safe Spaces for Kids

Safe spaces is a free, online training designed to help early care providers, TK-12 educators and other school personnel recognize and respond to trauma and stress in children.

TRAINING NOW LIVE!

Cross Sector Training and Competency: Corrections and Rehabilitation



Becoming a Trauma-Informed Organization: CDCR and CCHCS are committed to improving the practices, policies, and culture of the entire department by educating staff at all levels to recognize the impacts of trauma and ensure the physical and emotional safety of all staff and incarcerated individuals.

Public Awareness and Education: Parents

Breaking the Cycle/ Doctor

Home

What is Toxic Stress?

Address Toxic Stress



Get Help Now

English

Español

What is toxic stress?

When kids go through difficult or traumatic experiences, like losing a parent, getting bullied, or being exposed to violence, it can be very stressful on their minds and bodies. If this stress doesn't get addressed, it can build up and become toxic, which can lead to lasting challenges and serious health issues.






<https://www.youtube.com/watch?v=C73uTrDTkiw>

<https://www.youtube.com/watch?v=120MwVhJg3k>

Public Awareness and Education: Youth

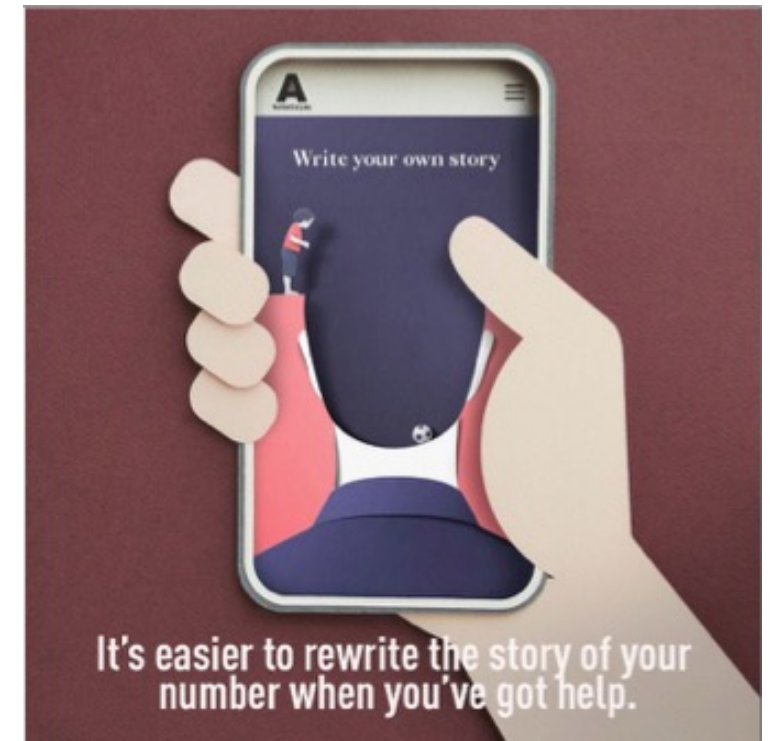
Our Key Audiences

-  **PRIMARY**
Youth and Young Adults (16-25)
-  **SECONDARY**
Caregivers
(emphasis on caregivers of youth ages 8-16)
-  **TERTIARY**
Health Care Providers, Educators, and Early Care Providers



Public Awareness and Education

Public/Private Partnership: Adults



NUMBERSTORY.ORG

NEXT STEPS:

Strengthening ACEsAware as the foundation of CA's trauma-informed systems transformation:

- **Supporting clinical innovations to prevent, identify, and respond to ACEs and Toxic Stress.**
- **Expanding training for health care teams.**
- **Advancing ACE screening and response activities through community engagement.**
- **Aligning science of ACEs and Toxic Stress with clinical implementation**
- **Strengthening alignment with CalAIM and DHCS bold goals**

THANK YOU!
