Screening for Adverse Childhood Experiences (ACEs) and Referral Pathways

Position Statement of the American Heart Association

Introduction

An estimated 64 percent of adults in the United States report a history of adverse childhood experiences (ACEs), defined as potentially traumatic events, either single, acute events or sustained over time, that have a direct and synergistic impact on health and well-being throughout the life course.[1,2]

The role of ACEs in predicting future adverse adult health outcomes is being widely recognized by policymakers and public health experts. Screening for ACEs, in particular in clinical practice and in school settings, has the potential to identify unaddressed key social issues that can influence current health risks, morbidity, and mortality. The American Heart Association (AHA) supports incorporating universal ACEs screening in routine care and in schools to ensure early identification of childhood adversities and the development of targeted preventative strategies, including referral pathways.

Background

ACEs occur regularly with children aged zero to 18 years across all races, socioeconomic statuses, and geographic regions; however, childhood adversity is disproportionally prevalent among low-income and minority populations.[3] Research suggests a dose-response effect between the occurrences of ACEs and various negative health outcomes, including risk for cardiovascular disease (CVD).[4,5,6,7,8] The range of stressors and experiences that contribute to such outcomes include: exposure to emotional, physical, or sexual abuse; environmental hazards; and medical traumas such as childhood cancer.[9] Recent studies have expanded the definition of ACEs to include household dysfunction, described as exposure to interpersonal violence in the home, living with a person with mental illness or substance abuse problems, parental separation, and incarceration of a household member, in addition to poverty.[10,11] Poverty is not only described as an ACE itself, but is shown as a strong reinforcing factor in the accumulation of ACEs.[12,13]

Initial work by Felitti and colleagues with a patient population (n=17,000) from California Kaiser Permanente determined that current health risk behaviors, morbidities, and chronic diseases were predicted by the number of childhood exposures. [14] Results of the landmark ACEs study concluded that more than one in five adults report three or more ACEs and 12.4 percent report four or more ACEs.[15]

Without early intervention, childhood adversity can be transmitted from one generation to the next with significant health and financial consequences for individuals and society.[16] There is evidence that supports universal screening for various aspects of social risk within routine clinical care as part of a wider continuum of strategies for enhancing population health and equity. Further, research recommends systematic screening for ACEs in schools, particularly among younger adolescents involved in victimization and perpetration. Early identification of ACEs can facilitate referrals and interventions to help mitigate the potential lifelong adverse health consequences of ACEs.

Screening in clinical practice

Screening for ACEs, either in a targeted manner or over time in the course of continuous relationships with patients, has been proposed or put into practice in some pediatric health settings in the U.S.[17,18,19] Given the serious health implications of ACEs and subsequent toxic stress, screening children for ACEs promotes healthy development by identifying children who require more support in primary care. Further, screening children for ACEs early and regularly enables providers and their behavioral health partners to implement primary prevention strategies to educate caregivers about the impact of adversity on their children's developing brains and bodies. [20] As a result, early identification of the child's odds of illness or disease can lay the foundation for the development of targeted interventions.

Research, however, suggests screening for ACEs in clinical settings is limited. In a survey of 833 Massachusetts family providers, less than one-third reported regularly screening patients for childhood adversity.[21] Barriers to screening included limited time to evaluate or counsel childhood abuse victims, competing primary care recommendations, and lack of clear recommendations about screening.[22] Current measures in practice are either limited to specific ACE categories such as child abuse (i.e. the Childhood Trauma Questionnaire), or contain items that assess trauma more generally (i.e. the Traumatic Events Screening Inventory). Research shows an age-appropriate tool that assesses cumulative adversity exposure is necessary for identifying children at risk of developing poor health outcomes and tailoring appropriate interventions.[23]

Screening in schools

Among the school-aged population, childhood adversity and trauma are associated with lower achievement, truancy and dropout, behavioral problems, mental illness, neurological changes, and difficulty managing emotions and social relationships.[24] Research suggests schools provide an ideal setting for identifying and responding to at-risk students due to their central role in children's lives, their continued assessment of children's learning abilities, and relationships with peers and school staff. School districts have considered the use of universal screening to aid in early identification of adversity and trauma among students and to use this data to guide the delivery of interventions and supports at school.

However for educators, students who have experienced multiple adversities (20 to 50 percent of all students) can be more difficult to engage consistently as these students require additional support and often need more attention, thereby reducing instructional time for other students.[25] Further, with many students and families experiencing adversity, schools may lack the necessary resources to address these issues without local partner services and support from the larger community and other systems.[26]

AHA Position Statement on Screening for ACEs and Referral Pathways

- AHA supports universal screening for ACEs in both clinical practice and school settings. Due to the synergistic impact of ACEs on health and well-being throughout the life course, screening for ACEs should be a continuing process. In addition, any screening programs for ACEs should also ensure that sufficient evidence-based treatment resources are available to handle likely referrals. Research shows screening for any condition in isolation without the capacity to ensure referral and linkage to appropriate treatment is ineffective.[27]

- AHA supports the development of clinically efficient, standardized tools for screening and assessment of children in clinical care settings. Identifying a standardized method is important to accurately evaluate the effects of ACEs on children's outcomes as well as to better understand how ACEs assessment might inform or improve broader efforts to promote children's health and well-being. As such, screening tools should reflect real-world settings; validated screening tools in research settings may not reflect real-world scenarios. Currently, there is no consensus on a framework for evaluating ACEs measures, due in part to ACEs measurement only recently being used in clinical practice, where standardization of methods is most critical.[28]
- AHA encourages schools to develop the infrastructure to increase access to trauma-informed intervention services. Research shows trauma-informed schools build resilience by preparing schools to be responsive to the needs of the students.[29] This is particularly important when working with low-income and minority student populations who are more susceptible to ACEs. The Substance Abuse and Mental Health Services Administration (SAMHSA) has developed a framework to help organizations, including in the education sector, to develop a working concept of trauma and a trauma-informed approach.[30]

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[1] 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. Gen Hosp Psychiatry. 2019;56:1-8. doi: S0163-8343(18)30318-9 [pii].
[2] Merrick MT, et al. Prevalence of adverse childhood experiences from the 2011-2014 behavioral risk factor surveillance system in 23 states. JAMA Pediatr. 2018; 172(11):1038-1044.
[3] 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. Gen Hosp Psychiatry. 2019;56:1-8. doi: S0163-8343(18)30318-9 [pii].
[4] Sonu, Stan, Sharon Post, and Joe Feinglass. "Adverse childhood experiences and the onset of chronic disease in young adulthood." Preventive Medicine (2019).
[5] White, Bradley A., Lydia Cordie-Garcia, and Esme Fuller-Thomson. "Incarceration of a family member during childhood is associated with later heart attack: Findings from two large, population-based studies." Journal of Criminal Justice 44 (2016): 89-98.
[6] Liu RS, et al. Socioeconomic status in childhood and C reactive protein in adulthood: a systematic review and meta-analysis. J Epidemiol Community Health. 2017;71(8):817-826. doi: 10.1136/jech-2016-208646 [doi].
[7] Willaims Ad, Shenassa E, Slopen N, Rossen L. Cardiometabolic dysfunction among u.s. adolescents and area-level poverty: Race/ethnicity-specific associations. Journal of Adolescent Health. 2018; 63(5):546-553. doi: 10.1016/j.jadohealth.2018.07.003 [doi].
[8] Schmeer KK, Yoon A. Socioeconomic status inequalities in low-grade inflammation during childhood. Arch Dis Child. 2016;101(11):1043-1047. doi: 10.1136/archdischild-2016-310837 [doi].
[9] Felitti, Vincent J., Robert F. Anda, Dale Nordenberg, David F. Williamson, Alison M. Spitz, Valerie Edwards, and James S. Marks. "Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study." American journal of preventive medicine 14, no. 4 (1998): 245-258.
[10] Sonu, Stan, Sharon Post, and Joe Feinglass. "Adverse childhood experiences and the onset of chronic disease in young adulthood." Preventive Medicine (2019).
[11] Quinn, Kelly, Bartley C. Frueh, Joy Scheidell, Daniel Schatz, Faith Scanlon, and Maria R. Khan. "Internalizing and externalizing factors on the pathway from adverse experiences in childhood to non-medical prescription opioid use in adulthood." Drug and alcohol dependence 197 (2019): 212-219.
[12] Hughes M, Tucker W. Poverty as an adverse childhood experience. North Carolina Medical Journal. 2018; 79(2):124-126. doi: 10.18043/ncm.79.2.124 [doi].
[13] Green MJ, Stritzel H, Smith C, Popham F, Crosnoe R. Timing of poverty in childhood and adolescent health: evidence from the us and uk. Soc Sci Med. 2018;197:136-143. doi: 10.1016/j.socscimed.2017.12.004 [doi].
[14] Centers for Disease Control and Prevention. Adverse childhood experiences (ACEs). Accessed June 25, 2019. Available at https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/index.html
[15] Centers for Disease Control and Prevention. Adverse childhood experiences (ACEs). Accessed June 25, 2019. Available at https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/index.html
[16] American Academy of Pediatrics. Adverse Childhood Experiences and the Lifelong Consequences of Trauma. 2014.
[17] Koita K, et al. Development and implementation of a pediatric adverse childhood experiences (ACEs) and other determinants of health questionnaire in the pediatric medical home: A pilot study. PLOS One. 2018, 13(12): e0208088.
[18] Glowa PT. Screening for adverse childhood experiences in a family medicine setting: A feasibility study. J Am Board Fam Med. 2016, 29(3).
[19] Purewal SK, et al. Screening for adverse childhood experiences (ACEs) in an integrated pediatric care model. Zero to Three Journal. 2015.
[20] Purewal SK, et al. Screening for adverse childhood experiences (ACEs) in an integrated pediatric care model. Zero to Three Journal. 2015.
[21] Weinreb et al. Screening for childhood trauma in adult primary care patients: A cross-sectional survey. Prim Care Companion J Clin Psychiatry. 2010; 12(6): PCC.10m00950.
[22] Idib.
[23] Finkelhor D, Shattuck A, Turner H, Hamby S. A revised inventory of Adverse Childhood Experiences. Child Abuse Negl. 2015 Oct;48:13–21.
[24] Hertel R, Johnson MM. How the traumatic experiences of students manifest in school settings. Oxford University Press. 2013.
[25] The Illinois ACEs Response Collaborative. Education brief: ACEs for educators and stakeholders. Available at http://www.hmprg.org/wp-content/themes/HMPRG/backup/ACEs/Education%20Policy%20Brief.pdf
[26] Child Welfare Information Gateway. Understanding the Effects of Maltreatment. 2015.
[27] Garg A. Avoiding the unintended consequences of screening for social determinants of health. JAMA. 2016, 316(8):813-814.
[28] Bethell CD, et al. Methods to assess adverse childhood experiences of children and families: Toward approaches to promote child well-being in policy and practice. Acad Pediatr. 2017; 17(7 Suppl):S51-S69.
[29] The National Child Traumatic Stress Network. Creating, supporting, and sustaining trauma-informed schools: A system framework. Los Angeles, CA, and Durham, NC: NCTSN. 2017.
[30] SAMHSA. Concept of trauma and guidance for a trauma-informed approach. July 2014. Available at https://store.samhsa.gov/system/files/sma14-4884.pdf.