



Adverse Childhood Experiences

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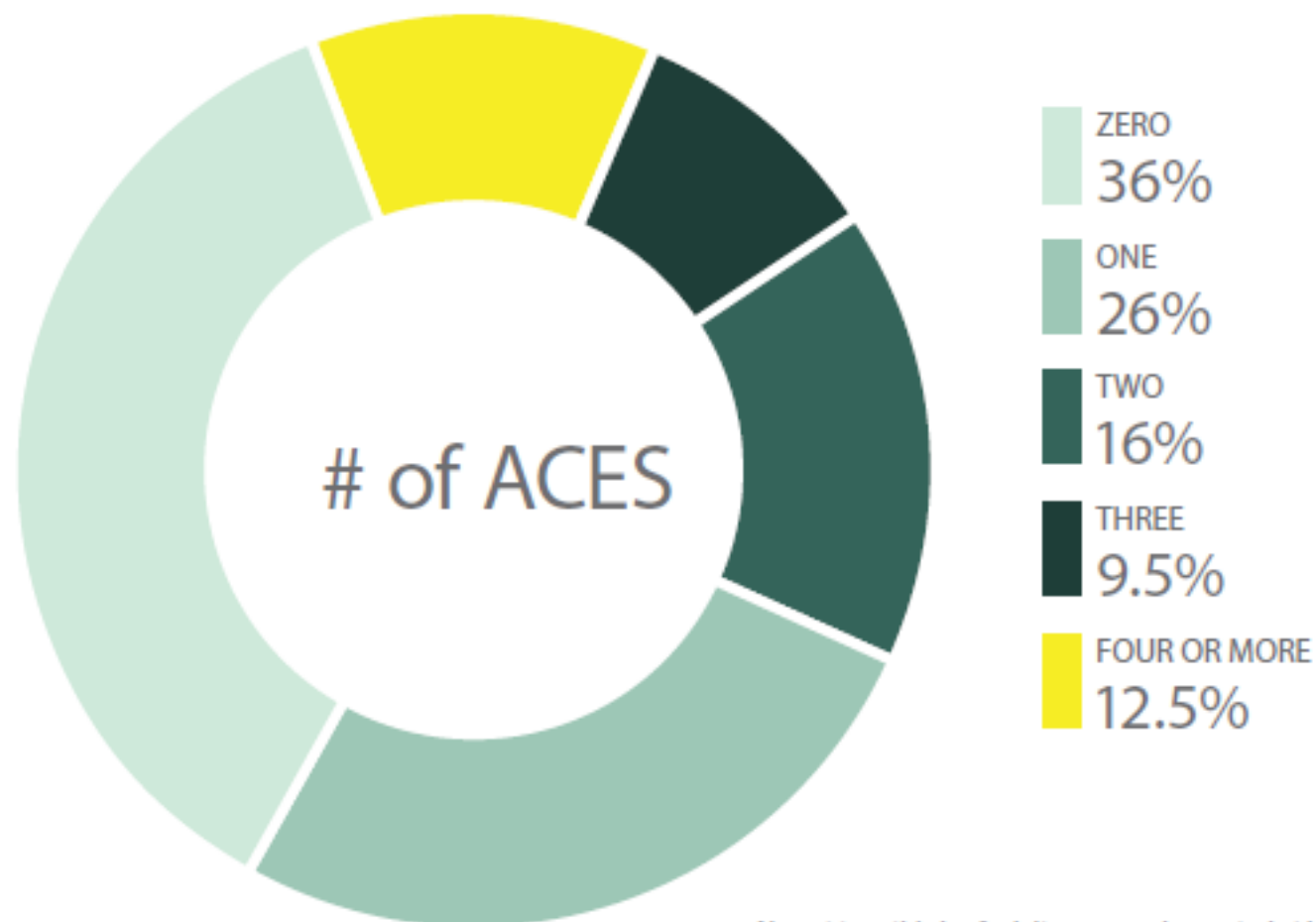


SEED

Stress Early Experience & Development
Research Center

the
ACE
adverse childhood experience
study

HOW COMMON ARE ACES?

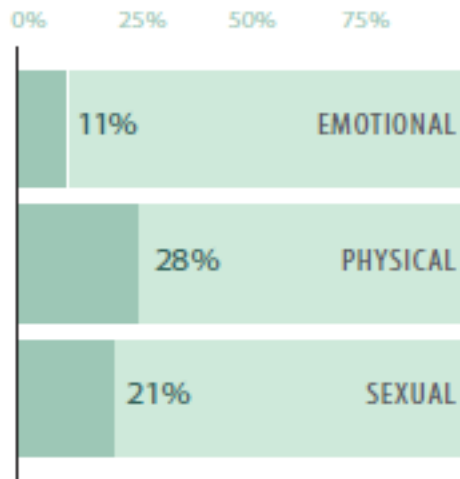


Almost two-thirds of adults surveyed reported at least one Adverse Childhood Experience – and the majority of respondents who reported at least one ACE reported more than one.

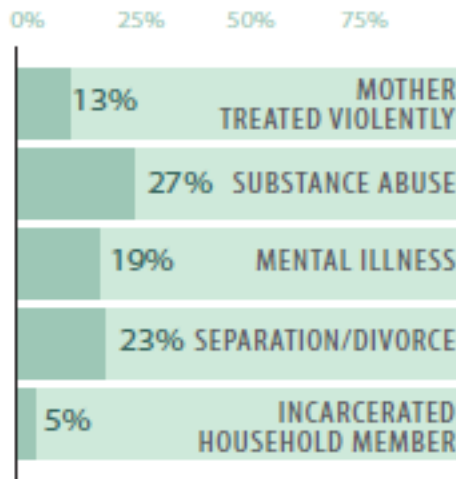
TYPES *of* ACES

The ACE study looked at three categories of adverse experience: **childhood abuse**, which included emotional, physical, and sexual abuse; **neglect**, including both physical and emotional neglect; and **household challenges**, which included growing up in a household where there was substance abuse, mental illness, violent treatment of a mother or stepmother, parental separation/divorce or had a member of the household go to prison. Respondents were given an **ACE score** between 0 and 10 based on how many of these 10 types of adverse experience to which they reported being exposed.

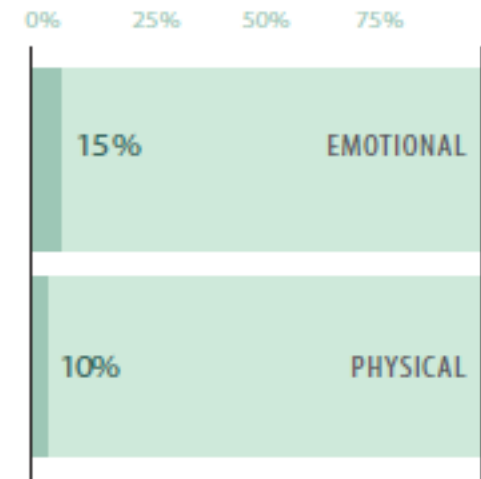
ABUSE



HOUSEHOLD CHALLENGES



NEGLECT



As ACEs increase, so does risk for:

- Alcoholism and alcohol abuse
- Chronic obstructive pulmonary disease
- Depression
- Fetal death
- Health-related quality of life
- Illicit drug use
- Ischemic heart disease
- Liver disease
- Poor work performance
- Financial stress
- Risk for intimate partner violence
- Multiple sexual partners
- Sexually transmitted diseases
- Smoking
- Suicide attempts
- Unintended pregnancies
- Early initiation of smoking
- Early initiation of sexual activity
- Adolescent pregnancy
- Risk for sexual violence
- Poor academic achievement

ACES CAN HAVE LASTING EFFECTS **ON** BEHAVIOR & HEALTH...

Simply put, our childhood experiences have a tremendous, lifelong impact on our health and the quality of our lives. The ACE Study showed dramatic links between adverse childhood experiences and risky behavior, psychological issues, serious illness and **the leading causes of death**.

The following charts compare how likely a person with 1, 2, 3, or 4 ACEs will experience specified behaviors than a person without ACEs.

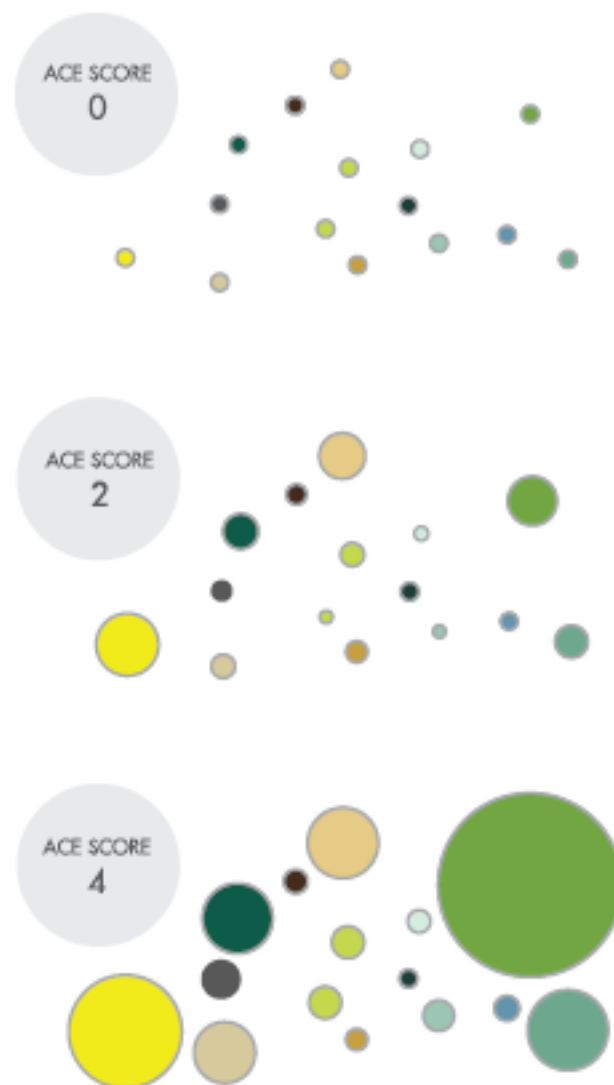
*Having an ACE score of zero does not imply an individual could not have other risk factors for these health behaviors/diseases.

PHYSICAL & MENTAL HEALTH

- SEVERE OBESITY
- DIABETES
- DEPRESSION
- SUICIDE ATTEMPTS
- STDs
- HEART DISEASE
- CANCER
- STROKE
- COPD
- BROKEN BONES

BEHAVIORS

- LACK OF PHYSICAL ACTIVITY
- SMOKING
- ALCOHOLISM
- DRUG USE
- MISSED WORK



Risk Factors' Effect on Life Expectancy

– Smoking	10 years ¹
– Obesity	6-7 years ^{2, 3}
– High blood pressure	5 years ⁴
– Diabetes	7-8 years ⁵

¹ Doll R, Peto R, Boreham J, Sutherland I. Mortality in relation to smoking: 50 years' observations on male British doctors. *BMJ* 2004; 328: 1519–27.

² Haslam DW, James WP (2005). "Obesity". *Lancet* 366 (9492): 1197–209.

³ Nedcom, A, Barendregt, JJ, Willekens, F et al. (January 2003). ["Obesity in adulthood and its consequences for life expectancy: A life-table analysis"](#) (PDF). *Annals of Internal Medicine* 138 (1): 24–32.

⁴ Franco OH, Peeters A, Bonneux L, de Laet C. Hypertension. 2005 Aug;46(2):280-6.

⁵ Franco OH, Steyerberg EW, Hu FB, Mackenbach J, Nusselder W. Arch Intern Med. 2007 Jun 11;167(11):1145-51.

Risk Factors' Effect on Life Expectancy

– Smoking	10 years ¹
– Obesity	6-7 years ^{2, 3}
– High blood pressure	5 years ⁴
– Diabetes	7-8 years ⁵
– Childhood Stress	20 years

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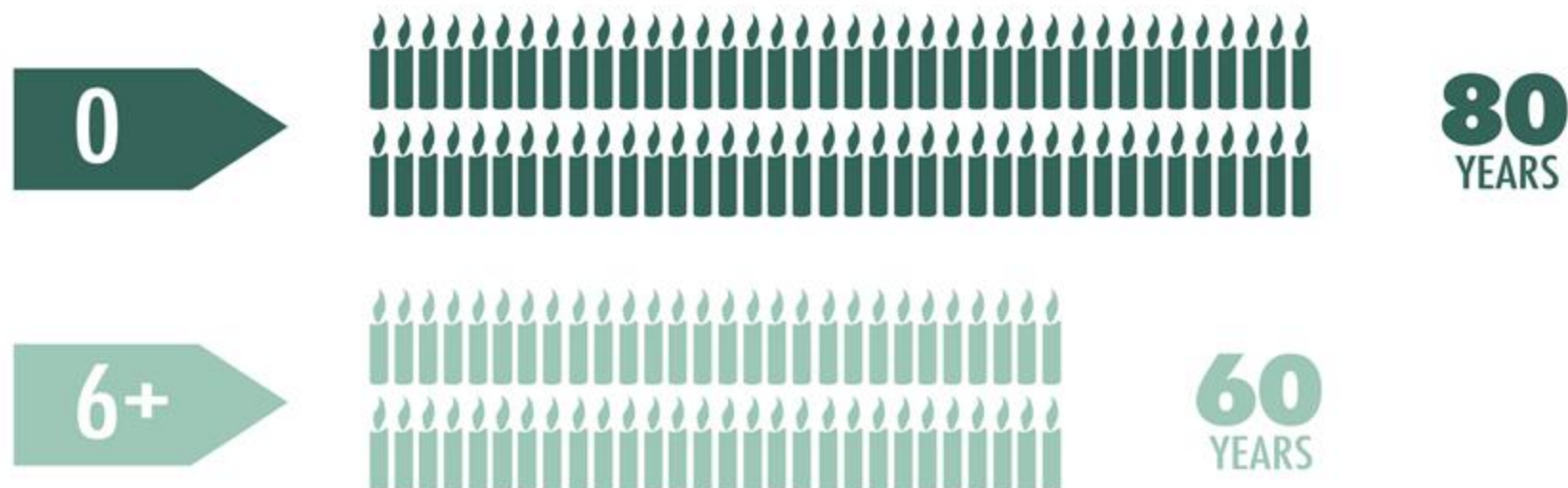
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LIFE EXPECTANCY

People with six or more ACEs died nearly **20 years earlier on average** than those without ACEs.

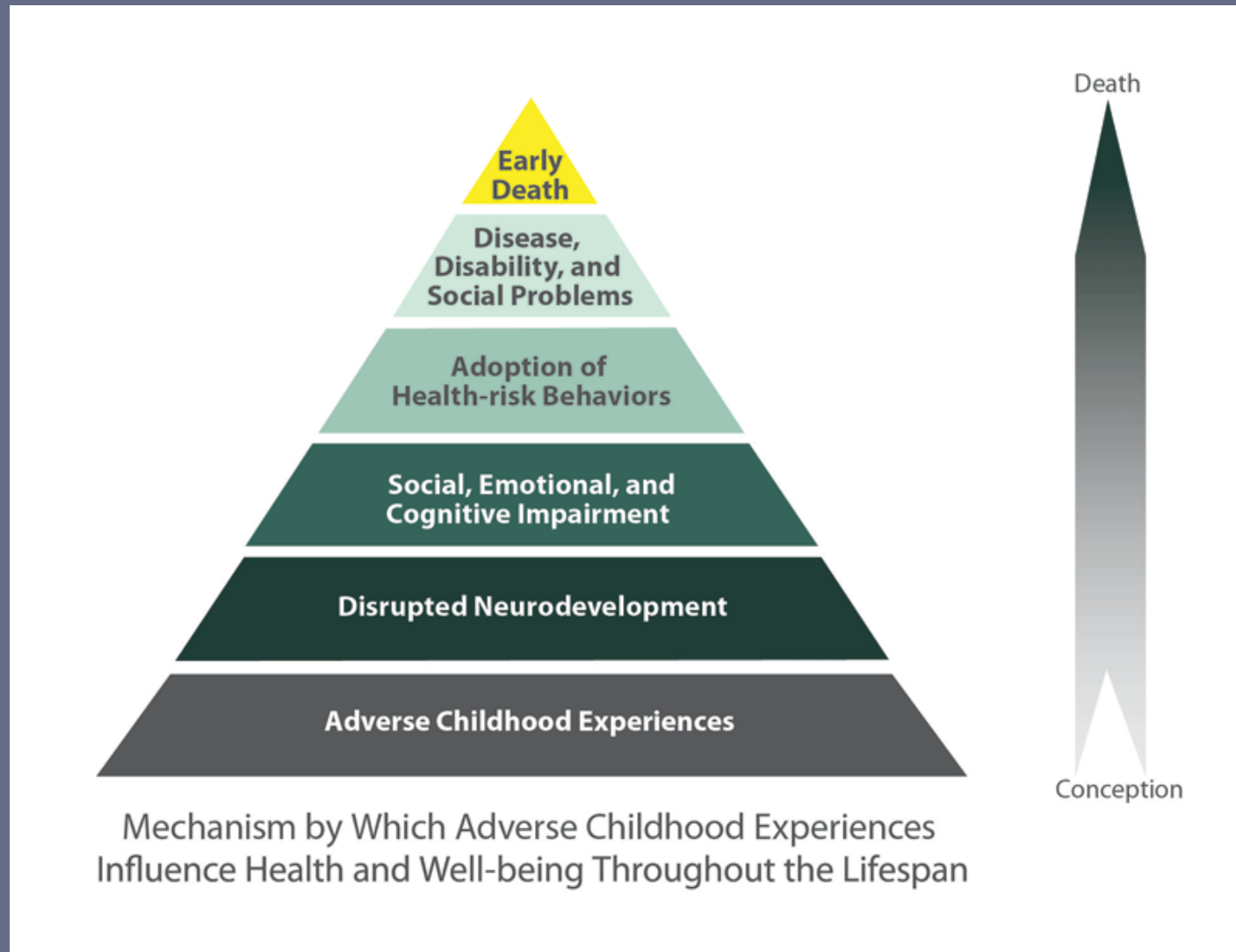


ECONOMIC TOLL

The Centers for Disease Control and Prevention (CDC) estimates the lifetime costs associated with child maltreatment at **\$124 billion**.

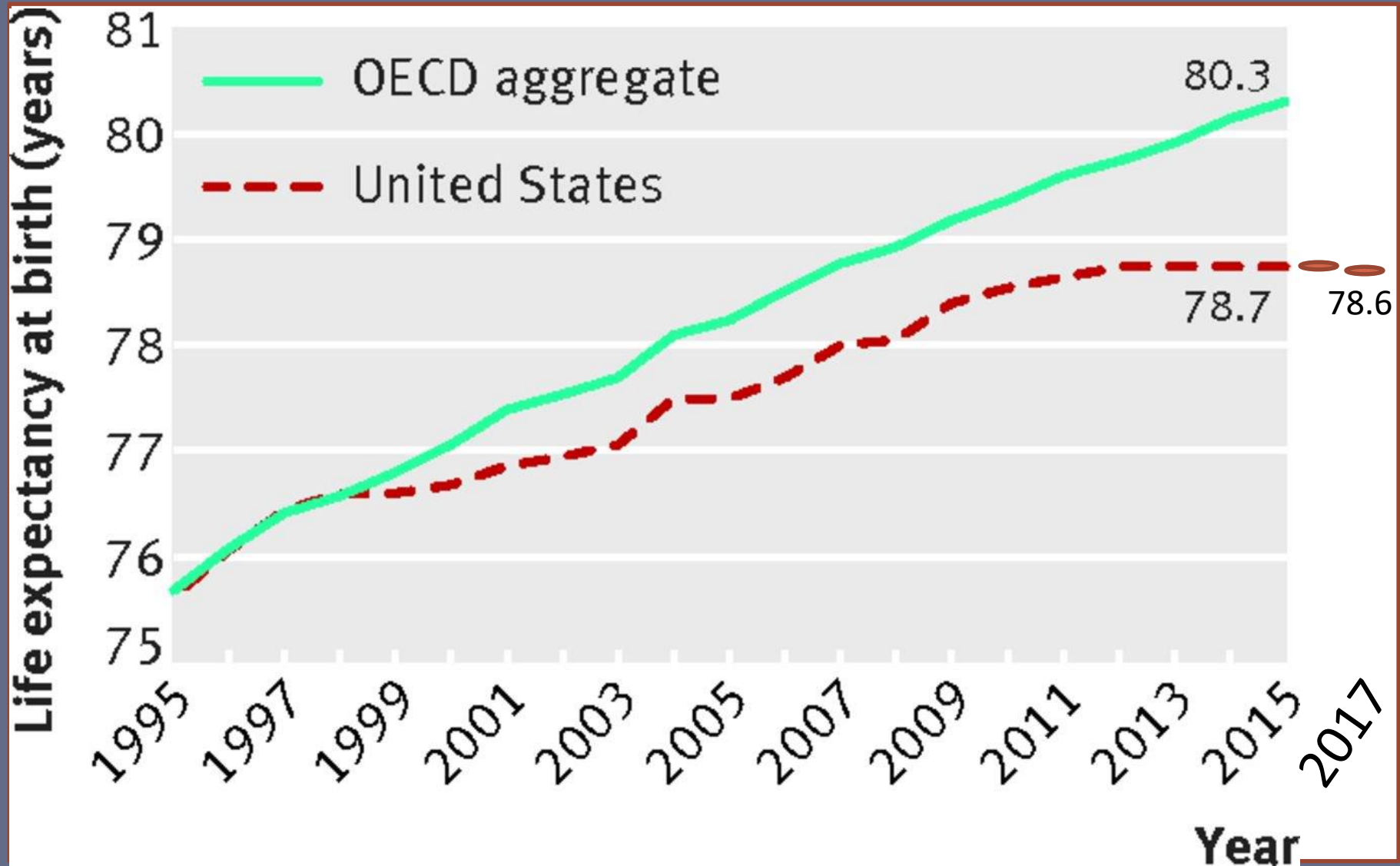


Childhood Stress Effects: Evidence from the ACE Study



For more information: <http://www.cdc.gov/ace/>

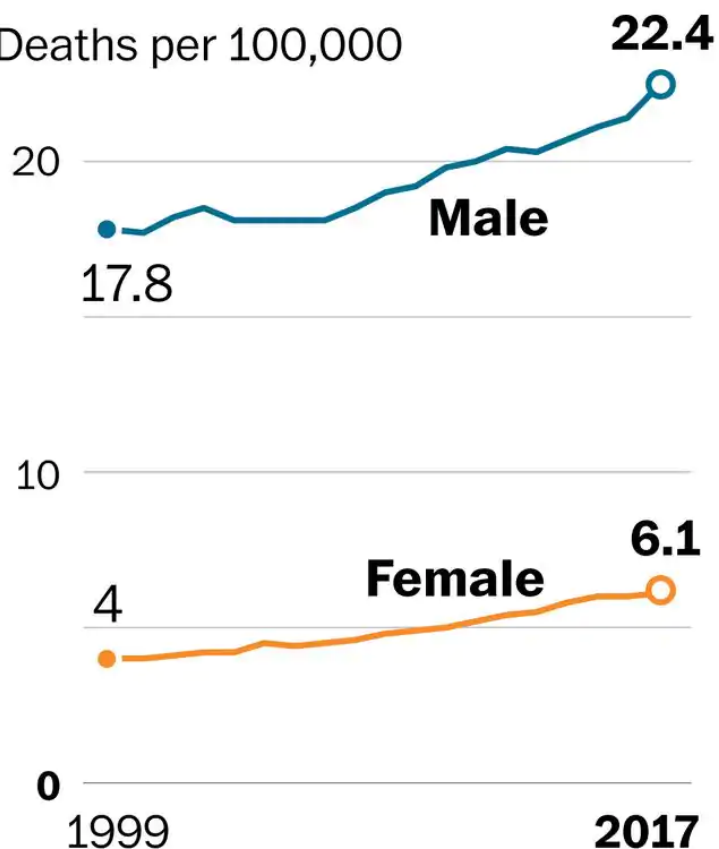
US Life Expectancy: 43rd and Declining



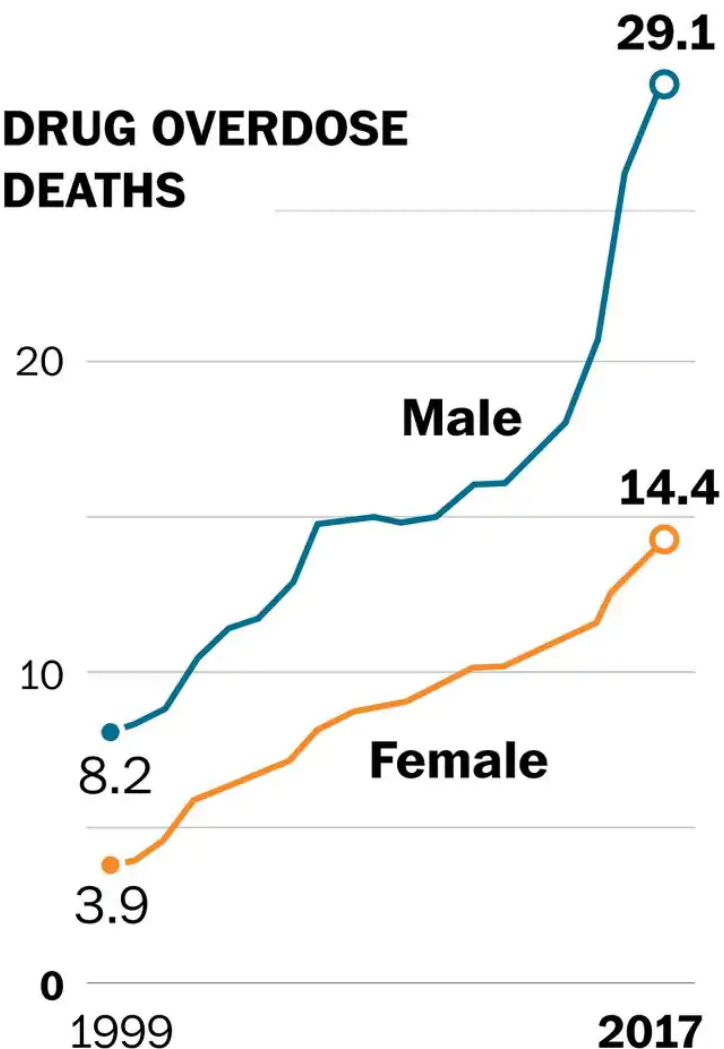
Rates of suicide and drug overdoses have continued to climb

SUICIDE

Deaths per 100,000



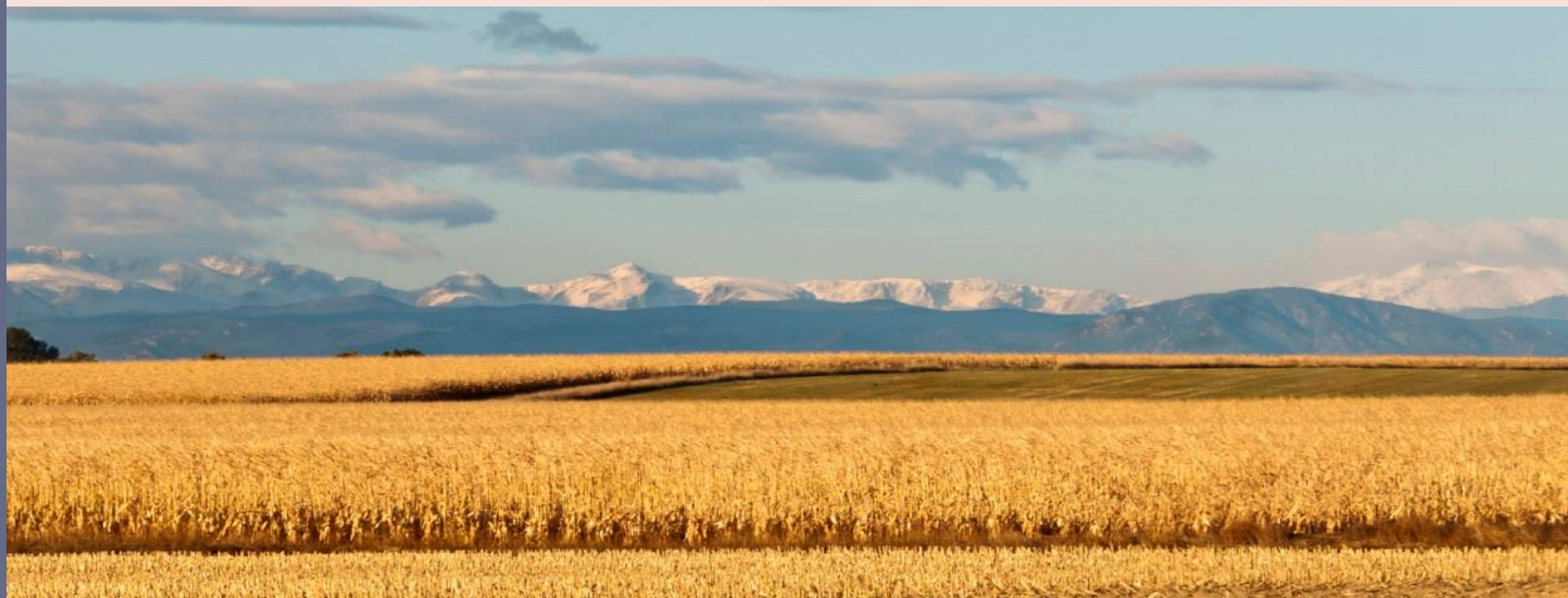
DRUG OVERDOSE DEATHS



Source: Centers for Disease Control and Prevention

THE WASHINGTON POST

Parental History of Adversity and Child Well-Being: Insights from Colorado



Sarah Enos Watamura, Ph.D. & Samantha M. Brown, Ph.D.
University of Denver



*Supported by The Ben & Lucy Ana Walton Fund
of the Walton Family Foundation*

<https://dcfs.my.salesforce.com/sfc/p/#410000012srR/a/410000000yp3/6qy0RIGU00pw1a10kBBPOB.1UBGb2Z7XycNOV4XZUqk>

Original ACE Score

Item type	Score
Verbal abuse, OR threat of physical abuse to child	1
Physical abuse of child	1
Sexual abuse of child	1
Lack of supportive, loving environment	1
Neglect of child	1
Parents ever separated or divorced	1
Mother/stepmother physically abused	1
Household member substance abuse	1
Household member mental illness	1
Household member incarcerated	1
TOTAL POSSIBLE	10

BRFSS ACE Items by Type

(Experienced before age 18)

Item Type	Items	Score
Abuse		
Emotional abuse (verbal)	1	1
Physical abuse	1	1
Sexual abuse	3	1
Household Dysfunction		
Parents ever separated or divorced	1	1
Household domestic violence	1	1
Household member substance abuse	2	1
Household member mental illness	1	1
Household member incarcerated	1	1
TOTAL	11	8

Table 1. BRFSS ACE Items by Type (Experienced before age 18).

11 BRFSS ACE ITEMS (Max Ace Score of 8)

- 1) Did you live with anyone who was depressed, mentally ill, or suicidal?
- 2) Did you live with anyone who was a problem drinker or alcoholic?
- 3) Did you live with anyone who used illegal street drugs or who abused prescription medications?
- 4) Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?
- 5) Were your parents separated or divorced?
- 6) How often did your parents or adults in your home ever slap, hit, kick, punch or beat each other up?
- 7) Before age 18, how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? Do not include spanking.
- 8) How often did a parent or adult in your home ever swear at you, insult you, or put you down?
- 9) How often did anyone at least 5 years older than you or an adult, ever touch you sexually?
- 10) How often did anyone at least 5 years older than you or an adult, try to make you touch sexually?
- 11) How often did anyone at least 5 years older than you or an adult, force you to have sex?

% of Adult Coloradans with Each ACE Score

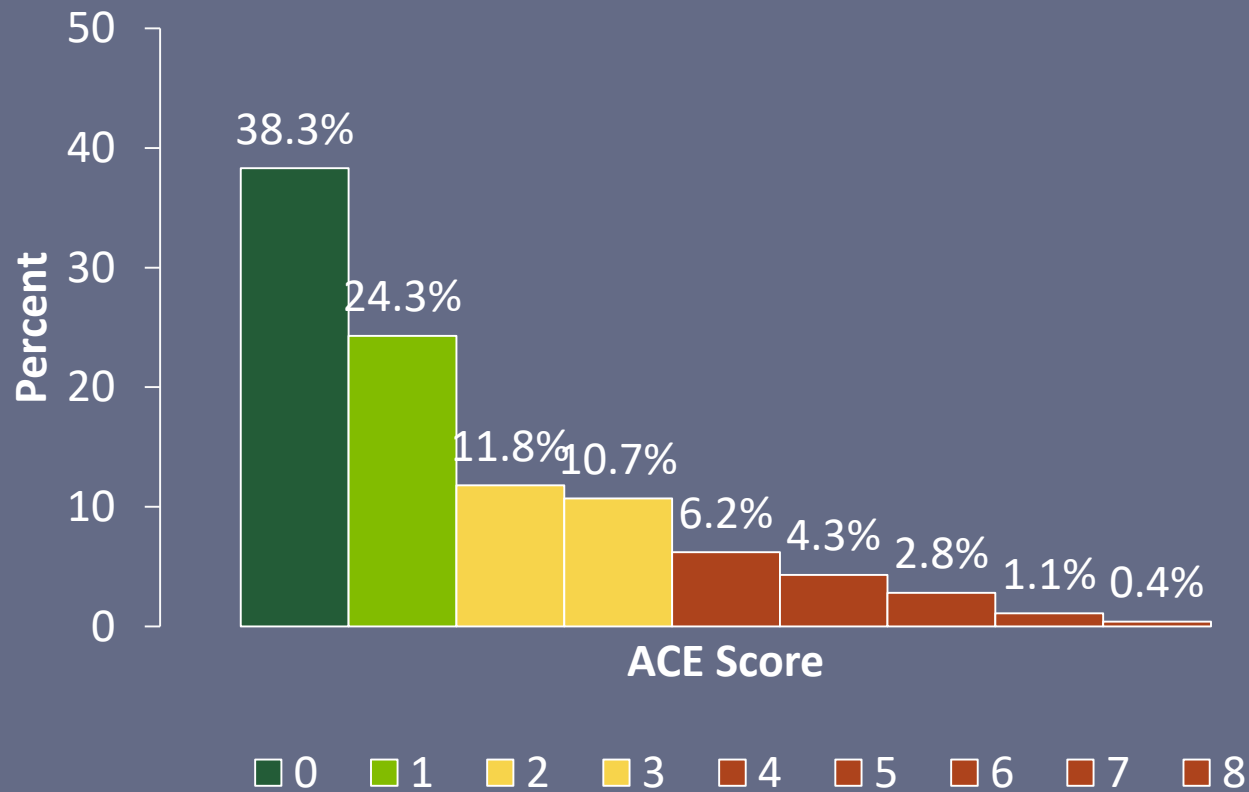
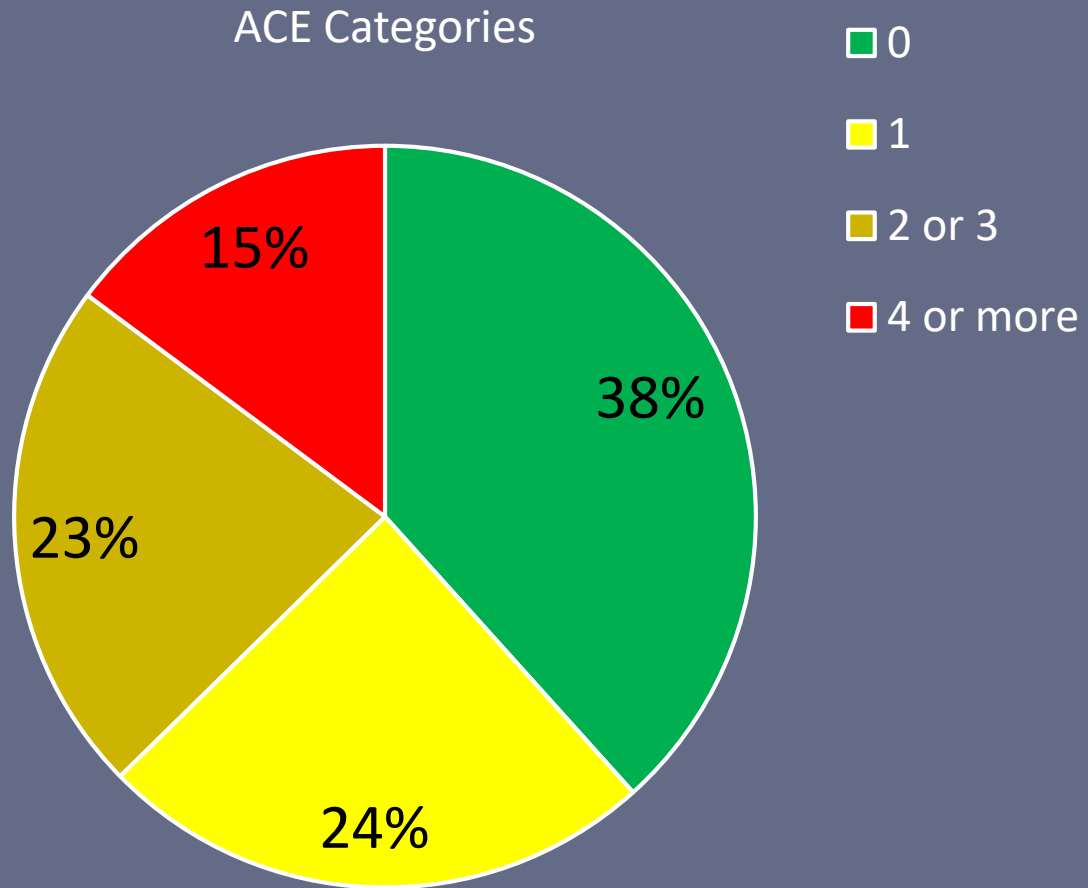
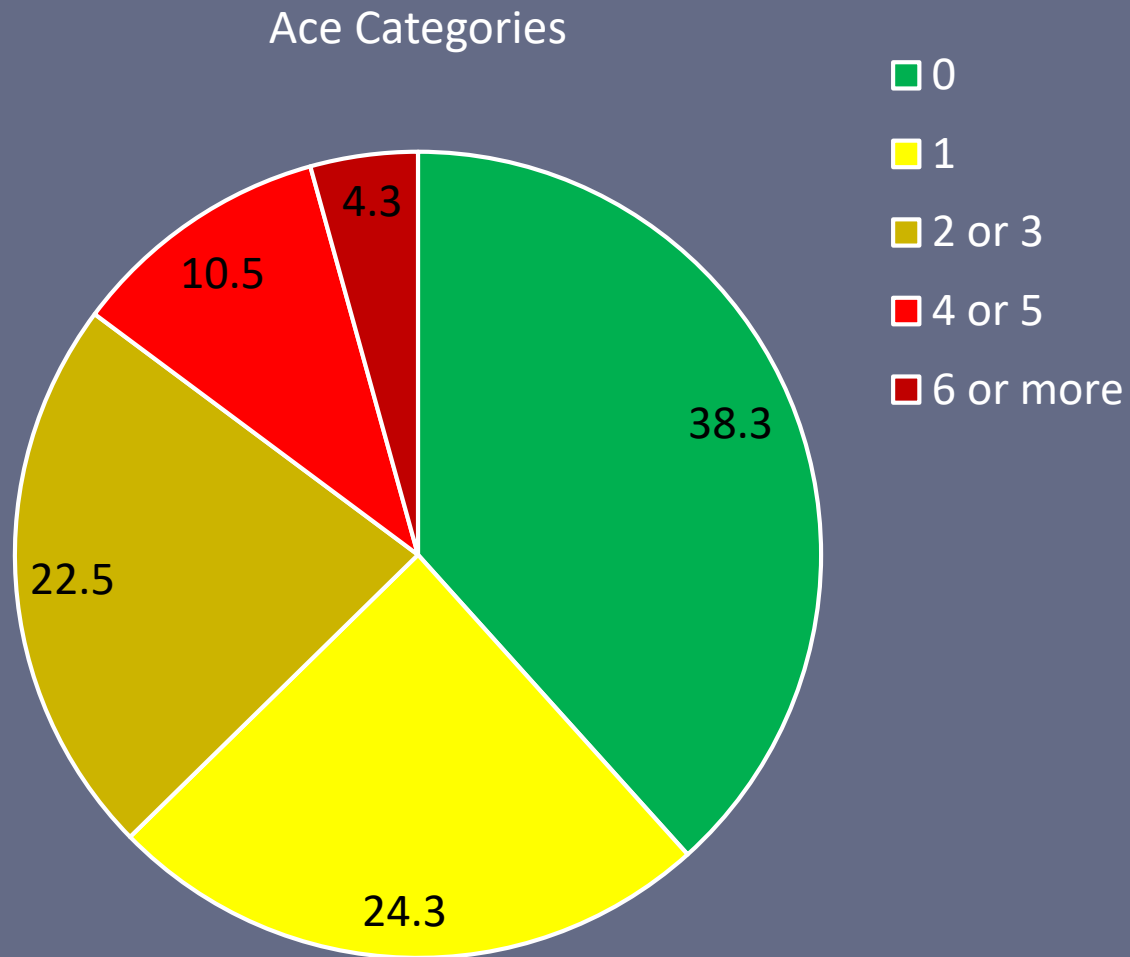


Figure 3. Percent of Adult Coloradans with Each ACE Score

% of Adult Coloradans by ACE Category



% of Adult Coloradans by ACE Category



Percent of Adult Coloradans Reporting Each Type of ACE

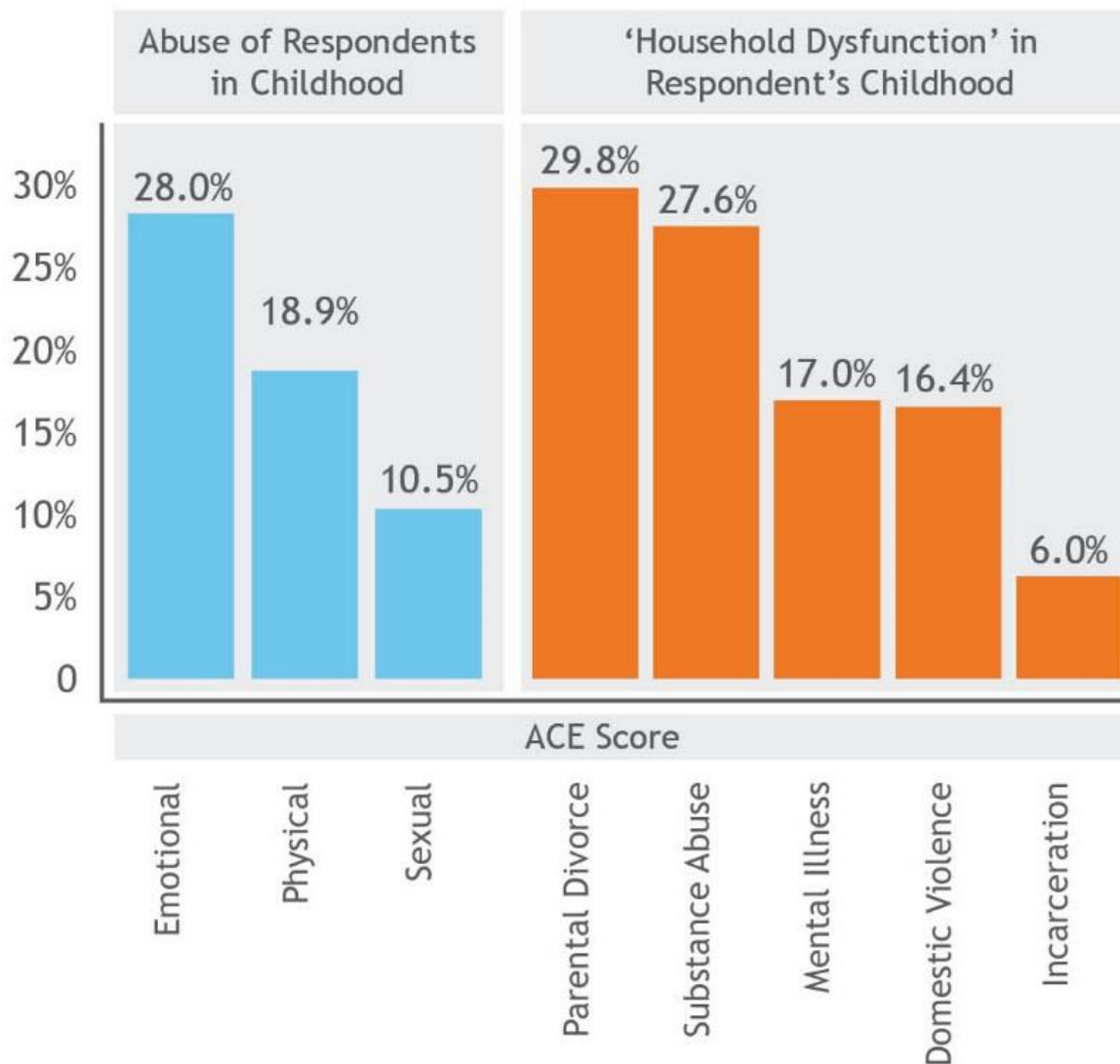
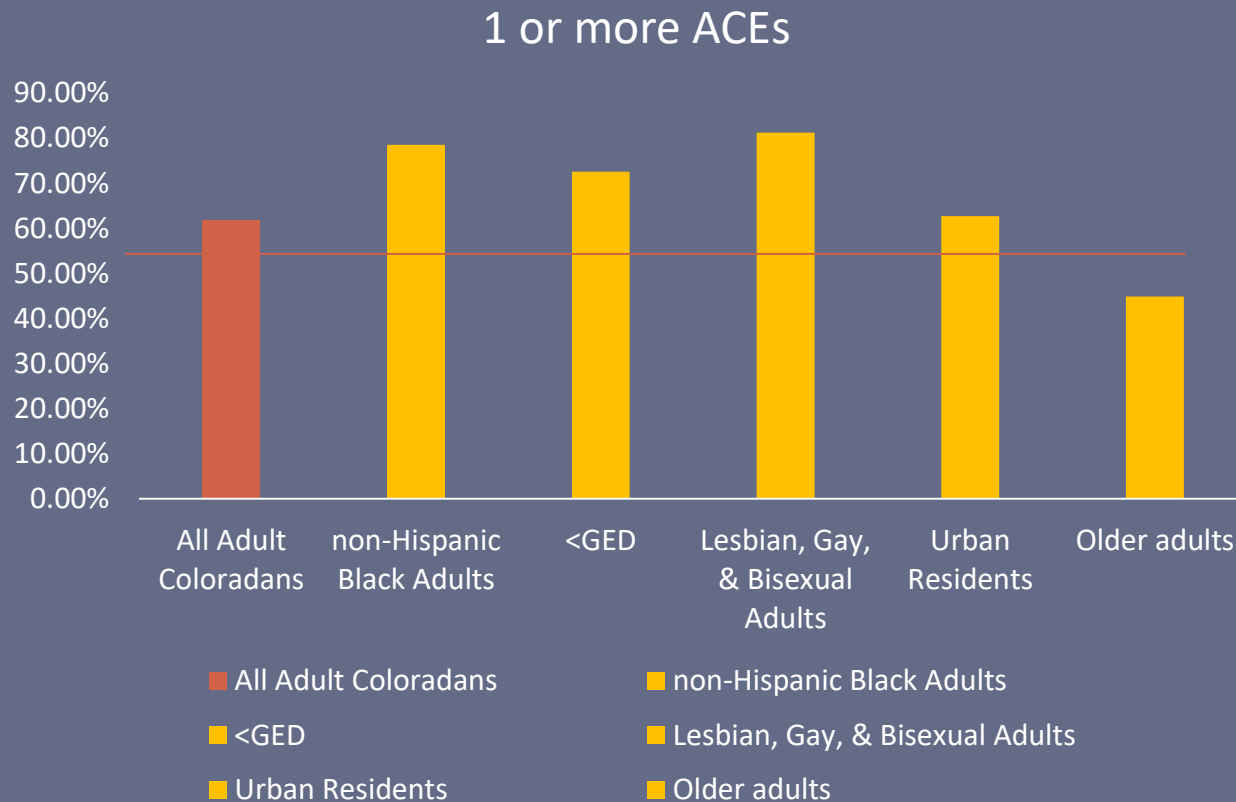


Figure 4. Percent of Adult Coloradans Reporting Each Type of ACE

ACEs Prevalence and Demographic Groups



- Females also had a higher prevalence of four or more ACEs (17.4%)

Odds of Chronic Health Conditions by ACE Score

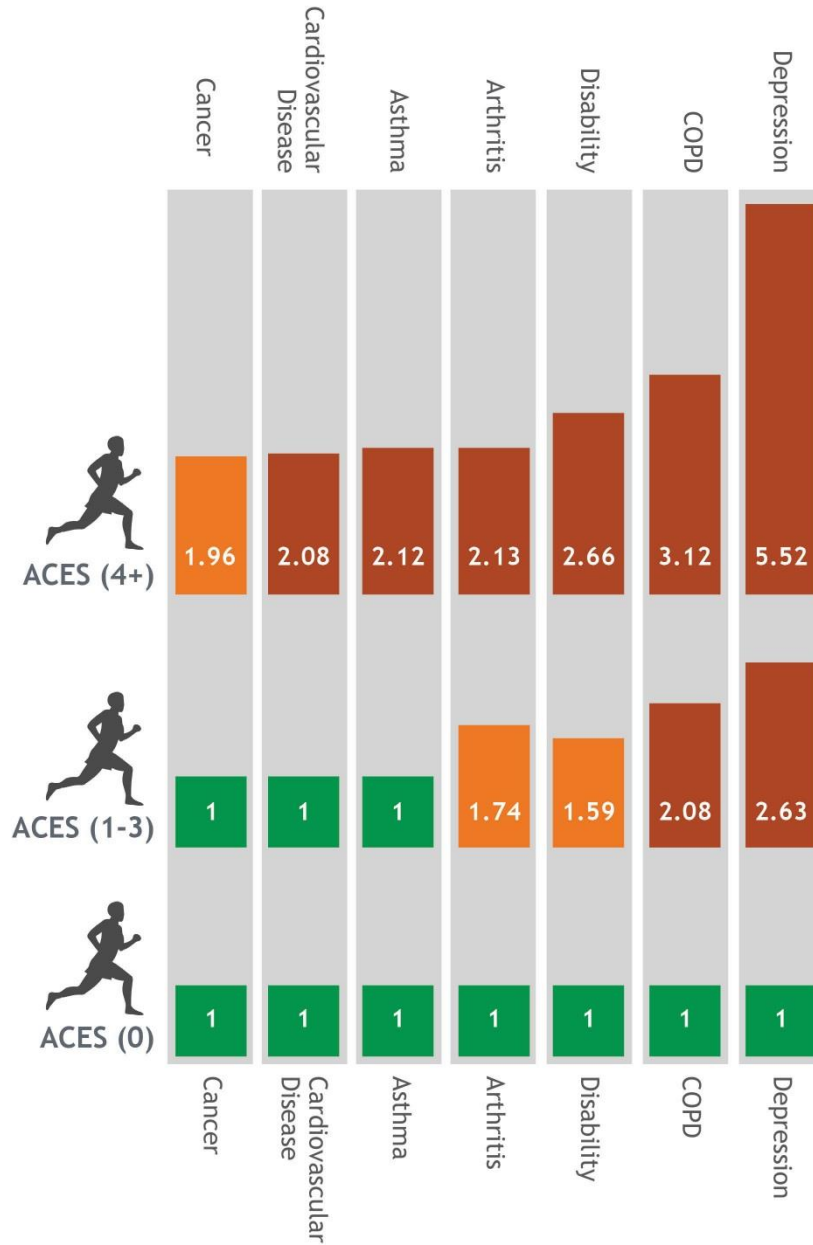
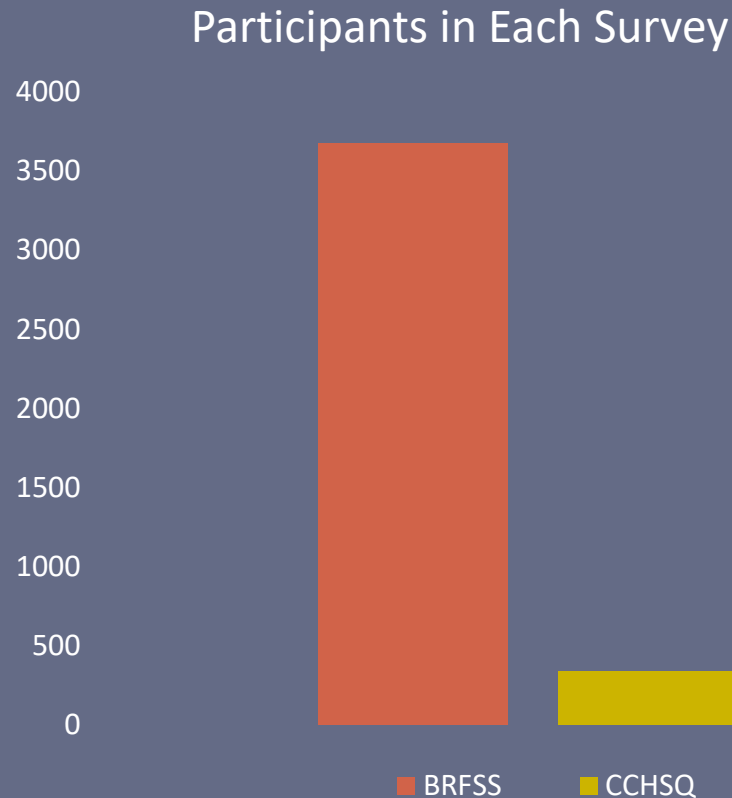


Figure 5. Odds of Chronic Health Conditions by ACE Score, controlling respondent age, sex, race, and educational level and using population weights.

Pairing the BRFSS ACE Module & the Colorado Child Health Survey Questionnaire



Conceptual Model of Data Origin



Figure 7. Conceptual Model of Data Origin

Odds of Exposure to Marijuana Products and Use in the Home by Parental ACE Score

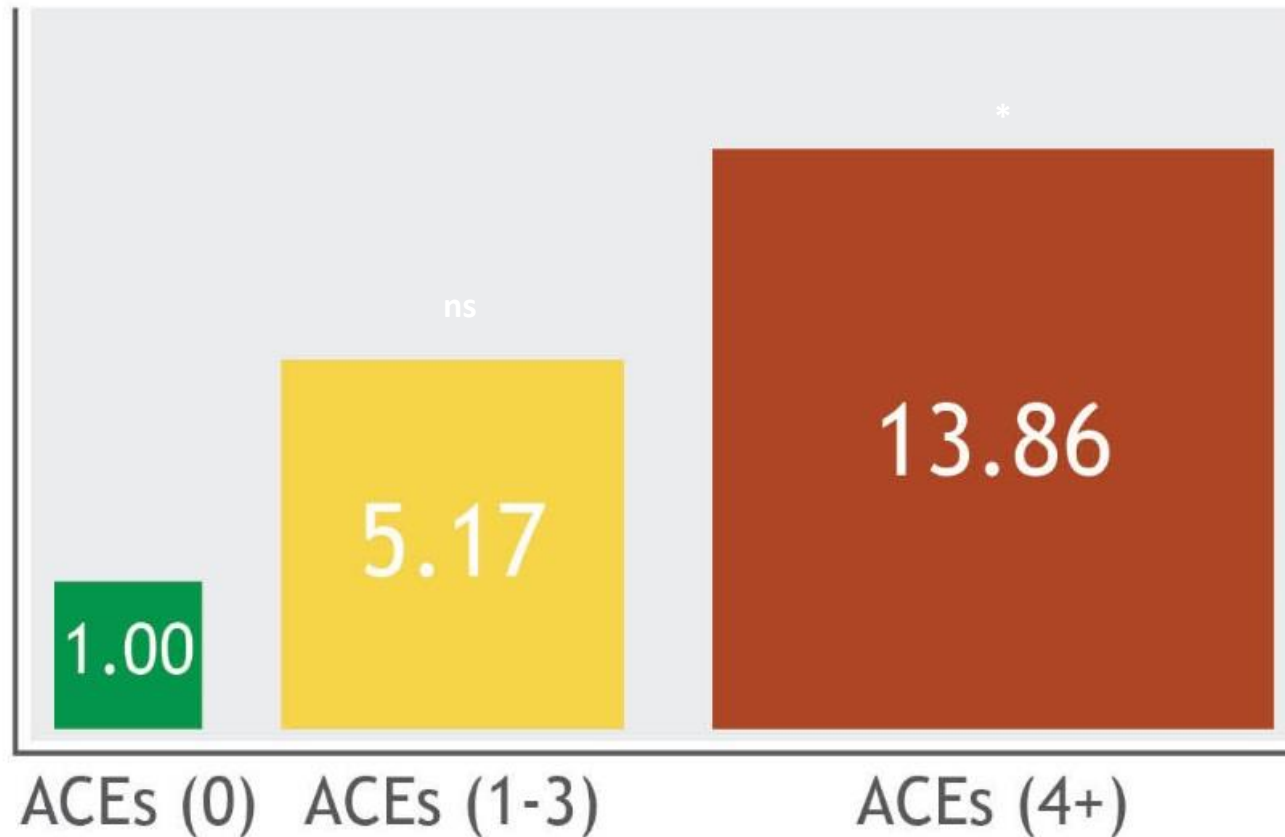


Figure 8. Odds of Exposure to Marijuana Products and Use in the Home by Parental ACE Score, controlling for parent age and sex and child age and race. Note. Ns=non-significant, * $p < .05$.

Odds of Yelling or Spanking by ACE Score

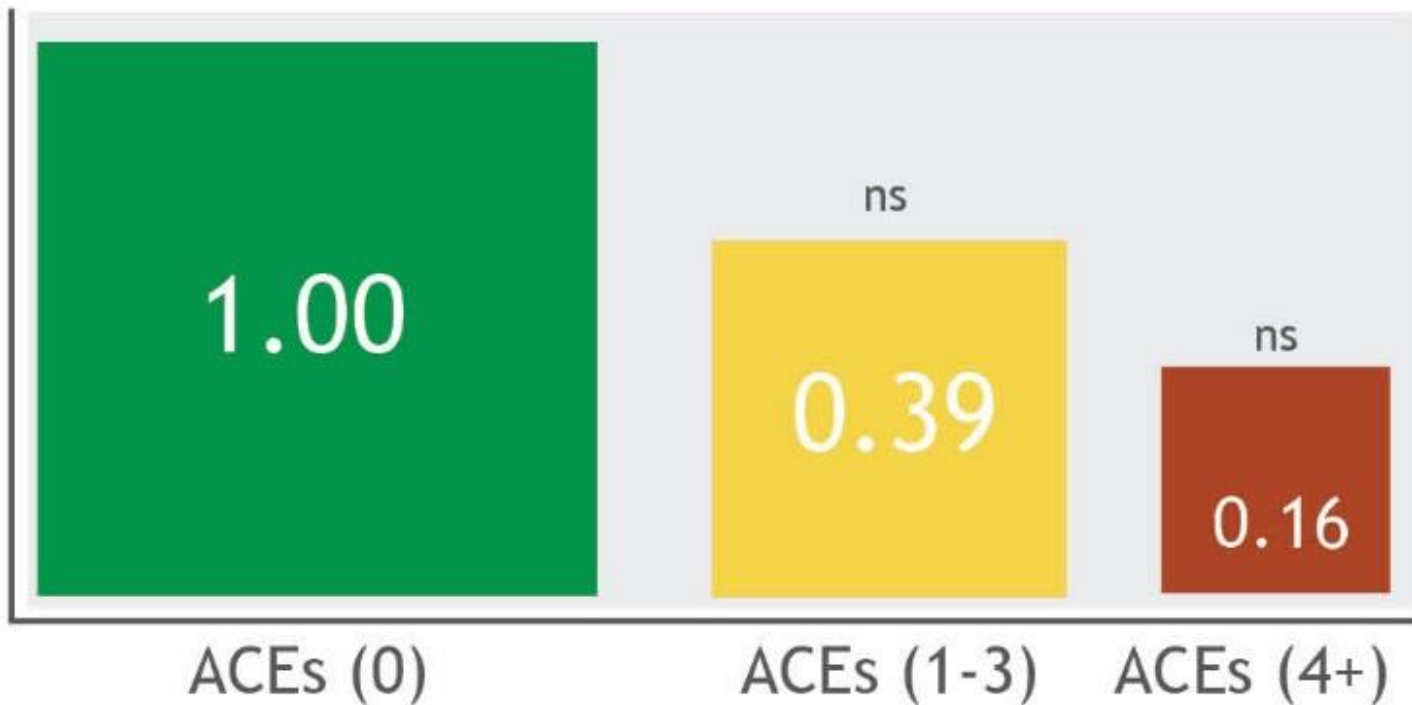


Figure 10. Odds of Yelling or Spanking by ACE Score, controlling for parent age and sex and child age and race.
Note. Ns = non-significant.

Percentage of Parents Reporting Child Needs Mental Health Services

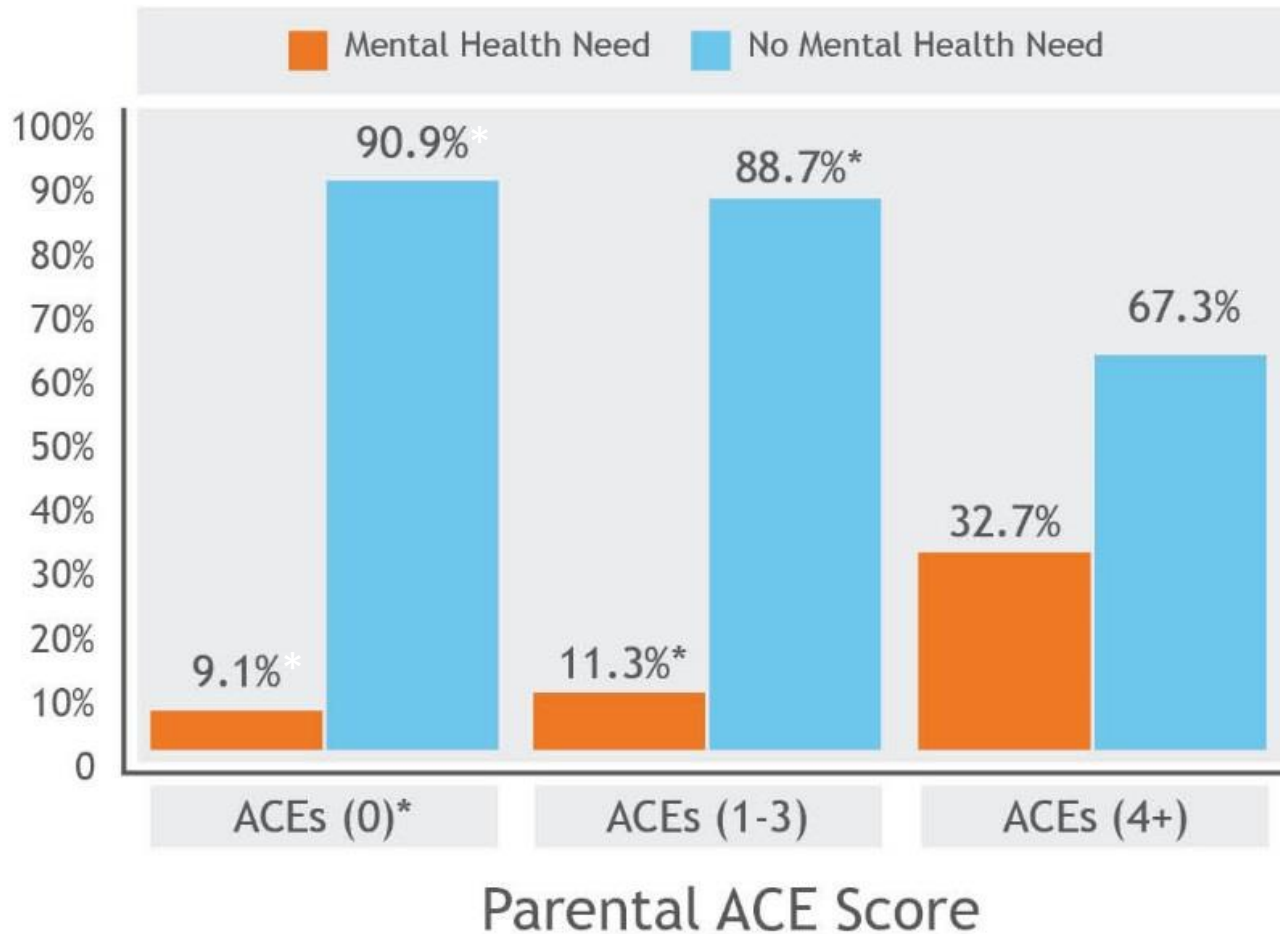


Figure 11. Percentage of Parents Reporting Child Needs Mental Health Services. *Note.* *statistically significant

Parent Reports Child Without Medical Coverage or Care

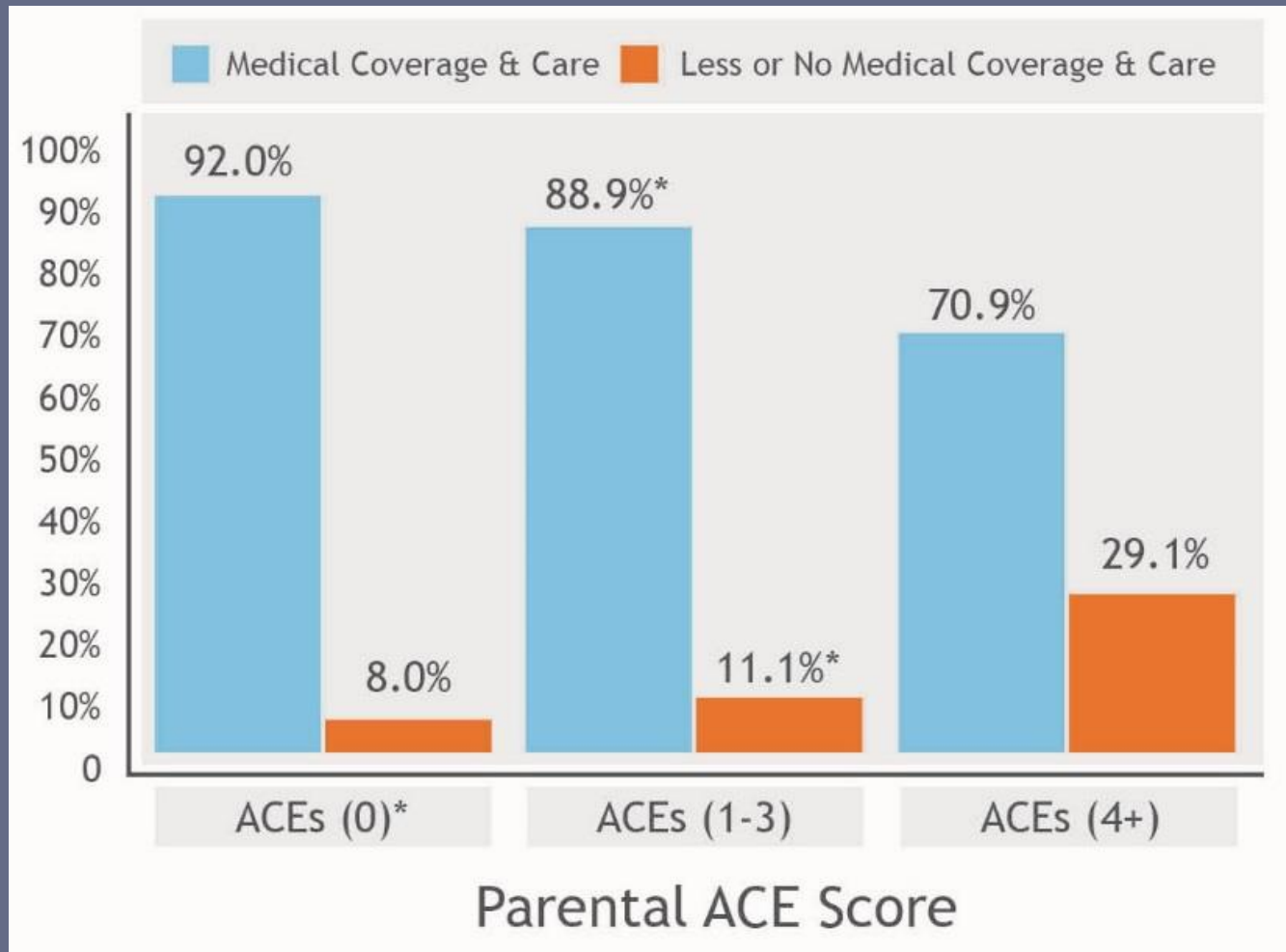


Figure 9. Percentage of Parents Reporting Children Without Medical Coverage of Care. *Note* *statistically significant

Parent Reports a Medical Professional Told them Their Child Had....

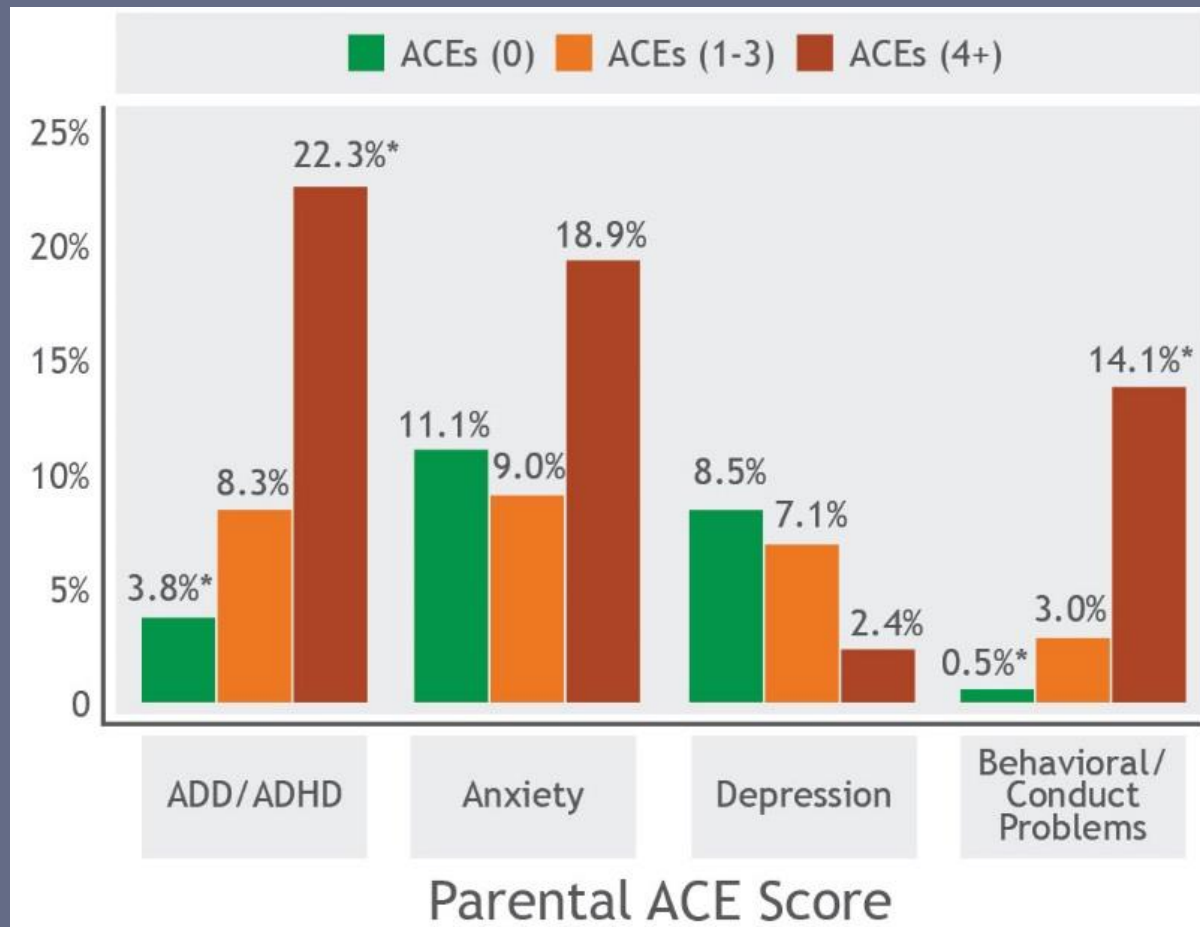


Figure 12. Percent of Parents Reporting Child Mental Health Diagnoses by ACE Score. *Note.* *statistically significant

Odds of ADD/ADHD and Externalizing Behavior Problems by Parental ACE

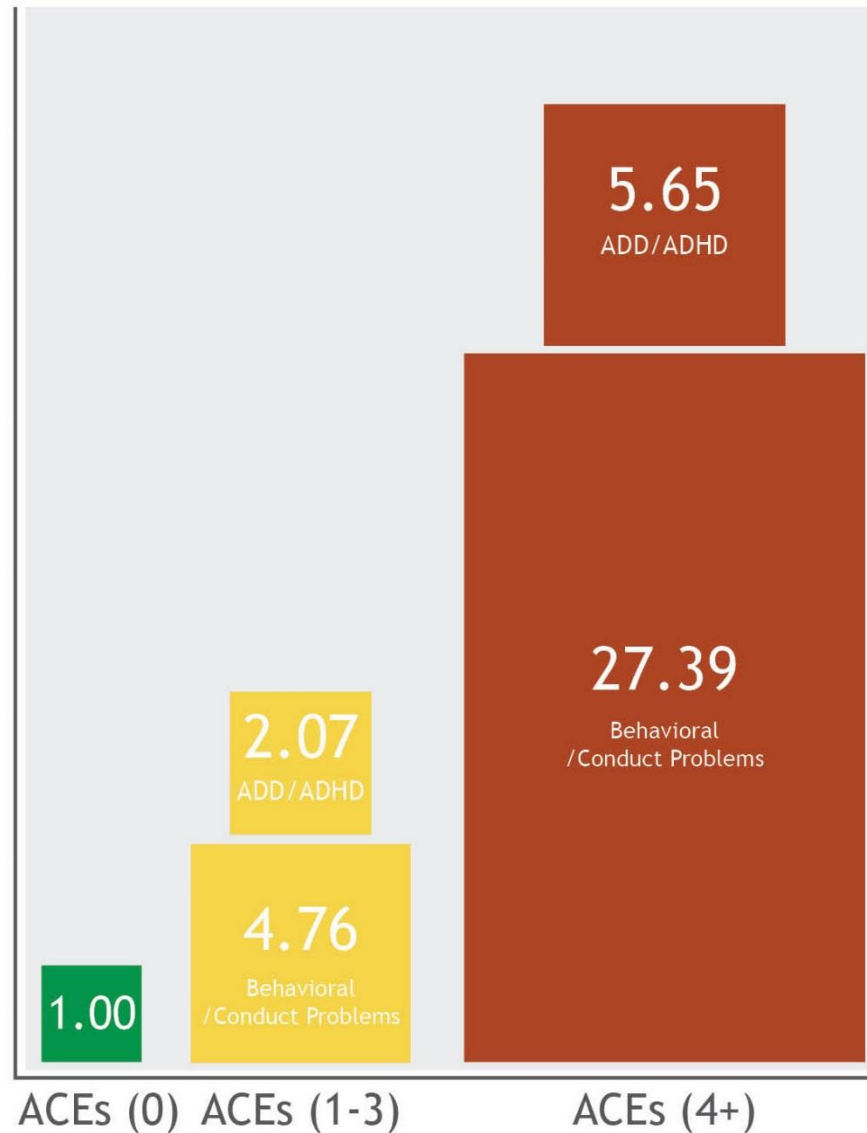


Figure 13. Odds of ADD/ADHD and Externalizing Behavior Problems by Parental ACE Score.

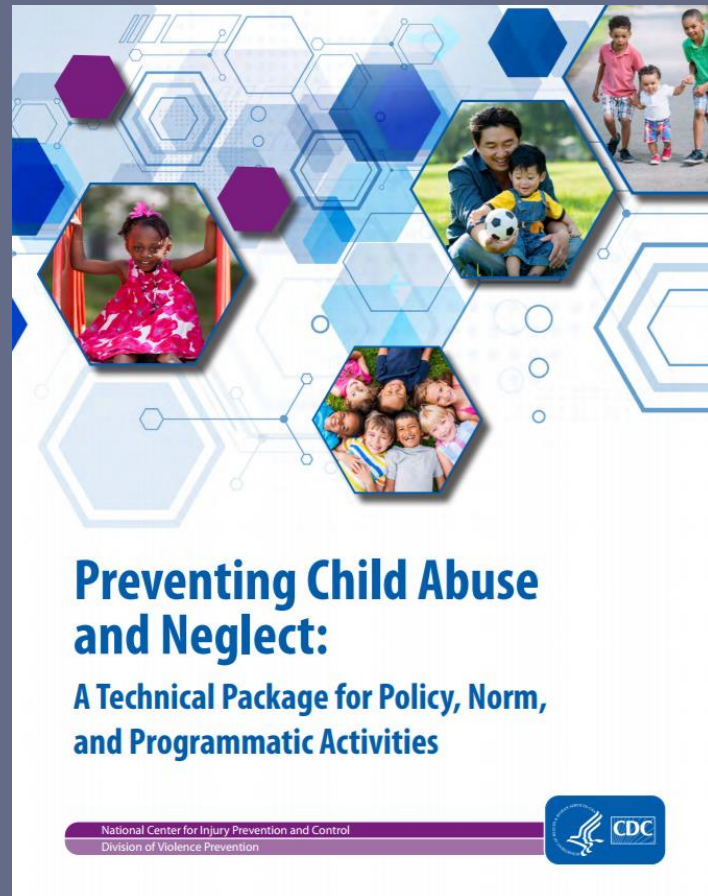
ACEs & Toxic Stress



Positive, Tolerable, Toxic

- **Positive Stress:** Moderate, short-lived increases in heart rate, blood pressure, and stress hormone levels
- **Tolerable Stress:** A physiological state that could potentially disrupt brain architecture but is buffered by supportive relationships that facilitate adaptive coping.
- **Toxic Stress:** Strong, frequent, and/or prolonged activation of the body's stress-response systems in the absence of the buffering protection of adult support.

First, Prevention



CDC Prevention Strategies

Economic supports for families

Changing social norms: support families & positive parenting

Provide early high quality care & education

Enhance parenting skills

Intervene to lessen harms & prevent future risk

Sector involvement

Monitoring & Evaluation

<https://www.cdc.gov/violenceprevention/pdf/CAN-Prevention-Technical-Package.pdf>

Questions?



Now, or later – I'm easy to find!

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