aces aware
SCREEN. TREAT. HEAL.

Why Should My Practice Screen for Adverse Childhood Experiences and Risk of Toxic Stress?

Adverse Childhood Experiences (ACEs) are a preventable root cause of numerous, costly health conditions and social challenges.[1] Identification of exposure to ACEs and other risk factors for toxic stress — through universal and routine ACE screening — helps clinicians provide more effective, equitable, specific, and high-quality health care. It may also ultimately reduce health care costs.

In California, 62% of adults have experienced at least one ACE and 16% have experienced four or more ACEs.[2] Among Californians enrolled in Medi-Cal, 69% report that they have at least one ACE and 23% have four or more ACEs.[3] In California alone, it is estimated that preventing ACEs and toxic stress could save the state at least $112.5 billion annually ($10.5 billion in personal health care spending and $102 billion in years of productive life lost).[4]

Multiple leading healthcare and public health organizations now recommend early screening for sources of toxic stress and early intervention to prevent or reduce the impacts of adversity - including the Centers for Disease Control and Prevention, the National Academies of Science, Engineering, and Medicine; and the American Academy of Pediatrics.[5]

In addition, toxic stress risk assessment and intervention meets the 10 principles for optimal population-based screening efforts outlined by the World Health Organization (WHO) Wilson and Jungner Criteria.[6]

Consistent with this guidance, and endorsed through legislative action by the State of California, effective January 1, 2020, qualified Medi-Cal clinicians became eligible for a $29 payment for conducting ACE screenings for child and adult patients with full-scope Medi-Cal (see Billing and Payment).

Since ACEs Aware is the first statewide effort to encourage ACE screening adoption, ACE screening is still new to many clinical practices. Some clinicians and clinic administrators may still find themselves wondering: Why should my practice screen for ACEs and risk of toxic stress? This article outlines three key reasons why ACE screening should be incorporated as part of routine care.

1. ACE screening supports health promotion, prevention, and effective treatment of illness

A body of research shows that the negative outcomes associated with ACEs are preventable through early detection and prompt intervention.[7] ACE screening allows for the detection of individuals at risk of toxic stress physiology by assessing for: 1) adversity (ACE score); 2) clinical manifestations of toxic stress (ACE-Associated Health Conditions); and 3) protective factors. Universal, rather than selective screening, is important because the evidence shows that ACEs are prevalent across all population groups regardless of demographics, and there is substantial individual variability in how toxic stress manifests clinically.

ACE screening provides clinicians the opportunity to educate patients on the relationship between ACEs, toxic stress, and health, as well as evidence-based stress mitigation strategies to prevent and treat toxic stress. For patients at risk of developing toxic stress physiology and those who are

currently experiencing ACE-Associated Health Conditions, screening results provide information that support treatment planning.

In addition, because the epigenetic changes that can result from the toxic stress response can be passed down from parent to child — and even to subsequent generations — ACE screening and treatment of toxic stress to mitigate the toxic stress response has the potential to positively impact health for generations.[8]

2. ACE screening helps clinicians and patients form stronger therapeutic relationships

ACE screening has been successfully integrated into a wide range of clinical settings, including pediatric primary care, adult primary care, family medicine, and women's health, including prenatal care.[9] It provides the health care team with information that allows them to more effectively treat toxic stress and ACE-Associated Health Conditions. ACE screening implementation studies report that ACE screening has helped clinicians highlight the mind-body connection, foster integrated care, and more specifically and effectively address patients' health problems.[10]

ACE screening also provides a tool for conversation that can improve the patient-clinician relationship, a cornerstone of quality health care shown to result in better treatment plans and improved outcomes.[11] Clinicians report that ACE screening has helped them develop a deeper and more trusting relationship with their patients, increased their empathy for their patients, and improve communication more generally.[12]

Studies also show that patients and caregivers want to discuss ACEs and receive guidance and resources that will help them address the toxic stress response and avoid its intergenerational transmission.[13]

3. ACE screening can improve clinical decision-making and treatment of serious and difficult-to-treat health conditions

ACEs are strongly associated, in a dose-response fashion, with some of the most common and serious health and social conditions facing our society, including nine of the 10 leading causes of death in the United States. ACEs lead to increased health risks through a health condition called the toxic stress response.

Many of the conditions considered hardest to treat by clinicians, such as abdominal pain, obesity, addictions, and mental health, are among those associated with ACEs.[14] ACE screening provides an efficient way for clinicians to identify patients who may be at risk for toxic stress and ACE-Associated Health Conditions. With early identification, targeted interventions are likely to be more effective and less expensive.[15]

In patients who may already be experiencing ACE-Associated Health Conditions, clinicians can work toward the goal of regulating the toxic stress response and counteracting the disruptions in the neuro-endocrine-immune-metabolic and genetic regulatory function that characterize it.[16]

Understanding the science of ACEs and toxic stress helps demystify their role as root causes of physical and mental illness and behavior. This helps health care and public health professionals provide more targeted clinical and policy interventions, as well as offer greater compassion, patience, and the opportunity for healing through caring relationships.

See below for additional, specific points on the value of screening children and adolescents, prenatal and pregnant individuals, and other adults.

Why should children and adolescent patients be screened for ACEs on an annual basis?

1. Routine ACE screening for children can capitalize on critical opportunities for prevention, early detection, and intervention

The biological plasticity during early childhood and adolescence is a source of opportunity for health promotion, prevention, and effective intervention and treatment. However, the converse is also true: children are uniquely vulnerable to the effects of an overactive stress response because their brains and bodies are still developing. Exposure to high doses of cumulative adversity during critical and sensitive periods of early childhood — without sufficient buffering protections of safe, stable, and nurturing relationships and environments — can lead to long-term disruptions of brain development, immune, hormonal, and metabolic systems, acting through genetic regulatory mechanisms (also known as the toxic stress response).[17]

It is for these reasons that leading health care and scientific organizations — including the National Academies of Sciences, Engineering, and Medicine and the American Academy of Pediatrics — recommend screening for risk of toxic stress.[18]

2. ACE screening can prevent and reduce the accumulation of exposures and risk

While exposure to a single ACE may influence a child's health, risk for toxic stress increases with cumulative exposure to adversity. Studies have found that children accumulate ACEs over the course of childhood[19] and that accumulation can be prevented. Universal annual screening can help clinicians:

- Prevent, track, and address ongoing or additive exposures to adversity
- Create space for clinicians and patients/caregivers to address concerns and work together to identify supports to prevent or reduce further exposures to adversity
- Identify changes in clinical risk of toxic stress and intervene promptly to prevent its onset or to regulate the toxic stress response and mitigate its impacts on a child's health and development

3. Screening improves clinical assessment and allows for more specific treatment of childhood ACE-Associated Health Conditions

During childhood there is a wide range of possible clinical manifestations of toxic stress and a possible latency period between exposure and outcomes. Because there is no agreed-upon clinical diagnostic criteria for toxic stress, ACE screening provides critical information to a clinician seeking to gauge patient risk of future health problems, while also identifying underlying causes of current health conditions.

The most commonly recognized symptoms of toxic stress are often those that show up as behavioral problems or mental health concerns. Without screening and paying attention to the full list of ACE-Associated Health Conditions in pediatrics, clinicians may miss important prevention and treatment opportunities. This is particularly true for children who may experience non-neuropsychiatric outcomes or those that have a long latency period (i.e., don't experience any ACE-Associated Health Conditions until adulthood).[20]

When children are diagnosed with certain conditions, such as asthma and attention-deficit/hyperactivity disorder (ADHD), it may be appropriate to develop a differential treatment plan upon determination of the likely presence of toxic stress.[21]

Why screen patients for ACEs who are seeking reproductive health care?

ACE screening is especially relevant in reproductive and prenatal health care settings. During general reproductive health care, in preparation for conception and during pregnancy, there are important opportunities for patient engagement, education, health promotion, and disease management.

For many individuals, reproductive health care is a gateway to health care in general. Pregnancy may result in access to more affordable health care for women eligible for Medi-Cal. In addition to the value of screening adults for ACEs more broadly, there are several critical ways that screening pregnant women and their partners for ACEs can support their developing fetus and future child's health.

1. ACE screening helps identify risks to reproductive health

ACEs and cumulative stress have been associated with numerous impacts on reproductive health risks that have implications for family planning, as well as pregnancy and postpartum health. For example, ACEs have been associated with unintended and early pregnancy, fertility challenges, pregnancy loss, fetal stress, preterm birth and low birth weight. Additionally, parents who experienced ACEs as children have been found to have higher risk for postpartum depression.[22] Screening for ACEs and risk of toxic stress allows women's health and prenatal clinicians to better identify and treat toxic stress and ACE-Associated Health Conditions in the preconception through the postpartum period.

2. ACE screening promotes an intergenerational cycle of health by reducing the intergenerational transmission of ACEs and toxic stress

The transmission of risk of toxic stress from one generation to another occurs when a parent's biology and behavior are altered by their ACEs. This then affects the health and development of their children. Additionally, certain health conditions or health risk behaviors in adults, including mental illness, substance use disorders or substance misuse, and violence, may pose additional risks for toxic stress for the next generation. Breaking this cycle by working with individuals before they become parents or when they are pregnant may help break this intergenerational cycle.[23]

Reproductive health visits are opportunities for screening, identifying, and addressing risk factors to improve the health of the reproductive-aged individual, current or soon-to-be parent, and child. Family planning, pregnancy education, and parenting are often discussed in reproductive health and prenatal visits, making them the ideal setting to provide counseling and intervention for ACEs and toxic stress among expectant or future parents.[24] Reproductive health clinicians, in particular those providing prenatal care, often see patients during a time when the patient may be more motivated to participate in interventions that will benefit their child's health.[25]

Supporting patients in treating impacts from their own ACEs and recommending support programs when appropriate, such as Centering Pregnancy or Centering Parenting, which provide both health care and proactive social support to promote positive parenting, can address patient health goals and help stop the intergenerational transmission of ACEs and toxic stress.[26]

3. ACE screening supports the provision of trauma-informed, evidence-based toxic stress-responsive reproductive health services

Staff comfort with ACE screening helps them embrace a trauma-informed approach to the clinic-based experience. This is important because procedures such as pelvic exams or cervical cytology screening may be triggering or re-traumatizing to patients.[27] Screening for ACEs can remove the stigma associated with a history of sexual trauma and help patients feel more comfortable discussing their past, and make important links between their ACEs and current/future health risks, including how to more specifically treat those risks.

Why should adult patients be screened for ACEs?

Over the past 20 years, studies have demonstrated the impact of exposure to ACEs on adult morbidity and mortality. ACEs can lead to the prolonged activation of the biological stress response and to long-term disruption of neuro-endocrine-immune-metabolic and genetic regulatory mechanisms, referred to as the toxic stress response.[28] There are several critical ways that ACE screening benefits adult patients.

1. ACE screening can improve clinical assessment, patient education, and treatment for ACE-Associated Health Conditions

The impacts of ACEs may not become evident until well into adulthood. Understanding an adult patient's ACE exposure as a way of assessing their risk for clinical toxic stress can help inform more specific prevention and treatment of ACE-Associated Health Conditions. In addition, an adult patient's susceptibility to ongoing or new stressors may be higher for adults who were exposed to ACEs and are biologically stress-sensitized through activation of the toxic stress response.[29]

Understanding the impact that ACEs may have on a patient's health can lead to more trauma-informed approaches to physical exams, care coordination, and treatment planning that incorporates consideration of the toxic stress response and its role in ACE-Associated Health Conditions. Clinicians also can use ACE screening results to inform patient education and anticipatory guidance.

2. ACE screening helps clinicians and patients address behavioral pathways to ACE-Associated Health Conditions

The toxic stress response can lead to ACE-Associated Health Conditions directly or through behavioral pathways (e.g., smoking, substance use, etc.). While it is important to acknowledge the full range of possible clinical manifestations, for adults who have adopted health risk behaviors that may contribute to further ACE-Associated Health Conditions, ACE screening can help clinicians address these risks. In particular, through ACE screening, clinical care teams can obtain useful information that may indicate a relationship between relief-seeking behaviors, such as smoking, overeating, and substance misuse, and the toxic stress a patient is experiencing,[30] providing opportunities for anticipatory guidance; behavioral health counseling or addiction services, if indicated; and targeted intervention.

3. ACE screening may validate and empower patients, contribute to improved family health, and reduce intergenerational transmission of risk for toxic stress

Educating adult patients about how their experiences in childhood may be impacting their physical, mental, and behavioral health can help validate their experiences and build on their strengths. This important in service of improving the health of the adult patient and it is also a means for stopping the intergenerational transmission of risk for toxic stress.

The transmission of risk of toxic stress from one generation to another occurs when a parent's biology and behavior are altered by their Adverse Childhood Experiences. This can then affect the health and development of their children. Additionally, certain health conditions or health risk behaviors in adults, including mental illness, substance use disorder or substance misuse, and interpersonal and self-directed violence, may pose additional risks for toxic stress for the next generation. Breaking this cycle by working with individuals before they become parents or when they are pregnant may help break this intergenerational cycle.[31]

Endnotes

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