Adverse Childhood Experiences: Informing Best Practices

Online Collaborative Living Document

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Introduction and Overview

Scientific evidence indicates that adverse childhood experiences (ACEs) are important contributors to health problems across the lifespan. With this increasing knowledge about the relationship between ACEs and illness, there is also an increasing interest by health providers, healthcare institutions, and funders in how best to identify and address these experiences in patients. The purpose of this "online collaborative learning document" is to help answer those questions by briefly describing:

- The growing evidence for the relationship between ACEs and health
- The role of resilience and other mitigating factors
- Approaches for helping parents
- Current best practices regarding identification and effective treatments to address ACEs
- Clinical approaches for patients who have symptoms and health problems that may be related to ACEs
- Self-help approaches for adults with ACEs
- Ways to develop trauma-informed care and integrated systems of care
- Estimated costs associated with ACEs
- The research needed to advance knowledge and to improve care for patients whose health problems may be related to ACEs

This paper is the result of collaboration between the Academy on Violence and Abuse (AVA), a membership organization for health professionals and educators focused on improving knowledge, education, and practice related to exposures to violence and abuse, and the National Health Collaborative on Violence and Abuse (NHCVA), an organization of more than 30 health professional societies and other concerned organizations whose mission is to inform public policy regarding violence, abuse, and health.

Our hope is that this paper will facilitate ongoing discussion; promote needed attention and resources to prevention, early recognition, and effective treatment of the harms associated with adverse childhood experiences; and help integrate ACEs into public health surveillance, policy, and healthcare practice.

Adverse Childhood Experiences and Long-Term Health

Robert Anda, MD, MS, and Vincent J. Felitti, MD

Adverse Childhood Experiences (ACEs) are strongly associated with many of the most serious diseases, disorders, and social problems,[1] yet most health providers are ill equipped by their training to help prevent, identify, and to intervene early in the development of these harms. The Adverse Childhood Experiences (ACE) Study found a dose-response relationship between the number of categories of ACEs experienced and the number and severity of both illness risk factors and psychosocial/behavioral problems (i.e., smoking, obesity, physical inactivity, depression, suicide attempts, alcoholism, drug abuse, sexual promiscuity, and sexually transmitted diseases) and serious disease or other physical health problems (i.e., heart disease, cancer, stroke, chronic bronchitis, COPD, chronic pain, diabetes, hepatitis, and skeletal fractures) as well as health care utilization—especially rates of prescription pharmaceuticals used to treat these conditions.[2,3,4,5,6] The cost to the health care system and society for these preventable sequelae is staggering.

The Adverse Childhood Experiences (ACE) Study is a landmark research study focusing on the role of childhood adversity, including violence and abuse and their relationship to long-term health.[2] The ACE Study is an ongoing collaboration between the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente that comprehensively describes the prevalence and the effects of 10 categories of adverse childhood experiences (ACEs), including: childhood abuse (emotional, physical, or sexual), childhood neglect (emotional or physical), and household dysfunction (witnessing domestic violence, substance abuse, mental illness, incarceration, or separation and divorce) on adult health and social well-being throughout the lifespan. Study participants include 17,000 middle-class adults from the Kaiser Health Plan in San Diego, CA. More than 80 publications describing both retrospective and prospective analyses of this large study cohort repeatedly demonstrate that:

- ACEs are common, but largely unrecognized.
- ACEs are highly interrelated and often occur together.
- The ACE Score is the number of *categories* of ACEs.
- The ACE Score has strong and graded relationship to numerous health and social problems, as listed above.
- The cumulative stressor effect of ACEs on human development throughout the lifespan shows that ACEs are major determinants of future health. Individuals with higher ACE scores have markedly increased risk of addiction, mental illness, social problems, health

care utilization, chronic diseases, prescription medication use, and premature mortality.2,3,4

Depression and diabetes are two of the most serious and costly medical conditions throughout the world today. The World Health Organization has standardized ACE questions for use in multiple countries. As a result, public health surveillance efforts are beginning to document the national and global burden of ACEs.4 A study of ACEs in the Netherlands shows that ACEs are associated with a higher burden of disease than all non-ACE related common mental disorders combined.5 While this is true, the risks of the intergenerational transmission of ACEs is greatest for problems like household substance abuse and mental illness. 2,4 A key to prevention of ACEs and all of their sequelae is the disruption of this intergenerational cycle with each successive generation.7 The pervasive influence of ACEs is now recognized as a serious international health and social problem, and a growing number of studies provide additional support to the validity of the concepts4 and importance of the ACE Study.

References

1. Adverse Childhood Experiences: Looking at how ACEs affect our lives & society. CDC infographic.

2. 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. Eur Arch Psychiatry Clin Neurosci. 2006;256(3):174-86.

3. Brown DW, Anda RF Tiemeier, et al. Adverse childhood experiences and the risk of premature mortality. Am J Prev Med 2009;37:389-396.

4. Anda RF, Butchart A, Felitti VJ, Brown DW. Building a framework for global surveillance of the public health implications of adverse childhood experiences. Am J Prev Med 2010;39(1)93–98.

5. Cuijpers P, Smit F, Unger F, et al. The disease burden of childhood adversities in adults: A population-based study. Child Abuse and Neglect 2011;35:937-945.

6. Anda RF, Brown DW, Felitti VJ, Dube SR, Giles WH. Adverse childhood experiences and prescription drug use in a cohort study of adult HMO patients. BMC Public Health. 2008;8:198.

7. Anda RF, Brown DW. Root Causes and organic budgeting; funding health from conception to the grave. Pediatric Health 2007;1(2):141-143.

Biological Effects of ACEs

Andrea Danese, MD, PhD; Michael D. De Bellis, MD, MPH; and
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Adverse psychosocial experiences in childhood affect later mental and physical health.[1,2] Current evidence suggests that the "biological embedding" of adverse childhood experiences may be attributed to changes in three key systems sensitive to psychological stress: the brain and the endocrine and immune systems.[3,4] Experimental research has shown that mice exposed to early life stress undergo biochemical changes in their genetic material that result in abnormal expression of key genes regulating the biological response to stress.[5]

Through these epigenetic changes, the developing child could modify his or her biological response to stress to maximize adaptation to the current environment. For example, a threatening and unpredictable environment will be associated with hyperactive stress response. Although this might ensure greater adaptation to the immediate environment, the hyperactive stress response may also carry a burden for disease during child development and beyond.

Endocrine and Immune Systems

In conditions of acute psychosocial stress, the secretion of glucocorticoid hormones (e.g., cortisol) and their systemic effects mediated by the glucocorticoid receptor are vital to increase energy provision in the face of adversities. Mice exposed to early life stress exhibit epigenetic changes leading to reduced functioning of the glucocorticoid receptor.[6] Consistent with evidence in these animal models, maltreated children show chronic elevation in cortisol levels,[7] possibly to compensate for the impaired functioning of the glucocorticoid receptor. Although elevated cortisol elevation might be adaptive in the short-term to support increased bodily demands under conditions of threat, chronic elevation in cortisol levels may become detrimental to health.[8]

Insufficient glucocorticoid functioning has important implications for the developing immune system. Because glucocorticoid hormones are potent anti-inflammatory compounds, attenuation of their effect may impair regulation of the inflammatory response. Consistent with impaired functioning of the glucocorticoid receptor, children, and adults exposed to early maltreatment show elevated inflammation levels.[9,10] Elevated inflammation levels may be adaptive in the short-term to potentiate stress-induced immune response—should the threat be followed by physical

injury. However, chronic elevation in inflammation levels contribute to the pathophysiology of several chronic conditions, such as cardiovascular disease or type 2 diabetes.[11,12] Abnormal endocrine and immune functioning in children exposed to adverse childhood experiences may affect brain development, with important implications for mental health. Regulation of inflammation and energy balance is also influenced by leptin, which has inhibitory effects acting both as a cytokine and as a hormone. Consistent with the evidence linking child maltreatment to high inflammation and obesity, maltreated children showed blunted elevation in leptin levels in relation to increasing levels of physiological stimuli, inflammation, and adiposity.[13]

Brain Structure and Function

A growing body of reproducible findings in child victims of maltreatment and adults who were maltreated as children have linked childhood maltreatment to structural and functional brain differences.[14] Smaller brain volumes, smaller midsagital areas of the corpus callosum, and functional alterations in the neocortex, visual cortex, and auditory cortex have been observed in maltreatment survivors. Adverse brain development is seen in maltreated children and adolescents with posttraumatic stress disorder (PTSD) and other psychopathology.[15,16] However, alterations in the prefrontal cortex of maltreated children are also seen in maltreated children without any DSM-IV Axis I disorders.[17] The findings also revealed gender differences; in maltreated girls, neurostructural alterations resided in brain regions involved in emotion regulation, whereas in maltreated boys, the affected brain regions involved impulse control.

In addition to gender differences, timing can also play a role in the degree to which anomalous brain development occurs. During brain maturation, specific windows of vulnerability, called stress-sensitive periods, exist. During these periods, brain regions are are undergoing active maturation and thus are more susceptible to the negative effects of overwhelming stress. To date, the data strongly suggest that child maltreatment is associated with alterations in brain regions that may have profound negative effects on executive function, attention, memory, sequencing, planning, and visual-spatial function.[18] These deficits can impair day-to-day function, leading to lower levels of function in victims of maltreatment. However, the neurobiology of child maltreatment in humans is a relatively new field of study, and thus several key questions remain: What changes are adaptive, and what changes will result in long-term disease? Does treatment of stress-related illnesses improves brain structure and function? In order to help victims of child maltreatment, longitudinal

studies are needed to address these important issues.

References and Resources

1. Nanni V, Uher R, Danese A. Childhood maltreatment predicts unfavorable course of illness and treatment outcome in depression: a meta-analysis. Am J Psychiatry. 2012;169:141-51.

2. Danese A, Tan M. Childhood maltreatment and obesity: systematic review and meta-analysis. Molecular Psychiatry. 2014;19(5):544-54.

3. Danese A, McEwen BS. Adverse childhood experiences, allostasis, allostatic load, and age-related disease. Physiol Behav. 2012;106:29-39.

4. Shonkoff JP, Boyce WT, McEwen BS. Neuroscience, molecular biology, and the childhood roots of health disparities: building a new framework for health promotion and disease prevention. JAMA. 2009;301:2252-9.

5. Meaney MJ. Epigenetics and the biological definition of gene x environment interactions. Child Dev. 2010;81:41-79.

6. Weaver IC, Cervoni N, Champagne FA, et al. Epigenetic programming by maternal behavior. Nat Neurosci. 2004;7:847-54.

7. Tarullo AR, Gunnar MR. Child maltreatment and the developing HPA axis. Horm Behav. 2006;50:632-9.

8. McEwen BS. Protective and damaging effects of stress mediators. N Engl J Med. 1998;338:171-9.

9. Danese A, Caspi A, Williams B, et al. Biological embedding of stress through inflammation processes in childhood. Molecular Psychiatry. 2011;16:244-6.

10. Danese A, Pariante CM, Caspi A, et al. Childhood maltreatment predicts adult inflammation in a life-course study. Proc Natl Acad Sci USA. 2007;104:1319-24.

11. Libby P. Inflammation in atherosclerosis. Nature. 2002;420:868-74.

12. Hotamisligil GS. Inflammation and metabolic disorders. Nature. 2006;444:860-7.

13. Danese A, Dove R, Belsky D, et al Leptin deficiency in maltreated children. Transl Psychiatry. 2014; 4:e446.

14. Teicher MH, Samson JA. Childhood maltreatment and psychopathology: A case for ecophenotypic variants as clinically and neurobiologically distinct subtypes. Am J Psychiatry. 2013;170(10):1114-33.

15. De Bellis MD, Baum A, Birmaher B, et al. Developmental traumatology part I: biological stress systems. Biological Psychiatry. 1999;45:1259-70.

16. De Bellis MD, Keshavan MS, Clark DB, et al. Developmental traumatology part II: brain development. Biological Psychiatry. 1999;45(10):1271-84.

17. Edmiston EE, Wang F, Mazure CM, et al. Corticostriatal-limbic gray matter morphology in adolescents with self-reported exposure to childhood maltreatment. Archives of Pediatrics & Adolescent Medicine. 2011;165(12):1069-77.

18. Burghy CA Stodola DE, Ruttle PL, et al. Developmental pathways to amygdala-prefrontal function and internalizing symptoms in adolescence. Nat Neurosci. 2012;15(12):1736-41.

Increasing Resilience: Primary Healthcare Providers' Opportunities to Promote Protective Factors Before and After Childhood Trauma

Machelle D. Madsen Thompson, PhD; and Bart Klika, PhD, MSW

Lifespan research1,2,3 reveals that although ACEs are common,4 many people are able to move toward recovery and achieve reportedly good functional status. This *resilience* does not occur in isolation but is supported by a composite of protective factors that empower a child to return to functional status following ACEs.5 Resilience is observed when a child is immersed in positive influences, such as supportive relationships, and is protected from risk factors across *ecological systems*, which by definition range from individual characteristics of the child to structures in the environment.6,7 *Protective factors* are positive qualities located within the cognitive, emotional, environmental, social, and spiritual experience of the child that are associated with resilience and, when combined, facilitate positive outcomes. These modifiable factors work cumulatively to empower and support the child so that she or he may avoid or successfully work through the trauma associated with ACEs.5

Healthcare providers, partnering with supportive family members and mentors close to the child, can play important roles in both preventing ACEs and promoting resilience should ACEs occur.8 Successful prevention of ACEs requires an integrated system of care that includes activities and interventions across disciplines and across the ecological prevention spectrum.9 Primary healthcare providers can initiate universal screening for ACEs with all of their patients. Screening for ACEs can assist healthcare providers in identifying both patients who may not be experiencing any significant impairment as well as patients who are experiencing health problems related to ACE exposure. Screening of both children and parents allows healthcare providers to identify patients who may have elevated risk for poor physical and/or psychosocial outcomes. For these patients, healthcare providers can provide targeted referrals to address the impacts of the ACEs.

Assessment of ACEs, however, only represents one side of the prevention coin.10 As healthcare providers work to identify and lessen the number and impacts of ACEs, they also should understand the potential sources of protection that can foster resilience for all of their patients. Identifying the presence or absence of protective factors through universal screening allows healthcare providers to make targeted referrals to facilitate the continued development of such factors. For example, if a child's parent is

diagnosed with a medical illness that limits her ability to support the child, the practitioner could identify and encourage other positive adult mentors in the child's extended family, school, community, or faith group to provide both practical and emotional support. In this way, healthcare providers contribute to the "promotion of safe, stable, and nurturing relationships" and well-being for all children and families.[11]

A review of more than 200 research articles, coupled with narratives of over 350 adults and children,[5] demonstrates that several important protective factors are known to help a child who has experienced multiple ACEs.[12,13,14] To aid the healthcare practitioner, each protective factor listed below contains references to information, handouts, and real-world implementation for children and families affected by or at risk for ACEs.[6,13]

Self value: The child's emotional and behavioral self expressions are positive, accurate, and constructive. Increasing this protective factor focuses on helping a child internally value him or herself enough to keep going and do his or her best despite setbacks, negative consequences, and/or emotions related to ACEs.[8,15,16]

Self regulation: The child is taught and demonstrates emotional and behavioral self-management that helps him or her resolve difficult situations rather than resort to self-destructive or aggressive behavior.[8,17]

Hope/future goal setting: The child is encouraged to engage in high and positive expectations, setting attainable goals in relation to his or her life and future outcomes.[18]

Problem solving: With the child's goals in mind, the child is supported in his or her ability to find unique solutions to difficult situations.[19]

Supportive belief structure: The child's personal beliefs and practices that give encouragement and meaning to life beyond the material or worldly are nurtured.[20]

Friends: The child learns to create and foster constructive and reciprocal friendships. A caretaker or mentor facilitates development of positive friendships.[21]

Family/caretakers: The family, caretakers, and close adult mentors provide stable care for the child. This includes meeting the child's survival, health, mental health, and emotional needs. Caretakers can be encouraged to place their child's care as a high priority, become good role models, and

set reasonably high expectations in a warm and loving environment.[8,22,23,24]

Supported academic functioning: The child is supported by caring mentors at school and at home who encourage his or her efforts to work consistently at his or her ability level and to attain educational goals.[25,26]

Active diversion: The youth is involved in developing and engaging in healthy activities, skills, and groups in the community, school, and/or home. Adults encourage a balance in activities to avoid over-scheduling or excessive emphasis on competition, creating more stress.8 Activity suggestions from qualitative research participants include helping youth become involved in activities such as sports, music, art, creative writing, religious youth groups, or community/school organizations.[5,27,28]

Supportive adults and community: The area in which a child lives is a secure place to obtain resources. Practitioners can work with community professionals to refer patients to supportive area resources that meet the child's needs in areas such as mental and behavioral health, social and emotional development, and disability support.[8,29,30,31]

Safety/fewer and less severe stressors: The child's well-being, basic needs, and security are promoted across the spectrum of ecological settings at the individual, relational, school, and community levels.[5,32,33,34,35]

Resilience, thought of in terms of achievable protective factors, allows a practitioner to recommend real solutions for families affected by ACEs. Because protective factors work cumulatively, it is imperative to acknowledge that the presence of one or two of the more apparent resilient areas, such as academic achievement, may still necessitate the implementation of resources to improve other, less visible protective factors. We highly recommend assessing and implementing resources for all children across all protective factors, even with those who are seemingly resilient. A proportion of children might appear to exhibit outward resilience yet continue to mask ACE-related anguish that may contribute to the development of chronic biomedical conditions over time.[36]

Pediatric medical teams, family practitioners, and other primary care providers who routinely treat children and families can encourage engagement with both (a) formal and professional services that enhance protective factors and (b) resources already available in the child's natural environment. Obstetric medical personal and family practitioners can encourage expecting mothers and their partners to begin accessing positive support structures for themselves and the unborn child as prevention tools

should the parent have the need to address his or her former ACEs or should future ACEs occur in the child's life.

By implementing multifaceted real world strategies, programs, and resources,37 primary healthcare providers can help maximize the protective factors in children and adolescents across multiple levels of prevention and treatment. Across the lifespan, these children and adolescents then become more likely to demonstrate the positive effects of resilience, growing up in a life less encumbered by major psychological and stress-induced physical health problems, enhanced by positive long-term relationships, and connected to society through successful careers and positive parenting despite ACEs.38

References

1. Garmezy N. Stress-resistant children: The search for protective factors. In Stevenson JE (ed). Recent research in developmental psychopathology. (pp 213-33). Oxford: Pergamon Press; 1985.

2. Rutter M. Psychosocial resilience and protective mechanisms. Am J Orthopsychiat. 1987;57(3):316-31.

3. Werner EE, Smith RS. Journeys from Childhood to Midlife: Risk, Resilience and Recovery. Ithaca, NY: Cornell University Press; 2001.

4. DePanfilis D. Child Neglect: A Guide for Prevention, Assessment and Intervention. Office on Child Abuse and Neglect. Chapter 4: Risk and Protective Factors. Children's Bureau; 2006.

5. Madsen Thompson, MD. Trauma Resilience Scale for Children: Validation of Protective Factors Associated with Positive Adaptation Following Violence [dissertation]. Tallahassee, FL: Florida State University; 2010.

6. Bronfenbrenner, U. The Ecology of Human Development: Experiments by Nature and Design. Cambridge, MA: Harvard University Press; 1979.

7. World Health Organization, Violence Prevention Alliance. The Ecological Framework.

8. Ginsburg KR with Jablow MM. Building Resilience in Children and Teens: Giving Your Child Roots and Wings. Elk Grove Village, IL: American Academy of Pediatrics; 2006.

9. Whitaker DJ, Lutzker JR, and Shelley GA. Child maltreatment prevention priorities at the Centers for Disease Control and Prevention. Child Maltreatment. 2005:10(3):245-259.

10. Find Youth Info. Positive Youth Development. 2012.

11. Centers for Disease Control and Prevention. Preventing Child Maltreatment Through the Promotion of Safe, Stable, and Nurturing Relationships Between Children and Caregivers. National Center for Injury Prevention and Control.

12. Department of Health and Human Services Administration on Children, Youth and Families. 2013 Resource Guide. Preventing Child Maltreatment and Promoting Well-Being: A Network for Action. 2013.

13. Pinheiro PS. World report on violence against children. United Nations Secretary-General's Study on Violence Against Children. 2006.

14. Youngblade LM, Theokas C, Schulenberg J, et al. Risk and promotive factors in families, schools, and communities: a contextual model of positive youth development in adolescence. Pediatrics. 2007;119 Suppl 1:S47-53.

15. American Academy of Pediatrics. Helping Your Child Develop a Healthy Sense of Self Esteem. 2012.

16. American Academy of Pediatrics. Ages & Stages. Ways to Build Your Teenager's Self-Esteem. 2011.

17. American Psychological Association. What You Need to Know About Willpower: The Psychological Science of Self-Control. Strengthening Self-Control. 2013.

18. Seginer R. Future orientation in times of threat and challenge: how resilient adolescents construct their future. Int J Behav Dev. 2008;32(4):272-282.

19. Shure MB. Preventing Violence the Problem-Solving Way. Juvenile Justice Bulletin. Office of Juvenile Justice & Delinquency Prevention. 1999.

20. Kim S and Esquivel GB. Adolescent spirituality and resilience: theory, research, and educational practices. Psychol Schools. 2011;48(7):755-65.

21. American Psychological Association. Seek the Right Kind of Social Support. 2013.

22. Chamberlain L. Partnering with Parents: Pathways to Prevention in the Pediatric Setting. ACEs: Healing and Health AVA/NHCVA Next Steps. Section 10. 2014.

23. American Psychological Association. Parents and Caregivers are Essential to Children's Healthy Development. 2013.

24. American Psychological Association. Communication Tips for Parents. 2013.

25. American Psychological Association. Resilience Guide for Parents and Teachers. 2013.

26. Centers for Disease Control and Prevention. School Connectedness: Strategies for Increasing Protective Factors Among Youth. 2009.

27. Centers for Disease Control and Prevention. Making Physical Activity a Part of a Child's Life. 2011.

28. Find Youth Info. Program Directory Search. [Search evidence-based rated youth programs by Risk and/or Protective Factors].

29. Psychology Today. Find a Therapist.

30. Find Youth Info. Map My Community. [Interactive search by zip code for local youth programs receiving federal funds].

31. Ability First. Serving Children and Adults with Special Needs.

32. American Academy of Pediatrics. How Pediatricians Can Advocate for Children's Safety in Their Communities.

33. Feeding America. Food Bank Locator. 2014.

34. U.S. Department of Housing and Urban Development. HUD Approved Housing Counseling Agencies [by state].

35. American Academy of Pediatrics. Keeping Children Safe: Preventing Gun Violence. 2013.

36. Anda R, Felitti VJ, Corwin DL. Adverse Childhood Experiences and Long-Term Health. ACEs: Informing Best Practice, AVA/NHCVA, Section 1. 2014.

37. US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration: Center for Mental Health Services. Promotions and Prevention in Mental Health: Strengthening Parenting and Enhancing Child Resilience. 2007.

38. Leadbeater BJ, Schellenbach CJ, Maton KI, and Dodgen DW. Research and policy for building strengths: Processes and contexts of individual, family, and community development. In Maton KI, Schellenbach CJ, Leadbeater BJ, and Solarz AL (Eds.). Investing in Children, Youth, and Families: Strengths-Based Research and Policy. Washington, DC: American Psychological Association, 2004.

Partnering with Parents: Pathways to Prevention in the Pediatric Setting

Linda Chamberlain, PhD, MPH

A growing body of research has documented the effects of current and past victimization on parenting skills and the quality of the parent-child relationship.[1,2,3] Because of the prevalence of ACEs, many families seen in the pediatric setting are living with the lingering effects that ACEs may have on parenting. The well-documented physical and mental health consequences of ACEs for adult survivors can interfere with parents' ability to be sensitive to and respond appropriately to their children's needs.[4] Having experienced abuse as a child increases the likelihood that parents will use physical punishment to discipline their own children.[5] This impaired parenting can provide the vehicle for the transmission of trauma to the next generation, even when ACEs are not currently present in a household. Conversely, consistent, nurturing parenting skills and secure attachments are protective for children experiencing early adversity.[6,7,8]

In their policy statement on Childhood Adversity, Toxic Stress, and the Role of the Pediatrician, the American Academy of Pediatrics describes the pivotal role that pediatricians can have in promoting the positive parenting techniques and stable, responsive parent-child relationships that buffer the toxic effects of childhood adversity.

Several key characteristics of a trauma-informed approach to parenting in the pediatric setting are that it:

(1) empowers pediatric providers with the skills and resources needed to educate parents about the impact of ACEs upon both parenting and their child's development;[9]

(2) recognizes that parenting may unexpectedly trigger memories of parents' traumatic experiences and meets parents where they are in terms of their life experiences;

(3) creates an emotionally safe and nonjudgmental space for parents to talk about their own experiences with ACEs and concerns for their children and parenting;

(4) offers universal education, support, and resources that help parents to address their own trauma and the effects of toxic stress on their children; and

(5) identifies families' strengths and builds resiliency by promoting positive parenting and healthy parent-child relationships.

Training on the impact of trauma on parenting will help pediatric providers to more accurately assess and assist families. An online curriculum and extensive bibliography with content on toxic stress, the connection between current and past family violence and the use of physical punishment, and positive discipline strategies is available on the Institute for Safe Families site (Partnering with Parents PowerPoint found at Materials). Futures Without Violence and the American Academy of Pediatrics have launched an E-learning module on addressing ACEs in the pediatric setting which provides free continuing education credits. This training includes a brief video on ACES for parents and a safety card with supportive self-care and parenting strategies that can be obtained at Futures Without Violence.

Web-based resources on child maltreatment can be found on the CDC's Child Maltreatment site. The site includes a video, "Promise of Prevention: A Survivor's Story," which documents a mother's journey to overcome the abuse she experienced as a child and become the kind of mother she wants to be.

Providers should be familiar with a range of resources, including electronic media such as self-help web sites and apps, to assist parents and children who are coping with issues related to trauma so they can offer warm referrals. "Partnering with Parents: Apps for Raising Healthy, Happy Children" was developed for universal education and anticipatory guidance with parents in the pediatric setting. This booklet is written in user-friendly language to help parents understand how tough times during childhood can affect their well-being, their children and parenting with an emphasis on building resiliency. Scannable QR codes and apps provide direct links to resources. "Partnering with Parents" is available on the Institute for Safe Families site.

The Parent Trauma Resource Center offers information about grief and trauma, self-help for parents and children including breathing exercises, meditation and relaxation techniques, and age-specific parenting strategies to help calm children.

There are a growing number of evidence-based and promising practices that address the effects of domestic violence, substance abuse, and other forms of trauma on parenting and the parent-child relationship including Connections and Breaking the Cycle, the CAFA Parenting Program, Caring Dads, and Child-Adult Relationship Enhancement. Referrals to home visitation programs provide a unique opportunity to provide social support to families and enhance parenting skills while working in the home setting. The Nurse Family Partnership, a home visitation program that has demonstrated reductions in risk factors for and the occurrence of child maltreatment, works with high-risk, first-time parents.[10,11] Nurse-visited mothers used less physical punishment with their infants, provided more developmentally appropriate home environments, and were more likely to use community-based services. Testimonies from parents and a reference list of evaluation studies that spans over 30 years can be found on the Nurse Family Partnership site. Some home-visitation programs use paraprofessionals who work with families to promote child health and prevent child maltreatment by addressing malleable risk factors such as parenting skills and family functioning. In a randomized, controlled trial of the Healthy Start program, mothers who were home-visited by paraprofessionals reported less domestic violence victimization and perpetration.[12]

The success of the Triple P Positive Parenting Program in preventing child maltreatment and improving the quality of life for children and their parents demonstrates the value of working with parents before things go wrong. Triple P is a multi-level system of parenting and family support that works with other service providers including childcare staff, health care providers, mental health practitioners, and child welfare workers.
In addition to being familiar with the trauma-informed interventions for parenting that are available locally, pediatric providers should take a leadership role as vocal advocates for implementing best practices in their service settings and communities. The Safe Environments for Every Kid (SEEK) model is an example of an evidence-based practice to prevent child maltreatment that is implemented in pediatric primary care settings. The SEEK intervention includes training for pediatric providers, a parent screening questionnaire, collaboration with social workers, and educational resources for parents. In a randomized, controlled trial, families who received the SEEK intervention had lower rates of child abuse and neglect and used less harsh punishment to discipline their children. In addition, their children were more likely to be up-to-date on immunizations.[13,14]

Resources

1. Banyard VL, Williams LM, Siegel JA. The impact of complex trauma and depression on parenting: an exploration of mediating risk and protective factors. Child Maltreat. 2003;8:334-349.

2. Min MO, Singer LT, Minnes S, Kim H, Short E. Mediating links between maternal childhood trauma and preadolescent behavioral adjustment. J Interpers Violence. 2013;28(4):831-851.

3. Graham AM, Kim HK, Fisher PA. Partner aggression in high-risk families from birth to age 3 years: associations with harsh parenting and child maladjustment. J Family Psychol. 2012;26(1):105-114.

4. Danese A, McEwen BS. Adverse childhood experiences, allostatis, allostatic load, and age-related disease. Physio Behav. 2012;106:29-39

5. Chung EK, Mathew L, Rothkopf, Elo IT, Coyne JC, Culhane JF. Parenting attitudes and infant spanking: The influence of childhood experiences. Pediatrics. 2009;124:3278-e286.

6. Graham-Bermann SA, Gruber G, Howell KH, Girz L. Factors discriminating among profiles of resilience and psychopathology in children exposed to intimate partner violence (IPV). Child Abuse Negl. 2009;33:648-660.

7. Busch AL, Lieberman AF. Mothers' Adult Attachment Interview ratings predict preschool children's IQ following domestic violence exposure. Attach Hum Dev. 2010;12(6):505-527.

8. Borrego J, Gutow MR, Reicher S, Barker CH. Parent-child interaction therapy with domestic violence populations. J Fam Viol. 2008;23:495-505.

9. AAP's Early Brain and Child Development web site.

10. Olds DL Prenatal and infancy home visiting by nurses: from randomized trials to community replication. Prev Sci. 2002;3(3):153-172.

11. Olds DL, Henderson CR, Kitzman H. Does prenatal and infancy nurse home visitation have enduring effects on qualities of parental caregiving and child health at 25 to 50 months of life? Pediatrics. 1994;93(1):89-98.

12. Bair-Merritt MH, Jennings JM, Chen R, Burrell L, McFarlane E, Fuddy L Duggan AK. Reducing Maternal intimate partner violence after the birth of a child: a randomized controlled trial of the Hawaii Healthy Start home visitation program. Arch Pediatr Adolesc Med. 2010;164(1):16-23.

13. Dubowitz H, Feigel S, Lane W, Kim J. Pediatric primary care to help prevent child maltreatment: the Safe Environment for Every Kid (SEEK) model. Pediatrics. 2009:123(3):858-864.

14. Dubowitz H. The Safe Environment for Every Kid (SEEK) Model: Helping promote children's health, development, and safety. Child Abuse Neg. 2014;38:1725-1733.

Evidence-Based Child and Adolescent Treatment

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Although there is some evidence for the efficacy of other modalities,[1] Trauma Focused Cognitive Behavioral Therapy demonstrates the greatest evidence base for treatment of posttraumatic stress disorder in very young traumatized children [2] and treatment of sexual abuse, exposure to domestic violence, and poly-victimization-related PTSD in older children.[3,4] In addition, trauma focused cognitive behavioral therapies have been shown to be effective in traumatized children with non-PTSD related conditions such as behavioral problems,[5] anxiety disorders,[5] and depressive symptoms.[6] With younger children, therapies that focus on enhancing the parent-child dyad such as Child Parent Psychotherapy and Parent Child Interaction Therapy have been demonstrated to be effective in children exposed to severe domestic violence[7] as well as multiple stressful life events[8] and physical abuse.[9,10] School-based group therapies have successfully reduced symptoms of post-traumatic stress and depression[11] as well as improved academic performance[12] among violence-exposed children.

In children exposed to violence, there is a small but growing body of research that demonstrates that some interventions may be effective in either reducing the risk of future symptoms or in the prevention of subsequent abusive or violent experiences. Child Family Traumatic Stress Intervention has been demonstrated to be effective in reducing the risk of posttraumatic stress disorder among children exposed to accidental violence as well as sexually abused children.[13] Parent Child Interaction Therapy has been demonstrated to be effective in reducing rates of recidivism for physically abusive parents[9,14] and enhancing parental sensitivity[15] among physically abused children. In addition, the use of standardized forensic interviews with abused children increases the probative information provided in a disclosure,[16] thus enhancing the capacity of children's services and law enforcement to effectively protect the child from subsequent abuse.

For adolescents with complex trauma presentations following polyvictimization and/or polytraumatization exposure including war zones, evidence-based interventions and promising practices are available for "at

risk" youth in the community as well as in residential treatment centers or juvenile justice facilities. These interventions have been effective in improving behavior disorders, school performance, and post-traumatic and symptoms such as post-traumatic stress disorder, depression, and maladaptive grief reactions.[17,18,19,20,21]

Because research about assessment and treatment of traumatized children is developing rapidly, practitioners are also referred to National Child Traumatic Stress Learning Center to remain current with developments in this expanding field. Cohen and colleagues have also published guidelines for pediatricians to identify, treat, and refer traumatized children.[22]

References

1. Saunders B, Berliner L, Hanson R. Child Physical and Sexual Abuse: Guidelines for Treatment. Final Report. eric.ed.gov. 2003.

2. Scheeringa MS, Weems CF, Cohen JA, Amaya-Jackson L, Guthrie D. Trauma-focused cognitive-behavioral therapy for posttraumatic stress disorder in three-through six year-old children: a randomized clinical trial. J Child Psychol Psychiatry. 2011;52(8):853–60.

3. Cohen JA, Deblinger E, Mannarino AP, Steer RA. A multisite, randomized controlled trial for children with sexual abuse-related PTSD symptoms. J Am Acad Child Adolesc Psychiatry. 2004;43(4):393–402.

4. Cohen JA, Mannarino AP, Iyengar S. Community treatment of posttraumatic stress disorder for children exposed to intimate partner violence: a randomized controlled trial. Arch Pediatr Adolesc Med. 2011;165(1):16–21.

5. Cohen JA, Berliner L, Mannarino A. Trauma focused CBT for children with co-occurring trauma and behavior problems. Child Abuse Negl. 2010;34(4):215–24.

6. Nixon RDV, Sterk J, Pearce A. A randomized trial of cognitive behaviour therapy and cognitive therapy for children with posttraumatic stress disorder following single-incident trauma. J Abnorm Child Psychol. 2012;40(3):327–37.

7. Lieberman AF, Van Horn P, Ippen CG. Toward evidence-based treatment: child-parent psychotherapy with preschoolers exposed to marital violence. J Am Acad Child Adolesc Psychiatry. 2005;44(12):1241–8.

8. Ghosh Ippen C, Harris WW, Van Horn P, Lieberman AF. Traumatic and stressful events in early childhood: can treatment help those at highest risk? Child Abuse Negl. 2011;35(7):504–13.

9. Chaffin M, Silovsky JF, Funderburk B, Valle LA, Brestan EV, Balachova T, et al. Parent-child interaction therapy with physically abusive parents: efficacy for reducing future abuse reports. J Consult Clin Psych. 2004;72(3):500–10.

10. Thomas R, Zimmer-Gembeck MJ. Parent-child interaction therapy: an evidence-based treatment for child maltreatment. Child Maltreat. 2012;17(3):253–66.

11. Stein BD, Jaycox LH, Kataoka SH, Wong M, Tu W, Elliott MN, et al. A mental health intervention for schoolchildren exposed to violence: a randomized controlled trial. JAMA. 2003;290(5):603–11.

12. Kataoka S, Jaycox LH, Wong M, Nadeem E, Langley A, Tang L, et al. Effects on school outcomes in low-income minority youth: preliminary findings from a community-partnered study of a school-based trauma intervention. Ethn Dis. 2011;21(3 Suppl 1):S1–71–7.

13. Berkowitz SJ, Stover CS, Marans SR. The Child and Family Traumatic Stress Intervention: Secondary prevention for youth at risk of developing PTSD. J Child Psychol Psychiatry. 2011;52(6):676–85.

14. Chaffin M, Funderburk B, Bard D, Valle LA, Gurwitch R. A combined motivation and parent-child interaction therapy package reduces child welfare recidivism in a randomized dismantling field trial. J Consult Clin Psych. 2011;79(1):84–95.

15. Thomas R, Zimmer-Gembeck MJ. Accumulating evidence for parent-child interaction therapy in the prevention of child maltreatment. Child Dev. 2011;82(1):177–92.

16. Lamb ME, Orbach Y, Hershkowitz I, Esplin PW, Horowitz D. A structured forensic interview protocol improves the quality and informativeness of investigative interviews with children: a review of research using the NICHD Investigative Interview Protocol. Child Abuse Negl. 2007;31(11-12):1201–31.

17. Layne CM, Saltzman WR, Poppleton L, Burlingame GM, Pasalic A, et al. Effectiveness of a school-based group psychotherapy program for war-exposed adolescents: A randomized controlled trial. J Am Acad Child

Adolesc Psych. 2008; 47(9):1048-62.

18. Saltzman WR, Layne CM, Pynoos RS, Steinberg AM, Aisenberg E. Trauma- and grief-focused intervention for adolescents exposed to community violence: Results of a school-based screening and group treatment protocol. Group Dynamics: Theory, Research and Practice. 2001;5(4):291-303.

19. Marrow MT, Knudsen KJ, Olafson E, Bucher SE. The value of implementing TARGET within a trauma-informed juvenile justice setting. J of Child & Adolesc Trauma. 2012;5(3):257-70.

20. Ford JD, Steinberg KL, Hawke J, Levine J, Zhang W. Randomized trial comparison of emotion regulation and relational psychotherapies for PTSD with girls involved in delinquency. J of Clin C & Adolesc Psychology 2012;41(1):27-37.

21. O'Callaghan P, McMullen J, Shannon C, Rafferty H, Black A. A Randomized Controlled Trial of Trauma-Focused Cognitive Behavioral Therapy for Sexually Exploited, War-Affected Congolese Girls. J Am Acad Child Adol Psychiatry 2013; 52(4): 359-369.

22. Cohen JA, Kelleher KJ, Mannarino AP. Identifying, treating and referring traumatized children. Arch Pediatr Adolesc Med. 2008;162(5): 447-52.

Trauma-Informed Care in Child and Family Serving Programs

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The findings from the ACE Study clearly demonstrated that the effects of adverse childhood experiences, including traumatic events, are among the most emotionally devastating and have been linked to a host of negative outcomes in childhood, from emotional and behavioral problems to impaired school performance.[1] In order to better address these adverse childhood experiences, it is imperative to adopt a strategic and systemic approach—a trauma-informed approach—to care for children and families who have experienced significant stresses such as those included in the ACEs.[2] The National Child Traumatic Stress Network (NCTSN) developed the following definition of a trauma-informed child- and family-serving system:[3]

A trauma-informed child- and family-service system is one in which all parties involved recognize and respond to the impact of traumatic stress on those who have contact with the system including children, caregivers, and service providers. Programs and agencies within such a system infuse and sustain trauma awareness, knowledge, and skills into their organizational cultures, practices, and policies. They act in collaboration with all those who are involved with the child, using the best available science, to facilitate and support the recovery and resiliency of the child and family.

While the actual words vary considerably across definitions and perspectives on trauma-informed care, organizations, and systems, some common themes emerge as the essential elements of a trauma-informed system.[4] These include:

(1) *Maximize physical and psychological safety for children and families*. The term psychological safety means a "sense of safety, or the ability to feel safe, within one's self and safe from external harm."[5] At its most fundamental level, recovery from trauma requires a sense of safety, and providers must recognize safety is both physical and psychological.

(2) *Identify trauma-related needs of children and families*. Where possible, a trauma-informed approach suggests the use of a reliable and valid screening tool for identifying the client's trauma history and traumatic stress responses, and to direct referrals for assessment and treatment when indicated.[6]

(3) *Enhance child well-being and resilience*. Trauma-informed care seeks to support positive relationships in the client's life and minimize disruptions to familiar and positive figures. It seeks to do so, while also supporting referral to specially trained mental health professionals who are schooled in evidence-based treatment models.

(4) *Enhance family well-being and resilience*. Families may find it difficult to be protective if they have been affected by trauma, and they may need help and support in order to draw on their natural strengths.

(5) *Enhance the well-being and resilience of those working in the system*. Trauma-informed organizations must consider their staff's physical and psychological safety and actively work to promote effective interventions for secondary traumatic stress.

(6) *Partner with youth and families*. Consumers being served—and often their family members who have been involved in the service system—have a unique perspective and can provide valuable feedback on how the system can better address trauma among those served.

(7) *Partner with agencies and systems that interact with children and families*. It is important that those aspiring to provide trauma-informed care partner with others in parallel service systems in identifying and addressing trauma. Working with allied professionals who know the clients and family can help in developing an appropriate service plan and prevent potentially competing priorities.

Taken together, these essential elements provide a helpful framework to conceptualize the components of a trauma-informed system for children and families.

References and Resources

1. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, 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. American Journal of Preventive Medicine. 1998;14:245-258.

2. Conradi, L. Wilson, C. Managing traumatized children: A trauma systems perspective. Current Opinion in Pediatrics. 2010;22:621-625.

3. National Child Traumatic Stress Network. Creating trauma-informed systems.

4. Child Welfare Committee, National Child Traumatic Stress Network. Essential elements of a trauma-informed child welfare system.

5. Chadwick Center for Children and Families. Chadwick Trauma-Informed Systems Project. Creating trauma-informed child welfare systems: A guide for administrators.

6. Conradi, L., Wherry, J., & Kisiel, C. Linking child welfare and mental health using trauma-informed screening and assessment practices. Child Welfare. 2011;90(6):129-148.

Implementing ACEs Screening into a Pediatric Practice

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Background

The American Academy of Pediatrics (AAP) Policy Statement, *Early Childhood Adversity, Toxic Stress, and the Role of the Pediatrician*, illuminated for the pediatrics specialty the critical role of adverse childhood experiences on lifelong health.[1] However, while the policy statement expressed a commitment of the AAP to a leadership role in promoting this issue, the statement left the majority of general pediatricians asking, "What should I do now?"

Practice Characteristics and Considerations

The Children's Clinic (TCC) is a large single-specialty pediatric practice in the metropolitan area of Portland, Oregon. Among TCC's 28 pediatricians, several have held a long-standing interest in early childhood development; child and adolescent mental health; and screening for developmental, behavioral, and emotional problems in primary care. The providers have implemented workflows around screening for developmental disabilities, autism, postpartum depression, adolescent substance abuse, and adolescent depression. Included in each of these workflows is a provider-driven algorithm that helps formulate a responsive plan for positive screens in any of these conditions. Upon reading the AAP policy statement, several providers within the practice felt well-positioned to implement a screening protocol for ACEs in primary care.

When considering a screening protocol in primary care, it is helpful to consider four basic questions:

- Why am I looking?
- What am I looking for?
- How do I find it?
- What do I do once I've found it?

In addressing the first question with providers, "Why am I looking?" the impact of toxic stress is easy to explain; however, it is more challenging to justify probing parents for their history of adversity. This partly comes from providers' fear that they will not have the skills to adequately address

mental health issues that may have arisen in the parents because of their experiences. The provider champion in this project recommended a simple trigger question to focus the conversation, such as "How do you think these experiences affect your parenting now?" One of the key principles in motivational interviewing is the idea of abandoning the "righting reflex," the belief providers often have that they have to fix, on their own, every problem that they encounter in their clinical practice.[2] Often the parents are able to devise their own solutions by reflecting on their experiences and how their personal histories have affected their parenting skills.

In addressing the next question, "What am I looking for?" the provider champions considered several scenarios for screening for ACEs in the practice, including screening all children during the toddler years, focusing on specific populations such as children experiencing school problems or adolescents facing mental health concerns, and screening parents for their own experiences. After considering several potential scenarios where ACE screening could be applied, the practice decided to pilot screening parents for their ACEs. The theory behind this approach is that the majority of what people learn about parenting comes from their own experiences with their childhood and their own parents; therefore, parents who come from dysfunctional households may need additional support and counseling in terms of self-care skills, modeling conflict for their children, developmental expectations, promoting healthy development, and skills in discipline and managing challenging behaviors.

Addressing the third question, "How will I find it?" reflects the creation of the screening tool itself. The proposed screening tool contained three components: the original 10 ACEs, a questionnaire about resiliency, and a list of potential resources (see Appendix 1). Given that adversity is only a part of the conversation around toxic stress, the resiliency questionnaire helps balance the discussion with parents to highlight strengths and assets. The providers were also interested in discovering what resources parents perceive to be helpful in dealing with their own adverse childhood experiences; thus, the list of potential resources serves as a checklist for parents to mark which services they felt would be most useful.

The final question, "What do I do when I find it?" is often the most important; much has been written about the ethics of screening if there is no viable response to positive results. Therefore, providers identified resources before implementing the pilot, including selected handouts and social connectedness exercises from Connected Kids (see Appendix 2), developmental promotion materials from the website Zero to Three, and lists of parenting classes and support groups from our local 211 info network. Other developmental promotion activities come from the Ages

and Stages system that is currently used in the office for developmental screening.

Pilot

The electronic medical record was manipulated in two ways to accommodate this work. First, a confidential field was created that (1) allows providers to document the results of the tool and see the results in future visits but (2) does not print into notes so that information is not inadvertently released if records are shared. Second, specific counseling points were added to the anticipatory guidance section for the well visits from four months through three years. These counseling topics, taken from the AAP's Connected Kids materials, provide decision support for the pediatricians when addressing toxic stress as part of future well-child visits.

The original pilot was conducted with eight of the providers and has since spread to half of the practitioners. There are plans to continue to spread as the workflow continues to be refined. When parents check in for their infant's four-month well-child check, the front desk staff hands them the screening tool along with a cover letter that explains the rationale for the tool and reminds parents that the results will be treated confidentially. Parents complete the tool while waiting for the provider, and the provider then collects the completed tool and discusses it with the family.

Results

To date, more than 500 parents have been screened for their ACEs. In TCC's population, 7.8% of parents had an ACE score of four or higher. There were no significant differences in the publicly insured and privately insured populations. Resiliency scores generally correlated with ACE scores, with higher ACE scores correlating with lower resiliency scores; however, some parents with ACE scores of 0 or 1 still had markedly decreased resiliency scores. The majority of parents identified parenting classes and support groups as the most desired resources; others requested more information from websites or other media. Other resources requested included home visitation, relief nurseries, and support groups for fathers.

The screening has been well received by both parents and providers. Parents who experienced ACEs have vocally expressed gratitude to their providers for addressing the issue directly. Providers have felt that the screening is not burdensome, helps focus the conversations about parenting skills and developmental promotion, and sometimes changes

how the providers give everyday advice to families. For example, one provider relates an encounter with a second-time mom; when discussing her own experiences of being abandoned by her mother, she related that she carries a fear of letting her own children ever feel abandoned. When the provider had recommended a "cry it out" approach with her first child's sleep problems (before the screening tool had been implemented), she was unable to do it because of this fear. The provider feels that knowing information about the parent's experiences allows for more useful and tailored advice that builds trust between the provider and patient. No provider has experienced a case where specific referrals for mental health services were necessary.

In the spirit of continuous quality improvement, the practice is continuing to adapt the screening to better suit the needs of the providers and families. Because of the observation that some parents with low ACE scores also had low resiliency scores, there was concern that the adversity experienced by those parents may not be adequately captured by the 10 ACE questions. As a result, they have added four questions to the screening tool to probe into food insecurity, extreme bullying and prejudice, foster care, and community violence. It is hoped that these additional questions will provide further insight into parents' experiences. The practice is also considering formal screening for ACEs in other clinical settings, such as school failure and mental health concerns.

Conclusion

Overall, the providers feel that this screening protocol is very successful. It has enhanced the providers' skills in understanding and addressing family dynamics. It has built trust with parents by creating a safe place for parents to discuss many topics that are not traditionally viewed as being a part of a pediatrician's domain. Providers also feel that the care that is being delivered is more effective, in that the root of many parenting problems can be more accurately identified.

References

1. 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. Early childhood adversity, toxic stress, and the role of the pediatrician: translating developmental science into lifelong health. Pediatrics 2012;129:e224–e231.

2. Miller, WR and Rollnick, S. Motivational Interviewing: Helping Patients Change Behavior. Guilford Press, 2012.

Resources

1 Dowd D and Gillespie RJ. Practical approaches in primary care setting with patients exposed to multiple types of violence. American Academy of Pediatrics Medical Home for Children Exposed to Violence Project webinar. 2013.
2 Resilience tool can be accessed at http://www.stlrhc.org/wp-content/uploads/2014/08/Resiliency-Questionnaire-2014.pdf
3 Children's Resilience Initiative. Resilience Trumps ACEs.
4 National Center for Infants, Toddlers and Families. Zero to Three.
5 AAP's Connected Kids resources can be purchased at http://www2.aap.org/connectedkids/material.htm
6 Tools used in TCC pilot work. (See appendix)

Screening and Case Finding for Adverse Childhood Experiences

Annie Lewis-O'Connor, PhD, NP-BC, MPH; Nadine Burke-Harris, MD, MPH; and Susan Hadley, PhD, MPH

Incidence and prevalence studies show a strong correlation between ACEs and long-term health outcomes.1 Screening and case finding for ACEs, which are designed to uncover past experiences of child maltreatment and other major stressors that occur in childhood, may provide opportunities for intervention and support that may otherwise be overlooked or misinformed. Data from the ACE Study and similar research suggests that one important way to help understand an adult's health is to understand their ACEs exposure.

The ACE score is the total number of categories from a list of 10 major adverse experiences during childhood and adolescence selected by the ACE Study co-investigators. Identifying these exposures during a healthcare visit also enables health providers to consider the impact and context of these exposures upon the patient's current health as well as offering affirmation and an informed plan of care.

Screening or case finding for ACEs requires a change in practice and redefines how a healthcare provider takes a health history from patients. There are a number of promising programs worth highlighting. These programs incorporate screening for the 10 ACEs included in the ACE Study:

(1) emotional/psychological abuse

(2) physical abuse

(3) sexual abuse

(4) emotional neglect

(5) physical neglect

(6) mother treated violently

(7) household substance abuse

(8) household mental illness

(9) growing up in a home with only one biological parent

(10) growing up in a home where there was an incarcerated household member

Other significant childhood stressors are included in some of the newer instruments to assess major childhood stress, such as the Childhood Trust Events Survey (CTES), which is available for different age groups and respondents on the Childhood Trust website.

The Center for Youth Wellness in San Francisco, founded and directed by Nadine Burke Harris, MD, MPH, is incorporating ACEs into the assessment and care of children from mostly low socioeconomic status families.2 A retrospective chart review of 701 children with a mean age of 8.1 was conducted. Documentation of ACEs were coded using prior ACE criterion of a score of 1 for each category of traumatic event (range 0-9). The majority of subjects (67.2%, N=471) had experienced 1 or more categories of ACEs and 12% (N=84) had experienced 4 or more ACEs. Increased ACE scores strongly correlated with increased risk for learning/behavioral requirements and obesity. Early detection may promote earlier interventions and may improve outcomes.

In a another section of this online document R. J. Gillespie and Terri Petersen describe the approach used in their Portland, Oregon primary care pediatric practice to screen new parents for both ACEs and resilience factors. They report that this screening does not significantly diminish the productivity of their practice and is well accepted by parents and providers who believe it improves the quality of their care.

Researchers are also finding that events that occur during pregnancy (low-birthweight babies, pre-eclampsia and gestational diabetes) pose risks to an adult's health later in life. Inquiry related to the women's reproductive years along with ACEs are important components for a comprehensive past medical history.3,4 The public health department in Port Townsend, WA, has incorporated ACEs screening into their family services, particularly asking pregnant women about their exposures. Screening for ACEs is now incorporated into assessments for all pregnant women in this clinic. Here is an assessment of a group of clients.

Annie Lewis-O'Connor NP, PHD, MPH, founder and director of the Women's C.A.R.E Clinic - Coordinated Approach to Recovery and Empowerment, a clinic for women who have experienced gender-based violence in the context of intimate partner violence and sexual assault, reports that assessing for ACEs has been helpful for developing a more informed plan of care for these patients. Before implementing ACEs screening, these care plans were often based on a single event of violence

and failed to consider the broader context of the patients' other traumatic life experiences, resulting in less well-informed treatment plans. Using a quality improvement approach with ACEs as a quality measure, O'Connor found that 72% of the patients had at least one ACE and 23% had four ACEs.

Vincent Felitti, MD, co-investigator of the ACE Study, is currently working on the first version of the North American Health Index (NAHI). NAHI will be a uniquely comprehensive, Internet-based medical history questionnaire that patients can fill out and give to their provider. It contains biomedical, psychological, occupational, developmental, family, and trauma-oriented components. Such tools and approaches seek to transform healthcare from symptom-reactive to a more individualized and contextualized approach to clinical practice.

Approaches to Screening and Case Finding

Computerized questionnaires emerged in the 1990s as means of assessing a patient's health history, medication history, and sexual and HIV risk history.[5,6,7,8] There has been much exploration of screening approaches relative to intimate partner violence (IPV). This body of literature can serve to inform us as we think about screening for ACEs. MacMillan and colleagues found in a randomized control trial that prevalence rates for IPV were dependent on the method used, the healthcare setting, and the instrument used. Specifically, a significant interaction between method and instrument was found: Prevalence was lower on the written instrument. The face-to-face approach was least preferred by participants.[9] Lewis-O'Connor found similar findings in a pediatric setting. Mothers preferred the tablet format over the paper/pencil and face-to-face format. The questionnaire was completed during the visit and took 9 to 11 minutes to complete.[10]

In an emergency department study, comparing face-to-face interviews to tape recorded questionnaire with responses recorded on an answer sheet, no significant differences existed between the two methods of screening.[11] Bair-Merritt and colleagues used a randomized clinical trial in a pediatric emergency department and found that 50 of 497 (10%) participants reported IPV, 30 of 266 (11%) in the audiotape group, and 20 of 231 (9%) in the written questionnaire group (p=.30). Women in both groups preferred their given method over the idea of directly being asked.[12] These results support use of the alternative methods studied as an alternative to direct questioning in that the indirect method yielded similar levels of disclosure and was preferred by some patients. Methods such as computer-based interviews and questionnaires appear reasonable for clinical use.

Additional evaluation through quality improvement efforts and research is warranted.

Ghandour and colleagues recently proposed a vision of universal screening and intervention for intimate partner violence that occurs routinely as part of comprehensive physical and behavioral health services that are both patient centered and trauma informed. 13 Similarly, collecting information about exposures to ACEs offers an opportunity to develop a plan of care for patients that is better informed, provides more context in relation to the patients' health histories, and strives to improve health outcomes and patient satisfaction. Best-practice guidelines for screening and case findings regarding ACEs and other toxic stressors are evolving. To date, there is no well researched, standardized and validated questionnaire that includes the original ACEs and other major stressors that subsequent research finds similarly associated with long-term health and behavioral impairment. In assessing for ACEs, providers may use face-to-face, computer-based or questionnaires. These kinds of inquiries appear well tolerated and appreciated by many patients. Some healthcare providers such as those cited above have integrated ACEs screening or case finding into their practice and have found this information helpful for care planning. More research is needed to determine if identifying and addressing ACEs earlier in life will affect health outcomes.

References and Resources

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. American Journal of Preventive Medicine 1998;14:245–58.

2. Burke N, Hellman J, Scott B, et al. The impact of adverse childhood experiences on an urban pediatric population. Child Abuse & Neglect. 2011:408-13.

3. Rich-Edwards JW. Reproductive health as a sentinel of chronic disease in women. Women's Health. 2009;5:101–5.

4. Rich-Edwards JW, McElrath TF, Thomas F, et al. Breathing Life Into the Lifecourse Approach: Pregnancy History and Cardiovascular Disease in Women. Hypertension. 2010;56:331-334.

5. DeLeo J, Pucino F, Calis K, et al. (1993). Patient-interactive computer system for obtaining medication histories. American Journal Hospital Pharmacies. 1993;50:2348-54.

6. Locke S, Kowaloff H, Hoff R, et al. Computer-based interview for screening blood donors for risk of HIV transmission. JAMA. 1992;268:1301-6.

7. Paperny D, Aono J, Lehman R, et al. Computer assisted detection and intervention in adolescent high-risk health behaviors. Journal Pediatrics. 1990;116:456-61.

8. Schneider D, Taylor E, Prater L, and Wright M. Risk assessment for HIV infection: Validation study of a computer-assisted preliminary screen. AIDS Education Prevention 1991;3:215-9.

9. MacMillan HL, Wathen N, Jamieson E, et al. Approaches to screening for intimate partner violence in health care settings: a randomized trial. JAMA. 2006;296(5):530-6.

10. Lewis-O'Connor A. Screening Mothers for IPV During their child's pediatric visit. Doctoral Dissertation. Boston College.

11. Furbee P, Sikora R, Williams J and Derks S. Comparison of domestic violence screening methods: A pilot study. Ann Emerg Med. 1998;31:495-501.

12. Bair-Merritt M, Feudtner C, Mollen C, et al. Screening for intimate partner violence using an audiotape questionnaire: a randomized clinical trial in a pediatric emergency department. Arch Pediatr and Adolesc Med. 2006;160:311-6.

13. Ghandour, R., Campbell, J., & Lloyd, J. Screening and counseling for intimate partner violence: a vision for the future. Journal of Women's Health. 2015; 24(1):57-61.

Educational Resources and Evidence-Based Treatment for Adults

Julian D. Ford, PhD, and Christine A. Courtois, PhD

A history of ACEs is the norm rather than the exception among adult healthcare patients. Research documents a dose-response relationship between the number of ACEs experienced and the number and severity of both illness risk factors and psychosocial/behavioral problems (e.g., smoking, obesity, physical inactivity, depression, suicide attempts, alcoholism, drug abuse, sexual promiscuity, and sexually transmitted diseases) and serious disease or other physical health problems (e.g., heart disease, cancer, stroke, chronic bronchitis, COPD, chronic pain, diabetes, hepatitis, and skeletal fractures). Screening for ACEs in primary care can identify patients for whom ongoing clinical surveillance of psychosocial/behavioral problems, anticipatory guidance and education, and timely early intervention are indicated.[1] Many of these patients have developmental, psychological, and relational impairments that constitute a complex form of posttraumatic stress disorder.[2]

Therefore, patients with clinically significant behavioral or medical conditions should routinely be screened for ACEs and other potential traumatic stressors. They should be provided with education[2] about how these "normal reactions to abnormal circumstances" can lead to persistent hypervigilance and chronic stress reactivity as a result of changes in the brain/body that were necessary to survive exposure to traumatic formative experiences early in life.[3] The adult sequelae of ACEs can be summarized as a shift into a perpetual state of alarm that takes the form of one or more of five "As": anxiety, anger, anhedonia, alienation, and avoidance. Patients tend to find these concise, strengths-based, non-pathologizing explanations affirming and de-stigmatizing.

Educational resources for patients with ACE histories who are at risk for or have mild to moderate severity psychosocial/behavioral problems can be retrieved from public information pages of professional organizations' web sites, such as the International Society for Traumatic Stress Studies, the International Society for the Study of Trauma and Dissociation, the American Psychological Association Division of Trauma Psychology, the National Center for PTSD, and the National Child Traumatic Stress Network.

When psychosocial/behavioral or medical conditions are severely impairing, the medical practitioner should consider referring the patient for specialized traumatic stress assessment/evaluation and treatment. Evidence-based psychotherapy for adults with a history of ACEs requires

careful attention to the therapist's training and experience in treating trauma of this type[jm2] and his or her ability to respond to the patient with empathy and respect while maintaining appropriate and defined boundaries and limitations.3 Therapy should also focus on ensuring the patient's personal and interpersonal safety and on the teaching of emotional regulation and other life skills, which, when warranted, often includes preventive medical checkups and timely medical care.

These foundations establish the treatment setting and relationship as a safe haven from which clients can explore and come to better understand and regain their sense of self, their access to a full range of emotions, and involvement in affirming relationships. There are a number of evidence-based approaches to psychotherapy for adults with ACEs histories, each of which guides the client through a progression of three phases: (1) safety and stabilization, (2) trauma processing, and (3) consolidation of therapeutic gains.4 The first and third phases are standard-of-care best-practice approaches for all psychotherapies, although they must be done with careful attention to the unique impact of ACEs. The second phase, trauma processing, requires specific therapeutic expertise and sensitivity in order to enable the patient to develop a coherent autobiographical understanding of the effect that traumatic experiences have had on his or her life. Table 1 provides a list of current evidence-based psychotherapy models for adults with ACEs-related disorders.[3,4]

Psychotherapy within this framework can enable adults who have experienced ACEs to achieve five key positive outcomes. First, they can gain a de-stigmatizing awareness and understanding of how expectable adaptations to early life trauma have resulted in what they now experience as troubling post-traumatic symptoms. Second, they can become more attuned to the full range of their emotions and able to recover from periods of emotional distress. Third, they can develop or regain a sense of self—the awareness that they are unique, worthy of respect, and capable of forging a satisfying life. Fourth, they can (re)gain a sense of trust and security in healthy relationships. Finally, as a result of these therapeutic gains, they can "jump-start" and resume their interrupted personal development. In sum, effective psychotherapy can enable adults who have experienced ACEs to achieve a productive, personally meaningful, and satisfying life.

References

1. Ford, JD. Identifying and caring for acutely traumatized children in pediatric practice. Consultant for Pediatricians. 2013;12(4):182-7.

2. Ford JD. Neurobiological and developmental research: clinical implications. In: Courtois CA, Ford JD, eds. Treating complex traumatic stress disorders: an evidence-based guide. New York: Guilford Press; 2009:31-58.

3. Courtois CA, Ford JD. Treating complex trauma: A sequenced relationship-based approach. Chapter 3: Preparing for Treatment of Complex Trauma. New York: Guilford Press; 2013.

4. Cloitre M, Courtois CA, Ford JD, et al. The ISTSS Expert Consensus Treatment Guidelines for Complext PTSD in Adults. November 2012.

Table 1. Evidence-Based Psychotherapy Models for Adults with ACEs-Related Disorders3,4

- Brief Psychodynamic Therapy
- Cognitive Processing Therapy
- Emotion-Focused Therapy for Trauma
- Eye Movement Desensitization and Reprocessing
- Imagery Rehearsal/Rescripting Therapy
- Narrative Exposure Therapy
- Phased Model for Treatment of Dissociation
- Prolonged Exposure Therapy
- Present-Centered Therapy
- Present-Focused Group Therapy
- Seeking Safety
- Skills Training in Affect and Interpersonal Regulation
- Trauma Affect Regulation: Guide for Education and Therapy
- Trauma-Focused Group Therapy

Clinical Approaches for Adult ACE Survivors Experiencing Unexplained Physical Symptoms and Health Problems

David Clarke, MD; Elliott Schulman, MD; David McCollum, MD; and Vincent Felitti, MD

Adverse childhood experiences (ACEs) pose significant negative health risks for millions of people. Hopefully, new approaches for addressing the long-term consequences of ACEs in the health care setting can mitigate their impact on medically unexplained symptoms, chronic conditions, and unhealthy behaviors. Despite the importance of ACEs to long-term health, there is little existing research on screening, case finding, and initial steps clinicians should use after discovering that a patient has a significant ACE history. This section presents some clinical approaches that were developed and found useful by the authors who are clinicians who have sought to integrate ACE information into their patient care for many years.

A validated questionnaire1 completed in private may facilitate more standardized history-taking of a patient's ACEs. It is important to be aware that some ACE survivors fail to recognize ACEs impacts and may minimize or even deny childhood adversity (at least initially) unless asked about their early life in a detailed yet compassionate manner. One example of a question that has shown practical value for uncovering ACEs in these patients is "How would you feel if you learned that a child you care about was growing up exactly as you did?" Amnesia for childhood experiences is also a common indicator of early childhood trauma.

Once a health care provider ascertains that ACEs are present in a patient's history, the provider should begin to evaluate whether the ACEs produced deleterious effects on the patient's life. For instance, Dr. Felitti suggests saying, "I see on the questionnaire that ….," then follow up with, "Can you tell me how that has affected you later in life and how often you think about those experiences now?"

In some cases, ACEs-associated symptoms may be ameliorated by asking patients about their past history, listening carefully to their life stories, and allowing them to share the stresses and fears in a way that is safe and non-judgmental. In doing so, these patients can leave the office visit feeling still accepted as a human being.

Some experts have advocated for use of the original 10-item ACE survey as a means to explore possible childhood trauma. The original ACE survey was developed and used as a research tool to explore the relationships between ACEs and health consequences. It is neither a comprehensive nor a diagnostic clinical tool. Research has demonstrated that additional stressors such as being the victim of bullying or racism and being exposed to community violence are equally or more traumatic than some of the original ACEs. Embedding the ACEs and other stressors into an expanded medical history questionnaire such as the Kaiser "Health Appraisal Questionnaire"[1] or sensitive inquiry may be a better approach. Examples of questions that the authors have found useful are:

- "How well do you remember your childhood?"
- "Are there things that happened to you when you were a child that shouldn't have happened to you or anyone?"
- "Would you like your children to grow up as you did?"
- "Sometimes we feel guilty about things that happened to us in the past. Are you feeling any sense of guilt or shame?"

When clinicians perceive an ACE-related medical problem in a patient, they can often reframe it as an adaptation or solution from the patient's perspective. (Examples are methamphetamine's anti-depressant effects, the reduction in unwanted sexual attention experienced by the obese, and the immediate psychoactive benefits of inhaled nicotine.) With this change in perspective, the trauma-informed mindset conveys acceptance and compassion. Patients can be reassured that "the ACEs were not your fault," "It is not all in your head," and "You are experiencing a normal response to abnormal life experiences in childhood. Help exists for that."

By knowing a patient's childhood history of these experiences, providers can focus efforts to promote healthier lifestyle or relieve functional symptoms. Attending to the root problem and not to the patient's adaptation to the problem allows providers to address the "fire" rather than merely the "smoke." In addition, the higher-quality clinician-patient relationship arising from this approach is itself therapeutic.

Another helpful initial approach for communicating with the ACE survivor is to point out that a hero in our society is someone who has overcome a difficult mental or physical challenge for a good cause. ACE survivors have done exactly that. Hearing a health professional describe heroism in these terms helps ACE survivors begin to reverse the low self-esteem and guilt that they commonly feel. This reversal is a key step in ACE survivors' overcoming many negative health and social behaviors.[2]

Many ACE survivors harbor substantial negative emotions surrounding their early lives. However, they also spent their childhood learning to avoid emotions in order to survive. Consequently, they often do not consciously recognize their anger, fear, or grief. Even though these memories may be partially or completely repressed, they may be expressed somatically as physical symptoms. Asking the ACE survivor to imagine a child they care about growing up exactly as the survivor did can increase conscious awareness of these emotions. Then, when they feel ready, speaking to a trauma-informed counselor, writing a letter (rarely mailed) to the person(s) who mistreated them, or autobiographical journaling[3] may help relieve functional illness by converting somatic manifestations of emotion into verbal expression.

Most evidence-based psychological trauma treatments require referral to mental health professionals trained in those specific treatments, but there are a few evidence-based treatments that can be provided in a healthcare outpatient setting. For example, Eye Movement Desensitization and Reprocessing (EMDR) has established training, certification, and empirical support. It can be used in a health care outpatient setting. Properly trained healthcare professionals can use EMDR to treat patients with trauma symptoms related to ACEs.[4]

Because a large number of patients are reluctant to consult a mental health clinician for a physical symptom, the first author (Clarke) provides group lectures on stress and illness.[6] Recommending community resources—such as Adult Survivors of Abuse, Adult Children of Alcoholics, and the United Kingdom-based National Association for People Abused as Children—can be a useful first step to introduce key concepts and encourage further healing. Many mental health professionals lack experience with patients whose most prominent ACE manifestation is one or more physical symptoms. Fortunately, resources are increasingly available that enable successful application of the clinician's prior training and experience.[2,6,7,8,9,10] Providing these and other resources to patients may improve their understanding of the relationship between early traumatic experiences and their current health and symptoms. For those patients with clearly disabling psychological symptoms and psychiatric disorders, referral to trauma-informed mental health services is indicated.

Healthcare providers' initial screening and response to ACEs is beginning to receive needed attention. New methods, research findings and innovative approaches for meeting these challenges will likely soon emerge.

References and Resources

1. Centers for Disease Control and Prevention. ACE Study questionnaire.

2. Clarke D. They Can't Find Anything Wrong!

3. Pennebaker, James. Web site, video and the books Opening Up and Writing to Heal.

4. Shapiro F. The Role of Eye Movement Desensitization and Reprocessing (EMDR) Therapy in Medicine: Addressing the Psychological and Physical Symptoms Stemming from Adverse Life Experiences. Perm J. 2014;18(1):71-7.

5. Stress and Illness workshops and lectures. Scroll down to find two annotated powerpoint files. Click on each to download.

6. Psychophysiologic Disorders Association (PPDA)

7. Schubiner, Howard, MD. Unlearn Your Pain

8. Karr-Morse. R. Scared Sick: The Role of Childhood Trauma in Adult Disease.

9. Kirkengen, AL. The Lived Experience of Violation. National Center for Trauma-Informed Care.

10. Kirkengen, AL. Inscribed Bodies—Health Impact of Childhood Sexual Abuse.

Self-Help Resources

Jane Ellen Stevens, and Vincent J. Felitti, MD

There aren't enough counselors or money to provide therapy for all people suffering from ACE-related problems. Although some people will have the resources to obtain help from social workers, psychologists or psychiatrists, most people want and will need other approaches. The following are resources for patients with ACE-related problems.

Questionnaires

ACE questionnaire—The 10-question ACE survey (in Word file and online). Developed by Robert Anda, MD, and Vincent Felitti, MD, co-principal investigators of the CDC's ACE Study.

Resilience questionnaire—The 14-question survey (in Word file and online) was developed by the early-childhood service providers, pediatricians, psychologists, and health advocates of Southern Kennebec Healthy Start, Augusta, Maine, in 2006, and updated in February 2013. Two psychologists in the group, Mark Rains, PhD and Kate McLinn, PhD came up with the 14 statements with editing suggestions by the other members of the group. They modeled the scoring system after the ACE Study questions and devised the questions based on a number of research studies from the literature over the past 40 years, including that of Emmy Werner, PhD, and others. Its purpose is limited to parenting education. It was not developed for research.

News and networking

ACEsConnection.com—Social network for people implementing ACE concepts. Provides wide-reaching resource section and daily summaries with links to news, reports, and research related to ACEs and trauma-informed practices.

ACEsTooHigh.com—A news site for the general public covering how communities, states, agencies, nonprofits, social services, and other organizations and individuals are implementing practices based on ACE and trauma-informed concepts, research about ACEs, neurobiology of toxic stress, epigenetics, and biomedical effects of ACEs.

Support/advocacy groups

Adults Molested as Children—Links to resources and online e-groups, including co-ed groups and groups for men, women and women who were molested by a female.

Survivors of Incest Anonymous—Links to local groups and meetings, upcoming events, an online store, and translations of SIA-approved literature into several languages.

Co-Dependents Anonymous—Links to meetings and literature, an online store, readings, articles, and information about the annual conference.

Adult Children of Alcoholics—Links to resources and groups for women and men who grew up in an alcoholic or otherwise dysfunctional homes.

Adults Survivors of Child Abuse—An international self-help support group program designed specifically for adult survivors of neglect, physical, sexual, and/or emotional abuse. The program offers community-based, provider-based, and web-based self-help support groups.

Alcoholics Anonymous—A resource for people who want information about dealing with alcoholism or to find a group.

Al-Anon Family Groups—Links to resources and group meetings for friends and families of problem drinkers.

Divorce Care for Kids—A site that helps children heal from the pain of divorce, with links to faith-based local groups.

Fosterclub.com—A national network for young people in foster care.

Faces and Voices of Recovery—A national campaign of individuals and organizations who advocate for public action to deliver the power, possibility and proof of recovery. Great resources for people who want to change perception of addiction from criminal or moral issue to a health issue.

Futures Without Violence—National organization that works to prevent and end violence against women and children around the world. Provides links to the National Domestic Violence Hotline, the National Sexual Assault Hotline and the National Teen Dating Hotline.

Narcotics Anonymous—A resource for all drug addicts, regardless of the particular drug or combination of drugs, including alcohol.

National Alliance on Mental Illness—Provides links to support and programs, including a help line, peer support, discussion groups, and social networks, such as NAMI Faithnet.

Prevent Child Abuse America—This national organization builds awareness, provides education and inspires hope to everyone involved in the effort to prevent the abuse and neglect of our nation's children.

Rape, Abuse and Incest National Network—The nation's largest anti-sexual violence organization. It has a national sexual assault online hotline, a section for male survivors, and background information for all types of sexual assault.

Resilience Trumps ACEs—Resources for parents, providers and the community on how to build resilience into families and communities.

San Francisco Children of Incarcerated Parents—Great resource for children and families of people who are imprisoned.

Self Helpline—Live one-on-one help for U.S. Department of Defense employees.

Verbal Abuse Site—Dedicated to the recognition and prevention of verbal abuse in homes, schools and workplaces

Background information

CDC's Adverse Childhood Experiences Study—Overview, history and publication list.

CDC's Adverse Childhood Experiences Study infographic—A visual overview of the ACE Study.

The Science of Early Childhood—Harvard Center on the Developing Child overview on the effects of toxic stress on the developing brain, with good videos.

The Adverse Childhood Experiences Study—The largest health study you never heard of —began in an obesity clinic (article)

Special Issues in Geriatric Patients

Steven Tam, MD

Advances in ACEs research have shown relationships between childhood adversity and poor mental health, physical health, and social outcomes later in life. More studies are needed to understand the mechanisms of these relationships and to aid in the development of treatment strategies for these conditions. With advances in life expectancy, the older adult population represents one of the fastest-growing age groups in the United States and providers will need to understand the impact of ACEs in order provide the best geriatric care.[1] Faced with issues such as fragility from medical conditions, decreased physical and cognitive reserves as well as certain geriatric syndromes such as dementia, an older adult may find more difficulties contending with the mental and emotional health problems along with poor social outcomes that may have resulted from ACEs developed earlier in adulthood.

Understanding the history and natural course of earlier life adversities along with their sequelae and how this affects treatments is important to providing proper care to the geriatric patient. For example, a psychologist providing counseling and cognitive behavioral therapy for depression in an older adult may find it useful to know that an individual had a traumatic or abusive childhood experience. This is especially true if treatment of the depression has been refractory to standard treatment modalities.

Successfully managing ACEs-related issues requires providers to consider the perspective of the individual and how these experiences may influence an individual's ability to manage the situations that arise in the elder years. Early adverse child experiences have been linked to some maladaptive behaviors later in life, including alcohol and drug abuse[2] and a higher risk for attempted suicide.[3] With some of the social and life-changing events faced by our older adults, such as the loss of social support networks and increasing fragility of health as well as a medical condition such as dementia, lacking the proper adaptive skills will impair one's ability to face these events.

The role ACEs may play in the development of certain issues for the geriatric population should also be considered in the context of violence and abuse across the lifespan. One example is the risk for elder

abuse. Elder abuse refers to an act by a caregiver or other causing harm or threatening harm to the health or welfare of the older adult.4 Exposure to child abuse/maltreatment is a risk factor for the development of abusive parenting and domestic violence later on, which in turn become a risk factor for elder abuse later in life. Understanding such relationships and potential psychopathology may be a crucial step to preventing elder abuse.

Another example is the role childhood stressors may play in the development of a geriatric syndrome such as dementia. Studies have pointed to an association between psychological stress in adulthood and the development of dementia, possibly through activation of the hypothalamic pituitary adrenal axis and increasing levels of glucocorticoid hormones.5 One study looking at war veterans suggested a greater prevalence and incidence of dementia in older veterans with PTSD.6,7 With ACEs linked to depression, PTSD, and other psychological problems, one possibility is that the stressors predisposing to dementia may start very early on. As future research investigates the prevention of dementia, attention has been focused on examining the cognitive health of the adult population. Perhaps we should begin assessing cognitive functioning earlier including the cognitive health of adolescents as well as adults.

As research moves forward examining the impact of ACEs on adulthood, little is known regarding the effect on the older adult. Further investigation is needed to (a) examine the role and effects ACEs have on mental health and other illnesses adults contend with and (b) how childhood stressors contribute to specific geriatric events and syndromes.

References

1. United States Census Bureau. 2010 Census Shows 65 and Older Population Growing Faster Than Total U.S. Population.

2. U.S. Department of Health and Human Services Administration for Community Living. What is Elder Abuse?

3. Douglas KR, Chan G, Gelernter J, et al. Adverse childhood events as risk factors for substance dependence: partial mediation by mood and anxiety disorders. Addict Behav. 2010; 35(1): 7-13.

4. Brodsky BS, Stanley B. Adverse childhood experiences and suicidal behavior. Psychiatr Clin North Am. 2008; 31(2):223-35.

5. Charles E, Bouby-Serieys V, Thomas P, Clément JP.. Links between life events, traumatism and dementia; an open study including 565 patients with dementia. Encephale. 2006; 32(5 Pt 1): 746-52.

6. Yaffe K, Vittinghoff E, Lindquist K, Barnes D, et al. PTSD and risk of dementia among US veterans. Arch Gen Psych 2010; 67: 608-613.

7. Qureshi SU, Kimbrell T, Pyne JM, Magruder KM, et al. Greater prevalence and incidence of dementia in older veterans with PTSD. J Am Geriatr Soc 2010; 58: 1627-1633.

Systems Integration

Randell Alexander, MD, PhD

Awareness and knowledge of ACEs1, the effects of toxic stress on the brain2, neuroendocrine pathways3, and epigenetics4 do not improve health if it is not translated into practical ways for others to implement. Thus, juvenile court judges may wonder how this scientific evidence translates into decisions they make each day. Child abuse prevention specialists may question how to re-tool their messages or approaches. How should health professionals re-design their clinical approaches? Such concerns make it imperative to adopt a strategic and systemic approach.

Primary prevention should be the most important goal even though it is necessary to provide interventions for those already affected by adverse childhood experiences. While the consequences of child abuse ought to permeate all of society and its systems, the following systems deserve special attention.

Education

The opportunities for prevention begin with early childhood education and extend into adult learning. Areas of focus can include teaching or modeling of psychologically supportive interactions, messages about not using physical means when frustrated or angry, sexual boundaries, and getting help when confronted with inappropriate feelings.

Primary prevention

Because educators work with children though much of their life, this is an opportunity for teaching and modeling ways to interact with others, conflict resolution, respect for others, sexual boundaries and appropriate behaviors, and reinforcement of positive feelings and behaviors.

Interventions

The educational system could help with early identification of children displaying apparent mental health problems, knowing the high prevalence of ACEs and how symptoms of ADHD, learning problems, and behavior

problems may not be a primary condition but the effects of ACEs. By knowing about a child's ACEs (at multiple points in time), a school could better understand academic performance and help to tailor compensatory strategies.

Health

Primary prevention

Knowing that more than half of children will eventually have one or more ACEs, proactive programs to protect and enhance brain development should be a priority. Often children do not see any professional except a physician until they go to kindergarten. This point of entry then becomes crucial to convey messages to parents about optimal brain development issues such as behavioral management, understanding development and when to be concerned, and positive ways a parent can interact with their child.

Interventions

In the primary care physician's office, routine knowledge of a parent's and child's ACEs can lead to early referral to helpful services. Some parents might alter their adverse behaviors when they learn that child abuse can even change the expression of a child's genes. Pediatricians are in a good position to advocate for policies that promote child development with the goal of creating healthy, well-functioning adults.

Child Welfare

Primary prevention

Child abuse prevention programs are not merely to stop various types of abuse but can be re-conceptualized as developing alternative positive realities whereby children are safe and brains are stimulated to develop optimally. Presumably, most parents would be enthusiastic in wanting the most for their children but would appreciate assistance about how to achieve these goals.

Interventions

When a parent does not comply well with a case plan, it is tempting to use labels such as unwilling, bad, or lazy. It may be more helpful to consider that a parent with adverse childhood experiences likely has no personal experience with supportive parenting. This leads to differences in brain

development (e.g., decreased activity of the prefrontal cortex, which mediates executive functions) that make scheduling and sustaining tasks very difficult. This enables professionals to understand that the parent's behavior reflects the brain they have—as a consequence of their own childhood adversities. The question then becomes whether services that exist (or could exist) are able to bridge the gap or whether the parent is unable to function well enough to promote the brain development of his or her own children.

Legal/Law Enforcement

Primary prevention

Community programs can be explored that reduce exposure to community violence and violence within the home. This could begin in cooperation with schools.

Interventions

Laws and approaches can be structured to encourage a parent who has abused a child to tell the truth, so that quick and sometimes vital health and mental health intervention can be started sooner. This approach encourages the parent to be part of the team trying to lessen the effects of abuse on the child's health and brain.

Business

Primary prevention

Businesses have a vested interest in helping employees manage whatever dysfunction arises through adverse childhoods. Absenteeism, health care costs, and retention all are improved in those with healthy childhoods[5]. The Centers for Disease Control and Prevention (CDC) has worked with business leaders to explore ways that businesses can play a role in preventing child abuse, and CDC's Essentials for Childhood Initiative partners around the country are engaging business leaders in work to promote safe, stable, nurturing relationships and environments for children.

Interventions

Businesses have employees who already experienced adverse childhoods. Rather than taking a passive, sometimes punitive approach to the problems that ACEs create in the workplace, the business community

could promote forms of employee wellness that better understand ACEs and attempt to compensate for ACE-related adversities. A better workforce is the prime goal.

In all of these approaches, a common theme is being proactive in advancing what enhances the safe, stable, and nurturing development of the developing child. Working together as systems, society can optimize the child's brain and their health now and in the future.6

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. American Journal of Preventive Medicine. 1998;14:245-58.

2. Shonkoff J, Garner A, and the Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, and the Section on Developmental and Behavioral Pediatrics. American Academy of Pediatrics. The lifelong effects of early childhood adversity and toxic stress. Pediatrics. 2012;129(1):e232-46.

3. DeBellis M, Spratt E, Hooper S. Neurodevelopmental biology associated with childhood sexual abuse. Journal of Child Sexual Abuse. 2011;20:548-87.

4. Shalev I, Moffitt TE, Sugden K, et al. Exposure to violence during childhood is associated with telomere erosion from 5 to 10 years of age: a longitudinal study. Molecular Psychiatry. 2013;18:576-581.

5. Anda RF, Fleisher VI, Felitti VJ, et al. Childhood Abuse, Household Dysfunction and Indicators of Impaired Worker Performance in Adulthood. The Permanente Journal. 2004;8(1):30-38.

6. CDC, Division of Violence Prevention. Essentials for Childhood: Steps to create safe, stable, nurturing relationships and environments. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 2014. Available from:

The Cost of Adverse Childhood Experiences

Ruth Gerson, MD, and David L. Corwin, MD

Stopping the abuse and maltreatment of children carries an inherent moral imperative, but there is another reason to focus on preventing maltreatment. Child abuse brings with it a massive economic burden, partially because of the costs of intervention but predominantly stemming from the immediate and long-term impact on physical and emotional health and functioning. Many have recoiled at the idea of wanting to put a monetary value on a child's suffering, which has limited the research done in this area. But mounting evidence described below clarifies the profound economic cost of ACEs and underscores the financial—as well as the moral—imperative of effective prevention and treatment.

The Centers for Disease Control and Prevention (CDC) has estimated that the economic toll associated with child maltreatment is between $124 and $585 billion across the lifetime.[1] Why the fourfold range in this estimate? To understand the range in these numbers, it is necessary to understand how such numbers are derived.

Research into the costs associated with adverse childhood experiences can take different forms. Some studies look at cost per case, others per year (and within these, some examining cost per new case per year, and others taking a prevalence approach). Some look at all forms of ACEs, others at only physical or sexual abuse (not emotional abuse, neglect, exposure to domestic violence or parental drug use, or others).

Perhaps the most important methodological difference in this research is the estimation of the number of children affected by maltreatment and other ACEs. The CDC's first estimate of $124 billion is the most conservative one—the minimum cost that can be assumed—in that it looked only at confirmed child maltreatment cases occurring in one year, to then estimate the lifetime cost for each victim of maltreatment.

Confirmed cases of child maltreatment are those for which child protective services has investigated and found sufficient credible evidence (including physical evidence and interviews) to declare that the abuse did occur. Unfortunately, in many cases of child maltreatment, there is no physical evidence of abuse (particularly in cases of sexual or emotional abuse), the

child is shamed or pressured into recanting their report, or for whatever other reason there is insufficient evidence even if the abuse did occur. Thus, reports including confirmed cases only likely vastly underestimate the true prevalence of child maltreatment.[2]

When the CDC report's authors included all new reports of child maltreatment (not just substantiated cases) and included those ascertained in the National Incidence Survey (and not included in the child protective services' report), the incidence of maltreatment more than doubled. This leads to the more accurate total cost estimate of $585 billion.

The higher estimate also does not include the costs of other ACEs beyond child maltreatment (childhood exposure to domestic violence, parental substance abuse, and other ACEs are often left out of child abuse cost studies), the costs of other consequences of childhood adversity such as future homelessness or the costs of medical care after 65 years of age. Many chronic diseases cost the most as people age.

A recent study in the Netherlands using a large population cohort (aged 18-65) examined the impact of maltreatment as well as psychological abuse, emotional neglect, parental depression/anxiety, parental substance use, and other disruptive early life events including death of a parent and divorce.3 This study found that psychological abuse had the greatest impact on later disability, followed by other forms of maltreatment (physical or sexual abuse, emotional neglect), parental psychopathology, and other disruptive early life experiences, with each of these acting independently as a predictor of disability. This suggests that if the cost of other ACEs were included, the estimations of long-term health costs would substantially increase.

The conclusion of the Netherlands study is that the burden of disease associated with ACEs was greater than all other common psychiatric disorders combined.[3] This is a remarkable statement given the World Health Organization finding that depression is the most costly disease in middle- to high-income countries around the world.[4]

Further research is needed to clarify these additional costs and to elucidate the specific versus cumulative costs of different maltreatment experiences and other ACEs. But these data reveal the massive economic burden of childhood adversity and the economic imperative for effective prevention and intervention efforts.

References

1. Fang X, Brown DS, Florence CS, Mercy JA. The economic burden of child maltreatment in the United States and implications for prevention. Child Abuse & Neglect 2012 36:156-165. Summary and info graphic.

2. Drake B. Unraveling "unsubstantiated." Child Maltreatment. 1996;1(3):261-271.

3. Cuijpers P, Smit F, Unger F, et al. The disease burden of childhood adversities in adults: a population-based study. Child Abuse & Neglect. 2011;35:937-945.

4. World Health Organization. The Global Burden of Disease: 2004 Update. Geneva, Switzerland: WHO Press; 2008.

Adverse Childhood Experiences: Future Research Directions

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Advances in a diverse set of disciplines have led to an increased understanding of the mechanisms by which ACEs predispose individuals to poor health outcomes. ACEs have been linked to health damaging behaviors, poor psychosocial health, and physiologic disruptions in the developing brain and regulatory systems, thereby increasing risk for disease. With this new knowledge, there has been growing interest in the role that health care providers and community-based organizations can play in identifying ACEs and fostering resilience in patients and clients. For this to occur most effectively, however, researchers must develop a more nuanced understanding of the following: (1) how biological embedding contributes to health outcomes along the life course, including ways in which to measure physiological changes in the clinical setting; (2) how ACEs differentially affect diverse populations; and (3) how to effectively prevent ACEs and mitigate their impact.

Syntheses of the literature have begun to comprehensively characterize how ACEs "get under the skin."[1,2] Research has elucidated, in part, the process by which increased production of stress hormones leads to alterations in underlying molecular pathways and inflammatory mediators, eventually causing multisystem impairments.[3,4,5,6] However, the field lacks standard, feasible "biomarkers" that can be used clinically to predict patient outcomes. Specifically, more research is needed to understand the cascade of biological changes that occur as part of alterations in stress physiology, the clinical relevance of changes in specific physiologic markers, and the responsivity of these changes to intervention. Development of such biomarkers may help clinicians treat and counsel patients and may set the stage for intervention development.

Although ACE-related studies to date have demonstrated a strong association between ACE score and adverse adult health, it is unclear how ACEs differentially affect specific populations or how ACEs contribute to the persistence of health disparities.

- Does the constellation of salient ACEs differ by race/ethnicity, socio-economic status, urban/suburban/rural location, socio-cultural group, immigration/refugee status, and sexual orientation? If the constellation of relevant ACEs differs by population, screening questions may need to be tailored to specific populations.

- Does poverty interact with ACEs to potentiate their impact? To date, there have not been published studies examining the breakdown of ACEs by socio-demographics and analyzing these associations to determine how they may differently contribute to health outcomes among at risk populations.
- Disparities have been noted in exposure to ACEs (e.g., by socio-economic status[7] and by sexual orientation[8]). However, it is not clear whether differences in experiences with ACEs help account for some health disparities. If ACEs do account for part of this variance, then developing effective preventive strategies will be critical in ameliorating disparities.

Understanding the potential differential impact of ACEs by socio-demographic group may open up new strategies to bend the health-care cost curve and improve longstanding outcomes for vulnerable populations.

While the association between adult health outcomes and ACEs has been clearly documented,[9,10,11,12,13] this association has not been firmly established for pediatric health outcomes. The strongest associations between ACEs and pediatric health outcomes has been documented with developmental, mental, and behavioral health.[14,15] Studies that have looked for associations between ACEs and pediatric physical health outcomes have demonstrated links between ACEs and poor overall physical health but failed to investigate associations with common pediatric chronic illnesses.[16,17] Further, as with much of the ACEs literature, the majority of the research investigating child and adolescent health impact suffers from limitations and biases associated with self-report of both the exposures and the outcomes, limiting the strength of the findings. With increasing trends in obesity, insulin resistance, and asthma among other chronic pediatric medical conditions, the association between ACEs and these chronic health conditions must be further explored, ideally using objectively defined measures of health impact. Studying ACEs in pediatric populations allows researchers to follow participant cohorts prospectively rather than retrospectively, as has been done in most ACE-related studies. In addition, investigating ACEs in pediatric populations will offer researchers the opportunity to disentangle the timing related to exposure to ACEs, physiologic changes in stress reactivity, development of risky coping strategies, and acquisition of health conditions.

Finally, although the "ACEs Next Steps" document has discussed strategies for intervention and for building resilience, few are evidence-based. Increasingly, "on the ground" organizations that are implementing intervention strategies must partner with researchers so that epidemiologically rigorous tests of ongoing programs occur. In research

trials, home-visiting and parenting programs designed to strengthen families have shown some limited efficacy among certain populations and in low-income urban communities.18,19,20 Numerous cognitive behavioral therapy programs also have shown efficacy in improving outcomes for children with significant adversity, though most of these therapy programs are only available in a limited number of communities. Cost-effectiveness studies may help promote broader dissemination. Future research must continue to identify cost-effective, evidence-based strategies that strengthen at-risk families and provide meaningful support for all patients/clients who have been affected by ACE exposure.

References and Resources

1. Miller GE, Chen E, and Parker KJ. Psychological stress in childhood and susceptibility to the chronic diseases of aging: moving toward a model of behavioral and biological mechanisms. Psychol Bull. 2011;137:959–997.

2. Shonkoff JP and Garner AS. The lifelong effects of early childhood adversity and toxic stress. Pediatrics. 2012;129;E232–E246.

3. Szyf M, McGowan P, and Meaney MJ. The social environment and the epigenome. Environ. Mol. Mutagen. 2008;49;46–60.

4. Gunnar M and Quevedo K. The neurobiology of stress and environment. Annual Review of Psychology 2007;58:145–73.

5. McEwen BS. Stress, Adaptation, and Disease: Allostasis and Allostatic Load. In Neuroimmunomodulation: Molecular Aspects, Integrative Systems, and Clinical Advances, Ann NY Acad Sci. 1998;840:33-44.

6. McEwen BS and Gianaros PJ. Stress and allostasis-induced brain plasticity. Annual Review of Medicine 2011; 62:431–45.

7. Adverse Childhood Experiences Reported by Adults—Five States, 2009. MMWR. 2010;59(49);1609-13.

8. Andersen JP and Blosnich J. Disparities in Adverse Childhood Experiences among Sexual Minority and Heterosexual Adults: Results from a Multi-State Probability-Based Sample. PLoS ONE 2013;8(1):e54691.

9. 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. American Journal of Preventive Medicine. 1998;14:245-58.

10. Edwards VJ, Holden GW, Felitti VJ, Anda RF. Relationship between multiple forms of childhood maltreatment and adult mental health in community respondents: results from the adverse childhood experiences study. American Journal of Psychiatry 2003;160:1453–60.

11. Hillis SD, Anda RF, Dube SR, et al. The association between adverse childhood experiences and adolescent pregnancy, long-term psychosocial consequences, and fetal death. Pediatrics. 2004;113:320-7.

12. Dong M, Giles WH, Felitti VJ, et al. Insights into causal pathways for ischemic heart disease: adverse childhood experiences study. Circulation 2004;110:1761–6.

13. 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.

14. Finkelhor D. Improving the adverse childhood experiences study scale. JAMA Pediatrics 2013;167:70.

15. Schilling EA, Aseltine RH, and Gore S. Adverse childhood experiences and mental health in young adults: a longitudinal survey. BMC Public Health.2007;7:30.

16. Flaherty EG, Thompson R, Litrownik AJ, et al. Adverse childhood exposures and reported child health at age 12. Academic Pediatrics. 2009;9:150–6.

17. Flaherty EG, Thompson R, Litrownik AJ, et al. Effect of early childhood adversity on child health. Arch Pediatr Adolesc Med 160, 1232–1238 (2006).

18. Coyne JC and Kwakkenbos L. Triple P-Positive Parenting programs: the folly of basing social policy on underpowered flawed studies. BMC Medicine 2013;11:11.

19. Wilson P, Rush R, Hussey S, et al. How evidence-based is an 'evidence-based parenting program'? A PRISMA systematic review and meta-analysis of Triple P. BMC Medicine 2012;10:130.

20. Bodenmann G, Cina A, Ledermann T, and Sanders MR. The efficacy of the Triple P-Positive Parenting Program in improving parenting and child behavior: a comparison with two other treatment conditions. Behav Res Ther 2008;46:411–27.

Appendix

AVA ACE Study DVD

The AVA has produced a DVD and online videos as teaching tools for educating students, health professionals, policy makers, and the public about the ACE Study and its significance for improving the health and well-being of all people around the world. The DVD and videos include plenary presentations and individual interviews with Vincent Felitti, MD, and Robert Anda, MD, along with commentary by Frank Putnam, MD, who describes "how ACEs changed the landscape" in the field addressing childhood trauma. There is also an interview with David Williamson, PhD, the CDC epidemiologist, who first suggested the need for a large epidemiological study examining the relationship between child abuse and adult diseases after hearing Dr. Felitti's 1990 presentation of the high rates of child sexual abuse among obese women in his San Diego Kaiser Permanente weight loss program. Dr. Williamson introduced Dr. Felitti to Dr. Anda who then collaborated on developing the ACE Study. A three-minute Preview, eight-minute Policy Maker Brief and 15-minute Summary of the DVD can be viewed and downloaded from the AVA's website.

- **Screening Tool used in TCC Pilot**

- **Counseling Points and Handouts by Well Visit**