



Provider Toolkit

Screening and Responding to
the Impact of ACEs and Toxic Stress

May 2020

Contents

This Provider Toolkit provides information on the ACEs Aware initiative, including how to screen for and respond to ACEs, and how Medi-Cal providers can get trained and receive payment for conducting ACE screenings. This toolkit is composed of a series of fact sheets that are designed to be read individually.

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For more ACEs Aware information and resources visit the [ACEs Aware website](https://www.ACEsAware.org) at **ACEsAware.org**.

May 2020

Dear Providers,

Adverse Childhood Experiences (ACEs) and toxic stress represent a public health crisis that has been, until recently, largely unrecognized by our state's health care system and society. A consensus of scientific research demonstrates that cumulative adversity, especially when experienced during critical and sensitive periods of development, is a root cause to some of the most harmful, persistent, and expensive health challenges facing our state and nation.

But there is hope. We can take action now to change and save lives. The impacts of ACEs and toxic stress are treatable. We can screen for ACEs, respond with evidence-based trauma-informed care, and significantly improve the health and well-being of individuals and families. These efforts can also reduce the risk of intergenerational transmission of the significant health and societal consequences of toxic stress.

As a provider, you are on the frontlines of administering ACE screenings and interventions, but you are not alone in this effort. That is why we are so pleased to share our ACEs Aware Provider Toolkit, created in partnership between the Office of the California Surgeon General (CA-OSG) and the California Department of Health Care Services (DHCS). The toolkit offers information and resources that providers will find useful as we join forces to screen, treat, and heal patients. This includes how to get trained to screen for ACEs, assess risk for toxic stress, implement evidence-based interventions, receive payment from Medi-Cal for screenings, and help advance our state's systems of care to be more effective and efficient.

The time to act is now. Effective January 1, 2020, DHCS began paying Medi-Cal providers for conducting ACE screenings for children and adults up to age 65 with full-scope Medi-Cal. Together, we can address this public health crisis, advance our health care systems, and lead a national movement to ensure everyone is ACEs Aware.

We hope you will join us by using the information in this toolkit and by going to the [ACEs Aware website](https://www.acesaware.org) at [ACEsAware.org](https://www.acesaware.org) to take action.

Sincerely,

Nadine Burke Harris, MD, MPH, FAAP
CALIFORNIA SURGEON GENERAL

Karen E. Mark, MD, PhD
MEDICAL DIRECTOR
California Department
of Health Care Services

ACEs Aware Initiative: Overview



This fact sheet explains Adverse Childhood Experiences (ACEs), the impact of ACEs and toxic stress on health, and steps for providers to screen for ACEs and receive Medi-Cal payment.

The term Adverse Childhood Experiences (ACEs) comes from the landmark 1998 study by the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente. It describes 10 categories of adversities in three domains experienced by age 18 years: abuse, neglect, and/or household dysfunction (Figure 1).¹

Data show that 62% of California residents have experienced at least one ACE and 16% have experienced four or more ACEs.²

Figure 1: 10 Categories of Adverse Childhood Experiences (ACEs)

Abuse: physical, emotional, and sexual abuse

Neglect: physical and emotional neglect

Household dysfunction: parental incarceration, mental illness, substance use, parental separation or divorce, and intimate partner violence

ACEs cross ethnic, socioeconomic, gender, and geographic lines. Children are uniquely vulnerable to the effects of an overactive stress response due to ACEs because their brains and bodies are still developing.

A consensus of scientific research demonstrates that cumulative adversity, especially when experienced during critical and sensitive periods of development, is a root cause to some of the most harmful, persistent, and expensive health challenges facing our state and nation, including at least 9 of the 10 leading causes of death in the United States.

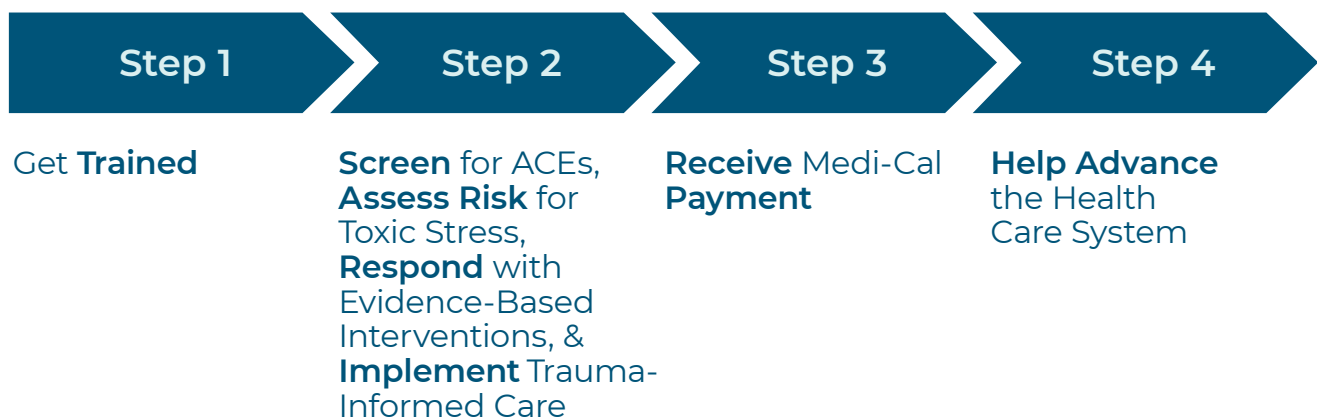
ACEs Aware in California

The ACEs Aware initiative offers Medi-Cal providers training, screening tools, clinical protocols, and payment for screening children and adults for ACEs. Screening for ACEs, assessing for toxic stress, and responding with evidence-based interventions can significantly improve the health and well-being of individuals and families.

- Effective January 1, 2020, qualified Medi-Cal providers are eligible for a **\$29 payment** for screening patients up to age 65 with full-scope Medi-Cal using a qualified screening tool.
- Beginning July 1, 2020, to receive payment, providers must have **completed a certified training and self-attested** to completing it.

Steps for Providers

Providers should follow these steps to receive Medi-Cal payment for conducting ACE screenings:



For more information, visit the [ACEs Aware website](https://www.ACEsAware.org) at **ACEsAware.org**.

The Science of ACEs and Toxic Stress



This fact sheet explains Adverse Childhood Experiences (ACEs) and the impact of ACEs and toxic stress on health.

The term Adverse Childhood Experiences (ACEs) comes from the landmark 1998 study by the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente. It describes 10 categories of adversities in three domains experienced by age 18 years: abuse, neglect, and/or household dysfunction (Figure 1).¹

Data show that 62% of California residents have experienced at least one ACE and 16% have experienced four or more ACEs, using 2011-2017 Behavioral Risk Factor Surveillance System (BRFSS) data from a random-digit-dialed telephone survey.²

Figure 1: 10 Categories of Adverse Childhood Experiences (ACEs)

Abuse: physical, emotional, and sexual abuse

Neglect: physical and emotional neglect

Household dysfunction: parental incarceration, mental illness, substance use, parental separation or divorce, and intimate partner violence

Key findings of the ACE Study and subsequent body of research include:

- **ACEs are highly prevalent.** Two thirds of respondents in the Kaiser Permanente/CDC study reported at least one ACE and one in eight reported four or more ACEs.^{1,3,4} Subsequent studies have shown a rate of four or more ACEs that is closer to one in six.^{5,6}
- **ACEs are strongly associated, in a dose-response fashion, with some of the most common and serious health conditions** facing our society today, including at least nine of the 10 leading causes of death in the U.S. (Figure 2). Find the ACE-Associated Health Conditions as part of the [ACE Screening Workflows, Risk Assessment and Treatment Algorithms, and ACE-Associated Health Conditions](#) at ACEsAware.org/assessment-and-treatment.
- **ACEs affect all communities.** The original ACE Study was conducted among a population that was mostly Caucasian, middle class, employed, college educated, and privately insured.^{1,3,4} Subsequent studies have found higher prevalence rates of ACEs in people who are low-income, of color, justice-involved, and/or part of the lesbian, gay, bisexual, transgender, and queer (LGBTQ+) community.⁵⁻¹⁰

Figure 2: Leading Causes of Death in the U.S.

	Leading Causes of Death in the U.S., 2017	Odds Ratios for ≥ 4 ACEs (relative to no ACEs)
1	Heart disease	2.1
2	Cancer	2.3
3	Accidents (unintentional injuries)	2.6
4	Chronic lower respiratory disease	3.1
5	Stroke	2.0
6	Alzheimer's or dementia	11.2
7	Diabetes	1.4
8	Influenza and pneumonia	Risk unknown
9	Kidney disease	1.7
10	Suicide (attempts)	37.5

Source of **causes of death**: CDC, 2017.¹¹

Sources of **odds ratios**: Hughes *et al.*, 2017 for 1, 2, 4, 7, 10.¹²

Petrucelli *et al.*, 2019 for 3 (injuries with fracture), 5.^{3,5,13}

Center for Youth Wellness, 2014 for 6 (Alzheimer's or dementia).¹⁴

Center for Youth Wellness, 2014 and Merrick *et al.*, 2019 for 9.^{5,14}

Toxic Stress

Several decades of scientific research have identified the biological mechanisms by which early adversity leads to increased risk of negative health and social outcomes through the life course.

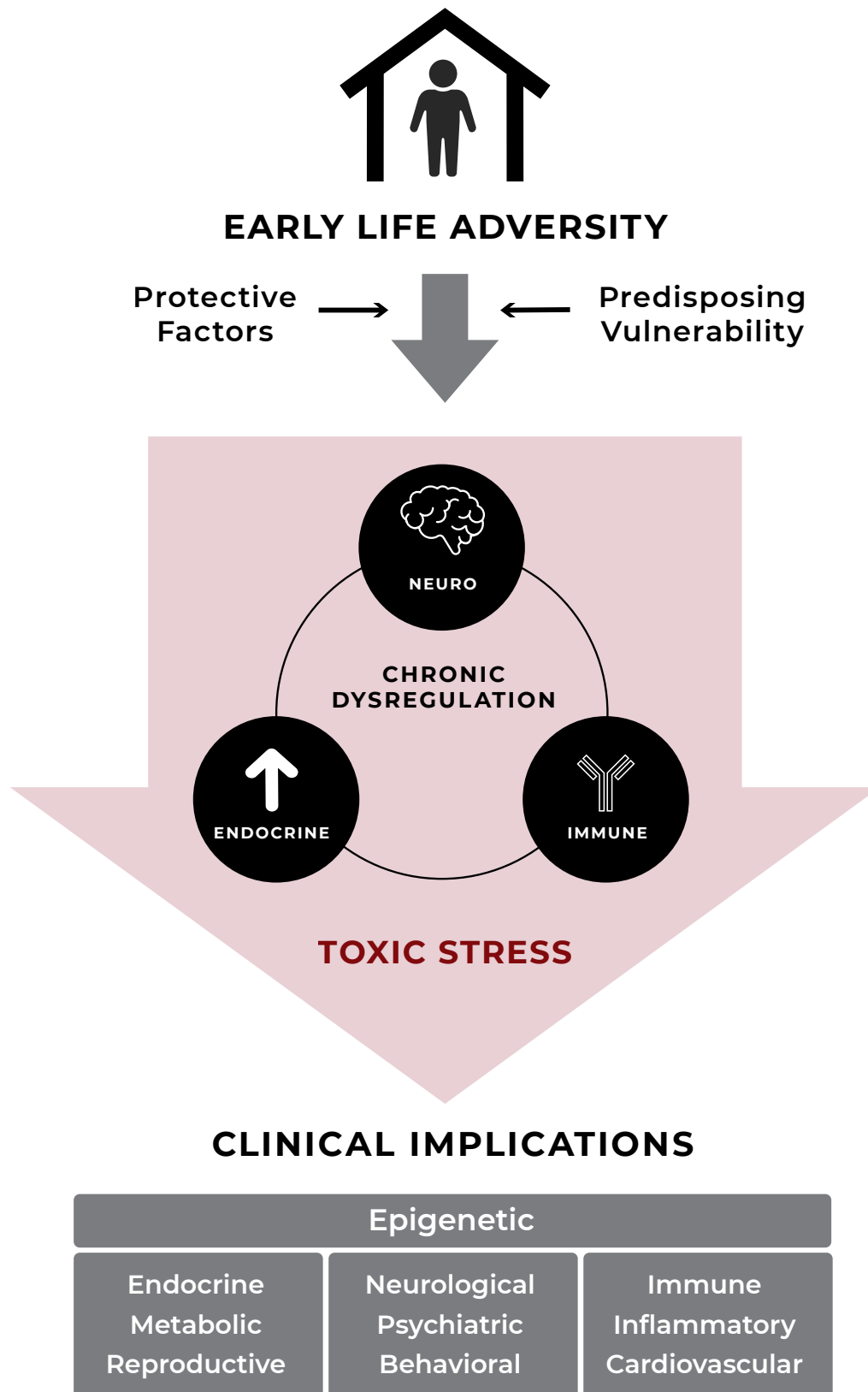
Repeated or prolonged activation of a child's stress response, without the buffering protections of trusted, nurturing caregivers and safe, stable environments, leads to long-term changes in the structure and functioning of the developing brain, metabolic, immune, and neuroendocrine responses, and even the way DNA is read and transcribed. This is known as the **toxic stress response** (Figure 3).¹⁵⁻¹⁸

These biological changes play an important role in the clinical progression from ACE exposure to negative short- and long-term health and social outcomes. Further, both the disrupted biology and the associated negative outcomes demonstrate a pattern of high rates of intergenerational transmission. Development of the toxic stress response is influenced by a combination of cumulative adversity, buffering or protective factors, and predisposing vulnerability.

In addition to ACEs, social determinants of health (SDOH), such as poverty, discrimination, and housing and food insecurity, are associated with health risks and may also be risk factors for toxic stress. While validated odds ratios are available in large, population-based studies utilizing the 10 standardized ACE criteria, the strengths of associations between SDOH and health outcomes have not been similarly standardized.



Figure 3: Toxic Stress Response



Adapted from *Bucci et al., 2016*¹⁶

The Impact of ACEs and Toxic Stress on Health

ACEs are associated with increased risk of a wide range of negative health conditions in both pediatric and adult populations. The life expectancy of individuals with six or more ACEs is 19 years shorter than that of individuals with none.²⁰ Find a list of ACE-Associated Health Conditions for pediatrics and adults as part of the [ACE Screening Workflows, Risk Assessment and Treatment Algorithms, and ACE-Associated Health Conditions](#) at ACEsAware.org/assessment-and-treatment.

Pediatric Health

The effects of toxic stress are detectable as early as infancy. In babies, high doses of adversity are associated with failure to thrive, growth delay, sleep disruption, and developmental delay. School-aged children may have increased risk of viral infections, pneumonia, asthma, and other atopic diseases, as well as difficulties with learning and behavior.

Among adolescents with high ACEs, somatic complaints — including headache and abdominal pain, increased engagement in high-risk behaviors, teen pregnancy, teen paternity, sexually transmitted infections (STIs), mental health disorders, and substance use — are common.

Adult Health

As noted above, ACEs are associated with some of the most common and serious health conditions facing our communities. Learn more about [ACE-Associated Health Conditions for adults](#) at: ACEsAware.org/assessment-and-treatment.

Mental and Behavioral Health

The higher the ACE score, the greater the likelihood an individual may experience mental health disorders such as depression, post-traumatic stress disorder, anxiety, and sleep disorders, and engage in risky behaviors such as early and high-risk sexual behaviors and substance use.^{5,12,13} High doses of childhood adversity are associated with increased risk of engaging in high-risk behaviors that can lead to negative health outcomes.

However, even in the absence of health-damaging behavior, strong associations between cumulative childhood adversity and increased risk of serious health conditions persist. Evidence suggests that the toxic stress response likely plays a role in mediating both behavior-related and non-behavior-related pathways.

Cost of ACEs in California

Considering just five ACE-Associated Health Conditions (asthma, arthritis, COPD, depression, and cardiovascular disease) and three health risk factors (lifetime smoking, heavy drinking, and obesity), the **annual total cost of these health-related impacts of ACEs in California is \$112.5 billion**. This includes direct healthcare expenditures (\$10.5 billion), and the cost in disability and years of productive life lost to ACEs (\$102 billion).^{21,22}

In sum, ACEs are common, highly consequential for health and well-being, and very costly—and thus constitute a major and under-addressed public health crisis of our era.

For information on the clinical response to ACEs, see the "[Clinical Response to Adverse Childhood Experiences and Toxic Stress](#)" fact sheet at ACEsAware.org/toolkit/clinical-response.



01 Screen: Training and Payment

Screening Tools Overview

Suggested Clinical Workflows for Screening

Medi-Cal Certification and Payment



Screening Tools Overview

This fact sheet explains why providers should screen for ACEs and describes the tools that should be used to screen children, adolescents, and adults for ACEs.

Screening for ACEs and toxic stress and providing targeted, evidence-based interventions for toxic stress can:

- Improve efficacy and efficiency of health care;
- Better support individual and family health and well-being; and
- Reduce long-term health costs.

ACE Screening Tools

The tools used to screen children, adolescents, and adults for ACEs are available in de-identified and identified formats:

For Children and Adolescents (Ages 0–19)

The **Pediatric ACEs and Related Life Events Screener (PEARLS)** was developed by the [Bay Area Research Consortium on Toxic Stress and Health \(BARC\)](#), a partnership between the Center for Youth Wellness, the University of California, San Francisco (UCSF), and UCSF Benioff Children's Hospital Oakland.

The PEARLS includes an ACE screen (Part 1) as well as a social determinants of health (SDOH) screen (Part 2) — for a total of 17-19 questions, depending on child age (Figure 4). Only Part 1 is used to calculate a child's ACE score. Below is more information about the two parts:

Part 1: ACE screen—10 questions that screen for history of abuse, neglect, and household dysfunction (Figure 1). The ACE score refers to the total number of ACE categories experienced, rather than the severity or frequency of any one category. The total score ranges between 0 and 10.

Part 2: It is recognized that social determinants of health (SDOH) other than ACEs are associated with health risks and may also be risk factors for toxic stress. These include community violence, food and housing insecurity, bullying, discrimination, and a caregiver's physical illness or death.

The social determinants of health also should be addressed with appropriate services as indicated, but they should not be added to the ACE score for the purpose of the toxic stress risk assessment, treatment planning, and billing. While validated odds ratios are available in large, population-based studies utilizing the 10 standardized ACE criteria, the strengths of association between these SDOH and health outcomes have not been similarly standardized.

There are three versions of the tool, based on age and reporter, for a total of 17-19 questions (10 ACE categories and seven to nine SDOH categories):

- **PEARLS child tool**, for ages 0–11, to be completed by a caregiver
- **PEARLS adolescent tool**, for ages 12–19, to be completed by a caregiver
- **PEARLS for adolescent self-report tool**, for ages 12–19, to be completed by the adolescent

Providers receive a single Medi-Cal payment if the adolescent OR their caregiver completes the PEARLS adolescent tool. However, the best practice is for both the adolescent and the caregiver to each complete a tool. When these yield different scores, the higher score should be used in toxic stress risk assessment, treatment planning, and billing.

**Figure 4. PEARLS –
De-Identified for ACEs and Identified for SDOH**

Pediatric ACEs and Related Life Events Screener (PEARLS)

CHILD - To be completed by: **Caregiver**

At any point in time since your child was born, has your child seen or been present when the following experiences happened? Please include past and present experiences.

Please note, some questions have more than one part separated by "OR." If any part of the question is answered "Yes," then the answer to the entire question is "Yes."


PART 1:

- Has your child ever lived with a parent/caregiver who went to jail/prison?
- Do you think your child ever felt unsupported, unloved and/or unprotected?
- Has your child ever lived with a parent/caregiver who had mental health issues?
(for example, depression, schizophrenia, bipolar disorder, PTSD, or an anxiety disorder)
- Has a parent/caregiver ever insulted, humiliated, or put down your child?
- Has the child's biological parent or any caregiver ever had, or currently has a problem with too much alcohol, street drugs or prescription medications use?
- Has your child ever lacked appropriate care by any caregiver?
(for example, not being protected from unsafe situations, or not cared for when sick or injured even when the resources were available)
- Has your child ever seen or heard a parent/caregiver being screamed at, sworn at, insulted or humiliated by another adult?


Or has your child ever seen or heard a parent/caregiver being slapped, kicked, punched beaten up or hurt with a weapon?
- Has any adult in the household often or very often pushed, grabbed, slapped or thrown something at your child?

Or has any adult in the household ever hit your child so hard that your child had marks or was injured?

Or has any adult in the household ever threatened your child or acted in a way that made your child afraid that they might be hurt?
- Has your child ever experienced sexual abuse?
(for example, anyone touched your child or asked your child to touch that person in a way that was unwanted, or made your child feel uncomfortable, or anyone ever attempted or actually had oral, anal, or vaginal sex with your child)
- Have there ever been significant changes in the relationship status of the child's caregiver(s)?
(for example, a parent/caregiver got a divorce or separated, or a romantic partner moved in or out)



This tool was created in partnership with UCSF School of Medicine.



Add up the "yes" answers for this first section:

Please continue to the other side for the rest of questionnaire →

Child (Parent/Caregiver Report) – Deidentified

**Figure 4. PEARLS –
De-Identified for ACEs and Identified for SDOH**


PART 2:

Please check "Yes" where apply.

- Has your child ever seen, heard, or been a victim of violence in your neighborhood, community or school?
(for example, targeted bullying, assault or other violent actions, war or terrorism)
- Has your child experienced discrimination?
(for example, being hassled or made to feel inferior or excluded because of their race, ethnicity, gender identity, sexual orientation, religion, learning differences, or disabilities)
- Has your child ever had problems with housing?
(for example, being homeless, not having a stable place to live, moved more than two times in a six-month period, faced eviction or foreclosure, or had to live with multiple families or family members)
- Have you ever worried that your child did not have enough food to eat or that the food for your child would run out before you could buy more?
- Has your child ever been separated from their parent or caregiver due to foster care, or immigration?
- Has your child ever lived with a parent/caregiver who had a serious physical illness or disability?
- Has your child ever lived with a parent or caregiver who died?

Add up the "yes" answers for the second section:

CENTER for YOUTH WELLNESS



UCSF Benioff Children's Hospital
Oakland

This tool was created in partnership with UCSF School of Medicine.


Child (Parent/Caregiver Report) – Identified

For Adults (Ages 18 and Older)

The **ACE Questionnaire for Adults** was adapted from the work of Kaiser Permanente and the Centers for Disease Control and Prevention (CDC). A version of the tool (Figure 5) has been compiled by the Office of the California Surgeon General and the Department of Health Care Services, in consultation with the ACEs Aware Clinical Advisory Subcommittee.

Figure 5. ACE Questionnaire for Adults — De-Identified

Adverse Childhood Experience Questionnaire for Adults
California Surgeon General's Clinical Advisory Committee


SCREEN. TREAT. HEAL.

Our relationships and experiences—even those in childhood—can affect our health and well-being. Difficult childhood experiences are very common. Please tell us whether you have had any of the experiences listed below, as they may be affecting your health today or may affect your health in the future. This information will help you and your provider better understand how to work together to support your health and well-being.

Instructions: Below is a list of 10 categories of Adverse Childhood Experiences (ACEs). From the list below, please add up the number of categories of ACEs you experienced prior to your 18th birthday and put the total number at the bottom. (You do not need to indicate which categories apply to you, only the total number of categories that apply.)

Did you feel that you didn't have enough to eat, had to wear dirty clothes, or had no one to protect or take care of you?	
Did you lose a parent through divorce, abandonment, death, or other reason?	
Did you live with anyone who was depressed, mentally ill, or attempted suicide?	
Did you live with anyone who had a problem with drinking or using drugs, including prescription drugs?	
Did your parents or adults in your home ever hit, punch, beat, or threaten to harm each other?	
Did you live with anyone who went to jail or prison?	
Did a parent or adult in your home ever swear at you, insult you, or put you down?	
Did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?	
Did you feel that no one in your family loved you or thought you were special?	
Did you experience unwanted sexual contact (such as fondling or oral/anal/vaginal intercourse/penetration)?	
Your ACE score is the total number of yes responses.	

Do you believe that these experiences have affected your health? ☐ Not Much ☐ Some ☐ A Lot

Experiences in childhood are just one part of a person's life story.
There are many ways to heal throughout one's life.

Please let us know if you have questions about privacy or confidentiality.

Figure 5. ACE Questionnaire for Adults — Identified

Adverse Childhood Experience Questionnaire for Adults
California Surgeon General's Clinical Advisory Committee

aces aware
SCREEN. TREAT. HEAL.

Our relationships and experiences—even those in childhood—can affect our health and well-being. Difficult childhood experiences are very common. Please tell us whether you have had any of the experiences listed below, as they may be affecting your health today or may affect your health in the future. This information will help you and your provider better understand how to work together to support your health and well-being.

Instructions: Below is a list of 10 categories of Adverse Childhood Experiences (ACEs). From the list below, please place a checkmark next to each ACE category that you experienced prior to your 18th birthday. Then, please add up the number of categories of ACEs you experienced and put the *total number* at the bottom.

Did you feel that you didn't have enough to eat, had to wear dirty clothes, or had no one to protect or take care of you?	
Did you lose a parent through divorce, abandonment, death, or other reason?	
Did you live with anyone who was depressed, mentally ill, or attempted suicide?	
Did you live with anyone who had a problem with drinking or using drugs, including prescription drugs?	
Did your parents or adults in your home ever hit, punch, beat, or threaten to harm each other?	
Did you live with anyone who went to jail or prison?	
Did a parent or adult in your home ever swear at you, insult you, or put you down?	
Did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?	
Did you feel that no one in your family loved you or thought you were special?	
Did you experience unwanted sexual contact (such as fondling or oral/anal/vaginal intercourse/penetration)?	
Your ACE score is the total number of checked responses	

Do you believe that these experiences have affected your health? ☐ Not Much ☐ Some ☐ A Lot

Experiences in childhood are just one part of a person's life story.
There are many ways to heal throughout one's life.

Please let us know if you have questions about privacy or confidentiality.

If an alternative version of the ACE Questionnaire for Adults is used, it must contain questions on the 10 original categories of ACEs to qualify for Medi-Cal payment (Figure 1). For 18- and 19-year-olds, either tool may be used. For patients 20 years and older, the adolescent self-report version of the PEARLS is also acceptable.

Tool Formats

Both tools are available in de-identified and identified formats:

- 1. De-Identified:** Respondents count the number of ACE categories on the screening tool that they or their child has experienced, and indicate only the total score — without identifying *which* ACE(s) they or their child experienced.
- 2. Identified:** Respondents count the number of ACEs categories on the screening tool that they or their child has experienced **and** specify *which* ACE(s) they or their child experienced.

Find the [ACE Screening Tools](#) at ACEsAware.org/screening-tools.

For information on the clinical response to ACEs and toxic stress, see the "[Clinical Response to Adverse Childhood Experiences and Toxic Stress](#)" fact sheet at ACEsAware.org/toolkit/clinical-response.

For information on Medi-Cal payment, see the "[Medi-Cal Certification and Payment](#)" fact sheet at ACEsAware.org/toolkit/certification-and-payment.



Suggested Clinical Workflows for Screening



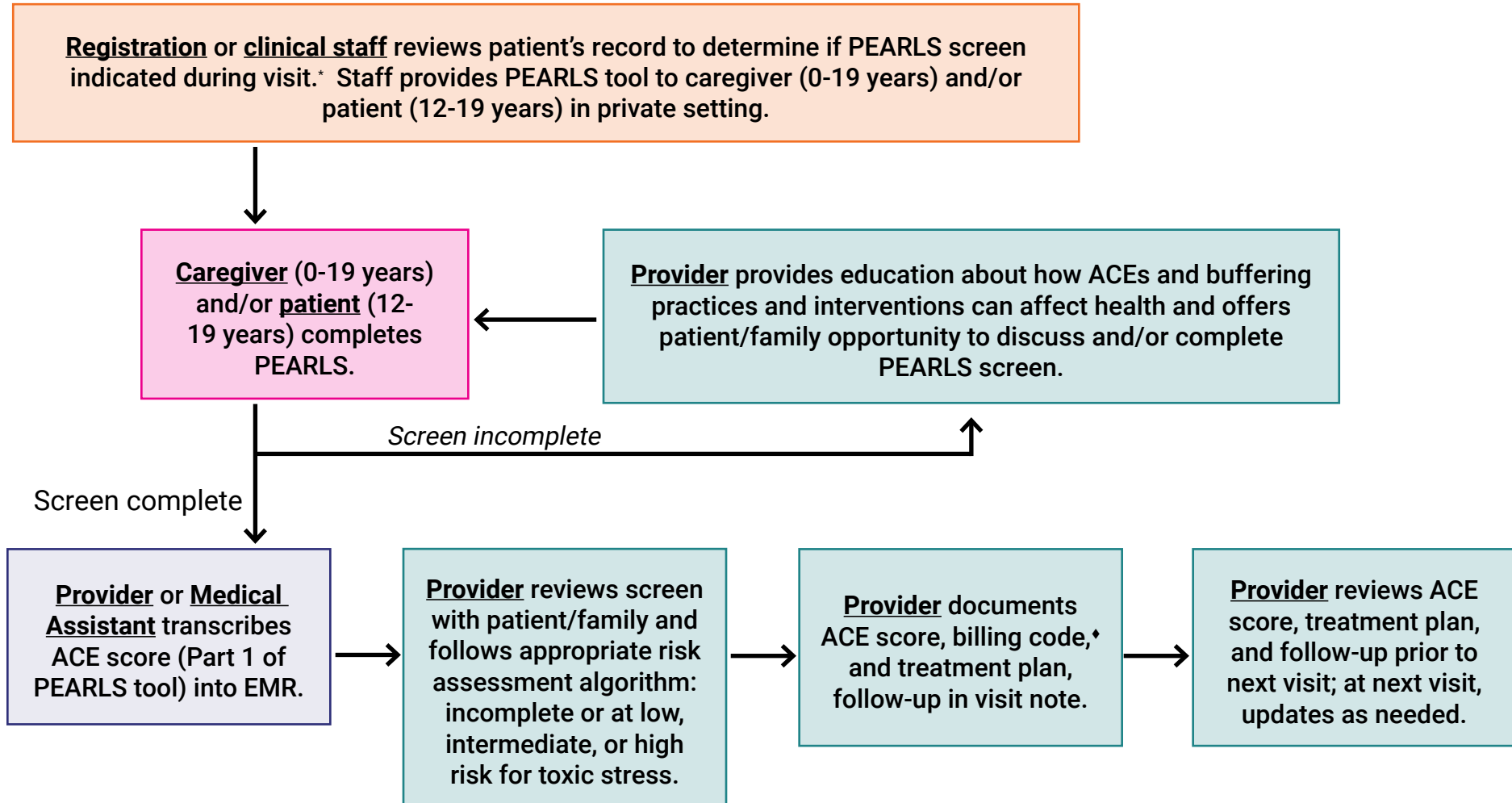
This fact sheet provides suggested workflows for implementing ACE screening and explains how to calculate the ACE score.

At the beginning of an appointment, the age-appropriate screening tool should be given directly to adult patients, caregivers for children and adolescents, and adolescent patients for completion in a private setting when possible.

The Clinical Advisory Committee and the Office of the California Surgeon General have developed the following suggested workflows for incorporating ACE screening and response into clinical care, adapted for pediatric and adult practices.

These [ACE Screening Clinical Workflows](#) can also be found as part of the ACE Screening Workflows, Risk Assessment and Treatment Algorithms, and ACE-Associated Health Conditions at [ACEsAware.org/assessment-and-treatment](https://acesaware.org/assessment-and-treatment).

Pediatric ACE Screening Clinical Workflow



*PEARLS is recommended to be completed once per year.

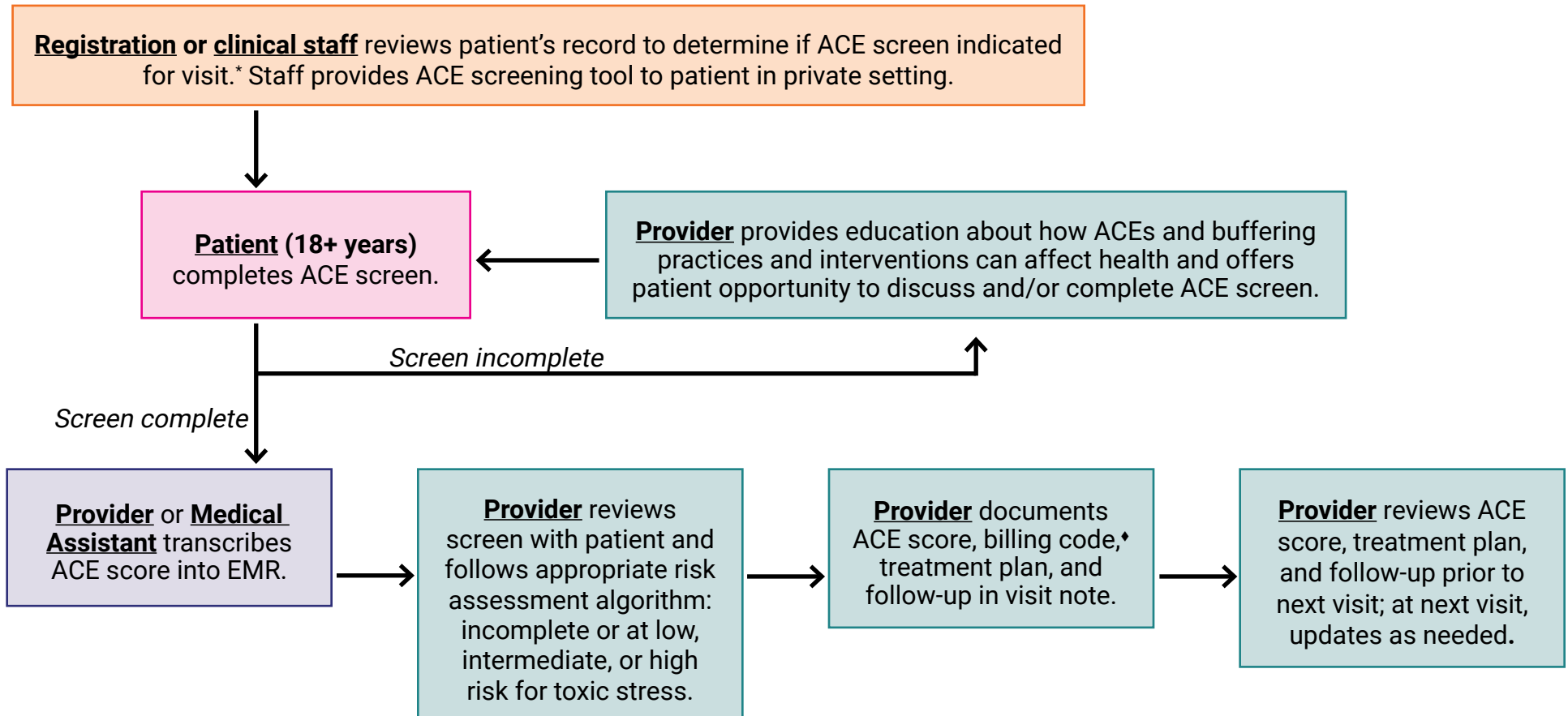
♦Healthcare Common Procedure System (HCPCS) billing codes for ACE scores:

G9919: ACE score ≥ 4, high risk for toxic stress

G9920: ACE score of 0 – 3, lower risk for toxic stress. For purposes of coding, scores of 1-3 with ACE-Associated Health Conditions should be coded as G9920, even though patient falls into the high-risk category of the clinical algorithm.

***PEARLS to be completed once per year, and no less often than every 3 years

Adult ACE Screening Clinical Workflow



*ACE tool is recommended to be completed once per adult, per lifetime.

♦Healthcare Common Procedure System (HCPCS) billing codes for ACE scores:

G9919: ACE score ≥ 4 , at high risk for toxic stress.

G9920: ACE score of 0 – 3, at lower risk for toxic stress (on algorithm, at either low or intermediate risk).

ACE Score Calculation

The ACE score refers to the total reported exposure to the 10 ACE categories indicated in Part 1 of the PEARLS and in the ACE Questionnaire for Adults. ACE scores range from 0 to 10.

The ACE score refers to the total number of ACE categories experienced, not the severity or frequency of any one category. The higher a patient's ACE score, the greater the risk for ACE-Associated Health Condition(s). Each patient's individual health outcomes will be based on a combination of cumulative adversity (including ACEs and other stressors), protective factors, and differential biological susceptibility. Therefore, ACE screening should be used in a probabilistic, not a deterministic, manner to alert providers to which patients are at a greater health risk based on population-level data.

If the ACE score is different on the adolescent self-report than the caregiver report, the higher of the two ACE scores should be used for treatment and billing.

Providers bill Medi-Cal using Healthcare Common Procedure Coding System (HCPCS) codes based on the results of the screening. For information on Medi-Cal billing codes, see the "[Medi-Cal Certification and Payment](#)" fact sheet at [ACEsAware.org/toolkit/certification-and-payment](https://www.acesaware.org/toolkit/certification-and-payment).

For information on the clinical response to ACEs and toxic stress, visit the "[Clinical Response to Adverse Childhood Experiences and Toxic Stress](#)" fact sheet at [ACEsAware.org/toolkit/clinical-response](https://www.acesaware.org/toolkit/clinical-response).



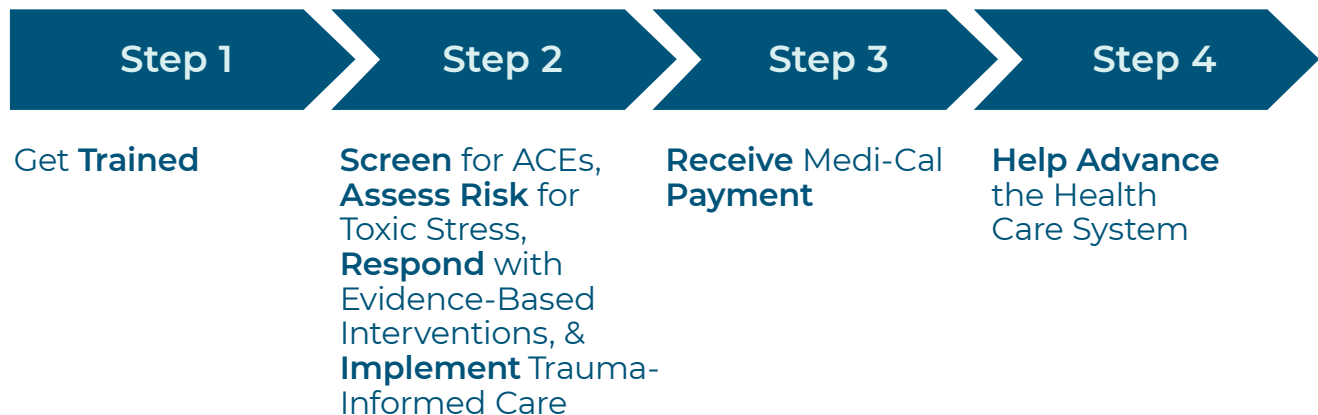
Medi-Cal Certification and Payment



This fact sheet explains how Medi-Cal providers can participate in the ACEs Aware initiative by getting trained, screening patients for Adverse Childhood Experiences (ACEs), assessing risk for toxic stress physiology, responding with evidence-based interventions, providing trauma-informed care, and receiving payment.

Steps for Providers

Providers should follow these steps to receive Medi-Cal payment from the Department of Health Care Services (DHCS) for ACE screenings:



Step 1 Get Trained

Providers can take a free, two-hour [ACEs Aware online training](https://www.acesaware.org/training) at [training.ACEsAware.org](https://www.acesaware.org/training). Providers will receive 2.0 Continuing Medical Education (CME) credits and 2.0 Maintenance of Certification (MOC) credits upon completion. Additional trainings will be certified in 2020. A [list of certified trainings](#) will be posted at [ACEsAware.org/training](https://www.acesaware.org/training).

Step 2 Screen for ACEs, Assess for Risk of Toxic Stress, Respond to Evidence-Based Interventions, and Implement Trauma-Informed Care

Providers screen patients using a qualified ACE screening tool depending upon the patient's age – find the [ACE screening tools](#) at [ACEsAware.org/screening-tools](https://www.acesaware.org/screening-tools).

Toxic stress risk assessment and management should be pursued according to the ACE Screening Workflows, Risk Assessment and Treatment Algorithms, and ACE-Associated Health Conditions. These clinical resources explain how to apply patient ACE scores and toxic stress risk assessment to target evidence-based interventions to buffer toxic stress, including making appropriate referrals to specialists and community resources. Find [ACE Screening Workflows, Risk Assessment and Treatment Algorithms, ACE-Associated Health Conditions and other clinical resources](#) at [ACEsAware.org/assessment-and-treatment](https://www.acesaware.org/assessment-and-treatment).

a. Screening Tools

An ACE screening evaluates children and adults for ACEs experienced by age 18. The following screening tools qualify providers to receive payment for screenings:

For Children and Adolescents (Ages 0–19)

The Pediatric ACEs and Related Life-Events Screener (PEARLS) was developed by the [Bay Area Research Consortium on Toxic Stress and Health \(BARC\)](#).

Providers receive Medi-Cal payment if the adolescent or their caregiver completes the tool. However, the best practice is for both the adolescent and the caregiver to each complete a tool.

In circumstances when this gives rise to two answers, the higher score should be used for billing and treatment planning.

For Adults (Ages 18 and Older)

The **ACE Questionnaire for Adults** was adapted from the work of Kaiser Permanente and the Centers for Disease Control and Prevention (CDC). If an alternative version of the ACE Questionnaire for Adults is used, it must contain questions on the 10 original categories of ACEs to qualify for Medi-Cal payment. For the [ACE Questionnaire for Adults](#) recommended by the Office of the California Surgeon General and the Department of Health Care Services, visit [ACEsAware.org/screening-tools](https://acesaware.org/screening-tools).

For 18- and 19-year-olds, either the adolescent PEARLS or the ACE Questionnaire for Adults may be used. For patients 20 years and older, the adolescent self-report version of the PEARLS tool is also acceptable.

b. Screening Frequency

Medi-Cal payment is available for ACE screenings based on the following schedule:

Children and Adolescents: Under Age 21

Permitted for periodic ACE rescreening as determined appropriate and medically necessary, not more than once per year, per provider (per managed care plan).

Adults: Age 21 through 64

Permitted once per adult lifetime (through age 64), per provider (per managed care plan). Screenings completed while the person is under age 21 years do not count toward the one screening allowed in their adult lifetime.

For information on assessing for risk of toxic stress physiology and intervening appropriately, visit the "[Clinical Response to Adverse Childhood Experiences and Toxic Stress](#)" fact sheet at [ACEsAware.org/toolkit/clinical-response](https://acesaware.org/toolkit/clinical-response).

Step 3 Receive Medi-Cal Payment

a. Attest to Completing Training

Beginning on July 1, 2020, Medi-Cal providers must self-attest to completing certified ACE training to continue receiving payment for screening. Providers can find and submit an [ACE Training Attestation Form](#) at [ACEsAware.org/certification-payment](https://acesaware.org/certification-payment).

b. Receive Medi-Cal Payment

Qualified Medi-Cal providers will receive a \$29 payment for providing qualifying screenings to patients up to age 65 with full-scope Medi-Cal. Payment is not available for patients age 65 and older or for those who are dually eligible for Medi-Cal and Medicare Part B (regardless of enrollment in Medicare Part A or Part D).

Qualifying ACE screenings are eligible for payment in any clinical setting in which billing occurs through Medi-Cal fee-for-service or to a network provider of a Medi-Cal managed care plan.

Medi-Cal Managed Care

Network providers will receive payment from managed care plans in addition to whatever the provider is paid by the managed care plan for the accompanying office visit.

Fee-for-Service

Payments will follow the typical process and will be paid directly to the provider submitting the claim.

Federally qualified health centers (FQHCs), rural health clinics (RHCs), and Indian Health Service (IHS) are also eligible for the \$29 payment.

Find information on the [Medi-Cal provider types that are eligible to receive payment](#) for conducting a qualifying ACE screen at [ACEsAware.org/FAQ](https://acesaware.org/FAQ).

Medi-Cal Billing Codes

The following Healthcare Common Procedure Coding System (HCPCS) should be used to bill Medi-Cal based on ACE screening results.

HCPCS	Definition	Notes
G9919	Screening performed: Result indicates patient is at high risk for toxic stress; education and evidence-based interventions (as necessary) provided.*	Providers must bill this HCPCS when the patient's ACE score is 4 or greater (high risk) .
G9920	Screening performed: Result indicates patient is at lower risk for toxic stress; education and evidence-based interventions (as necessary) provided.*	Providers must bill this HCPCS when the patient's ACE score is between 0-3 (lower risk) .

* Billing and coding are based solely on the total ACE score. The ACE score refers to the total reported categories of exposure from among the 10 ACEs, indicated in the ACE Questionnaire for Adults or Part 1 of the pediatric PEARLS. ACE scores range from 0 to 10.

Providers must document all of the following:

- The screening tool that was used;
- That the completed screen was reviewed;
- The results of the screen;
- The interpretation of results; and
- What was discussed with the patient and/or family.

This documentation must remain in the patient's medical record, and be available upon request.

Step 4 Help Advance the Health Care System

ACEs Aware is hosting a series of activities to promote shared learning and quality improvement among Medi-Cal providers in implementing ACE screenings and providing evidence-based care. For [information about upcoming events](#), visit ACEsAware.org/educational-events.

ACE Aware is also providing grants to extend the reach and impact of the initiative. For [information on grants](#), visit ACEsAware.org/request-for-proposals.

Additionally, the California ACEs Learning and Quality Improvement Collaborative (CALQIC) will run an 18-month statewide effort among at least 50 diverse pediatric and adult clinics across five regions. CALQIC will identify promising evidence-informed practices, tools, resources, and partnerships that will inform future phases of the ACEs Aware initiative.

Not a Medi-Cal provider? The \$29 payment for ACE screenings is funded by Prop. 56 and is only available to Medi-Cal providers.

You can still get trained and use the [ACE Screening Workflows, Risk Assessment and Treatment Algorithms, and ACE-Associated Health Conditions](#) at ACEsAware.org/assessment-and-treatment.

If you are interested in becoming a Medi-Cal provider, visit the [DHCS Provider Enrollment web page](#) at bit.ly/providerenrollment.





02 Treat: Clinical Practice

Trauma-Informed Care Overview

Clinical Response to ACEs and Toxic Stress

Trauma-Informed Care Overview



This fact sheet provides information on the framework and principles of trauma-informed care.

Trauma-informed care recognizes and responds to the signs, symptoms, and potential consequences of trauma to better support the health needs of patients who have experienced ACEs and toxic stress.

Trauma-informed care is a framework that involves:

- **Understanding** the prevalence of trauma and adversity and their impacts on health and behavior;
- **Recognizing** the effects of trauma and adversity on health and behavior;
- **Training** leadership, providers, and staff on **responding** to patients with best practices for trauma-informed care;
- **Integrating** knowledge about trauma and adversity into policies, procedures, practices, and treatment planning; and
- **Resisting** re-traumatization by approaching patients who have experienced ACEs or other adversities with non-judgmental support.

Principles of Trauma-Informed Care

The following key principles of trauma-informed care should serve as a guide for all health care providers and staff:

1. Establish the physical and emotional safety of patients and staff.

Examples: When appointments are made, staff can ask patients if there is anything their provider needs to know to make their upcoming visit more comfortable. When the patient arrives, inform them about any anticipated wait times and, when possible, provide a private setting for completing ACE screening.

2. Build trust between providers and patients.

Examples: Provide a clear description of the purpose of ACE screening and how the responses will inform the provider's assessment and a joint treatment plan. Approach patients who have experienced ACEs or other adversities with non-judgmental support. Train all providers and staff on how to recognize patient strengths and experiences and build upon them. Trauma-informed care training for staff should also include best practices for preventing vicarious traumatization, compassion fatigue, and burnout.

3. Recognize the signs and symptoms of trauma exposure on physical and mental health.

Examples: Providers should familiarize themselves with the range of ACE-Associated Health Conditions—including asthma, obesity, cardiovascular disease, and mental health disorders. Supplementing the treatment plan with patient education on how to recognize and respond to the role that past or present stressors may be playing in their current health condition(s) is an important part of trauma-informed care.

Specific and evidence-based interventions for the toxic stress response include enhancing supportive relationships, regular physical activity, balanced nutrition, sufficient sleep, mindfulness, and mental health care, including psychotherapy or psychiatric care, and substance use disorder treatment, if indicated.

4. Promote patient-centered, evidence-based care.

Examples: Providers should consult evidence-based clinical guidelines for best practices in trauma-informed care and addressing toxic stress. For [resources on trauma-informed care](https://www.acesaware.org/TIC), visit [ACEsAware.org](https://www.acesaware.org). All providers and staff should receive education and resources on how to practice trauma-informed care and offer evidence-based toxic stress interventions.

5. Ensure provider and patient collaboration by bringing patients into the treatment process and discussing mutually agreed upon goals for treatment.

Examples: Use motivational interviewing techniques to engage patients in discussions about their priorities, preferences, and goals to inform a jointly formulated treatment plan. Train all providers and staff on how to assess for, recognize, and integrate patient strengths and experiences into a jointly formulated treatment plan. Healing happens through supportive relationships and shared decision-making.

6. Provide care that is sensitive to the patient's racial, ethnic, and cultural background, and gender identity.

Examples: Establish policies, practices, and processes that are responsive to the diverse needs of patients. Provide patients with language-appropriate resources, ask for patient information in lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ+) community-inclusive ways, and take cultural perspectives into account to ensure that patients understand and are comfortable with the care they receive.

Anticipating Patient Emotional Responses and Avoiding Re-Traumatization

ACE screening can induce a spectrum of emotional reactions in patients. Screening requires patients to reflect on and revisit upsetting parts of their lives, which may activate distressing feelings or thoughts for patients and for providers conducting the screenings.

Some people who have experienced ACEs or other adversities may feel shame, blame, anger, sadness, and/or embarrassment. However, some patients find the experience empowering and report a positive emotional response to being able to make important connections between ACEs, toxic stress, and their current health, and to receiving appropriately focused care.

Patients with higher ACE scores with an identified screen were more likely to have strong emotional reactions, both positive and negative, according to pilot data. De-identified ACE screening was much less likely to elicit a strong emotional reaction for patients, either positive or negative.³⁹

It is important for providers to administer screenings in a trauma-informed manner that avoids re-traumatization. There are several ways providers can avoid re-traumatization:

- **Maintain emotional safety** by approaching patients who have experienced ACEs and other adversities with non-judgmental support. Assess for, recognize, and integrate patient strengths and experiences into a jointly formulated treatment plan.
- In the primary care context, providers can **provide supportive, compassionate responses to trauma histories of ACEs or other adversities without eliciting specific details.**

- **Empower patients** by providing education on simple things they can do every day, at home, to recognize how stress shows up in their bodies and help regulate their stress response system and buffer the negative impacts of toxic stress. Find these [strategies to regulate the stress response](#) at [ACEsAware.org/assessment-and-treatment](https://www.acesaware.org/assessment-and-treatment).
- **Refer patients to mental health providers** who are trained in evidence-based trauma-specific therapy, if necessary.
- **Practice compassionate resilience** to maintain provider well-being while caring for patients to be able to combat compassion fatigue, burnout, secondary traumatic stress, vicarious trauma, and related concerns.

For [information and resources on trauma-informed care](#), visit [ACEsAware.org/TIC](https://www.acesaware.org/TIC).

Clinical Response to ACEs and Toxic Stress



This fact sheet explains how to apply the science of toxic stress to improve patient health; presents the ACE Screening Workflows, Risk Assessment and Treatment Algorithms, and ACE-Associated Health Conditions; and provides an overview of the clinical response to ACEs and toxic stress.

Applying the Science of Toxic Stress to Improve Patient Health

Early Identification and Intervention Help

It is well established that early identification and intervention are key to ameliorating the impacts of toxic stress and reducing the risk of negative health and social outcomes (ACE-Associated Health Conditions). See the "[ACEs Aware Initiative: Overview](#)" fact sheet for more information.

ACE-Associated Health Conditions include cardiovascular, pulmonary, immune, metabolic, mental health, and substance use conditions. While the relationship between ACEs and mental health outcomes is most commonly recognized, a recent meta-analysis demonstrates that the single greatest driver of ACE-associated health care costs is cardiovascular disease.²⁴

ACEs and Toxic Risk Assessment Guide Evidence-Based Assessment

Rigorous investigation is currently underway to aid in establishing clinical diagnostic criteria and standardized biomarkers for defining and prognosticating about toxic stress risk. While this research is underway,

the **ACEs and Toxic Stress Risk Assessment Algorithms** help providers assess whether a patient is at low, intermediate, or high risk for having a toxic stress physiology.

The algorithm's toxic stress risk assessment is based on a combination of the ACE score and the presence or absence of ACE-Associated Health Conditions.

Treatment Strategy

The treatment strategy consists of education to help patients recognize and respond to the role that past or present stressors may be playing in their current health conditions and addressing toxic stress physiology as a core component of treating ACE-Associated Health Conditions.

For both children and adults, addressing current stressors, increasing the total dose of buffering and protective factors such as safe, stable, and nurturing relationships and environments are associated with decreased metabolic, immunologic, neuroendocrine, and inflammatory dysregulation, and improved physical and psychological health.

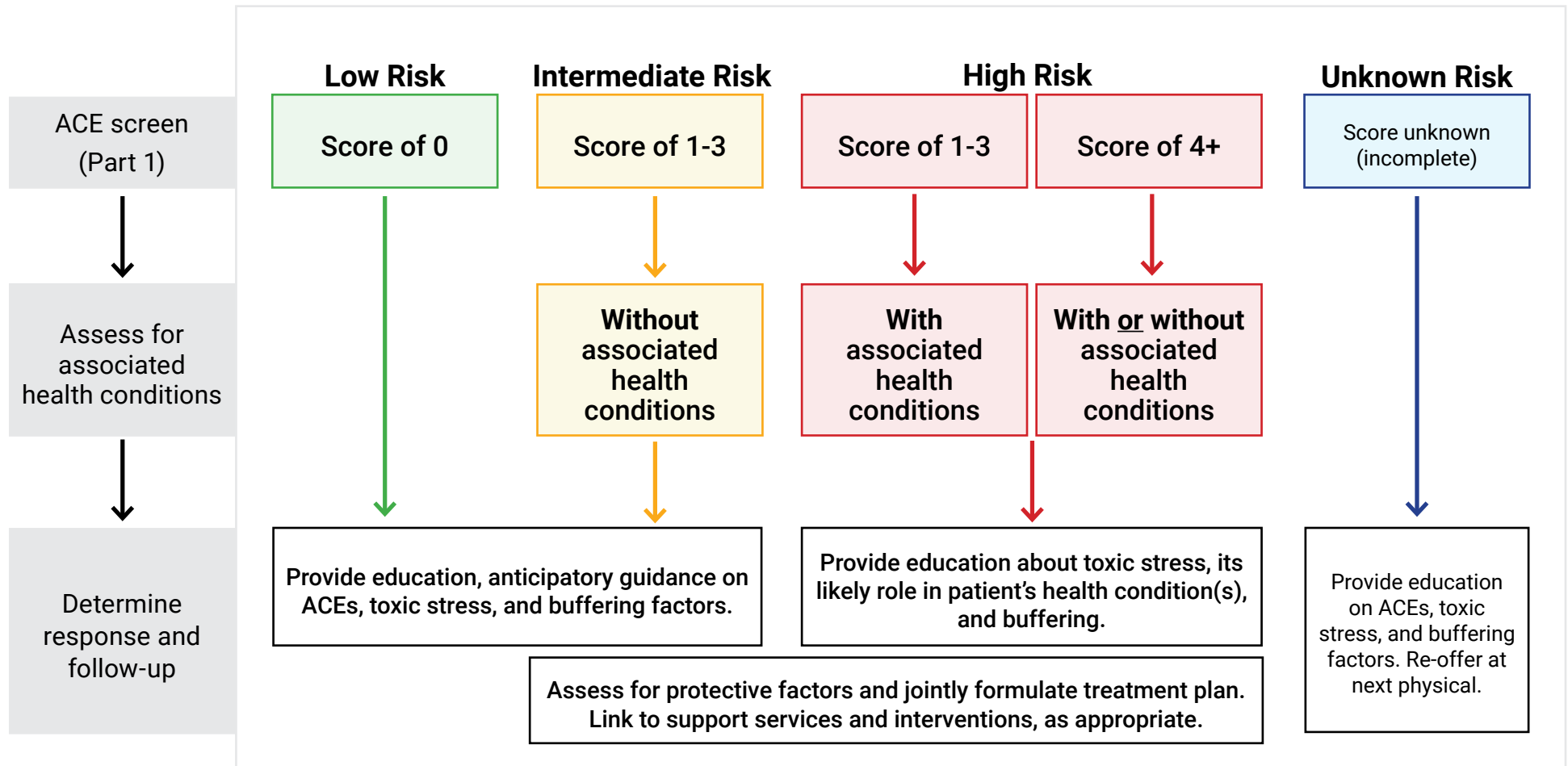
Even when treatment comes later in life, it is known that for individuals with ACEs, addressing the resulting toxic stress physiology is important for improving ACE-Associated Health Conditions, as well for averting future consequences.

Implementation Studies

A variety of primary care implementation studies have established the feasibility and utility of ACE screening and treatment in pediatrics,^{25–30} maternity care,^{31,32} family practice,³³ and internal medicine.^{34–36} **These implementation studies have found that ACE screening usually adds less than five minutes to the visit, is acceptable to both patients and providers, and is associated with improved patient satisfaction and healthcare utilization.**^{25,37,38} Specifically, education about the relationship between adversity and health is appreciated by patients, increases trust in the provider, and improves the relationship quality. Screening is also welcomed by patients as a bridge to needed services.

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

Pediatrics

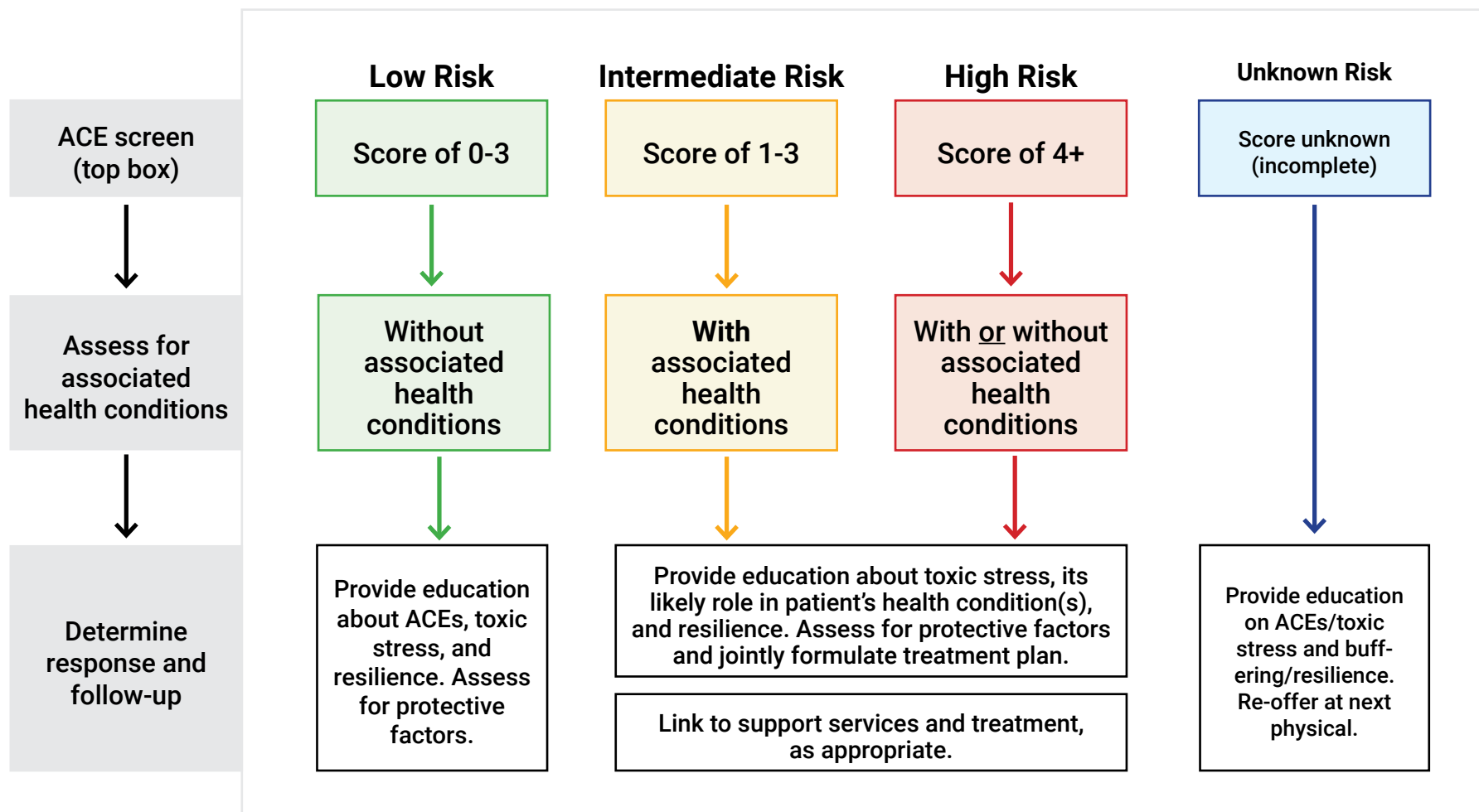


This algorithm pertains to the ACE score (Part 1 of PEARLS), whose associations with health conditions are most precisely known. Social determinants of health (Part 2 of PEARLS) may also increase risk for a toxic stress response and should be addressed with appropriate services, but should NOT be added 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 Health 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 ACE-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.

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

Adults



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 0-3 without ACE-Associated Health Conditions, the patient is at “low risk” for toxic stress physiology. The provider should offer education on the impact of ACEs and other adversities on health (including reviewing patient’s self-assessment of ACEs’ impact on health), buffering/protective factors, and interventions that can mitigate health risks. If the ACE score is 1-3 with ACE-Associated Health Conditions, the patient is at “intermediate risk.” If the score is 4 or higher, even without ACE-Associated Health Conditions, the patient is at “high risk” for toxic stress physiology. In both cases, the provider should offer education on how ACEs may lead to a toxic stress response and ACE-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.

Overview of the Clinical Response

Clinical response to identification of ACEs and increased risk of toxic stress should include:

1. Applying principles of **trauma-informed care**, including establishing trust, safety, and collaborative decision-making
2. **Identification and treatment of ACE-Associated Health Conditions** by supplementing usual care with **patient education** on toxic stress and strategies to regulate the stress response, including:
 - a. Supportive relationships, including with caregivers (for children), other family members, and peers
 - b. High-quality, sufficient sleep
 - c. Balanced nutrition
 - d. Regular physical activity
 - e. Mindfulness and meditation
 - f. Mental health care, including psychotherapy or psychiatric care, and substance use disorder treatment, when indicated
3. Validation of **existing strengths and protective factors**
4. **Referral to needed patient resources or interventions**, such as educational materials, social work, care coordination or patient navigation, community health workers, as well as the six pillars listed above
5. **Follow up** as necessary, using the presenting ACE-Associated Health Condition(s) as indicators of treatment progress

For [information on the clinical response to ACEs and toxic stress](https://www.ACEsAware.org/assessment-and-treatment), visit [ACEsAware.org/assessment-and-treatment](https://www.ACEsAware.org/assessment-and-treatment).



03 Heal: Resources and Support

Patient Tools and Informational Handouts

References

For [resources on ACEs and trauma-informed care](https://www.acesaware.org/resources),
visit [ACEsAware.org/resources](https://www.acesaware.org/resources).

PATIENT TOOLS AND INFORMATIONAL HANDOUTS

This section lists key resources including patient self-care tools and educational handouts. Resources marked with an asterisk (*) are presented in full below in the order in which they are listed.

For additional resources, visit the [ACEs Aware website](https://www.acesaware.org/resources) at [ACEsAware.org/resources](https://www.acesaware.org/resources).

Resources that Providers Can Offer Adult Patients

[Self-Care Tool for Adults – ACEs Aware](https://www.acesaware.org/wp-content/uploads/2019/12/Self-Care-Tool-for-Adults.pdf)*

<https://www.acesaware.org/wp-content/uploads/2019/12/Self-Care-Tool-for-Adults.pdf>

An ACEs Aware-developed tool that patients can use in developing a self-care plan to enhance well-being and decrease toxic stress.

[Parent Handout: Parenting with ACEs – The Center for Youth Wellness](https://www.acesaware.org/wp-content/uploads/2019/12/10-Parenting-with-ACEs-English.pdf)*

<https://www.acesaware.org/wp-content/uploads/2019/12/10-Parenting-with-ACEs-English.pdf>

A patient handout on toxic stress, how it can make parenting harder, and ways to reduce its impacts.

[Parent Handout: Reducing the Effects on Toxic Stress – The Center for Youth Wellness](https://www.acesaware.org/wp-content/uploads/2019/12/3-How-to-Reduce-the-Effects-of-ACEs-and-Toxic-Stress-English.pdf)*

<https://www.acesaware.org/wp-content/uploads/2019/12/3-How-to-Reduce-the-Effects-of-ACEs-and-Toxic-Stress-English.pdf>

A handout for parents that offers tips on ways to reduce the effects of toxic stress on children.

Provider Resources / Support

[Tips for Providers: ACE Screening – The Center for Youth Wellness and ZERO to THREE](https://www.acesaware.org/wp-content/uploads/2019/12/11-Providing-Anticipatory-Guidance-for-ACEs-Screening-English.pdf)

<https://www.acesaware.org/wp-content/uploads/2019/12/11-Providing-Anticipatory-Guidance-for-ACEs-Screening-English.pdf>

Tips for providers on ways to approach families when screening for ACEs.

Resources that Providers Can Offer Pediatric Patients / Families

[Sample School Health Letter – ACEs Aware](https://www.acesaware.org/wp-content/uploads/2019/12/ACEs-Aware-School-Health-Letter-1.pdf)*

<https://www.acesaware.org/wp-content/uploads/2019/12/ACEs-Aware-School-Health-Letter-1.pdf>

An ACEs Aware-developed sample school letter from a pediatrician to a school regarding a patient's toxic stress symptoms and treatment plan.

[Self-Care Tool for Pediatrics – ACEs Aware](https://www.acesaware.org/wp-content/uploads/2019/12/Self-Care-Tool-for-Pediatrics.pdf)

<https://www.acesaware.org/wp-content/uploads/2019/12/Self-Care-Tool-for-Pediatrics.pdf>

An ACEs Aware-developed tool for children and their families to use in developing a self-care plan to enhance well-being and decrease toxic stress.

[Patient Handout: What are ACEs and Why Do They Matter? – The Center for Youth Wellness and ZERO TO THREE](https://www.acesaware.org/wp-content/uploads/2019/12/1-What-are-ACEs-and-Why-Do-They-Matter-English.pdf)

<https://www.acesaware.org/wp-content/uploads/2019/12/1-What-are-ACEs-and-Why-Do-They-Matter-English.pdf>

A patient handout that describes the definition and importance of ACEs to health, and ways to buffer their potential negative impacts on health.

Patient Handout: What is Toxic Stress? – The Center for Youth Wellness and ZERO TO THREE*

<https://www.acesaware.org/wp-content/uploads/2019/12/2-What-is-Toxic-Stress-English.pdf>

A patient handout that describes the definition of toxic stress, the effects it has on the body, and ways to reduce these effects.

Parent Handout: How to Reduce the Effects of ACEs and Toxic Stress – The Center for Youth Wellness and ZERO TO THREE*

<https://www.acesaware.org/wp-content/uploads/2019/12/3-How-to-Reduce-the-Effects-of-ACEs-and-Toxic-Stress-English.pdf>

A handout for parents that provides tips on ways to reduce the effects of toxic stress on children.

The Center for Youth Wellness and ZERO TO THREE patient handouts on the six pillars of toxic stress intervention:

The Benefit of Supportive Relationships*

<https://www.acesaware.org/wp-content/uploads/2019/12/8-The-Benefit-of-Supportive-Relationships-English.pdf>

A patient handout for families about the importance of maintaining supportive relationships and tips to do so.

Using Mindfulness

<https://www.acesaware.org/wp-content/uploads/2019/12/9-Using-Mindfulness-English.pdf>

A patient handout about using mindfulness as a tool to reduce toxic stress.

Improving Mental Health

<https://www.acesaware.org/wp-content/uploads/2019/12/7-Improving-Mental-Health-English.pdf>

A patient handout on ways to improve children's mental health.

Good Sleep Habits

<https://www.acesaware.org/wp-content/uploads/2019/12/5-Good-Sleep-Habits-English.pdf>

A patient handout on how to improve children's sleep habits.

Promoting Exercise

<https://www.acesaware.org/wp-content/uploads/2019/12/6-Promoting-Exercise-English.pdf>

A patient handout on ways of promoting exercise to children.



ACEs Aware Self-Care Tool for Adults

When a person has experienced significant Adverse Childhood Experiences (ACEs), their body may make more or less stress hormones than is healthy. This can lead to physical and/or mental health problems, such as diabetes, heart disease, anxiety, smoking, or unhealthy use of alcohol or other drugs. Safe, stable, and nurturing relationships can protect our brains and bodies from the harmful effects of stress and adversity. The following tips can help you manage your stress response. Healthy nutrition, regular exercise, restful sleep, practicing mindfulness, building social connections, and getting mental health support can help decrease stress hormones and improve health. Here are some goals you can set to support your health. *[Check the goals that you are choosing for yourself!]*

☐ **Healthy relationships.** I've set a goal of...

- ☐ Spending more high-quality time together with loved ones, such as:
 - ☐ Having regular meals together
 - ☐ Having regular “no electronics” time for us to talk and connect with each other
- ☐ Making time to see friends and create a healthy support system for myself
- ☐ Connecting regularly with members of my community to build social connections
- ☐ Asking for help if I feel physically or emotionally unsafe in my relationships
 - ☐ The National Domestic Violence hotline is **800-799-SAFE (7233)**
 - ☐ The National Sexual Assault hotline is **800-656-HOPE (4673)**
 - ☐ To reach a crisis text line, **text HOME to 741-741**
- ☐ Create your own goal: _____

☐ **Exercise.** I've set a goal of...

- ☐ Limiting screen time to less than __ hours per day
- ☐ Walking at least 30 minutes every day
- ☐ Finding a type of exercise that I enjoy and doing it regularly
- ☐ Create your own goal: _____

☐ **Nutrition.** I've set a goal of...

- ☐ Eating a healthy breakfast daily (with protein, whole grains, and/or fruit)
- ☐ Drinking water instead of juice or soda
- ☐ Limiting my alcohol consumption



- ☐ Eating at least 5 vegetables and/or fruits every day
- ☐ Choosing whole wheat bread and brown rice instead of white bread or rice
- ☐ Create your own goal: _____
- ☐ **Sleep.** I've set a goal of...
 - ☐ Being consistent about going to bed at the same time every night
 - ☐ Creating a cool, calm, and quiet place for sleep, and a relaxing bedtime routine
 - ☐ Using mindfulness or other stress reduction tools if worry is keeping me up at night
 - ☐ Turning off electronic devices at least 30 minutes before bed
 - ☐ Create your own goal: _____
- ☐ **Mindfulness.** I've set a goal of...
 - ☐ Taking moments throughout the day to notice how I'm feeling, both physically and emotionally
 - ☐ Practicing mindful breathing or other calming technique(s) during stressful situations
 - ☐ Finding at least one thing to be thankful for each day
 - ☐ Creating a regular routine of prayer, meditation, and/or yoga
 - ☐ Downloading a mindfulness app and doing a mindfulness practice 20 minutes per day
 - ☐ Create your own goal: _____
- ☐ **Mental health.** I've set a goal of...
 - ☐ Learning more about mental health and/or substance use services (e.g., counseling, groups, medications,)
 - ☐ Identifying a local mental health professional or support group.
 - ☐ Scheduling an appointment with a mental health professional
 - ☐ If I am feeling like I am in crisis, I will get help
 - ☐ The National Suicide Prevention Lifeline is **800-273-TALK (8255)**
 - ☐ To reach a crisis text line, **text HOME to 741-741**
 - ☐ Create your own goal: _____

Here are some other goals that you can set to help yourself be healthier.

- ☐ **Self-Care.** I've set a goal of...



- ☐ Limiting screen/social media time to less than __ hours per day
- ☐ Making a plan for what to do when I'm feeling stressed out, angry, or overwhelmed
- ☐ Planning with my partner, friends, or family to get support when I need it
- ☐ Making regular appointments with my medical provider(s), including for preventive care
- ☐ Identifying my strengths and learning more about building resilience
- ☐ Create your own goal: _____

For more information, please visit:

From **ACEs Aware**: <https://www.acesaware.org/heal/resources/>

Mental Health and Substance Use:

- **The National Alliance on Mental Illness (NAMI):** <https://www.nami.org/help>
 - 1-800-950-NAMI (6264); [Crisis Text Line](#) – **Text HOME to 741-741**
- **The Substance Abuse and Mental Health Services Administration Facilities Locator:** <https://findtreatment.samhsa.gov/locator>



Parenting with ACEs



As an adult, you may still feel the effects of your own Adverse Childhood Experiences (ACEs). What does this mean for your own health? This depends on how many ACEs you experienced as a child. It *also* depends on whether you've had certain positive experiences that help reduce the effects of stress. These positive experiences are known as "protective factors." Did a friend, family member, or mental health care professional provide support during your childhood? Do you have a good support system in place now? These experiences help reduce the effects of ACEs. The impact of ACEs also depends on factors such as how you personally manage stress. Let's start by talking about how stress works.

The stress response

Your body's stress response is designed to help you survive. When you sense danger or any kind of threat, your body's natural reaction is to increase blood pressure and heart rate so you have the energy to run or fight back. Another reaction is to freeze and shut down. These reactions are your body's way of trying to keep you safe. When used from time to time, these stress responses work well. However, when you experience frequent or severe stress during childhood, your body may learn to respond to small problems as if they were big ones. This could be why little things, even a toddler's tantrum or spilled milk, can feel overwhelming. It can also explain why you may sometimes feel anxious and threatened even when in a safe and calm place. When you're only a little stressed, you may feel alert, aware, and able to cope well. But when you become overly stressed, you may feel panicked and anxious. You may also feel numb, exhausted, or emotionally drained.

Parenting is demanding, and it can easily trigger this stress response. Very simply, because of how brains and bodies react to stress, it is harder to process information when stress levels are too high. You may experience feelings of *stress overload* such as:

- difficulty calming down
- a quicker-than-normal temper and feelings of impatience
- difficulty thinking logically
- a limited ability to "read" others and judge the needs of your children
- difficulty modeling good skills and behavior for your children.



Breaking the ACEs Cycle

Some adults who had ACEs when they were children have a harder time providing a safe and nurturing environment for themselves and their children. In addition, being a parent with ACEs can increase the risk that your children will also have ACEs. It's important to know about this connection. Ensuring that you and your child live in a safe, trusting and healthy environment is one of the most important steps you can take to protect your child. If you need resources, your health care provider or a mental health professional can help.

The good news!

Although people with ACEs may be at higher risk for many health issues, it's never too late to get support! Because bodies and brains are constantly growing and changing, things you do to improve your health *today* can make a *big difference* over time! Learning healthy ways to cope with stress and build resilience can help. This skill-building means developing healthy habits for stress management now that improve your ability to handle difficult situations *in the future*. Also, learning about what's age-appropriate for your child can give you perspective when his behavior is challenging.



How to reduce the effects of ACEs

Many lifestyle changes can help reduce the effects of ACEs. Relationships with other supportive adults can help your brain and body *turn down the stress response* and build resilience. Making time to relax, engage in a fulfilling hobby, or participate in a fun activity can help a lot, too! Good sleep habits, healthy eating, and regular exercise are other important tools to manage stress. Mindfulness practices can also help. Some parents find it helpful to seek out mental health professionals for their own exposure to ACEs and trauma. Talk to your own doctor about the health risks associated with ACEs at your next medical visit. Together, these protective factors can help *improve the health and well-being* of your whole family!

SOURCES

American Academy of Pediatrics. (2015). When things aren't perfect: Caring for yourself and your children. Retrieved from <https://www.healthychildren.org/English/healthy-living/emotional-wellness/Building-Resilience/Pages/When-Things-Arent-Perfect-Caring-for-Yourself-Your-Children.aspx>

American Academy of Pediatrics. (2018). Sleep. Retrieved from <https://www.healthychildren.org/English/healthy-living/sleep/Pages/default.aspx>

Bucci, M., Marques, S. S., Oh, D., & Harris, N. B. (2016). Toxic Stress in Children and Adolescents. *Adv Pediatr*, 63(1), 403-428. doi:10.1016/j.yapd.2016.04.002

Center on the Developing Child at Harvard University. (2014). A decade of science informing policy: The story of the National Scientific Council on the Developing Child. Retrieved from <https://developingchild.harvard.edu/resources/decade-science-informing-policy-story-national-scientific-council-developing-child>

Khoury, B., Sharma, M., Rush, S. E., & Fournier, C. (2015). Mindfulness-based stress reduction for healthy individuals: A meta-analysis. *J Psychosom Res*, 78(6), 519-528. doi:10.1016/j.jpsychores.2015.03.009

Office of Disease Prevention and Health Promotion. (2018). Chapter 3: Active children and adolescents.

Purewal Boparai, S. K., Au, V., Koita, K., Oh, D. L., Briner, S., Burke Harris, N., & Bucci, M. (2018). Ameliorating the biological impacts of childhood adversity: A review of intervention programs. *Child Abuse Negl*, 81, 82-105. doi:10.1016/j.chiabu.2018.04.014

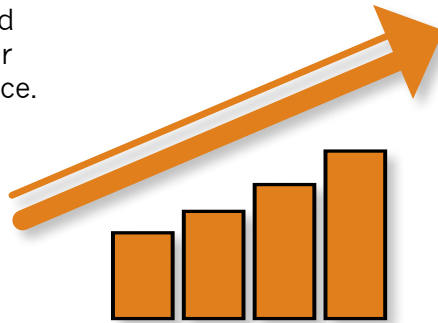
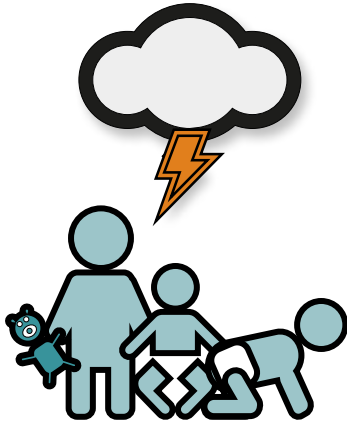
Yousafzai, A. K., Rasheed, M. A., & Bhutta, Z. A. (2013). Annual Research Review: Improved nutrition--pathway to resilience. *J Child Psychol Psychiatry*, 54(4), 367-377. doi:10.1111/jcpp.12019



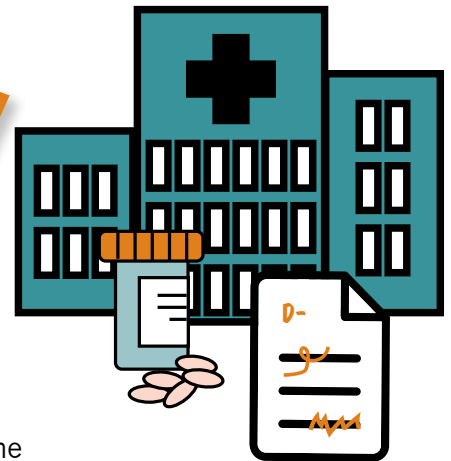
WHAT ARE ACES?

AND HOW DO THEY RELATE TO TOXIC STRESS?

“ACEs” stands for “Adverse Childhood Experiences.” These experiences can include things like physical and emotional abuse, neglect, caregiver mental illness, and household violence.

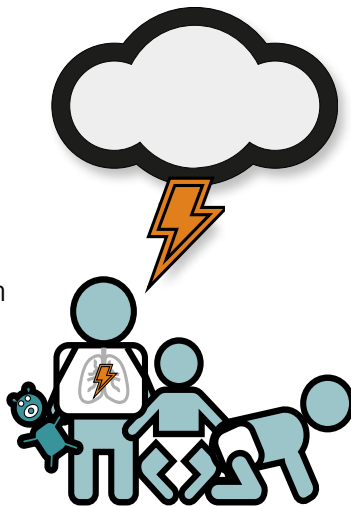


The more ACEs a child experiences, the more likely he or she is to suffer from things like heart disease and diabetes, poor academic achievement, and substance abuse later in life.



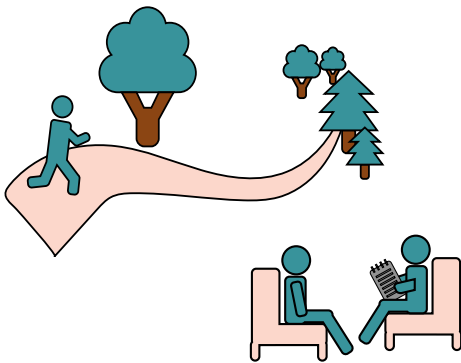
TOXIC STRESS EXPLAINS HOW ACES “GET UNDER THE SKIN.”

Experiencing many ACEs, as well as things like racism and community violence, without supportive adults, can cause what’s known as **toxic stress**. This excessive activation of the stress-response system can lead to long-lasting wear-and-tear on the body and brain.



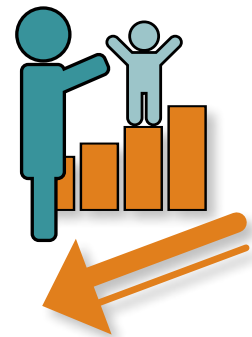
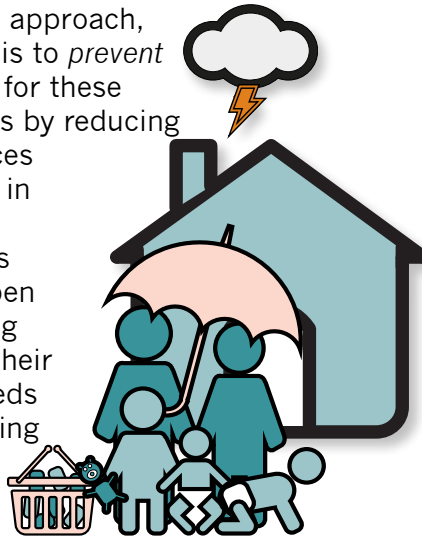
The effect would be similar to revving a car engine for days or weeks at a time.

WE CAN REDUCE THE EFFECTS OF ACEs AND TOXIC STRESS.



For those who have experienced ACEs, there are a range of possible responses that can help, including therapeutic sessions with mental health professionals, meditation, physical exercise, spending time in nature, and many others.

The ideal approach, however, is to *prevent* the need for these responses by reducing the sources of stress in people's lives. This can happen by helping to meet their basic needs or providing other services.



Likewise, fostering strong, [responsive relationships](#) between children and their caregivers, and helping children and adults build [core life skills](#), can help to buffer a child from the effects of [toxic stress](#).

ACEs affect people at all income and social levels, and can have serious, costly impact across the lifespan.

No one who's experienced significant adversity (or many ACEs) is irreparably damaged, though we need to acknowledge trauma's effects on their lives. By reducing families' sources of stress, providing children and adults with responsive relationships, and strengthening the core life skills we all need to adapt and thrive, [we can prevent and counteract lasting harm](#).

Center on the Developing Child  HARVARD UNIVERSITY

Learn more about ACEs from the [Centers for Disease Control and Prevention](#).

For more information: <https://developingchild.harvard.edu/ACEs>



Sample School Health Letter from Pediatrician to School

To whom it may concern,

This letter is in regard to my patient, Sally Jones.

Sally was seen by me for evaluation of possible ADHD/angry outbursts/ behavior problems/ poor attention. A thorough medical evaluation was completed and revealed the most likely cause to be an overactive stress response (also known as the toxic stress response) caused by high levels of Adverse Childhood Experiences.

In the toxic stress response, the body has difficulty regulating the stress response: it is quick to release high levels of stress hormones, the release of hormones may be greater than normal, and the body has difficulty shutting off the stress response. The effects of the toxic stress response may be on behavior, brain development, the immune system, hormones or all of the above.

Symptoms of a toxic stress include – being easily triggered, difficulty calming oneself down in stressful situations, impaired executive functioning (difficulty with attention, memory, impulse control and self-regulation). This impaired executive functioning can often lead to behavioral symptoms at school. Other symptoms include frequent infection, increase risk of asthma and allergies, increased aches and pains including headache and abdominal pain, and overweight or obesity.

The treatment regimen involves reducing the dose of adversity, regulating the stress response and enhancing the capacity of caring adults in the child's life to help buffer her stress response. Activities that regulate the stress response include – sleep, exercise, nutrition, mindfulness, mental health and healthy relationships.

Sally's treatment plan includes:

1. Guanfacine X mg by mouth every morning
2. 60 minutes vigorous exercise, 5 days per week.
3. Mindfulness practice, 10 minutes twice per day
4. In addition, Sally should receive trauma-focused mental health services and be considered for an individualized education plan that includes trauma-sensitive practices. Examples of a trauma-focused education plan include more regular check-ins with the child's family; identifying and effectively coordinating with mental health and other services outside the school; supporting access to community resources; and promoting predictable routines in the classroom to ensure the child's physical and psychological safety.



If you have any questions, please do not hesitate to call me. I look forward to partnering with you to support Sally's health and academic success.

Sincerely,

Name of Primary Care Provider

For more information on toxic stress, please visit:

<https://developingchild.harvard.edu/science/key-concepts/toxic-stress/>

<https://www.stresshealth.org/>

<https://traumaawareschools.org/traumaInSchools>

<https://traumasensitiveschools.org/>

What Is Toxic Stress?



Everyone feels stress!

And not all stress is bad. Stress can help bring attention to what's important and be a motivator for problem-solving. But too much of the wrong kind of stress can be unhealthy. For children, this kind of stress can become toxic over time, affecting the way their brains and bodies grow. Adverse Childhood Experiences (ACEs) like abuse or neglect can cause this kind of stress and can harm a child's long-term health. Because of this possible impact, it's important to know a little more about stress and the different ways people's bodies can respond.



Positive stress response:

This is the body's response to temporary stress. Stress hormones help the body do what's needed in the moment. Once the event passes, the stress response turns off and the body goes back to its normal state. For example, starting a new child care arrangement or getting shots might lead to a positive stress response. Children can gain confidence and learn coping skills when supported through this type of stress.



Tolerable stress response:

This is the body's response to more lasting and serious stress. With tolerable stress, a child needs the help of a supportive caregiver to help her stay calm and turn down the stress response. With this support in place, the body can more easily return to its normal state. Tolerable stress can occur during events like an injury or natural disaster.



Toxic stress response:

This is the body's response to lasting and serious stress, without enough support from a caregiver. When a child doesn't get the help he needs, his body can't turn off the stress response normally. This lasting stress can harm a child's body and brain and can cause lifelong health problems. This type of stress results from exposure to things like abuse and neglect.

How does toxic stress affect children's bodies?



The brain:

Toxic stress can make it harder for children to sit still, pay attention, and learn. It can affect other behavior, too, causing children to have trouble remembering rules and to forget to think before acting. It can also affect a child's moods and feelings.



Immunity:

Toxic stress can make it harder for bodies to fight off infection and illness. For example, children may have more frequent colds and ear infections, or health conditions like eczema or asthma.



The heart:

Toxic stress can increase a person's risk of developing high blood pressure, elevating levels of inflammation that can damage the arteries. These conditions can lead to heart disease, stroke and other serious health issues later in life.



Hormones and development:

Toxic stress can impact growth and development. It can also lead to obesity and changes in the timing of puberty, as well as other issues.

How can adults protect children from toxic stress?

When caregivers consistently care for children and offer support, they feel safe. This feeling of safety is good for their brains and bodies. Other protective factors for your child include eating healthy food, getting regular exercise, getting a good night's sleep, practicing mindfulness, and getting mental health support when needed. Together, these factors help lower the stress response and can help reduce the potential negative effects of ACEs.



SOURCES

American Academy of Pediatrics. (2018). Sleep. Retrieved from <https://www.healthychildren.org/English/healthy-living/sleep/Pages/default.aspx>

Bucci, M., Marques, S. S., Oh, D., & Harris, N. B. (2016). Toxic Stress in Children and Adolescents. *Adv Pediatr*, 63(1), 403-428. doi:10.1016/j.yapd.2016.04.002

Center on the Developing Child at Harvard University. (2014). A decade of science informing policy: The story of the National Scientific Council on the Developing Child. Retrieved from <https://developingchild.harvard.edu/resources/decade-science-informing-policy-story-national-scientific-council-developing-child>

Khoury, B., Sharma, M., Rush, S. E., & Fournier, C. (2015). Mindfulness-based stress reduction for healthy individuals: A meta-analysis. *J Psychosom Res*, 78(6), 519-528. doi:10.1016/j.jpsychores.2015.03.009

Office of Disease Prevention and Health Promotion. (2018). Chapter 3: Active children and adolescents.

Purewal Boparai, S. K., Au, V., Koita, K., Oh, D. L., Briner, S., Burke Harris, N., & Bucci, M. (2018). Ameliorating the biological impacts of childhood adversity: A review of intervention programs. *Child Abuse Negl*, 81, 82-105. doi:10.1016/j.chiabu.2018.04.014

Shonkoff, J. P., & Garner, A. S. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, 129(1), e232-246. doi:10.1542/peds.2011-2663

Yousafzai, A. K., Rasheed, M. A., & Bhutta, Z. A. (2013). Annual Research Review: Improved nutrition--pathway to resilience. *J Child Psychol Psychiatry*, 54(4), 367-377. doi:10.1111/jcpp.12019



A photograph of a woman with dark hair hugging a young child with curly hair. The child is smiling broadly and looking down. The woman is wearing a purple jacket. The background is slightly blurred.

How to Reduce the Effects of ACEs and Toxic Stress

Adverse Childhood Experiences (ACEs) may increase a child's risk of health problems, but parents' consistent care and support help to protect children's health. Relationships with loving and supportive adults can reduce children's stress levels. Even simple activities like playing with bubbles, bear hugs, lullabies, listening to music together, and coloring can make a difference.

What's the best way to respond to a child's ACEs? If possible, prevention of ACEs is best. In addition, you can:

- Tune in and learn your child's signals. Help your child calm down when you sense that she is stressed or scared. Soothe your child, and teach ways to calm down when feeling upset.
- Talk and play with your child. Babies like to be rocked, cuddled, and massaged. Toddlers thrive on hugs, shared stories and songs, and daily routines. These actions can help children feel seen, heard, and understood.
- Focus on managing your own stress. This can help you better adjust the way these feelings impact how you respond to your child. Having a calm parent will help protect your child during periods of stress.
- Take your child to regular medical visits. Your medical provider can help you understand when your child's health may be at risk.

Other ways to help your child's body deal with stress:

- Stick to daily routines. They help children know what's happening next, which can reduce stress.
- Have your child exercise regularly. Make sure your child is getting at least an hour per day of active play.
- Help your child eat well. Good nutrition builds brain health and protects the body. Serve fruits and veggies at meals and avoid junk food.
- Turn to supportive relationships in your family and community.
- Ensure your child gets adequate sleep. Sleep gives the body time to grow and recharge and children who get adequate sleep manage stress more easily.
- Seek mental health care if needed.
- Practice being in the moment; try breathing and meditation. It can help the body manage stress.
- Talk to your health care provider about whether your child's ACEs might be affecting his health and what you can do about it.

ACEs don't just affect children,

they affect families. Some of the most important things you can do to stop the effects of ACEs include learning to manage your *own* stress so you can be a healthy, stable, and caring presence for your child. This includes making lifestyle choices such as eating healthy food, getting regular exercise, making a good night's sleep a top priority, and practicing mindfulness. Getting mental health support can also be helpful if you experienced ACEs and trauma in your own childhood or are currently experiencing stressful or traumatic situations in your life. The good news is that science shows how bodies and brains grow and change *every minute of the day!* This means that by starting *today*, putting some of these lifestyle choices into action and getting the right help when you need it, can help build a healthier future for you and your family.

SOURCES

American Academy of Pediatrics. (2007). The importance of family routines. Retrieved from <https://www.healthychildren.org/English/family-life/family-dynamics/Pages/The-Importance-of-Family-Routines.aspx>

American Academy of Pediatrics. (2018). Sleep. Retrieved from <https://www.healthychildren.org/English/healthy-living/sleep/Pages/default.aspx>

Bucci, M., Marques, S. S., Oh, D., & Harris, N. B. (2016). Toxic Stress in Children and Adolescents. *Adv Pediatr*, 63(1), 403-428. doi:10.1016/j.yapd.2016.04.002

Center on the Developing Child at Harvard University. (2014). A decade of science informing policy: The story of the National Scientific Council on the Developing Child. Retrieved from <https://developingchild.harvard.edu/resources/decade-science-informing-policy-story-national-scientific-council-developing-child>

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., . . . Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med*, 14(4), 245-258.

Gunnar, M. R., & Davis, E. P. (2008). Stress, coping, and caregiving. In L. Gilkerson & R. Klein (Eds.), *Early Development and the brain: Teaching resources for educators* (pp. Unit 7, 1-56). Washington, DC: ZERO TO THREE.

Khoury, B., Sharma, M., Rush, S. E., & Fournier, C. (2015). Mindfulness-based stress reduction for healthy individuals: A meta-analysis. *J Psychosom Res*, 78(6), 519-528. doi:10.1016/j.jpsychores.2015.03.009

Office of Disease Prevention and Health Promotion. (2018). Chapter 3: Active children and adolescents.

Purewal Boparai, S. K., Au, V., Koita, K., Oh, D. L., Briner, S., Burke Harris, N., & Bucci, M. (2018). Ameliorating the biological impacts of childhood adversity: A review of intervention programs. *Child Abuse Negl*, 81, 82-105. doi:10.1016/j.chiabu.2018.04.014

Shonkoff, J. P., & Garner, A. S. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, 129(1), e232-246. doi:10.1542/peds.2011-2663

Yousafzai, A. K., Rasheed, M. A., & Bhutta, Z. A. (2013). Annual Research Review: Improved nutrition--pathway to resilience. *J Child Psychol Psychiatry*, 54(4), 367-377. doi:10.1111/jcpp.12019



The Benefit of Supportive Relationships



Relationships are important

for the health and well-being of every family. All families face difficulties. For some, the challenges are intense or too frequent for a child to manage. When a child is stressed often, is stressed for a long period of time, or experiences a severe stressor without the support of a caring adult, her body may react with a what is called a “toxic stress” response. Over time, without the right support from a trusted caregiver, this toxic stress response can harm a child’s developing brain and body. But the good news is—*it doesn’t have to!*



The first thing you can do is get support for yourself. A healthy, stable parent can more easily provide his child with a loving and supportive home life. Safe and nurturing relationships can protect children’s brains and bodies from the harmful effects of stress and adversity. Other things, like healthy nutrition, daily exercise, making a good night’s sleep a priority, practicing mindfulness, and getting mental health support if needed, can also help. These practices are great for you, and also for your child!

Supportive Relationship

Parents also need reliable and supportive relationships for sharing thoughts and feelings. You can build strong relationships in your community by connecting with family, friends, faith communities, and local resources such as parenting groups. Making healthy relationships a priority will help you feel more supported, which can *improve your ability to do the following*:

- Parent in ways that help your child feel safe, cared for, and protected.
- Provide a safe space for your child to explore, learn, and grow.



- Teach your child words for different feelings, like sad, happy, and mad. Help them recognize how and where they feel these emotions in their bodies. Sometimes the first sign of feeling stress is having a tight chest or a clenched jaw! Labeling and understanding these emotions is an important step in learning to manage feelings in a healthy way—for both adults and children!
- Set age-appropriate limits, state expectations clearly, and be consistent with age-appropriate discipline that focuses on teaching, not punishment.
- Treat everyone in the household with respect.
- Keep adults in your household from using violent or abusive language around or directed at children.
- Avoid physical discipline with children.
- Use daily routines to provide structure and a sense of safety.
- Tell your child when there will be changes to the daily routine, and what these changes will mean for him.
- Give your child some choices—like asking if she would like to brush her teeth before or after bath time.
- Pay attention to your child’s signals and respond with love and care.
- Make sure you enjoy special one-on-one time through play, stories, bath time, and shared meals.
- Let your child take the lead by letting him choose an activity and paying attention to him without distraction when you do something together.
- *Recognize when you are feeling stress!* When this happens, have an action plan. For instance, you might think about taking an “adult time out” for a few minutes. This will allow you to take a deep breath, refocus, and return to your family in a calmer state of mind. This is important! Because when kids see adults around them manage stress in a healthy way, they learn to do the same thing.

These practices help create safe and stable homes that are good for everyone in the family.

SOURCES

American Academy of Pediatrics. (2007). The importance of family routines. Retrieved from <https://www.healthychildren.org/English/family-life/family-dynamics/Pages/The-Importance-of-Family-Routines.aspx>

American Academy of Pediatrics. (2018). Sleep. Retrieved from <https://www.healthychildren.org/English/healthy-living/sleep/Pages/default.aspx>

Burke Harris, N. (2018). The deepest well: Healing the long-term effects of childhood adversity. New York, NY: Houghton Mifflin Harcourt.

Center on the Developing Child at Harvard University. (2012). The Science of Neglect: The Persistent Absence of Responsive Care Disrupts the Developing Brain: Working Paper No. 12. Retrieved from <http://developingchild.harvard.edu/wp-content/uploads/2012/05/The-Science-of-Neglect-The-Persistent-Absence-of-Responsive-Care-Disrupts-the-Developing-Brain.pdf>

Center on the Developing Child at Harvard University. (2014). A decade of science informing policy: The story of the National Scientific Council on the Developing Child. Retrieved from <https://developingchild.harvard.edu/resources/decade-science-informing-policy-story-national-scientific-council-developing-child>

Centers for Disease Control and Prevention. (2014). Essentials for childhood: Steps to create safe, stable, nurturing relationships and environments. Retrieved from https://www.cdc.gov/violenceprevention/pdf/essentials_for_childhood_framework.pdf

Khoury, B., Sharma, M., Rush, S. E., & Fournier, C. (2015). Mindfulness-based stress reduction for healthy individuals: A meta-analysis. *J Psychosom Res*, 78(6), 519-528. doi:10.1016/j.jpsychores.2015.03.009

Murray, D. W., Rosanbalm, K., & Christopoulos, C. (2016). Self-regulation and toxic stress Report 4: Implications for programs and practice. OPRE Report # 2016-97. Retrieved from Washington, DC: https://www.acf.hhs.gov/sites/default/files/opre/acf_report_4_final_rev_11182016_b5082.pdf

Office of Disease Prevention and Health Promotion. (2018). Chapter 3: Active children and adolescents.

Purewal Boparai, S. K., Au, V., Koita, K., Oh, D. L., Briner, S., Burke Harris, N., & Bucci, M. (2018). Ameliorating the biological impacts of childhood adversity: A review of intervention programs. *Child Abuse Negl*, 81, 82-105. doi:10.1016/j.chiabu.2018.04.014

Shonkoff, J. P., Garner, A. S., Siegel, B. S., Dobbins, M. I., Earls, M. F., Garner, A. S., . . . Wood, D. L. (2012). The Lifelong Effects of Early Childhood Adversity and Toxic Stress. *Pediatrics*, 129(1), e232-e246. doi:10.1542/peds.2011-2663

Yousafzai, A. K., Rasheed, M. A., & Bhutta, Z. A. (2013). Annual Research Review: Improved nutrition—pathway to resilience. *J Child Psychol Psychiatry*, 54(4), 367-377. doi:10.1111/jcpp.12019



References

- 1 Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med* 1998; 14: 245–58.
- 2 California Department of Public Health, Injury and Violence Prevention Branch (CDPH/IVPB), University of California, Davis, Violence Prevention Research Program, California Behavioral Risk Factor Surveillance System (BRFSS), 2011–2017.
- 3 Dube SR, Felitti VJ, Dong M, Giles WH, Anda RF. The Impact of Adverse Childhood Experiences on Health Problems: Evidence from Four Birth Cohorts Dating Back to 1900. *Preventive Medicine* 2003; 37: 268–77.
- 4 Anda RF, Felitti VJ, Bremner JD, et al. The Enduring Effects of Abuse and Related Adverse Experiences in Childhood: A Convergence of Evidence from Neurobiology and Epidemiology. *European Archives of Psychiatry and Clinical Neuroscience* 2006; 256: 174–86.
- 5 Merrick MT, Ford DC, Ports KA, et al. Vital Signs: Estimated Proportion of Adult Health Problems Attributable to Adverse Childhood Experiences and Implications for Prevention—25 States, 2015–2017. *MMWR Morb Mortal Wkly Rep* 2019; 68. DOI:10.15585/mmwr.mm6844e1.
- 6 Merrick MT, Ford DC, Ports KA, Guinn AS. Prevalence of Adverse Childhood Experiences from the 2011–2014 Behavioral Risk Factor Surveillance System in 23 States. *JAMA Pediatr* 2018; 172: 1038–44.
- 7 Baglivio M, Swartz K, Sayedul Huq M, Sheer A, Hardt N. The prevalence of Adverse Childhood Experiences (ACEs) in the lives of juvenile offenders. *Journal of Juvenile Justice* 2014; 3: 1–23.
- 8 Liu SR, Kia-Keating M, Nylund-Gibson K, Barnett ML. Co-Occurring Youth Profiles of Adverse Childhood Experiences and Protective Factors: Associations with Health, Resilience, and Racial Disparities. *American Journal of Community Psychology* 2019; published online Sept 6. DOI:10.1002/ajcp.12387.

- 9 Liu SR, Kia-Keating M, Nylund-Gibson K. Patterns of adversity and pathways to health among White, Black, and Latinx youth. *Child Abuse & Neglect* 2018; 86: 89–99.
- 10 Maguire-Jack K, Lanier P, Lombardi B. Investigating racial differences in clusters of adverse childhood experiences. *American Journal of Orthopsychiatry* 2019; published online Feb 28. DOI:10.1037/ort0000405.
- 11 Centers for Disease Control and Prevention. Leading causes of death by age group 2017. https://www.cdc.gov/injury/images/lc-charts/leading_causes_of_death_by_age_group_2017_1100w850h.jpg (accessed May 8, 2019).
- 12 Hughes K, Bellis MA, Hardcastle KA, et al. The Effect of Multiple Adverse Childhood Experiences on Health: A Systematic Review and Meta-Analysis. *The Lancet Public Health* 2017; 2: e356–66.
- 13 Petruccelli K, Davis J, Berman T. Adverse childhood experiences and associated health outcomes: A systematic review and meta-analysis. *Child Abuse & Neglect* 2019; 97: 104127.
- 14 Center for Youth Wellness. Data Report: A Hidden Crisis. Findings on Adverse Childhood Experiences in California. 2014.
- 15 Bucci M, Marques SS, Oh D, Harris NB. Toxic Stress in Children and Adolescents. *Advances in Pediatrics* 2016; 63: 403–28.
- 16 Garner AS, Shonkoff JP, Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, Section on Developmental and Behavioral Pediatrics, et al. Early Childhood Adversity, Toxic Stress, and the Role of the Pediatrician: Translating Developmental Science into Lifelong Health. *Pediatrics* 2012; 129: e224–31.
- 17 Shonkoff JP, Garner AS, Dobbins MI, et al. The Lifelong Effects of Early Childhood Adversity and Toxic Stress. *Pediatrics* 2012; 129: e232–46.
- 18 Danese A, McEwen BS. Adverse Childhood Experiences, Allostasis, Allostatic Load, and Age-Related Disease. *Physiology & Behavior* 2012; 106: 29–39.
- 19 Oh DL, Jerman P, Silvério Marques S, et al. Systematic review of pediatric health outcomes associated with childhood adversity. *BMC Pediatrics* 2018; 18. DOI:10.1186/s12887-018-1037-7.

- 20 Brown DW, Anda RF, Tiemeier H, et al. Adverse childhood experiences and the risk of premature mortality. *American Journal of Preventive Medicine* 2009; 37: 389–96.
- 21 Waehrer GM, Miller TR, Silverio Marques SC, Oh DL, Burke Harris N. Disease burden of adverse childhood experiences across 14 states. *PLoS ONE* 2020; 15: e0226134.
- 22 Miller TR, Waehrer GM, Oh DL, et al. Adult Health Burden and Costs in California During 2013 Associated with Prior Adverse Childhood Experiences. *PLoS ONE* 2020; 15: e0228019.
- 23 National Research Council. *Vibrant and Healthy Kids: Aligning Science, Practice, and Policy to Advance Health Equity*. Washington, D.C.: National Academies Press, 2019 DOI:10.17226/25466.
- 24 Bellis MA, Hughes K, Ford K, Ramos Rodriguez G, Sethi D, Passmore J. Life course health consequences and associated annual costs of adverse childhood experiences across Europe and North America: a systematic review and meta-analysis. *Lancet Public Health* 2019; 4: e517–28.
- 25 Gillespie RJ. Screening for Adverse Childhood Experiences in Pediatric Primary Care: Pitfalls and Possibilities. *Pediatr Ann* 2019; 48: e257–61.
- 26 Purewal SK, Bucci M, Wang LG, et al. Screening for Adverse Childhood Experiences (ACEs) in an Integrated Pediatric Care Model. *Zero to Three* 2016; 36: 10–7.
- 27 Marsicek SM, Morrison JM, Manikonda N, O'Halleran M, Spoehr-Labutta Z, Brinn M. Implementing standardized screening for adverse childhood experiences in a pediatric resident continuity clinic: *Pediatric Quality and Safety* 2019; 4: e154.
- 28 Kia-Keating M, Barnett ML, Liu SR, Sims GM, Ruth AB. Trauma-Responsive Care in a Pediatric Setting: Feasibility and Acceptability of Screening for Adverse Childhood Experiences. *American Journal of Community Psychology* 2019; 64: 286–297.
- 29 Marie-Mitchell A, Lee J, Siplon C, Chan F, Riesen S, Vercio C. Implementation of the Whole Child Assessment to Screen for Adverse Childhood Experiences. *Global Pediatric Health* 2019; 6: 2333794X1986209.

- 30 Choi KR, McCreary M, Ford JD, Rahmanian Koushkaki S, Kenan KN, Zima BT. Validation of the Traumatic Events Screening Inventory for ACEs. *Pediatrics* 2019; 143. DOI:10.1542/peds.2018-2546.
- 31 Flanagan T, Alabaster A, McCaw B, Stoller N, Watson C, Young-Wolff KC. Feasibility and acceptability of screening for adverse childhood experiences in prenatal care. *Journal of Women's Health* 2018; 27: 903–11.
- 32 Young-Wolff KC, Alabaster A, McCaw B, et al. Adverse childhood experiences and mental and behavioral health conditions during pregnancy: the role of resilience. *Journal of Women's Health* 2019; 28: 452–61.
- 33 Glowa PT, Olson AL, Johnson DJ. Screening for adverse childhood experiences in a family medicine setting: a feasibility study. *The Journal of the American Board of Family Medicine* 2016; 29: 303–7.
- 34 Goldstein E, Topitzes J, Birstler J, Brown RL. Addressing adverse childhood experiences and health risk behaviors among low-income, Black primary care patients: Testing feasibility of a motivation-based intervention. *General Hospital Psychiatry* 2019; 56: 1–8.
- 35 Goldstein E, Athale N, Sciolla AF, Catz SL. Patient Preferences for Discussing Childhood Trauma in Primary Care. *permj* 2017; 21: 16–055.
- 36 Chandler GE, Kalmakis KA, Murtha T. Screening Adults With Substance Use Disorder for Adverse Childhood Experiences: *Journal of Addictions Nursing* 2018; 29: 172–8.
- 37 Felitti VJ, Anda RF. The Lifelong Effects of Adverse Childhood Experiences. In: *Chadwick's Child Maltreatment: Sexual Abuse and Psychological Maltreatment*. .
- 38 Ford K, Hughes K, Hardcastle K, et al. The evidence base for routine enquiry into adverse childhood experiences: A scoping review. *Child Abuse & Neglect* 2019; 91: 131–46.
- 39 Bay Area Research Consortium on Toxic Stress and Health (BARC) investigators. Personal communication with the Bay Area Research Consortium on Toxic Stress and Health (BARC) investigators. 2019.

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