Responding to Adverse Childhood Experiences

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Heart disease, cancer, and chronic lower respiratory diseases are the leading causes of death in the U.S., and led to more than 1.3 million deaths in 2010 (CDC 2013a). Researchers are increasingly turning their attention to young children and early traumatic stressors to further understand the pathway leading to these diseases and their associated risk factors. Why this attention? A landmark study conducted nearly 20 years ago shone a light on the long-term relationship between prolonged, traumatic stress while growing up—what the authors called Adverse Childhood Experiences (ACE)—and many of the leading causes of death (Felitti et al. 1998). ACEs have been associated with a greater likelihood of heart disease, chronic bronchitis or emphysema, stroke, cancer, sexually transmitted infections, and depression, as well as the behavioral risks of excessive drinking, substance use, cigarette smoking, and attempting suicide (Felitti et al. 1998). This growing body of research underscores the importance of early child and family interventions that can help set a pathway to lifelong health and wellness.

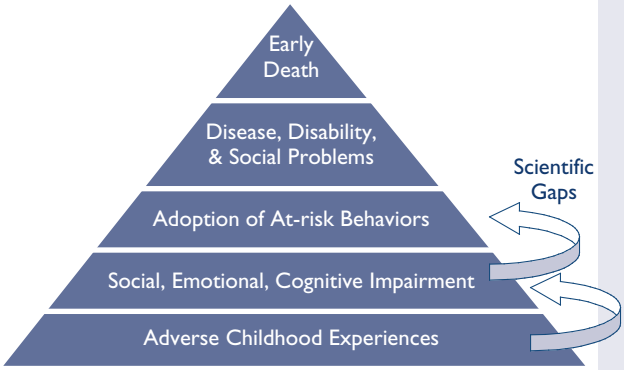
ORIGINS OF ADVERSE CHILDHOOD EXPERIENCES

The initial ACE study, conducted in the late 1990s by Dr. Vincent Felitti of Kaiser Permanente San Diego, in partnership with Dr. Robert Anda of the Centers for Disease Control and Prevention (CDC), established a framework for understanding the relationship between childhood exposures to a constellation of maltreatment and household dysfunction types (Figure 1) and subsequent adult health and behaviors. Adopting a "whole life perspective," the framework posits that ACEs are a common pathway to social, emotional, and cognitive impairments, leading to the adoption of risky behaviors, which develop into disease or disability and culminate with an early death (Figure 2) (CDC 2013b).

FIGURE 1
TYPES OF ADVERSE CHILDHOOD EXPERIENCES

Abuse	• Physical • Sexual • Emotional
Neglect	• Physical • Emotional
Household Characteristics	• Household member with mental illness • Household member incarcerated • Parents divorced or separated • Mother treated violently • Household member with substance addiction

FIGURE 2
ADVERSE CHILDHOOD EXPERIENCES FRAMEWORK



Source: CDC 2013b

Although there are still gaps in our understanding of the progression from ACEs to death and disability, the evidence base for the basic model is strong. Since 1995, more than 17,300 Kaiser Permanente San Diego plan members have participated in the ACE study. Among the findings, nearly two-thirds of the adults (64 percent) had at least one ACE while growing up, and approximately one in eight (13 percent) had four or more ACEs, suggesting that for many adults multiple forms of adversity were present during childhood (Figure 3) (CDC 2013d). The findings also show that the more ACEs a person experiences while growing up, the greater the risk for poor health by adulthood. For example, adults with four or more ACEs had a 10-fold greater odds of injecting drugs, seven-fold greater odds of identifying themselves an alcoholic, four-fold greater odds of having chronic bronchitis or emphysema, and a two-fold greater odds of having ischemic heart

disease, compared with those who did not have these types of experiences while growing up (Felitti et al. 1998).

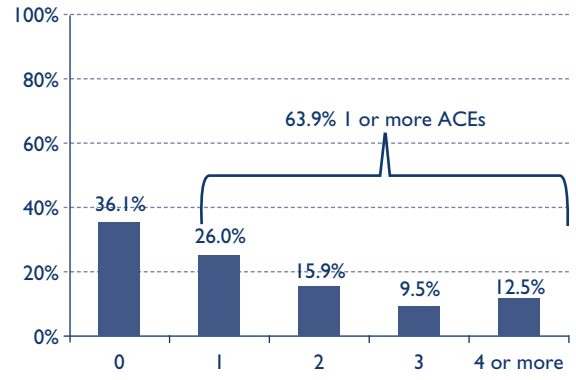
Since the original Kaiser Permanente-CDC study, statewide surveys have been fielded throughout the U.S., with similar results. Arkansas, Louisiana, New Mexico, Tennessee, and Washington featured the ACE module in their state's 2009 Behavioral Risk Factor Surveillance Survey (BRFSS), an annual state-based telephone survey of randomly-selected adults ages 18 or older. Among these states, the prevalence of having at least one ACE ranged from a low of 53 percent (Arkansas) to a high of 65 percent (Washington), and the prevalence of having four or more ACEs ranged from a low of 12 percent (Louisiana) to a high of 18 percent (Washington) (CDC 2010). Similar with the original study, these findings suggest that ACEs are common and often occur in multiples; state-level differences are also apparent. The BRFSS ACE module continues to garner interest among other state officials, with 21 states having adopted it at least once for their state's survey (Anda 2013).

HEALTH PHILANTHROPY AND CHILDHOOD ADVERSITY

Long before the phrases, "Adverse Childhood Experiences" or "toxic stress," were coined, health funders were investing in strategies to prevent or mitigate experiences like child abuse or domestic violence that may interrupt a child's healthy development. ACEs research has sparked even more interest in this area of work.

The child care grantmaking portfolio of **The Duke Endowment** encompasses an array of efforts ensuring that North and South Carolina's vulnerable children are provided with opportunities to reach their full potential and successfully transition into adulthood. As part of this portfolio, the endowment supports efforts to prevent child maltreatment. For example, the endowment funds two statewide child abuse prevention programs, Prevent Child Abuse North Carolina and Prevent Child Abuse South Carolina. These organizations are implementing evidence-based and innovative programs that seek to prevent child maltreatment before it occurs. Working within communities across the Carolinas, these organizations are striving to create safe and healthy relationships for children through the use of parenting classes, home visiting programs, and anti-bullying programs.

FIGURE 3
DISTRIBUTION OF ADVERSE CHILDHOOD EXPERIENCES, SAN DIEGO, 1995-1997



Source: CDC 2013b

Blue Shield Against Violence, an initiative of the **Blue Shield of California Foundation**, aims to end domestic violence in the state. To advance this goal, the foundation is investing in a variety of approaches that support: (1) core operations of domestic violence shelters; (2) capacity-building and sustainability of service providers, supporting organizations, and leaders to reduce domestic violence; (3) innovative approaches that reach underserved populations; and (4) statewide and regional coalitions and convenings, allowing for policy and advocacy discussions to strengthen prevention efforts. One example of the foundation's domestic violence grantmaking is an award provided to Futures Without Violence. This advocacy organization is developing a national agenda that seeks to maximize opportunities provided by the Affordable Care Act to fund prevention efforts and care for children and youth who are exposed to family violence.

Some grantmakers are directly responding to ACEs and traumatic stressors through research, dissemination, and early childhood and family interventions.

The **Mid-Iowa Health Foundation** has been investing in research and dissemination strategies to raise awareness about ACEs throughout the state. To date, the foundation has awarded two grants to the Iowa Department of Public Health to include the BRFSS ACE module in the 2012 and 2013 statewide surveys. Findings from the 2012 Iowa ACE module corroborate previous findings: ACEs are common, frequently occur in multiples, and are associated with poor health outcomes (Figure 4) (Central Iowa ACEs Steering Committee 2013). The foundation is also a member of the Central Iowa ACEs 360 Steering Committee that is working to raise awareness among the general public, policymakers, and other professionals throughout Iowa about the scope of ACEs as well as the health impacts. Additionally, committee members have been working to amass a repository of information about other state efforts in collecting ACE-related survey data, and recently convened its first statewide ACE summit, bringing together national and local experts to share their efforts in addressing ACEs (ACEs 360 Iowa 2013).

Last year the **Robert Wood Johnson Foundation** (RWJF) provided a grant to the Institute for Safe Families (ISF) to support ACE-related research among adults residing in Philadelphia, PA—a more urban and diverse population than previously studied. A Task Force developed the Philadelphia Urban ACE Survey, which expanded the content of previous ACE surveys by adding supplementary items to assess the health impact of experiences such as witnessing community violence, experiencing racism, being bullied, feeling unsafe in

FIGURE 4
KEY FINDINGS, IOWA, 2012

ACE Prevalence

- **55%** of Iowa adults have one or more ACEs
- **14%** of Iowa adults have four or more ACEs

ACEs increase likelihood of:

- Poor mental health, including depression
- Poor physical health, including chronic health conditions
- Cigarette smoking

Source: Central Iowa ACEs Steering Committee 2013

the community, and living in foster care. Findings reveal that ACEs are common among an urban population, frequently occur in clusters, and are associated with poor health outcomes (Figure 5) (PHMC 2013). The heterogeneous sample was large enough for racial and economic disparities to be identified. They include that ACEs are more common among lower-income adults than higher-income adults and are more common among black adults than white adults (PHMC 2013). Similar with the communication and convening work in Iowa, Philadelphia Task Force members are engaging in efforts to spread the word about ACEs and to learn from others working in the field. Additionally, ISF and RWJF representatives convened a two-day national summit, which brought together national and local experts to share their research, dissemination tactics, and interventions. In moving forward, task force members are meeting regularly to continue these discussions and identify appropriate interventions (ISF 2013).

FIGURE 5
KEY FINDINGS, PHILADELPHIA, 2012

ACE Prevalence

- **70%** of Philadelphia adults have one or more ACEs
- **22%** of Philadelphia adults have four or more ACEs

Including Urban-Specific ACE Items

- **83%** of Philadelphia adults have one or more ACEs
- **37%** of Philadelphia adults have four or more ACEs

ACEs increase likelihood of:

- Poor mental health, including suicide attempts
- Poor physical health
- Substance addiction
- Cigarette smoking

Source: PHMC 2013

In addition to research- and dissemination-funded efforts, other ACE-related grantmaking efforts are being advanced to identify children who are exhibiting signs of traumatic stress so that interventions can begin earlier. Many of these efforts are meeting children were they are: child care settings and schools.

A number of funders serving the Kansas City area have funded the Crittenton Children's Center's Head Start-Trauma Smart program to provide trauma-informed care to young children ages three through five. Local funders included the **REACH Healthcare Foundation**, the **Health Care Foundation of Greater Kansas City**, the **Hall Family Foundation**, and **Bank of America**. The Head Start-Trauma Smart model promotes trauma awareness, resiliency building, and lifelong coping strategies. Licensed therapists provide classroom consultation as well as individual or family therapy while parents and Head Start staff, ranging from teachers to custodians, are provided with trainings to develop the skills necessary to sustain the program's progress. More recently**, RWJF** awarded a three-year grant to the Crittenton Children's Center to support the replication of the Head Start-Trauma Smart model of care across Missouri.

As part of their U.S. education grantmaking efforts to improve school outcomes, the **Bill & Melinda Gates Foundation** is investing in ACE-related place-based interventions designed for elementary school students. The foundation recently awarded a three-year grant to the Seattle and King County and Area Health Education Center of Eastern Washington to replicate and enhance an evidence-based model that addresses the needs of children who have experienced multiple forms of trauma. This model seeks to improve school practices by training teachers and other school staff to help mitigate the effects of trauma. This grant also will provide opportunities to develop ways in which this model can enhance existing practices for school-based health clinics.

CONCLUSION

More than 20 years ago, Drs. Felitti and Anda began an inquiry into exposures to traumatic stressors during childhood and subsequent quality of life and health outcomes in adulthood. Today, with the help of neuroscience, we have an even better understanding of the mechanisms by which early exposures to traumatic stressors affect healthy brain development among young children. Many health funders are joining this conversation, too. No one approach will solve this complex challenge, and grantmakers are supporting a variety of approaches: child maltreatment or household dysfunction prevention and intervention programs, early childhood intervention programs, and research and communication tactics. Many of the nation's leading causes of death and associated risk behaviors may benefit from investments in children's healthy development through the prevention or mitigation of ACEs, thereby helping to pave the way for optimal health and wellness across the lifespan.

RESOURCES

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