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## II. BACKGROUND: ADVERSE CHILDHOOD EXPERIENCES

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### Definitions

A number of underlying factors contribute to the higher prevalence and impact of HBLs among economically disadvantaged children. Poor access to health care and quality schools, excessive absenteeism, and other social issues affect development, learning, and health. Among the most important factors are **Adverse Childhood Experiences**, or “**ACEs**.” Adverse Childhood Experiences are events during childhood that have been shown to increase the short- and long-term risk of negative health and social outcomes. These experiences include: the child suffering physical, psychological, or sexual abuse and the presence of substance abuse, mental illness, domestic violence, or criminal behavior in the household.<sup>8</sup> The resulting stress from ACEs may become “toxic” when there is a “strong, frequent, or prolonged activation of the body’s stress response systems in the absence of the buffering protection of a supportive, adult relationship.”<sup>9</sup>

In addition to numerous health effects, ACEs are associated with impaired development of the brain, leading to long-term negative consequences on cognitive, language and academic abilities, and mental health. Negative educational outcomes including grade repetition, lower academic scores, disengagement with school, and attendance problems. Trauma from Adverse Childhood Experiences (ACEs), particularly child abuse and neglect, has great impact, particularly on underserved children. These experiences may result in children failing to thrive at home, at school, or in the community. Furthermore, they can be associated in later life with continued impairment, as well as with illness, substance abuse, delinquency, and unsafe behavior. Trauma disproportionately affects children in poverty, and is both a significant pathway towards mental health and behavioral problems, as well as a predictor of lower academic outcomes.



#### From the sentinel study published in 1998, Adverse Childhood Experiences with demonstrated impact on long-term health and well being include:

- Emotional abuse
- Physical abuse
- Sexual abuse
- Emotional neglect
- Physical neglect
- Mother treated violently
- Household substance abuse
- Household mental illness
- Parental separation or divorce
- Incarcerated household member

Other studies have included single, acute events as well as those sustained over time, such as death of a parent and exposure to community violence.

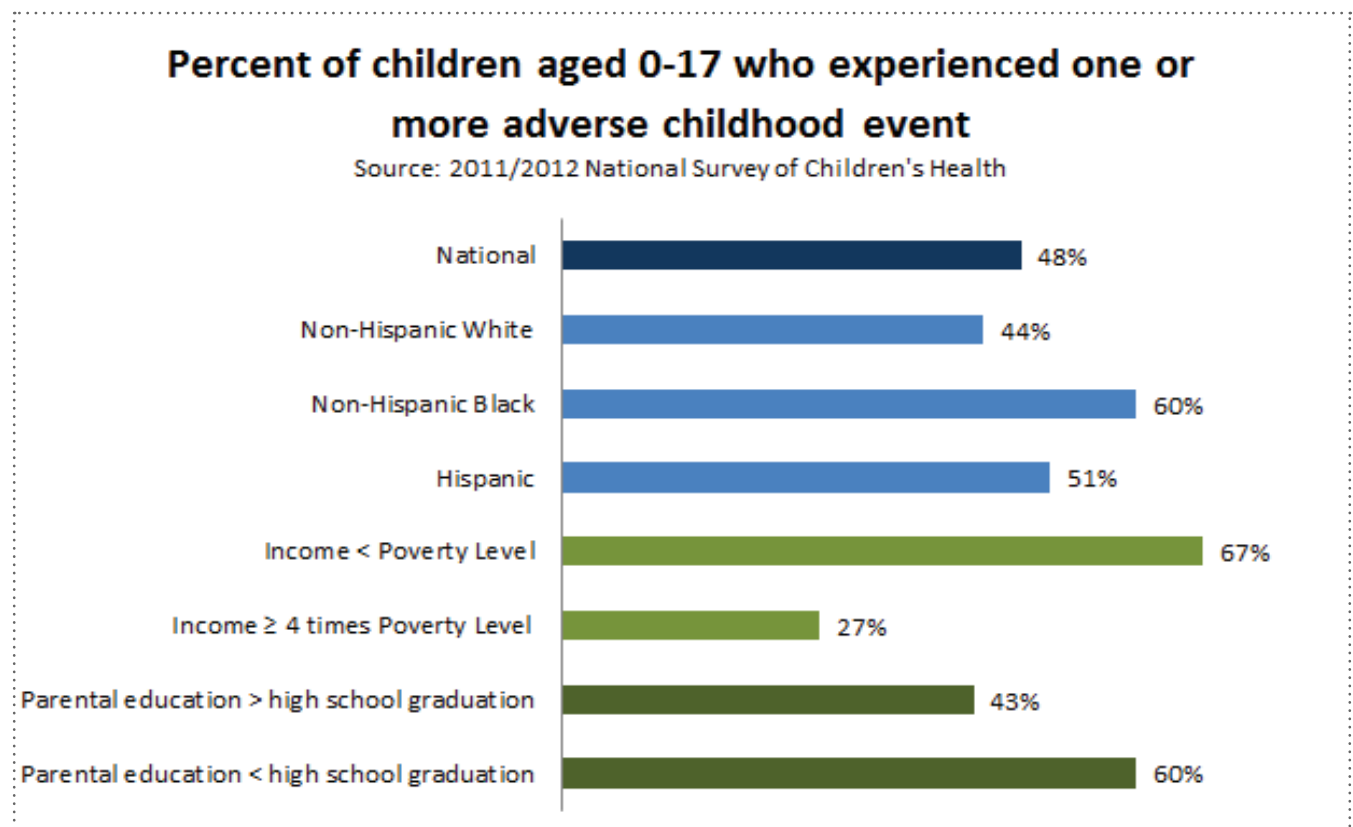
Sources:

- 1) American Academy of Pediatrics (AAP). *Adverse Childhood Experiences and the Lifelong Consequences of Trauma*.
- 2) Felitti, V.J., 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. *Am J Prev Med*, 1998. 14(4): p. 245-58.

As described by Child Welfare Information Gateway, the trauma that originates from abuse and ACEs can lead to impaired development, by causing “regions of the brain to fail to form or grow properly. These alterations in brain maturation have long-term consequences for cognitive, language, and academic abilities, and are connected with mental health disorders.”<sup>10</sup> For example, a study of the National Survey of Child and Adolescent Wellbeing (NSCAW) found that, among children that come in contact with the child protection and welfare system and therefore who have likely been subject to abuse or neglect, only 13% of infants and toddlers were at low or no risk for developmental delay or neurological impairment. More than one-third (36%) were at moderate risk, while 51% were at high risk for developmental delay or neurological impairment. These percentages are similar to the rates found in infants born prematurely, with low birth weight, and/or with respiratory distress syndrome, rather than the rates in the non-clinical or general population.<sup>11</sup>

## Prevalence

ACEs disproportionately affect underserved populations as shown in the following chart. The rates of ACEs are substantially higher in children who are black, Hispanic, living in poverty and whose parents have low levels of education, compared with rates for the general population. According to the 2011/12 National Survey of Children’s Health, nearly half (48%) of US children 17 years and below experienced one or more ACE, i.e. about 35 million children. Rates are high in black children (60%) and Hispanic children (51%), compared with white children (44%). About two-thirds of children in families below the Federal Poverty Level (67%) experience at least one ACE, 2.5 times the rate in children from families that are at least 4 times above the poverty level (27%). A similar disparity is seen when looking at household educational levels; 60% of children from families where neither parent/guardian had completed high school have experienced at least one ACE, compared with 43% in children from families where at least one parent/guardian had more than a high school education.<sup>12</sup>



## Unmet need for services

The American Academy of Pediatrics (AAP) calls for pediatric medical homes to play an important role in addressing early childhood adversity and toxic stress in its policy statement “Early Childhood Adversity, Toxic Stress, and the Role of the Pediatrician: Translating Developmental Science Into Lifelong Health.”<sup>13</sup>

### AS DEFINED BY THE AMERICAN ACADEMY OF PEDIATRICS:

“A **medical home** represents an approach to pediatric health care in which a trusted physician partners with the family to establish regular ongoing care. Through this partnership, the primary health care professional can help the family and patient access and coordinate specialty care, other health care services, educational services, in and out of home care, family support, and other public and private community services that are important to the overall health of the child and family. Providing a medical home means addressing the medical and non-medical needs of the child and family.”

Source:

Definition of medical home from [healthychildren.org](https://www.healthychildren.org/English/family-life/health-management/Pages/A-Medical-Home-Where-Everybody-Knows-Your-Name.aspx) (from the American Academy of Pediatrics). Link: <https://www.healthychildren.org/English/family-life/health-management/Pages/A-Medical-Home-Where-Everybody-Knows-Your-Name.aspx>

Specifically, it recommends that pediatric medical homes should: “(1) strengthen their provision of anticipatory guidance to support children’s emerging social-emotional-linguistic skills and to encourage the adoption of positive parenting techniques; (2) actively screen for precipitants of toxic stress that are common in their particular practices; (3) develop, help secure funding, and participate in innovative service-delivery adaptations that expand the ability of the medical home to support children at risk; and (4) identify (or advocate for the development of) local resources that address those risks for toxic stress that are prevalent in their communities.” A recent national survey investigated the extent to which pediatricians follow AAP’s recommendation to adopt a broad framework for understanding how social/emotional and familial factors such as ACEs affect child health. This survey found considerable gaps between recommendations and practice. While more than 80% of respondents said that screening for familial factors was within the scope of their responsibility, about a third (32%) did not usually ask about any ACE. About half reported usually asking about maternal depression (46%) or parental separation/divorce (42%), about a third usually ask about physical or sexual abuse (32%) or domestic violence (26%), and only 1 in 10 usually ask about incarcerated relatives (9%) or emotional abuse (10%).<sup>14</sup>

### Impact on mental and behavioral health

Behavioral and cognitive problems are more common in children who are victims of abuse and neglect. This holds true both in the general population as well as for children in the welfare system. According to the 2011/12 National Survey of Children’s Health (a survey of children in the general population), 52% of children with emotional, behavioral, or developmental issues have experienced two or more ACEs, which is almost twice the rate for children without any emotional, behavioral, or developmental issues (27%).<sup>15</sup>

### *Trauma, poverty, and mental health risks*

Trauma disproportionately affects children in poverty, and is both a significant pathway towards mental health and behavioral problems, as well as a predictor of lower academic outcomes. Mental health/behavioral issues are also more common in underserved children, and affect their ability to thrive at school and in life. The National Survey of Child and Adolescent Well-being (NSCAW, a survey of children involved in the child protection and welfare system) found that children who come in contact with the child protection and welfare system are at higher risk for cognitive and behavioral problems, compared to the general population. About two-thirds of children (67%) of children aged 6 to 17 years had higher risk for cognitive or behavioral problems. About 10% had a risk of cognitive problems, 43% had a risk of behavioral or emotional problems, and 13% had both types of risk.<sup>16</sup>

Based on caregivers' reports, the percentage of children with clinically relevant mental health issues was higher in children involved in the child welfare system than in children in the general population. About 21% of children scored in the clinical range for externalizing behaviors, 18% for Internalizing behaviors, and 23% on the 'Total Problems' scale. Similarly, based on teachers' report, the proportion of children with scores in the clinical range was 20% for externalizing behaviors, 24% for internalizing behaviors, and 19% on the Total Problems scale.<sup>17</sup> Attention-Deficit/Hyperactivity Disorder (ADHD) and emotional problems (depression, anxiety, eating disorder or other emotional problem) were among the three most common health conditions reported by caregivers, with ADHD affecting 16% of children and emotional problems affecting 14% of children.<sup>18</sup> The percentage of children with ADHD was higher than the proportion of children with ADHD nationally (10%).<sup>19</sup> Similarly, a study of children aged 18 -71 months who were investigated by child welfare examined the association between ACEs, and mental health/social development. For every additional ACE, there was a 32% increase in the odds of having clinically significant behavior problems. For children aged 3 to 6 years, for every additional ACE there was a 77% increase in the odds of having poorer socialization skills.<sup>20</sup>

### **Impact on learning**

Experiences of abuse have been proven to impact academic achievement both in children in the welfare system, and in the general population. Caregivers reported that more than one fourth (25.9%) of children involved in the child welfare system had repeated at least one grade.<sup>21</sup> Nationally, the proportion of children who have repeated a grade is less than half as high.<sup>22</sup> Furthermore, children 5 to 17 years old involved in the child welfare system scored significantly lower than the general population in academic performance.<sup>23</sup> The CDC reported that the Adverse Childhood Experiences Study found a dose-response relationship between ACEs and poor academic achievement, meaning that as the number of ACEs increases, so does the risk of poor academic achievement.<sup>24</sup>

A study using the 2011/2012 National Survey of Children's Health assessed the prevalence of ACEs and the association with school engagement and grade repetition, controlling for socio-demographic characteristics and health status. Children with two or more ACEs were 2.67 times more likely to repeat a grade, compared to children with no such experiences. Likewise, children who had not experienced an ACE had 2.59 or greater odds of being highly engaged in school, compared to their peers who had two or more ACEs.<sup>25</sup>

A study of the pediatric medical records from 2007-2009 of a clinic in California serving youth at high risk of exposure to ACEs found that 3% of participants without ACEs had a learning/behavior problem, while 51% of participants with at least 4 ACEs displayed learning/behavior problems. Additionally, having experienced one or more ACEs was associated with increased odds of having learning/behavior problems as compared to having experienced no ACEs. Having experienced 4 or more ACEs was associated with odds of having a learning/behavior problem 32.6 times higher than having experienced no ACEs.<sup>26</sup>

The Washington State University Child and Family Research Unit (CFRU) has studied the effects of ACEs on childhood education and development in children in public Head Start programs and schools in Spokane, WA. After adjusting for socio-demographic factors, children's ACE scores were predictive of child developmental status in the areas of social, literacy, language, cognitive, and math development.<sup>27</sup> The Spokane Childhood ACEs Study from the same center explored the correlation between ACEs and academic problems in elementary school children (Grades K-6) from the Spokane public schools. Preliminary findings suggested that the level of ACE exposure was the principal predictor of attendance and behavior problems. After participation in special education classes, ACE exposure was the second-highest predictor of academic failure. The higher the number of ACEs, the greater the percentage of students with academic concerns.<sup>28</sup>

Finally, another study from the same center analyzed the relationship between ACE exposure and students' math and reading competencies, social adjustment, and school attendance in children from in early learning programs to 12th grade enrolled in a state-funded program for students at risk of academic failure for non-academic barriers. Preliminary findings suggest that, after adjusting for socioeconomic characteristics as well as special education enrollment, children with four or more ACEs are five times more likely to have attendance problems, six times more likely to have behavioral problems, twice as likely to experience academic failure, and three times as likely to have school behavior problems.<sup>29</sup>

In summary, studies of national population and vulnerable populations provide abundant evidence that ACEs are strongly associated with the following school-related outcomes: grade retention, decreased academic performance, disengagement with school, learning problems, behavioral problems at school and attendance problems.