



## Understanding the Effects of Trauma on Health

A growing body of research shows that experiencing traumatic events increases an individual's risk of long-term physical and behavioral health issues.<sup>1</sup> As health care providers and policymakers begin to understand these connections, trauma-informed approaches to care are being adopted as a crucial aspect of high-quality health care in hopes of improving patient engagement and outcomes while lowering costs.

### What is Trauma?

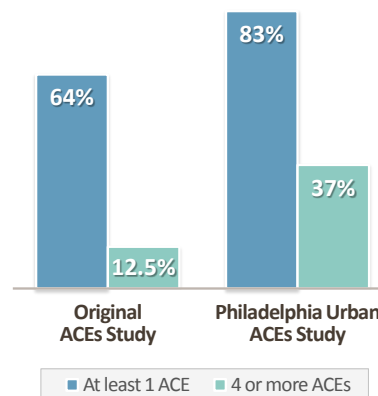
Trauma results from exposure to an incident or series of events that is emotionally disturbing or life-threatening.<sup>2</sup> Events that may be traumatic include:

- Experiencing or observing physical, sexual, and emotional abuse;
- Childhood neglect;
- Having a family member with a mental health or substance use disorder;
- Experiencing or witnessing violence in the community or while in the military;
- Natural or human-made disasters and forced displacement;
- Sudden, unexplained separation from a loved one;
- War or terrorism; and
- Poverty, discrimination, and historical trauma.<sup>3</sup>

Trauma overwhelms a person's coping capacity and has long-term effects on functioning and well-being.<sup>4</sup> Normal, protective responses to threats ("fight, flight, or freeze") are activated by the perception of a threat. A person who has experienced trauma may continue to experience this defensive response, even in situations that are not threatening.<sup>5</sup>

Not all children or adults who are exposed to potentially traumatic events experience long-term health problems. This may be due to protective factors, which help shield individuals from the lasting effects of trauma. Protective factors include: parental knowledge of child development; healthy parent-child attachment; social connections; and social and emotional competence.<sup>6</sup>

### Prevalence of Childhood Trauma



Two major studies of adverse childhood experiences (ACEs) provide a glimpse into the prevalence of childhood trauma:

- **Original ACEs Study**<sup>7</sup> surveyed middle-class, primarily white (non-Hispanic) individuals with some college education.
- **Philadelphia Urban ACEs Study**<sup>8</sup> surveyed racially diverse sample of adults who completed high school.

### Trauma-Related Definitions

There is no universal definition of trauma. However, the Substance Abuse and Mental Health Services Administration describes trauma as resulting from: *"an event, series of events, or set of circumstances experienced by an individual as physically or emotionally harmful or life-threatening with lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being."*<sup>9</sup> Following are definitions of terms related to trauma:

**Toxic Stress:** Strong, frequent, and/or prolonged adversity that stimulates the body's natural protections against stress and can have a long-term negative impact on neurobiology, psychology, and physical health.<sup>10</sup>

**Allostatic Load:** Wear-and-tear on the body from toxic stress that can lead to poor health and health risk behaviors.<sup>11</sup>

**Protective Factors:** Social conditions or personal attributes that help lessen the risks of trauma for an individual, family, or community.<sup>12</sup>



### ***How Does Exposure to Trauma Affect an Individual's Health?***

A growing body of research is uncovering a link between traumatic childhood experiences and a greater chance of physical and behavioral health problems in adulthood.<sup>13</sup> Multiple studies, including the original ACEs study and the Philadelphia Urban ACEs study, have linked childhood trauma with lifelong health problems, including:<sup>14,15,16</sup>

- Chronic lung and heart diseases;
- Sexually transmitted infections; and
- Liver disease, viral hepatitis, and liver cancer;
- Depression and other mental health conditions.
- Autoimmune diseases;



### ***How Does Childhood Trauma Affect Neurobiology?***

Before age five, children's brains are in a critical period of development and are constantly being shaped by their experiences. Positive experiences can lead to healthy brain development, while negative experiences can promote unhealthy development. Prolonged trauma can decrease the volume of areas of the brain responsible for cognitive functions such as short-term memory, emotional regulation, and higher cognitive functions.<sup>17</sup> Similarly, trauma can affect the body's ability to appropriately release stress hormones like cortisol, which can lead to long-lasting health conditions such as changes in cognitive processes and weakened immune responses.<sup>18</sup>



### ***How Does Childhood Trauma Affect Health Risk Behaviors?***

In some cases, children with trauma exposure develop coping mechanisms to help alleviate the hurt they feel as a result of trauma. Sometimes, these strategies evolve into health risk behaviors—for example, eating unhealthy food or overeating, tobacco use, or drug and alcohol abuse.<sup>19</sup> When childhood traumatic stress goes untreated, these coping mechanisms can contribute to anxiety, social isolation, chronic diseases, or substance use disorders.



### ***Can the Effects of Trauma be Avoided or Addressed?***

Protective factors, such as having supportive relationships and a positive future outlook, can help shield individuals from the effects of trauma.<sup>20</sup> Even without protective factors, the potential health implications of traumatic events do not have to be life-long. Trauma-specific physical and behavioral health treatments, as well as creating health care and social service systems that employ trauma-informed principles, can help patients begin the healing process.



### ***How can Health Care Providers Help Patients Heal from Trauma?***

Health care providers can build *trauma-informed* health care organizations that create safe, caring, inclusive environments for all patients. *Trauma-informed care* acknowledges that understanding patients' life experiences is key to delivering effective care—and has the potential to improve patient engagement, treatment adherence, and health outcomes. Implementing trauma-informed approaches to care may also help avoid provider and staff burnout and workforce turnover. Through trauma-specific treatments, such as Prolonged Exposure Therapy, Seeking Safety, and the Trauma Recovery and Empowerment Model, health care providers can help patients begin to address their trauma experiences and start the healing process.<sup>21</sup>



### ***What Kinds of Policy Changes can Support Trauma-Informed Care?***

Health care payers, health systems, states, and federal agencies can pursue policy changes to support the adoption of trauma-informed care. In particular, value-based purchasing and integration of primary and behavioral health care may support trauma-informed care implementation by allowing providers to spend more time with patients and families, and by encouraging integrated primary and behavioral health care delivery. Building the evidence base, provider and patient awareness, and health system competency around trauma-informed care will help advance these changes.



**Advancing Trauma-Informed Care** is a multi-site demonstration project to better understand how to implement trauma-informed approaches to health care delivery. Supported by the Robert Wood Johnson Foundation and led by the Center for Health Care Strategies, this national initiative is developing and enhancing trauma-informed approaches to care and sharing emerging best practices. For more information, visit [www.chcs.org](http://www.chcs.org).

## Endnotes

- <sup>1</sup> J. P. Shonkoff and A. S. Garner. Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care; and Section on Developmental and Behavioral Pediatrics (2012). "The Lifelong Effects of Early Childhood Adversity and Toxic Stress." Available at: <http://pediatrics.aappublications.org/content/pediatrics/early/2011/12/21/peds.2011-2663.full.pdf>.
- <sup>2</sup> M. Michelfelder and E. Swoboda. "Trauma 101." Trauma Informed Care Stakeholders Group Training Subcommittee PowerPoint presentation. (2012). Available at: <http://www.traumainformedcareproject.org/resources/Trauma%20101%20Powerpoint%20PresentationV1.pdf>.
- <sup>3</sup> Substance Abuse and Mental Health Services Administration (2016). "Types of Trauma and Violence." Available at: <http://www.samhsa.gov/trauma-violence/types>.
- <sup>4</sup> M. Michelfelder, op. cit.
- <sup>5</sup> Blue Knot Foundation. "Workers in Diverse Settings – Trauma-Informed Practice." Available at: [http://www.blueknot.org.au/Portals/2/Fact%20Sheets%20Info/Fact%20Sheet\\_Workers.pdf](http://www.blueknot.org.au/Portals/2/Fact%20Sheets%20Info/Fact%20Sheet_Workers.pdf).
- <sup>6</sup> Child Welfare Information Gateway, op. cit.
- <sup>7</sup> Centers for Disease Control and Prevention, Division of Violence Prevention (2016). "About the CDC-Kaiser Adverse Childhood Experiences Study." Available at: <https://www.cdc.gov/violenceprevention/acestudy/about.html>.
- <sup>8</sup> Research and Evaluation Group at Public Health Management Corporation (2013). "Findings from the Philadelphia Urban ACE Study." Available at: <http://www.rwjf.org/en/library/research/2013/09/findings-from-the-philadelphia-urban-ace-survey.html>.
- <sup>9</sup> Substance Abuse and Mental Health Services Administration-Health Resources and Services Administration Center for Integrated Health Solutions. "Trauma." Available at: <http://www.integration.samhsa.gov/clinical-practice/trauma>.
- <sup>10</sup> Center for Youth Wellness (2014). "An Unhealthy Dose of Stress: The Impact of Adverse Childhood Experiences and Toxic Stress on Childhood Health and Development." Available at: <http://ncfy.acf.hhs.gov/library/2014/unhealthy-dose-stress-impact-adverse-childhood-experiences-and-toxic-stress-childhood>.
- <sup>11</sup> S. L. Bloom (2010). "Adverse Childhood Experiences Study and Allostatic Load." Available at: <http://www.sanctuaryweb.com/Portals/0/2010%20PDFs%20NEW/2010%20Bloom%20ACEs%20and%20Allostatic%20Load.pdf>.
- <sup>12</sup> Child Welfare Information Gateway. "Protective Factors to Promote Well-Being." Available at: <https://www.childwelfare.gov/topics/preventing/promoting/protectfactors>.
- <sup>13</sup> For more information about the biological links between childhood trauma and lifelong physical and behavioral health needs, see: "The Science of Early Life Toxic Stress for Pediatric Practice and Advocacy," available at: <http://pediatrics.aappublications.org/content/131/2/319.full>.
- <sup>14</sup> V.J. Felitti, R.F. Anda, D. Nordenberg, D.F. Williamson, A.M. Spitz, V. Edwards, 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*, 14, no. 4 (1998): 245-258.
- <sup>15</sup> Public Health Management Corporation (2013). *Findings from the Philadelphia Urban ACE Survey*. Available at: <http://www.rwjf.org/content/dam/farm/reports/reports/2013/rwjf407836>.
- <sup>16</sup> J. P. Shonkoff, A. S. Garner, and the Committee on Psychosocial Aspects of Child and Family Health; Committee on Early Childhood, Adoption, and Dependent Care; and Section on Developmental and Behavioral Pediatrics. "The Lifelong Effects of Early Childhood Adversity and Toxic Stress." *Pediatrics*, 129, (2012b): 232-246.
- <sup>17</sup> Child Welfare Information Gateway (2015). "Understanding the Effects of Maltreatment on Brain Development." Available at: [https://www.childwelfare.gov/pubPDFs/brain\\_development.pdf](https://www.childwelfare.gov/pubPDFs/brain_development.pdf).
- <sup>18</sup> Child Welfare Information Gateway, op. cit.
- <sup>19</sup> Blue Knot Foundation, op. cit.
- <sup>20</sup> M. D. Madsen and N. Abell. "Trauma Resilience Scale: Validation of Protective Factors Associate with Adaptation Following Violence." *Research on Social Work Practice*, 20, no. 2 (2010): 223-233.
- <sup>21</sup> For more information about trauma-informed care and trauma treatments, see: "The Key Ingredients for Successful Trauma-Informed Care Implementation," available at: <http://www.chcs.org/resource/key-ingredients-for-successful-trauma-informed-care-implementation/>.