ADVERSE CHILDHOOD EXPERIENCES DATA REPORT: Behavioral Risk Factor Surveillance System (BRFSS), 2011-2017

An Overview of Adverse Childhood Experiences in California





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This data report has been produced by the California Essentials for Childhood (EfC) Initiative, a project of the California Department of Public Health, Injury and Violence Prevention Branch (CDPH/IVPB) and the California Department of Social Services, Office of Child Abuse Prevention (CDSS/OCAP), in collaboration with the University of California, Davis Violence Prevention Research Program (VPRP) and the University of California Firearm Violence Research Center (UCFC). It provides an overview of the 2011-2017 Adverse Childhood Experiences (ACEs) data from the California Behavioral Risk Factor Surveillance System (BRFSS).

A key function for governmental public health and social services agencies in addressing child maltreatment is to collect and analyze data to better understand the problem, identify risk and protective factors, and support the development of data-informed interventions that reduce risk factors and support protective factors to mitigate child abuse and neglect. Data are essential in the development of effective and sustainable child maltreatment prevention strategies.

This data report provides a broad overview of the prevalence and burden of Adverse Childhood Experiences in California from 2011 through 2017.

ACKNOWLEDGEMENTS

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SUGGESTED CITATION

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INTRODUCTION

OVERVIEW OF ADVERSE CHILDHOOD EXPERIENCES

Adverse Childhood Experiences (ACEs) are traumatic events, including child maltreatment and family dysfunction, occurring before age 18. ACEs can disrupt healthy brain development, alter the immune and endocrine systems, and change how the body responds to stress. ACEs can also negatively impact education, employment, earnings, and health outcomes over the life course and across generations. Experiencing four or more ACEs is associated with significantly increased risk for nine out of ten leading causes of death in adulthood, such as heart disease, stroke, cancer, chronic obstructive pulmonary disease (COPD), diabetes, Alzheimer's, and suicide.¹

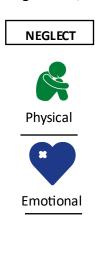
The Adverse Childhood Experiences Study (ACE Study) was a groundbreaking research study conducted from 1995 to 1997 by Kaiser Permanente and the Centers for Disease Control and Prevention (CDC). ² It was the first large scale study to look at the relationship between adversity in childhood and health outcomes in adulthood. The original study included 9,508 Kaiser Health Plan members from Southern California and measured nine specific childhood exposures, including three categories of abuse, four categories related to household dysfunction, and two measures of neglect that were added in the second wave of the study.

Key findings published in 1998 highlighted the following:

- ACEs are incredibly common two-thirds of study participants had experienced at least one ACE
 category, and one in eight individuals had experienced four or more ACEs.
- The higher an individual's ACE score, the higher their likelihood is of developing long-term health problems like heart disease, stroke, cancer, and diabetes.

Since the original study was published, some studies and subject matter experts (SME) have identified additional childhood adversities including systemic factors and community-level indicators that may also influence long-term health, such as witnessing violence, experiencing discrimination, living in an unsafe neighborhood, being bullied, and living in foster care.³











INTRODUCTION

DATA REPORT OVERVIEW

TOPICS COVERED IN THIS DATA REPORT:

- Statewide and county prevalence and trends
- Geographic and demographic disparities
- The impact of ACEs

This data report presents ACEs data from the 2011, 2013, 2015, and 2017 California Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is an annual, state-based, random-digit-dial telephone survey that collects data from non-institutionalized U.S. adults age 18 and over regarding health conditions and risk factors. In California, the BRFSS is implemented in collaboration between the Centers for Disease Control

and Prevention (CDC) and the California Department of Public Health (CDPH).

The BRFSS ACE module was adapted from the original CDC-Kaiser ACE Study and is used to collect information about abuse and household dysfunction during the respondent's first 18 years of life.⁴ The current analysis calculated a total ACEs score (range: 0-8) by summing the number of categories of ACEs each respondent was exposed to. Exposure was determined if an individual answered "yes" or at least "once" to one or more of the following questions:

- "Did you live with anyone who was depressed, mentally ill, or suicidal?"
- "Did you live with anyone who was a problem drinker or an alcoholic?" or "Did you live with anyone who used illegal street drugs or who abused prescription medications?"
- "Did you live with anyone who served time or who was sentenced to serve time in a prison, jail, or other correctional facility?"
- "Were your parents separated or divorced?"
- "How often did your parents or adults in your home ever slap, hit, kick, punch or beat each other up?"
- "How often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?"
- "How often did a parent or adult in your home ever swear at you, insult you, or put you down?"
- "How often did anyone at least 5 years older than you or who was an adult, ever touch you sexually, try to make you touch them sexually, or forced you to have sex?"

Data presented in this report are from BRFSS only. Estimates were weighted to be representative of the adult population in California. Limitations of BRFSS data include self-reported and retrospective data collection.

In California, the BRFSS is used along with other data from sources such as the National Survey of Children's Health (NSCH) and the Maternal and Infant Health Assessment (MIHA) to understand ACEs as these sources present a rich, conceptually-related perspective on childhood adversity across the lifespan (i.e., data for children, pregnant women, and all adults) and provide complementary data to inform and facilitate interventions. (See Kidsdata.org – Childhood Adversity and Resilience topic for more information).



PREVALENCE OF ACES

HOW COMMON ARE ACES IN CALIFORNIA?

Distribution of Total ACEs Scores, CA 2011-2017 0.4% 1.9% 6+ 4.7% **Total ACEs Score** 5+ 9.3% 16.3% 26.1% 40.1% 2+ 1+ 62.3% 37.7% 0

Figure 1. Prevalence of cumulative ACEs among a representative sample of California residents 18+ (N=21,183).

30.0%

Prepared by: UC Davis Violence Prevention Research Program; CDPH, Injury and Violence Prevention Branch

40.0%

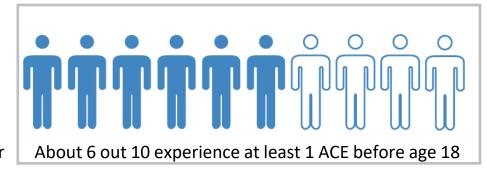
50.0%

60.0%

70.0%

Between 2011 and 2017, 21,183 California residents age 18 and over completed the BRFSS ACE module and retrospectively reported on ACEs they faced before the age of 18. Figure 1. presents the cumulative number of ACE categories that adults from California were exposed to before the age of 18. More than 60% of adult respondents reported that they had experienced at least one category of ACE before the age of 18, and about 40% reported two or more categories of ACEs. This shows that experiencing at least one or two types of ACEs is arguably

common among California residents. In addition, over a quarter of respondents reported facing three or more categories of ACEs, and finally, about 16% experienced four or more categories of of ACES.





0.0%

10.0%

20.0%

PREVALENCE OF ACES

COMMON TYPES OF ACES IN CALIFORNIA

Prevalence of Individual ACE Items, CA 2011-2017

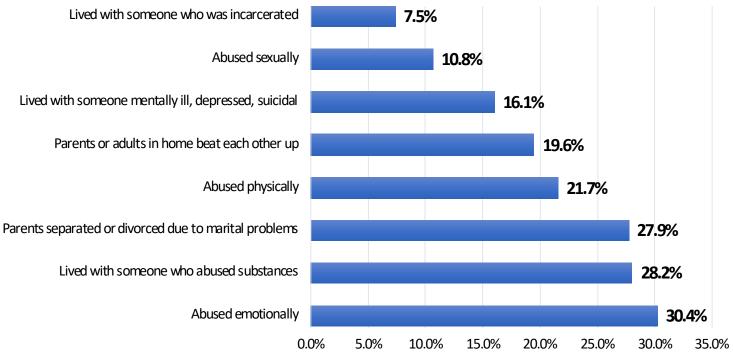


Figure 2. Prevalence of ACEs by category among a representative sample of California residents (N=21,183).

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The prevalence of eight ACEs was measured among California residents between 2011 and 2017. The most commonly reported ACEs were emotional abuse (30.4%) and living with someone who abused substances, including alcohol, street drugs, or prescription medications (28.2%). The least common ACE reported was living with someone who was incarcerated (7.5%).

Prevalence estimates of the four measures of household challenges in California between 2011 and 2017 were very similar to estimates of household challenges reported across 23 states that included the ACE module on their BRFSS survey between 2011 and 2014. Prevalence of emotional abuse in California was lower than the prevalence reported across 23 states between 2011 and 2014 (30.4% compared to 34.4%). Physical abuse in California was reported to be slightly higher than the 23 reporting states (21.7% compared to 17.9%). Lastly, sexual abuse in California was comparable to the prevalence estimate observed among the 23 states collecting BRFSS ACE data between 2011 and 2014 (10.8% compared to 11.6%). ⁵



PREVALENCE OF ACES BY COUNTY

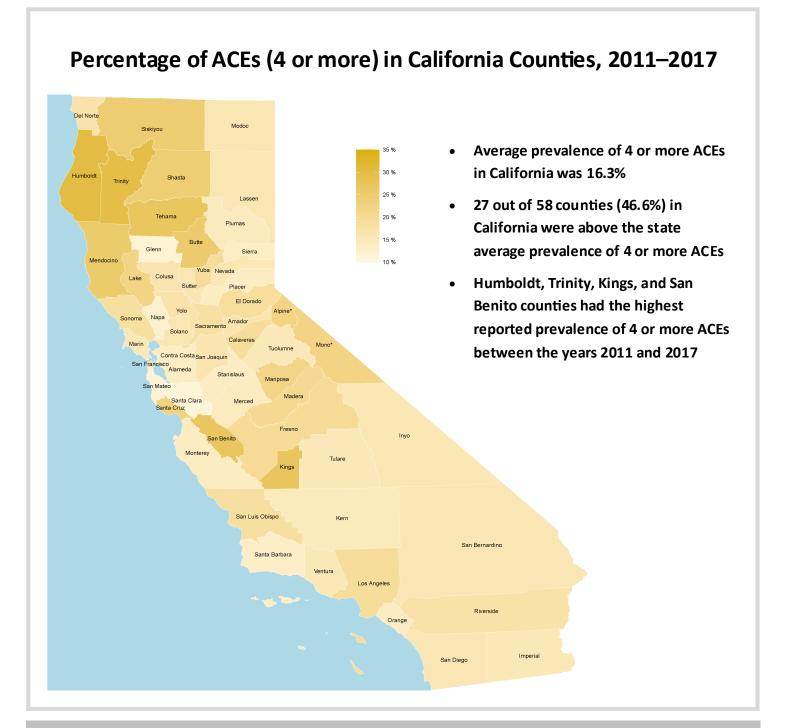


Figure 3. Percentage of California residents who experienced 4 or more ACEs before age 18 by county (N= 21,183).

Note: Alpine and Mono counties were combined to improve the stability of estimates.

Sources: California Behavioral Risk Factor Surveillance System (2011-2017); Department of Finance P-3 Population Projection File (2010-2060).

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ACES BY RACE & ETHNICITY

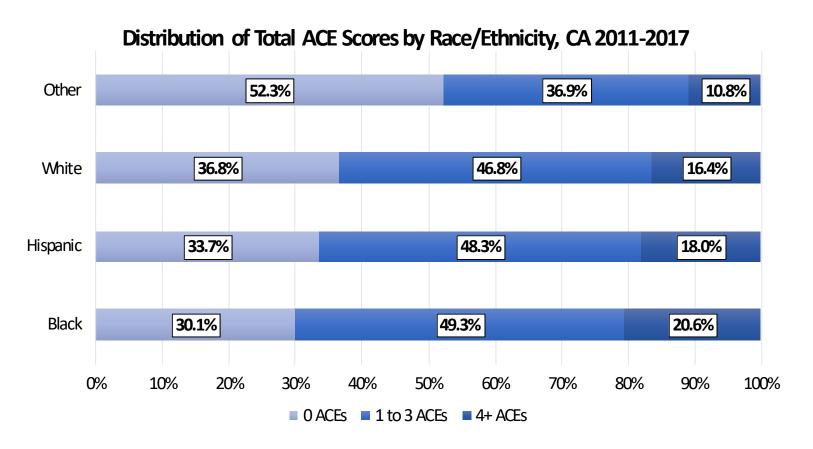


Figure 4. Prevalence of ACEs by race/ethnicity in California (N=21,183).

Note: "Other" includes response options for Californians who are Asian, Pacific Islander, American Indian, Alaska Native, and other race/ethnicity.

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In addition to geographic disparities, there are differences in the prevalence of ACEs among racial/ethnic groups in California and nationally. According to national BRFSS ACE data collected among 23 states between 2011 and 2014, respondents who identified as multiracial, Hispanic, or Black reported the highest overall exposure to ACEs compared to White and "other" racial/ethnic groups.⁵

Among California residents sampled between 2011 and 2017, respondents who identified as Black and Hispanic were more likely to report four or more ACEs compared to California residents who identified as White or "other" race.



ACES BY EDUCATIONAL ATTAINMENT

Distribution of Total ACEs Scores by Education, CA 2011-2017

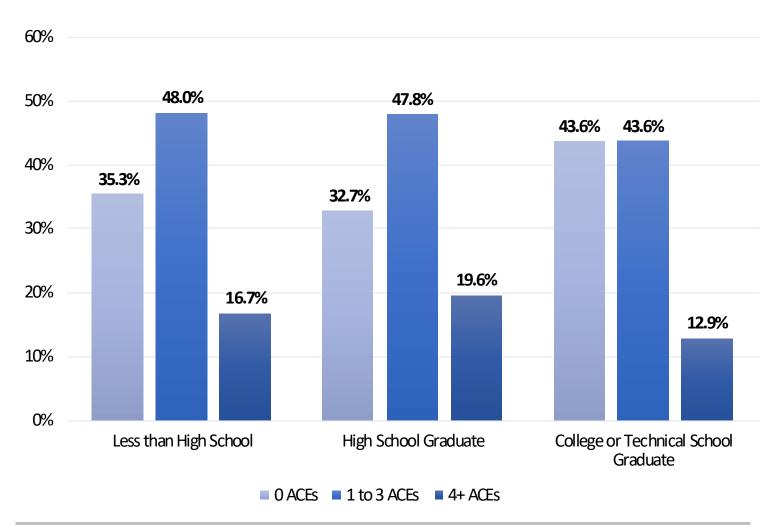


Figure 5. Prevalence of ACEs by educational attainment in California (N=21,166).

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Childhood adversity has been shown to be related to measures of socioeconomic status in adulthood, such as educational attainment, employment status, and household income. Figure 5. depicts the prevalence of ACEs in California between 2011 and 2017 by educational attainment. California residents with less than a college or technical school degree were more likely to experience ACEs. In addition, the group with highest prevalence of zero ACE scores were also the group with the highest educational attainment.



ACES BY HOUSEHOLD INCOME

Distribution of Total ACEs Score by Income, CA 2011-2017

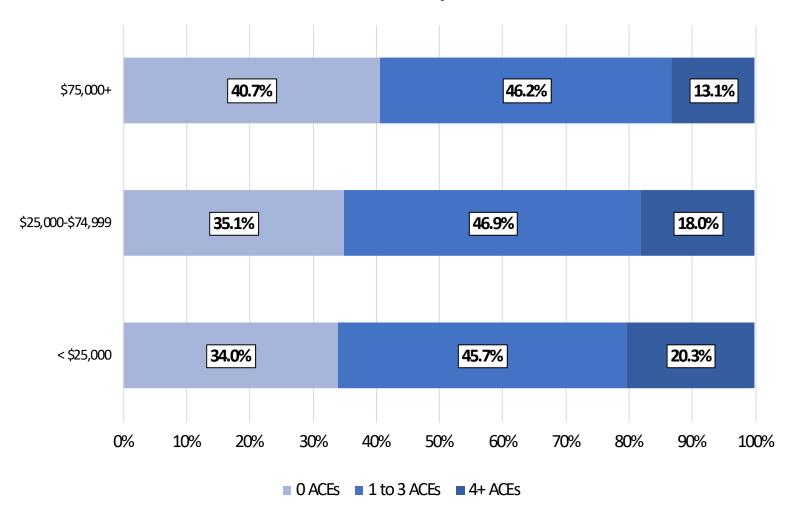


Figure 6. Prevalence of ACEs by household income among California residents (N= 19,524).

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Adults with a household annual income of \$25,000 or below were 1.5 times as likely to experience four or more ACEs as compared to those with a household annual income of \$75,000 and over. For a family of four, the 2020 federal poverty level (FPL) is \$26,200. The percentage of California residents who experienced one to three ACEs was similar across all levels of household income.



ACES BY HEALTHCARE COVERAGE

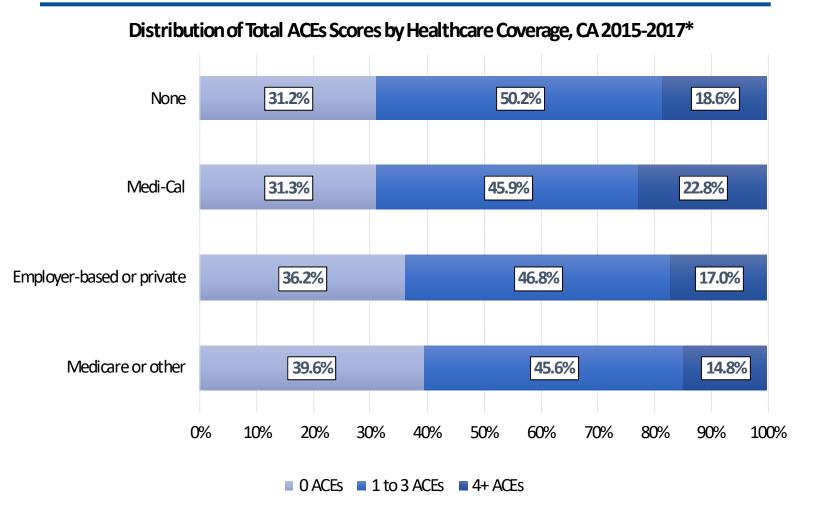


Figure 7. Prevalence of ACEs by health insurance among California residents (N= 21,067).

Note: *Data presented for 2015 and 2017 only; health insurance was not measured comparably in 2011 and 2013. "Other" includes response options for TRICARE (formerly CHAMPUS), VA, or military insurance, Alaska Native, Indian Health Service, or Tribal Health Services, and other forms of health insurance. Those with missing data for health insurance were excluded from analysis.

Prepared by: UC Davis Violence Prevention Research Program; CDPH, Injury and Violence Prevention Branch

Adult respondents with Medicare, employer-based, or privately bought health insurance were less likely to experience ACEs compared to those with Medi-Cal or no insurance. Those with Medi-Cal were over 1.3 times as likely to report four or more ACEs as compared to those with private or employer-based insurance.



THE IMPACT

ACES & HEALTH OUTCOMES

ACEs are common and costly. High and persistent exposure to ACEs creates toxic stress in the body and can have a lasting impact on one's health over their entire life course and leads to lost years of life and premature death.^{7,8}

In addition to the socioeconomic impact of ACEs, early adversity and childhood trauma are associated with a wealth of negative health outcomes in adulthood. This report is focused on indicators of poor mental health, behavioral risk factors, and chronic disease associated with ACEs.

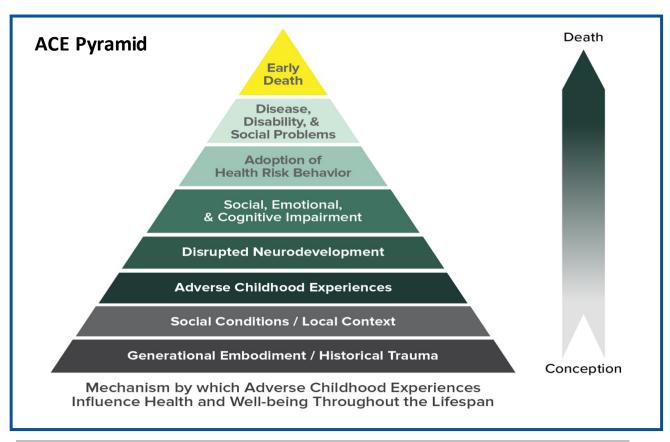


Figure 8. The ACE Pyramid provides a simplified visualization of the hypothesized mechanisms through which ACEs and other childhood adversities are thought to impact biological processes, behavior, and health outcomes.⁷

Image Source: Centers for Disease Control and Prevention (CDC)7

For more recent research that contributes to understanding these mechanisms, see the National Academies of Sciences, Engineering and Medicine's publication, *Vibrant and Healthy Kids*.



Indicators of Poor Health Status and ACEs

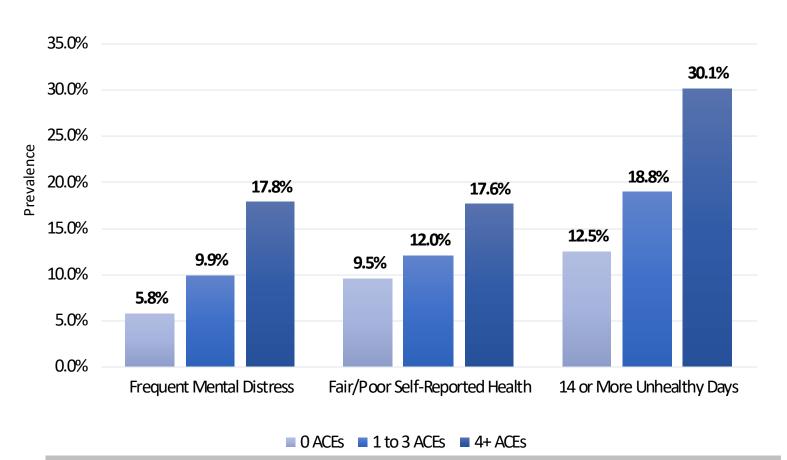


Figure 9. Predicted probabilities of indicators of poor mental health by ACEs exposure level among California residents adjusted for race, sex, age, income, education, and employment status.

Note: Sample sizes range from N=19,346 to N=19,455 for measures of mental health.

Prepared by: UC Davis Violence Prevention Research Program; CDPH, Injury and Violence Prevention Branch

Adjusted for race, sex, age, income, education, and employment status, California residents who experienced four or more ACEs before the age of 18 as compared to those who experienced zero were approximately:

- 3.5 times as likely to report frequent mental distress
- 2.0 times as likely to report fair/poor self-rated health
- 3.0 times as likely to report 14 or more unhealthy days in the past month

^{*}Bold text indicates p-value < 0.05



THE IMPACT

ACES & HEALTH OUTCOMES

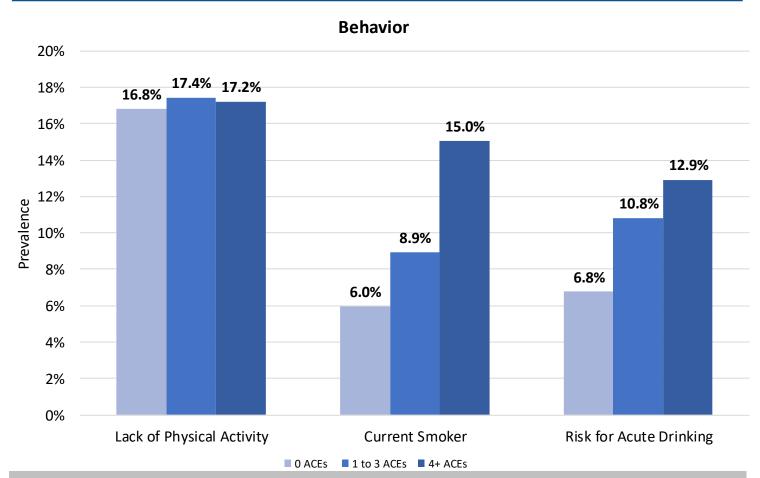


Figure 10. Predicted probabilities of behavioral risk factors by level of ACEs exposure among California residents adjusted for race, sex, age, income, education, and employment status.

Note: Sample sizes range from N=19,325 to N=19,453 for measures of behavioral risk. Risk for acute drinking is defined as five or more drinks on at least one occasion during the past month. Lack of physical activity is defined as less than 150 minutes per week of moderate-intensity activity or less than 75 minutes per week of vigorous-intensity activity.9

Prepared by: UC Davis Violence Prevention Research Program; CDPH, Injury and Violence Prevention Branch

Adjusted for race, sex, age, income, education, and employment status, California residents who reported experiencing four or more ACEs before age 18 as compared to those who experienced zero ACEs were approximately:

- No more likely to report a lack of physical activity
- 2.8 times as likely to be a current smoker
- 2.0 times as likely to be at risk for acute drinking

^{*}Bold text indicates p-value < 0.05



THE IMPACT

ACES & HEALTH OUTCOMES

Chronic Disease

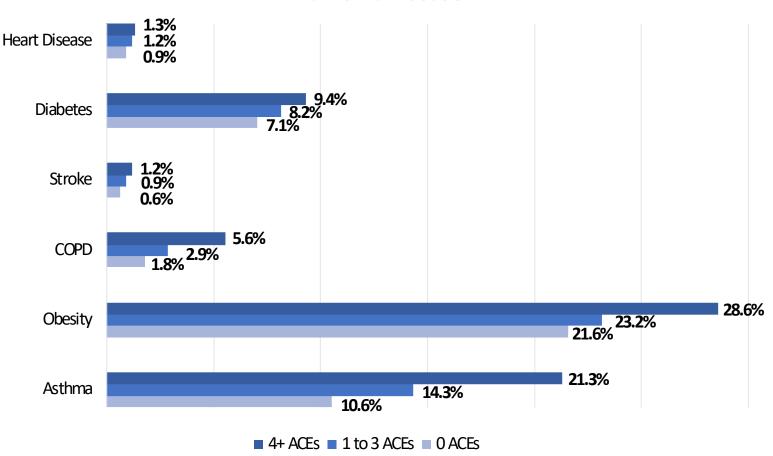


Figure 11. Predicted probabilities of health outcomes by level of exposure to ACEs among California residents adjusted for race, sex, age, income, education, and employment status.

Note: Sample sizes range from N=18,944 to N=19,439 for measures of chronic disease health outcomes.

Prepared by: UC Davis Violence Prevention Research Program; CDPH, Injury and Violence Prevention Branch

Adjusted for race, sex, age, income, education, and employment status, California residents who experienced four or more ACEs as compared to those who experienced zero were approximately:

- 1.5 times as likely to have heart disease
- 1.4 times as likely to have diabetes
- 1.9 times as likely to have a stroke
- 3.2 times as likely to have chronic obstructive pulmonary disease (COPD)
- 1.5 times as likely to be obese
- 2.3 times as likely to have asthma

^{*}Bold text indicates p-value < 0.05



NEXT STEPS

THE PUBLIC HEALTH APPROACH TO THE PREVENTION OF CHILD **MALTREATMENT**

The BRFSS ACE data presented in this report give insight to the prevalence of ACEs in California and can be used to encourage prevention efforts to support and protect the health and wellbeing of children growing up in California today. As evidenced from this report:

- ACEs are common in California.
- Experiencing 4 or more ACEs was more common among Black and Hispanic populations, those with less than a college or technical school degree, those with annual household incomes less than \$25,000, and those with Medi-Cal or no health insurance.
- Experiencing 4 or more ACEs increases the likelihood of poor mental health, risky behaviors such as acute drinking and smoking, and chronic disease, including heart disease, diabetes, stroke, Strengthen economic supports to families COPD, obesity, and asthma.

California is the most populated and diverse state in the nation. With a majority demographic split between White and Hispanic populations, health disparities are common among different demographic groups in California. 10 Children of color are disproportionately impacted by ACEs due to stressful environments, socioeconomic inequalities, and lack of systemic support and resources for families of color. 11 Therefore, primary prevention efforts to reduce occurrence of ACEs and promote life-long health and success include interventions that create social norm change and policies that strengthen economic support for families. In California, the California Earned Income Tax Credit (CalEITC) and Paid Family Leave (PFL) programs are examples of actions taken at the state-level to improve family access to enhanced economic stability. For more information about strategies that create change and improve the lives of children, please see the CDC's Technical Package, "Preventing Child Abuse



- · Strengthening household financial security
- Family-friendly work policies



Change social norms to support parents and positive parenting

- · Public engagement and enhancement campaigns
- Legislative approaches to reduce corporal punishment



Provide quality care and education early in life

- Preschool enrichment with family engagement
- Improved quality of child care through licensing and accreditation



Enhance parenting skills to promote healthy child development

- Early childhood home visitation
- Parenting skill and family relationship approaches



Intervene to lessen harms and prevent future risk

- Enhanced primary care
- Behavioral parent training programs
- Treatment to lessen harms of abuse and neglect exposure
- Treatment to prevent problem behavior and later involvement in violence

Image Source: Centers for Disease Control and Prevention Figure 12. Social norm, policy, and programmatic activities

and Neglect: A Technical Package for Policy, Norm, and Programmatic Activities."



ADDITIONAL RESOURCES & TOOLS

- ACEs Aware Initiative: https://www.acesaware.org/
- Let's Get Healthy California (Healthy Beginnings): https://letsgethealthy.ca.gov/
- <u>California Home Visiting Program (CHVP):</u> http://www.cdph.ca.gov/programs/mcah/Pages/HVP-HomePage.aspx
- Campaign to Counter Childhood Adversity: http://www.4cakids.org/
- <u>California Essentials for Childhood Initiative</u>: http://www.cdph.ca.gov/programs/Pages/ ChildMaltreatmentPrevention.aspx
- First 5 California and County First 5 Commissions: http://www.ccfc.ca.gov/ and http://first5association.org/
- ACEs Connection: http://www.acesconnection.com/home and https://acestoohigh.com/
- <u>The Center for Youth Wellness (CYW):</u> http://www.centerforyouthwellness.org/adverse-childhood-experiences-aces/
- <u>Centers for Disease Control and Prevention ACE Study:</u> http://www.cdc.gov/violenceprevention/acestudy/index.html
- <u>Centers for Disease Control and Prevention Technical Packages for Violence Prevention:</u> https://www.cdc.gov/violenceprevention/pub/technical-packages.html
- California Department of Social Services, Office of Child Abuse Prevention, <u>County Prevention Dashboard</u>: https://www.cdss.ca.gov/inforesources/ocap/data-dashboards
- National Academies of Sciences, Engineering and Medicine (NASEM), Vibrant and Healthy Kids: Aligning Science, Practice, and Policy to Advance Health Equity: https://www.nap.edu/read/25466/chapter/1
- For more information about childhood adversity indicators, visit: Kidsdata.org: https://www.kidsdata.org/



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ESSENTIALS FOR CHILDHOOD INITIATIVE

The Essentials for Childhood (EfC) Initiative is a coalition led in partnership by the California Department of Public Health, Injury and Violence Prevention Branch (CDPH/IVPB) and the California Department of Social Services, Office of Child Abuse Prevention (CDSS/OCAP).

The Essentials for Childhood Initiative:

- Seeks to address child maltreatment as a public health issue,
- Aims to raise awareness and commitment to promoting safe, stable, nurturing relationships, and environments (SSNR&E),
- Creates the context for healthy children and families through social norms change, programs, and policies,
 and
- Utilizes data to inform actions.

The EfC Initiative recognizes that child maltreatment is preventable and utilizes a primary prevention approach, working upstream to address underlying causes to prevent child abuse and neglect from occurring in the first place.

The EfC Initiative is comprised of a coalition body and five subcommittees: data, policy, trauma -informed practices, strengthening economic supports, and equity.

Utilizing a collective impact model, the EfC Initiative advances the common agenda of multiple agencies and stakeholders through the alignment of activities, programs, policies, and funding so that all California children, youth, and their families attain safe, stable, nurturing relationships, and environments.

FEEDBACK

If you have feedback, questions, or would like to know more about the methods used in this data report, please contact: ivpb@cdph.ca.gov.







