

What are Adverse Childhood Experiences (ACEs)?

Adverse childhood experiences (ACEs) are potentially **traumatic experiences** that occur before the age of 18. ACEs range from physical and sexual abuse to household challenges experienced by parents, caregivers, or other adults living with the child.¹ Experiencing a high number of ACEs, without supportive adults or safe and stable environments, may lead to a prolonged activation of the biological stress response, known as toxic stress. Toxic stress can have a lasting effect on brain structure and function and disrupt healthy development.² Current research indicates that experiencing a higher number of ACEs is associated with chronic health conditions, mental illness, and health risk behaviors.^{1,2} Additionally, ACEs can be passed from generation to generation.² ACEs can be measured using a variety of questionnaires, including the Behavioral Risk Factor Surveillance System (BRFSS), the National Children's Health Survey (NSCH), and the Maternal and Infant Health Assessment (MIHA).²

In the United States, **1 in 6 adults** have experienced **4 or more** ACEs, and **61% of adults** have experienced at least **one** ACE.³ Some demographic groups are more likely to experience an increased number of ACEs, including racial and ethnic minorities, females, LGBTQ+ individuals, and those with lower socioeconomic status and education levels.⁴ ACEs have been found to have a graded dose-response relationship with 40+ health and well-being outcomes as of 2019, including **9 of the top 10 leading causes of death**.^{2,5} As the number of ACEs increase, so does the risk for negative health and well-being outcomes.⁵

Fortunately, ACEs are preventable. Creating and maintaining safe, stable, and nurturing relationships and environments for children and families can prevent ACEs and decrease the risk of adverse health and well-being outcomes associated with ACEs.² Preventing ACEs could decrease the overall burden of disease across the United States, including a decrease in roughly 2.5 million cases of **overweight/obesity**, up to 1.9 million cases of **heart disease**, and 21 million cases of **depression**.³

Risk Factors for ACEs

Demographic Risk Factors

- *Gender*
 - Women are at greater risk for experiencing 4 or more types of ACEs compared to men.⁴
- *Sexual Orientation and Gender Identity*
 - Lesbian, gay, bisexual, and transgender people reported experiencing significantly more ACEs than straight and cisgender people.⁴
- *Race/Ethnicity*
 - Individuals who are Black, Hispanic/Latino, and multiracial reported experiencing significantly more ACEs than individuals who are White.⁴
- *Socioeconomic Status*
 - Households earning less than \$15,000 each year have a higher mean ACE score compared to all other household earnings.^{4,6}
- *Employment Level*
 - Those that are unemployed or unable to work have a higher mean ACE score compared to those that are employed.^{4,6}
- *Educational Attainment*
 - Lower education is associated with a higher prevalence of ACEs.⁴

Health Risk Behaviors

- *Risky sexual behaviors*
 - The more ACE categories to which a person is exposed, the more likely it is that they will engage in risky sexual behaviors.²
- *Insufficient Sleep*
 - Sleep disturbances are among the most common and non-specific outcomes of childhood adversity.²
- *Smoking*
 - For adults with an ACE score of five or higher, the likelihood of ever smoking is more than triple the rate for adults with zero ACEs.²
- *Substance Misuse*
 - ACEs are associated with and increased risk of substance use disorder (SUD) development and severity in adulthood.³
- *Heavy Drinking*
 - The more ACEs that a person experiences, the more likely it is that they will drink heavily.²

Health Outcomes

- *Overweight/obesity*
 - Adults and adolescents with ACEs are at an increased risk for being overweight or obese.^{7,8}
- *Diabetes*
 - Adults with ≥ 4 ACEs are 1.4 times more likely to have diabetes compared to adults with no ACEs.⁹
- *Cancer*
 - Adults with ≥ 4 ACEs are 2.4 times more likely to have cancer compared to adults with no ACEs.⁹
- *Chronic Obstructive Pulmonary Disease (COPD)*
 - Adults with ≥ 4 ACEs are 3.1 times more likely to have chronic lower respiratory disease compared to adults with no ACEs.⁹
- *Alzheimer's Disease or Dementia*
 - Adults with ≥ 4 ACEs are 11.2 times more likely to have Alzheimer's disease or dementia compared to adults with no ACEs.⁹
- *Asthma*
 - Children with ≥ 3 ACEs are more likely to have asthma.¹⁰
- *Cardiovascular Disease (CVD)*
 - Adults with ≥ 4 ACEs are 2 times more likely to develop CVD compared to adults who have no ACEs.¹¹
- *Ischemic Heart Disease (IHD)/Coronary Heart Disease (CHD)*
 - Adults with ≥ 4 ACEs are 2.1 times more likely to have heart disease compared to adults with no ACEs.⁹
- *Stroke*
 - Adults with ≥ 4 ACEs are 2 times more likely to have a stroke compared to adults with no ACEs.⁹

- *HIV/STIs*
 - Exposure to ACEs increases the risk of HIV and other sexually transmitted infections.⁵
- *Kidney Disease*
 - Adults with ≥ 4 ACEs are 1.7 times more likely to have kidney disease compared to adults with no ACEs.⁹
- *Depression*
 - Experiencing a higher number of ACEs is associated with an increased risk of depression.⁴
- *Suicide*
 - Adults with ≥ 4 ACEs are 37.5 times more likely to attempt suicide compared to adults with no ACEs.⁹
- *Post-Traumatic Stress Disorder (PTSD)*
 - Exposure to ACEs is associated with increased risk of PTSD.²
- *Maternal Health Problems*
 - Exposure to ACEs increases the risk of maternal health problems, including pregnancy loss, preterm birth, and low birth weight.^{2,5}
- *Injuries*
 - Adults with ≥ 4 ACEs are 2.6 times more likely to die from unintentional injuries compared to adults with no ACEs.⁹
- *Life expectancy*
 - Adults with ≥ 6 ACEs live, on average, almost 20 years less than those with no ACEs.²

National Statistics and Disparities

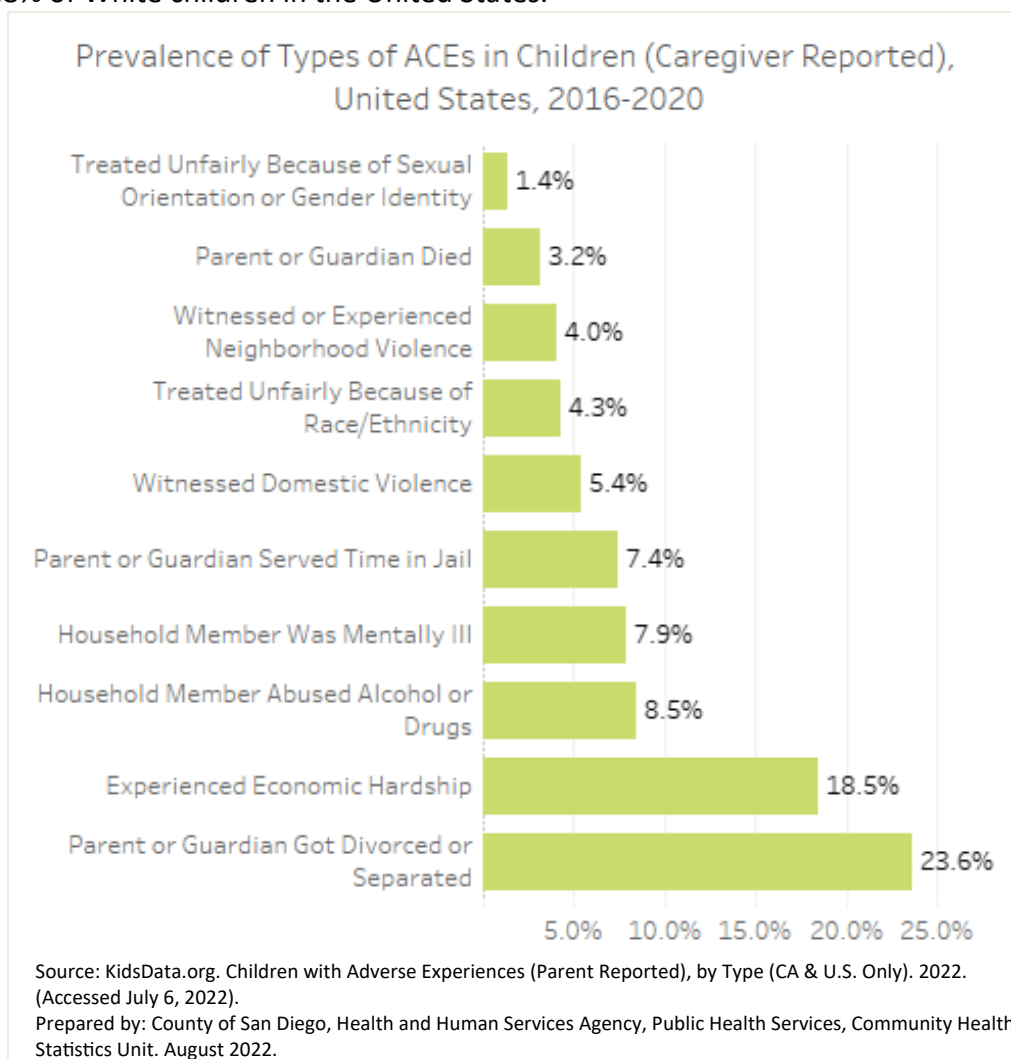
- From 2015-2017, about 61% of adults in the United States had experienced 1 or more ACEs, and 1 in 6 adults in the United States had experienced 4 or more ACEs.³

Prevalence of ACEs by Category for Participants Completing the ACE Module on the 2011-2014 BRFSS*			
ACE Category	Women	Men	Total
	Percent	Percent	Percent
ABUSE			
Emotional Abuse	33.9%	34.9%	34.4%
Physical Abuse	17.5%	18.4%	17.9%
Sexual Abuse	16.3%	6.7%	11.6%
HOUSEHOLD CHALLENGES			
Intimate Partner Violence	18.2%	16.8%	17.5%
Substance Abuse	28.7%	26.3%	27.6%
Mental Illness	19.2%	13.7%	16.5%
Parental Separation or Divorce	27.8%	27.5%	27.6%
Incarcerated Household Member	7.3%	8.6%	7.9%

*The prevalence estimates reported are from 23 states that included the ACE module on the 2011-2014 BRFSS (n=214,157).

Source: ¹²Centers for Disease Control and Prevention (CDC). Violence Prevention. Behavioral Risk Factor Surveillance System ACE Data. April 2020. (Accessed August 3, 2022).

- From 2011-2014, emotional abuse the most common ACE reported by adults in the United States.¹²
- From 2011-2014, the prevalence of childhood sexual abuse was 2.4 times higher in adult women than in adult men in the United States.¹²
- From 2019-2020, 18.1% of children in the United States experienced at least once ACE (caregiver reported).¹³
- From 2019-2020, 25.4% of Black, non-Hispanic children experienced 2 or more ACEs, compared to 15.8% of White children in the United States.¹³



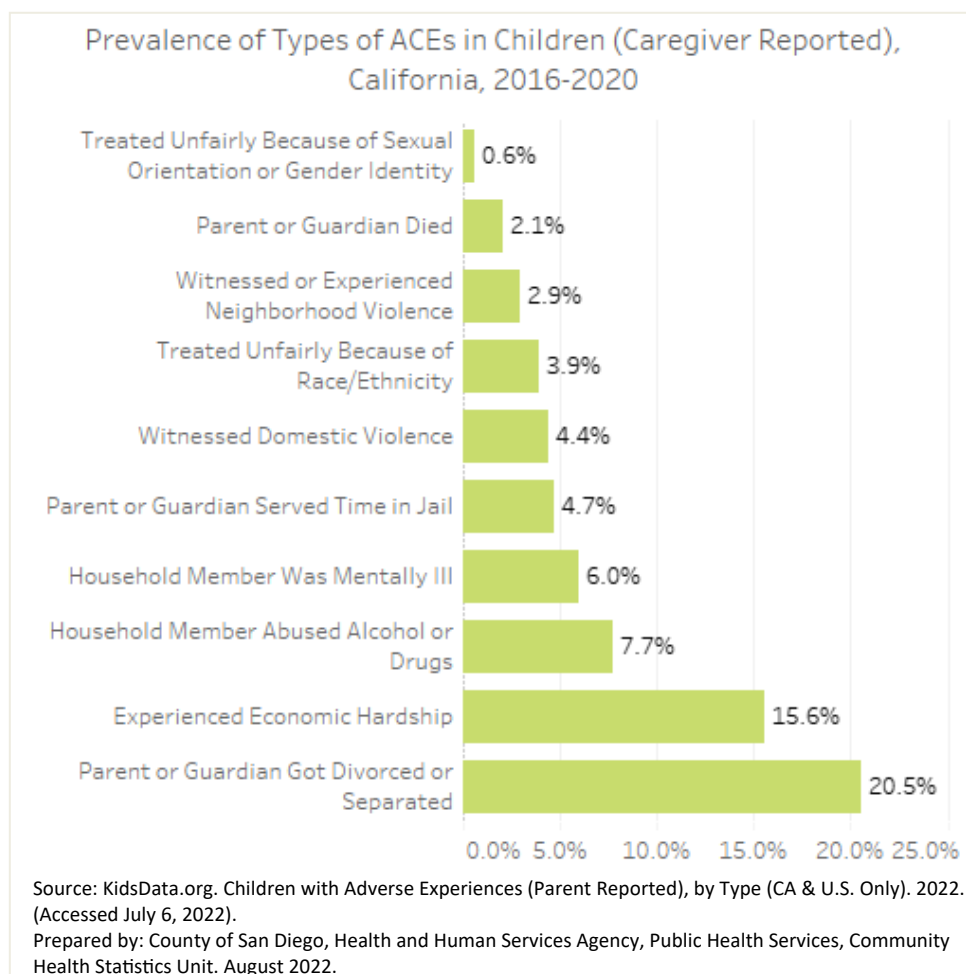
- From 2016-2020, parent separation or divorce was the most common ACE among children in the United States, followed by economic hardship.¹⁴
- From 2016-2020, 8.5% of children lived with someone who abused alcohol or drugs in the United States.¹⁴

Cost

- The total economic burden of ACEs is estimated to be about \$748 billion per year in North America.¹⁵

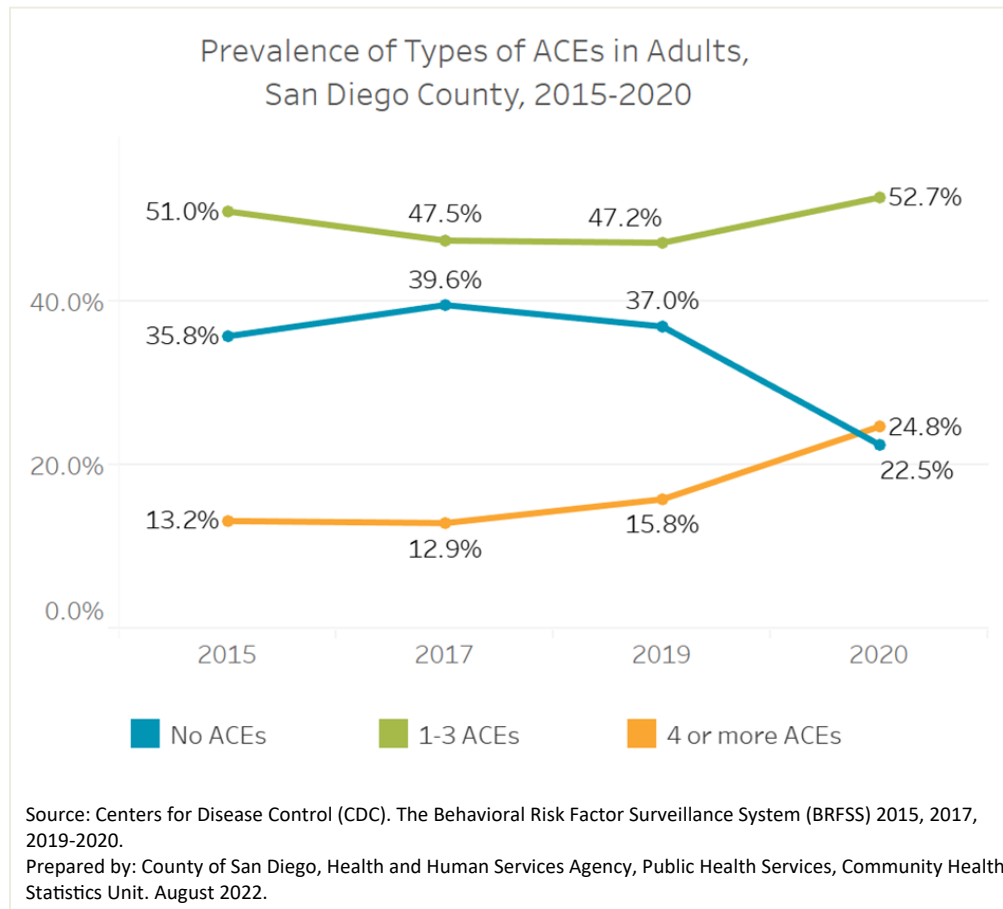
California Statistics and Disparities

- From 2011-2017, about 62% of adults in California had experienced 1 or more ACEs, and nearly 1 in 6 adults in California had experienced 4 or more ACEs.¹⁶
- From 2011-2017, emotional abuse was the most common ACE reported by adults in California (30.4%).¹⁶
- From 2011-2017, Black and Hispanic residents were more likely to report 4 or more ACEs compared to California residents who identified as White or Other race.¹⁶
- From 2019-2020, 17.9% of children in California experienced at least once ACE (caregiver reported).¹³
- From 2019-2020, 19.8% of Hispanic children experienced 2 or more ACEs, compared to 12.2% of non-Hispanic White children in California.¹³



- From 2016-2020, parent separation or divorce was the most common ACE among children in California (20.5%), followed by economic hardship (15.6%).¹⁴
- From 2016-2020, 7.7% of children in California lived with someone who abused alcohol or drugs.¹⁴

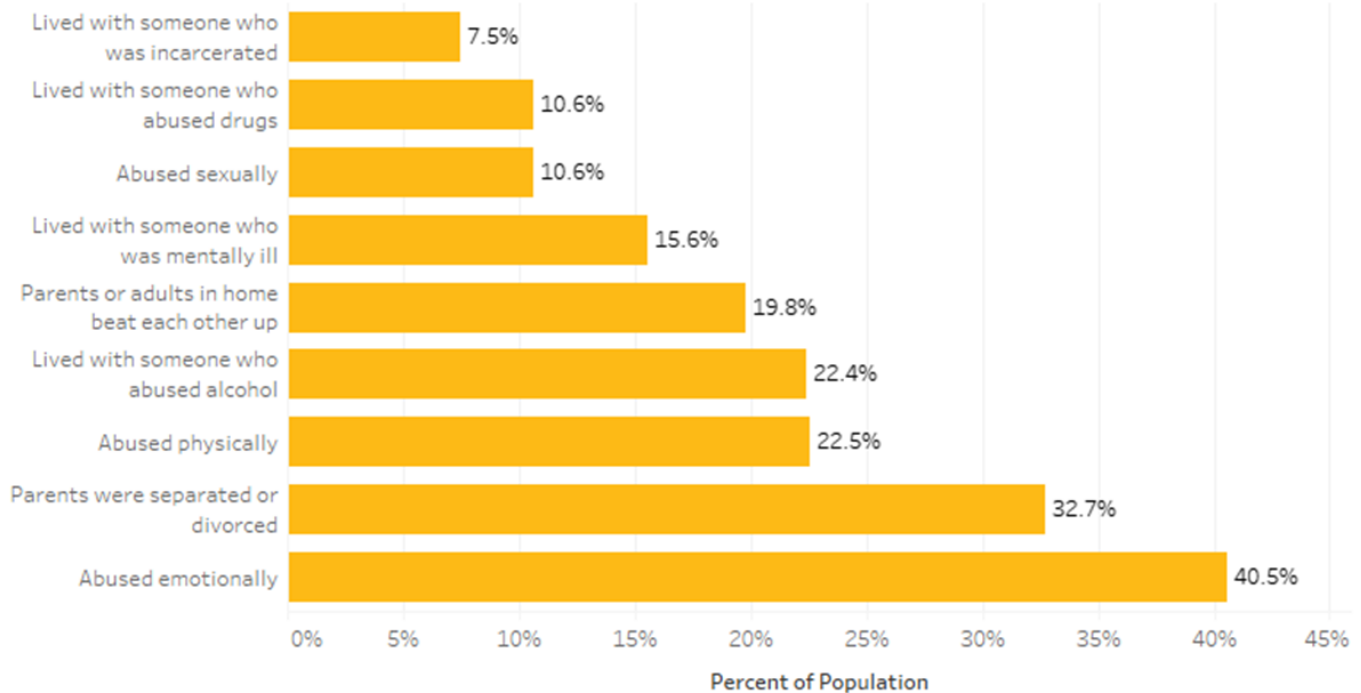
Local Statistics and Disparities



- In 2020, roughly 1 in 4 adults reported experiencing 4 or more ACEs.¹⁷
- The percent of adults in San Diego County who have experienced 4 or more ACEs has increased from 2015 to 2020.¹⁷
- From 2016-2019, about 15.6% of children in San Diego County experienced 2 or more ACEs.¹⁸

Adverse Childhood Experiences (ACEs) Descriptive Summary

Prevalence of Types of ACEs in Adults, San Diego County, 2015-2019



Source: Centers for Disease Control (CDC). The Behavioral Risk Factor Surveillance System (BRFSS) 2015, 2017, 2019.

Prepared by: County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit. August 2022.

- Emotional abuse (40.5%) was the most common ACE among adults in San Diego County.¹⁷
- 1 in 3 adults in San Diego County had separated or divorced parents before the age of 18.¹⁷
- Nearly 23% of adults in San Diego County experienced physical abuse before the age of 18.¹⁷
- 1 in 10 adults in San Diego County experienced sexual abuse in childhood.¹⁷
- Nearly 1 in 4 adults in San Diego County lived with someone who was a problem drinker or alcoholic during childhood.¹⁷

Preventing Adverse Childhood Experiences (ACEs)²

Adverse childhood experiences affect all communities across the United States. The good news is that ACEs are preventable. Creating and maintaining safe, stable, and nurturing relationships and environments for children and families can prevent ACEs and decrease the risk of adverse health and well-being outcomes associated with ACEs.

Prevention strategies include:

- *Strengthen economic support for families*
- *Promote family-friendly work policies*
 - Paid family leave
- *Promote social norms that protect against violence and adversity*
- *Models to enhance parenting efficacy, resilience, attachment, and family bonds*
 - High-quality child care
 - Early childhood home visitation
- *Raise awareness of ACEs and toxic stress*
 - Public education campaigns
- *Access to high-quality mental and physical healthcare*
- *Enable opportunities for stress-buffering activities*
 - Access to nature, mindfulness activities, physical activity, and sufficient and high-quality sleep
- *Cross-sector and sector-specific training in trauma-informed tools, approaches, and strategies for providers engaging with children and families*
- *Public health surveillance*
 - Surveillance can help to identify populations with greater risk of ACE exposure to target interventions
- *Screening for ACEs*
 - ACE screening can identify individuals who may be at increased risk of having a toxic stress response
 - Early detection improves outcomes related to toxic stress, can strengthen existing protective factors, and initiate early stress buffering interventions
- *Teaching and practicing stress-mitigation strategies*
 - Enhancing supportive relationships
 - Regular exercise
 - Access to nature
 - Sufficient and high-quality sleep
 - Eating balanced meals
 - Practicing mindfulness

Prevention Tools for Public Health Professionals: Cancer Critical Pathway

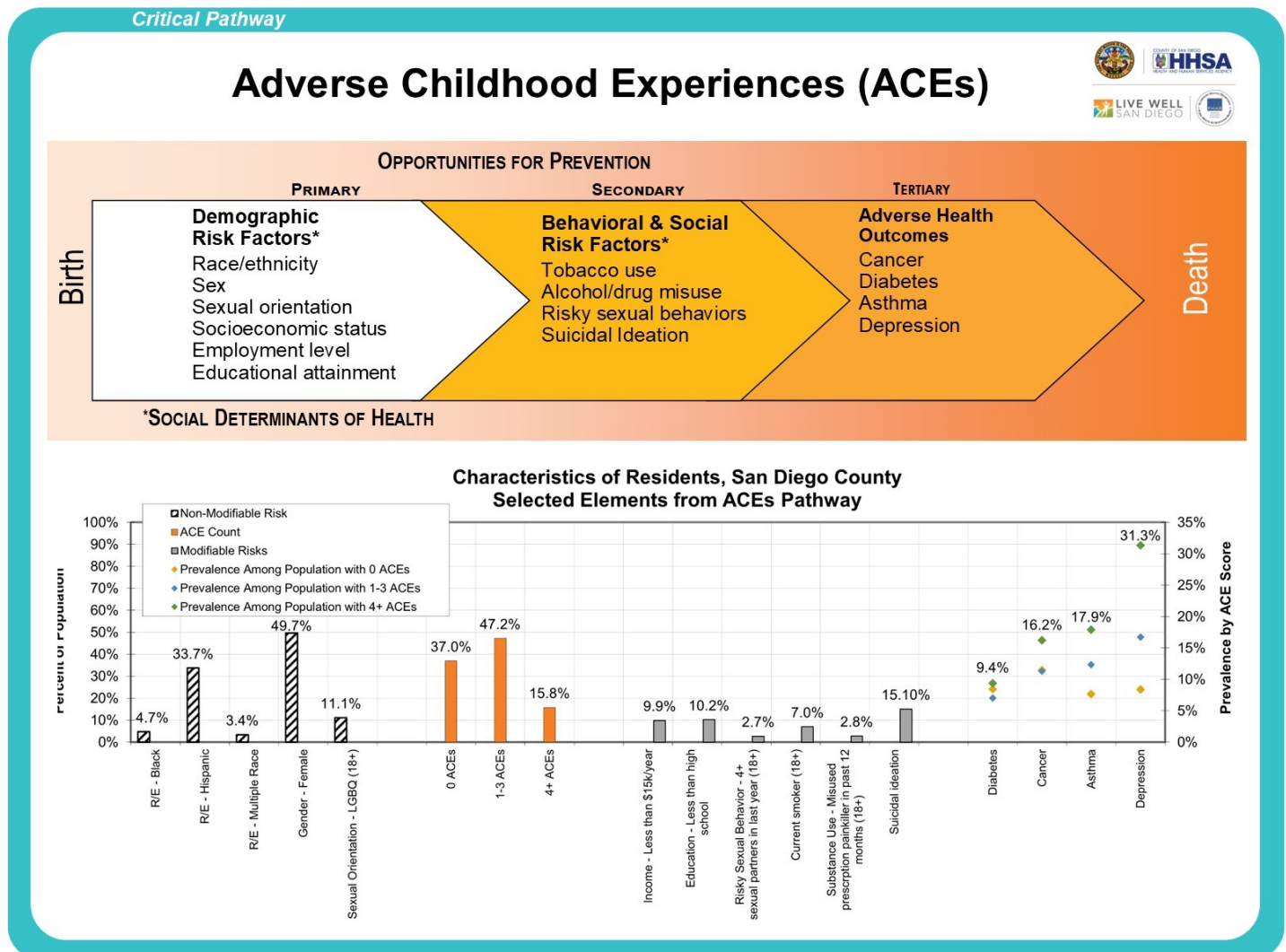
Public health professionals can help reduce ACEs by educating family and community members about the adverse health effects associated with ACEs. Understanding the risks of ACEs and creating policies and programs that address ACEs in families can help to reduce the overall burden of disease in the United States. To assist in community health efforts, an Adverse Childhood Experiences Critical Pathway was developed.

The *Adverse Childhood Experiences Critical Pathway* is a tool to be used in health promotion and disease prevention efforts. Its purpose is to identify populations at greater risk for ACEs, and to identify prevention and early intervention opportunities. The *Adverse Childhood Experiences Critical Pathway* displays a diagram of the populations at the highest risk for ACEs and intermediate (behavioral and social) outcomes associated with ACE exposure. Risk factors are marked as non-modifiable (black striped bars), such as race/ethnicity or sex and modifiable (solid-colored bars), such as alcohol and drug misuse.

Beneath the risk factors diagram is a data grid describing the San Diego resident population in relation to selected elements of the pathway. The data grid is designed to assist in quick identification of opportunities for interventions that might have a high impact on a particular disease. The data for non-modifiable and modifiable risks represent all San Diegans, not only those with a particular disease. The left axis (bar) indicates the percent of the population with a known risk factor or intermediate outcome. The right axis (diamond) indicates the prevalence of the specified disease by ACE count. The data are described fully in the complete version of the Critical Pathways.¹⁹

In addition, the Community Health Statistics Unit website (www.SDHealthStatistics.com) provides detailed demographic, health and facility data including maps of geographically formatted health data. Also available are links to other County data sources and state and national sites of interest. For further assistance with data or interpretation, please contact the Community Health Statistics Unit.

ACEs Critical Pathway to Disease



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