

# Going Upstream to Address The Opioid Crisis and Addictions: Adverse Childhood Experiences

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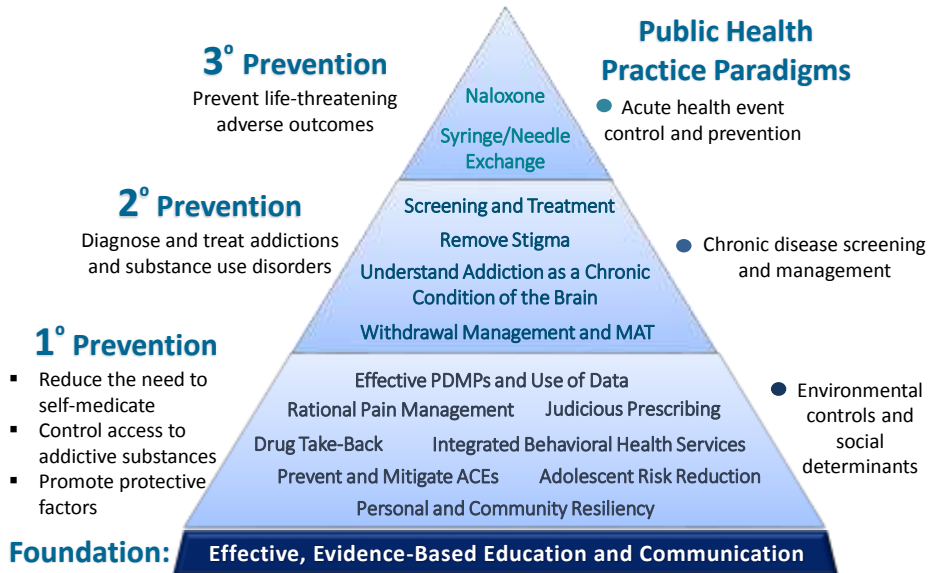


## Overview

- Public health approaches to substance misuse and addiction prevention
- Adverse childhood experiences (ACEs)
- How ACEs influence health and health outcomes
- What can be done

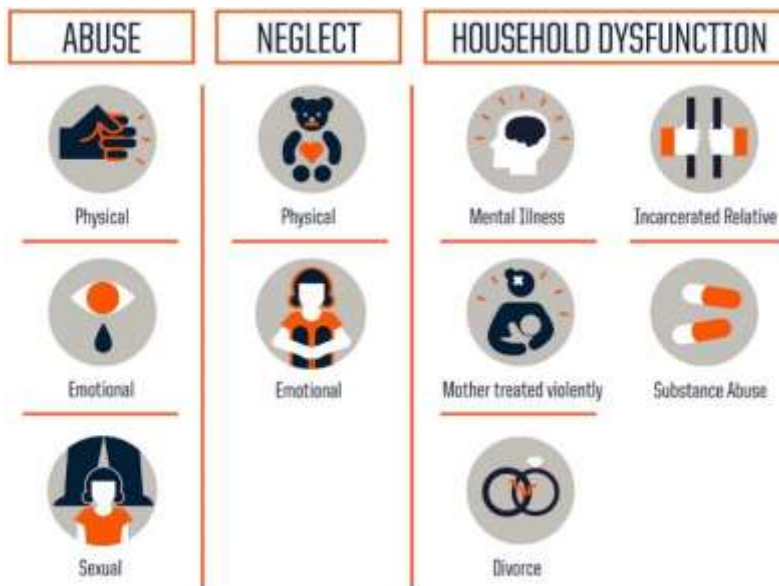
# Conceptual Framework

## Public Health Approaches to Preventing Substance Misuse and Addiction



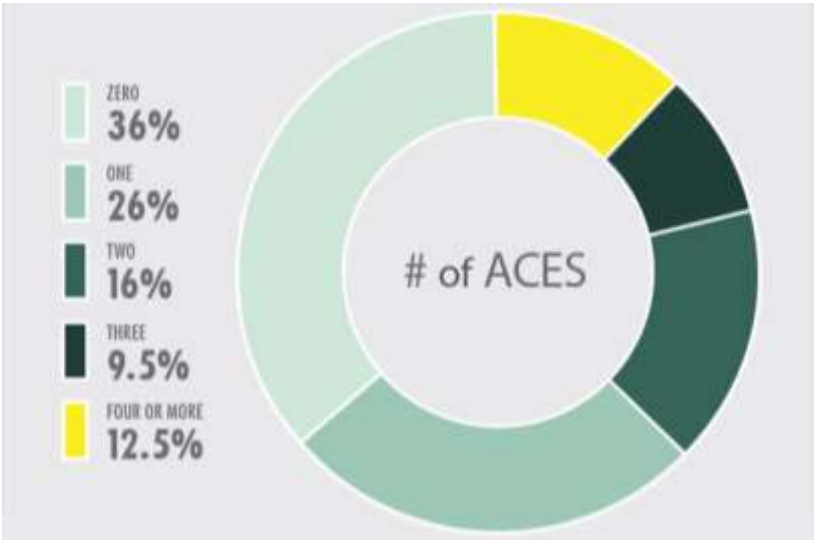
Adapted from: Butler JC. *J Public Health Pract Manag* 2017; 23:531-536

## Adverse Childhood Experiences (ACEs)



[www.rwjf.org/aces](http://www.rwjf.org/aces)

# ACEs Are Common

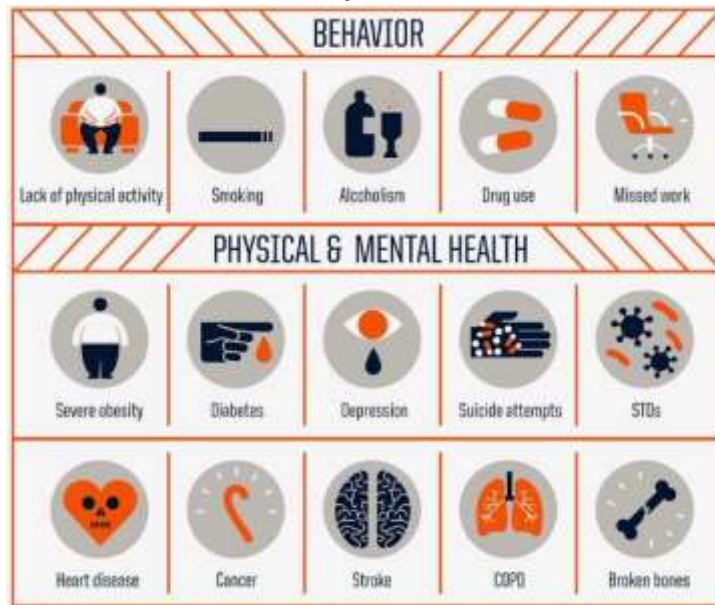


<https://www.cdc.gov/violenceprevention/acestudy/index.html>

<b>Adverse Childhood Experience Score</b>	<b>Alaska</b>	<b>Arkansas</b>	<b>Louisiana</b>	<b>New Mexico</b>	<b>Tennessee</b>	<b>Washington</b>
<b>Zero</b>	35.6%	46.9%	42.6%	39.0%	43.5%	34.6%
<b>One</b>	22.3%	21.0%	24.7%	21.8%	20.8%	23.0%
<b>Two</b>	14.7%	11.2%	12.9%	12.6%	12.6%	14.6%
<b>Three</b>	10.1%	7.1%	7.7%	10.1%	8.3%	10.3%
<b>Four</b>	6.5%	5.9%	5.5%	7.1%	6.2%	7.5%
<b>Five Plus</b>	10.8%	8.0%	6.6%	9.5%	8.7%	10.1%

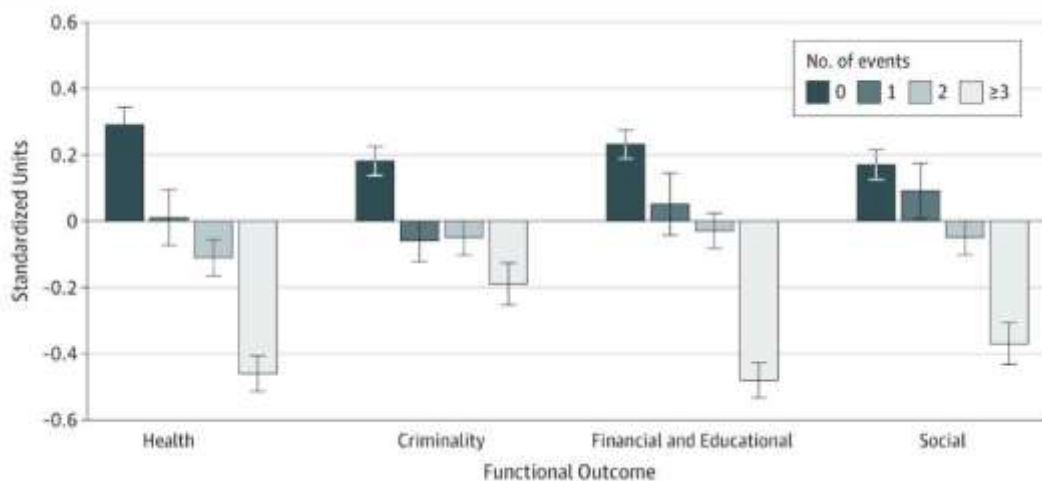
Source: Alaska data from the 2013 Alaska Behavioral Risk Factor Surveillance System, Alaska Department of Health and Social Services, Division of Public Health, Section of Chronic Disease Prevention and Health Promotion  
 Source: Five States Study data from the Centers for Disease Control and Prevention, *Adverse Childhood Experiences Reported by Adults - Five States, 2009*, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5949a1.htm>

# Health Impact of ACEs



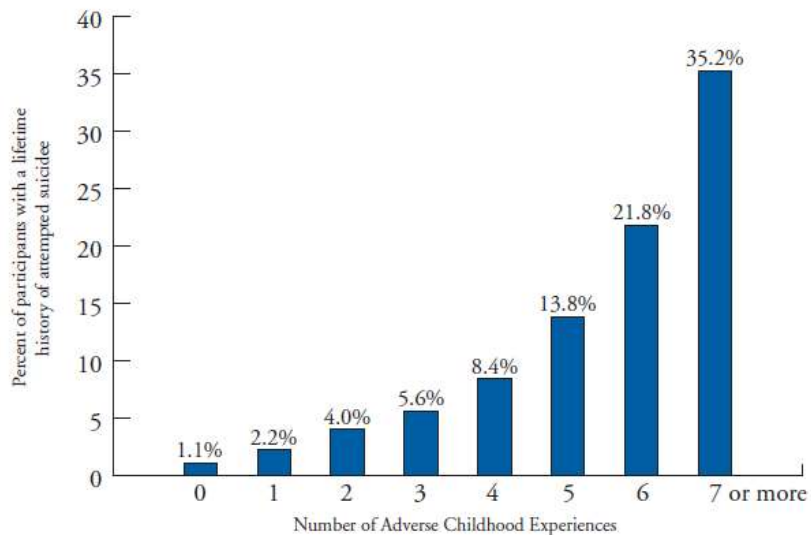
[www.rwjf.org/aces](http://www.rwjf.org/aces)

# Association Between Childhood Trauma and Adults Outcomes



Copeland WE, et al. *JAMA Network Open* 2018;1(7):e184493

## Number of ACEs and Lifetime Suicide Attempt



Dube SR, et al. *JAMA* 2001; 286(24):3089-96

## ACEs and Health Risk Behaviors

**Compared with people with no ACEs, those with 4+ ACEs are:**

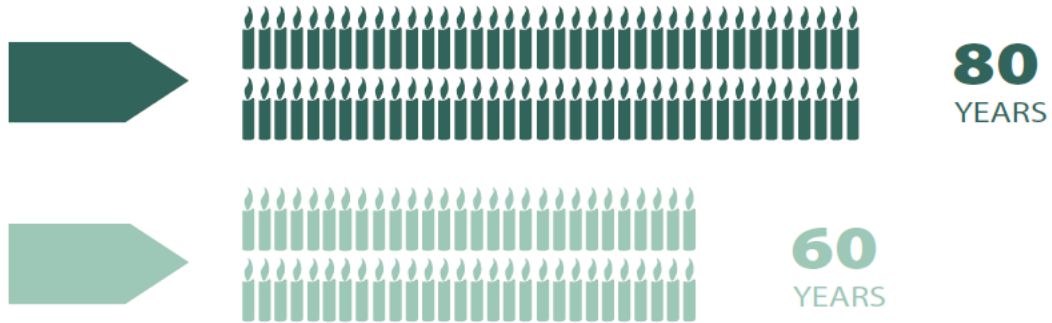
- 2** times more likely to currently binge drink and have a poor diet
- 3** times more likely to be a current smoker
- 5** times more likely to have had sex while under 16 years old
- 6** times more likely to have had or caused an unplanned teenage pregnancy
- 7** times more likely to have been involved in violence in the last year
- 11** times more likely to have used heroin/crack or been incarcerated

Bellis MA, et al. *BMC Medicine* 2014; 12:72

# Health Impact of ACEs

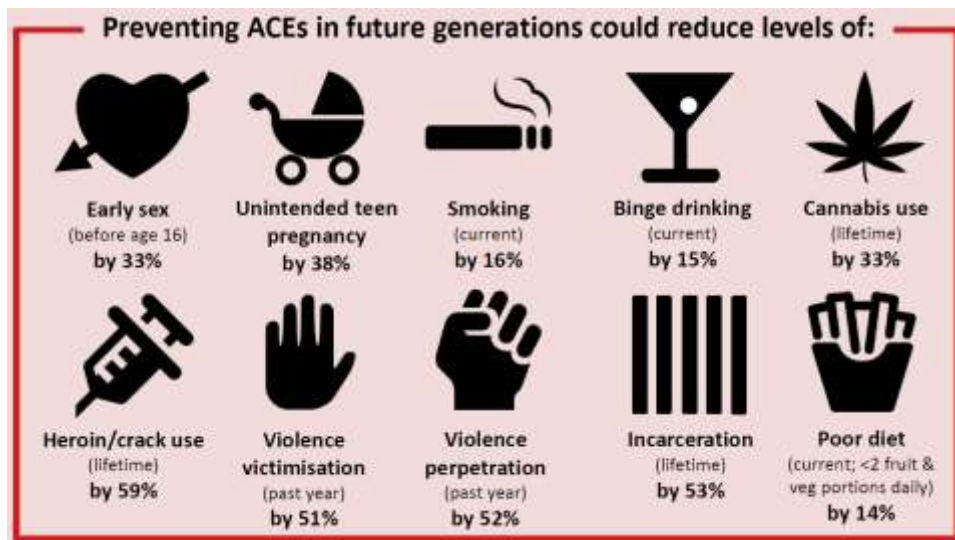
## LIFE EXPECTANCY

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



<https://www.cdc.gov/violenceprevention/acestudy/index.html>

## Attributable Risk from ACEs



Bellis MA, et al. *BMC Medicine* 2014; 12:72

# Society Impact of ACEs

## ECONOMIC TOLL

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

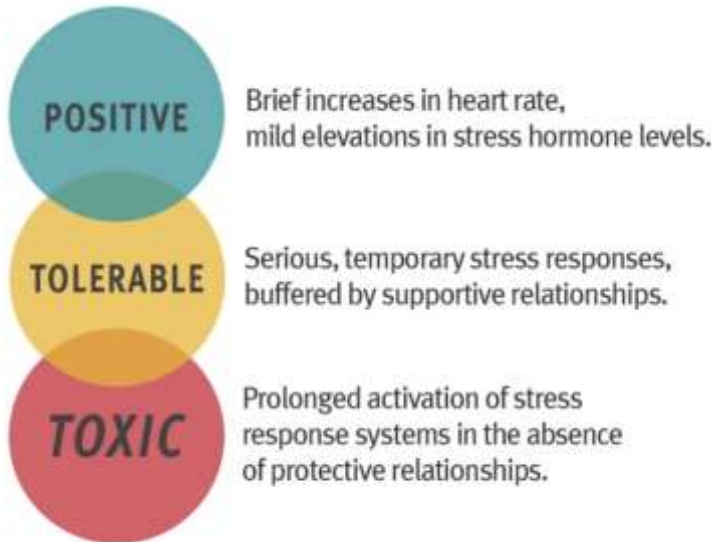


<https://www.cdc.gov/violenceprevention/acestudy/index.html>



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## Types of Stress Response



“Trauma turns a learning brain into a surviving brain”

-Josh Arvidson  
Univ Alaska Anchorage

## Duration of Stress Response

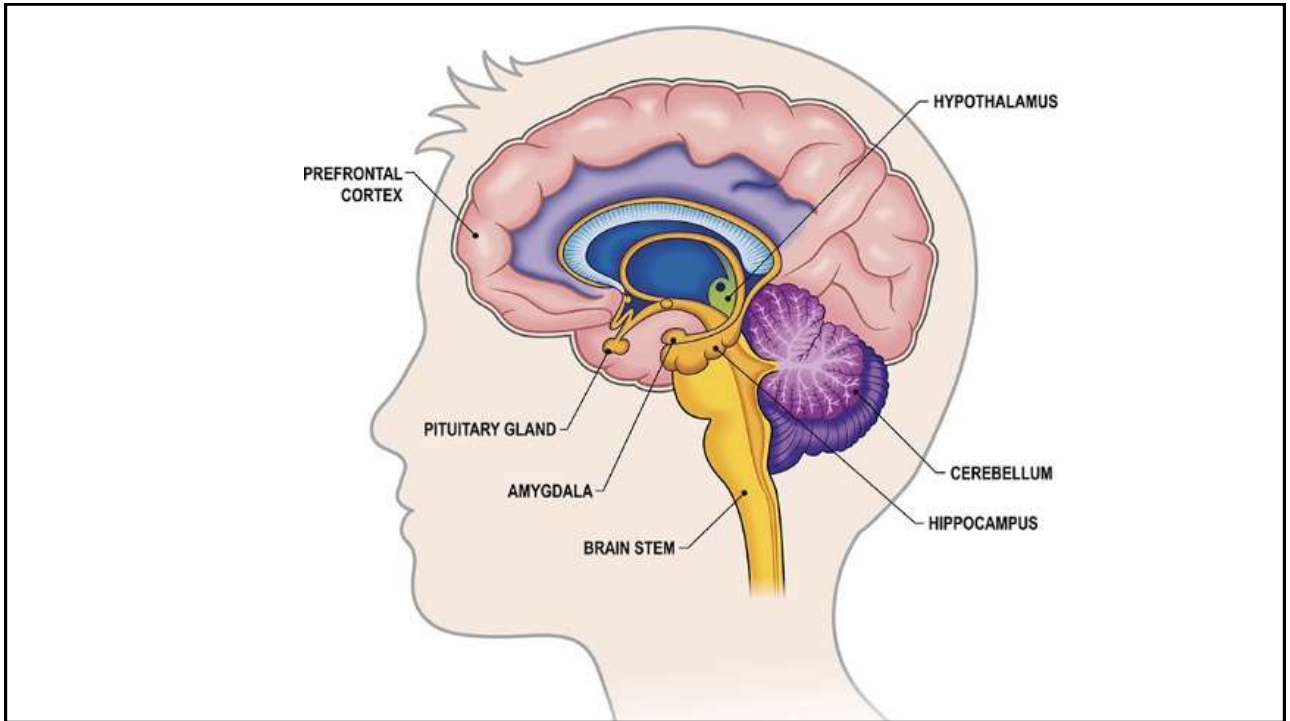


Acute  
Flight, fight, or freeze



Chronic  
Energy directed away from growth and reproduction





## Down-regulation of the Amygdala

- The amygdala is suppressed at low doses of alcohol
- At higher doses, cortical functions are also compromised
- Other depressants:
  - Opioids (stress also increases pain perception)
  - Benzodiazepines

## What Can Be Done?



Home visiting to pregnant women and families with newborns



Parenting training programs



Parent support programs for teens and teen pregnancy prevention programs



Mental illness and substance abuse treatment



Intimate partner violence prevention



Social support for parents

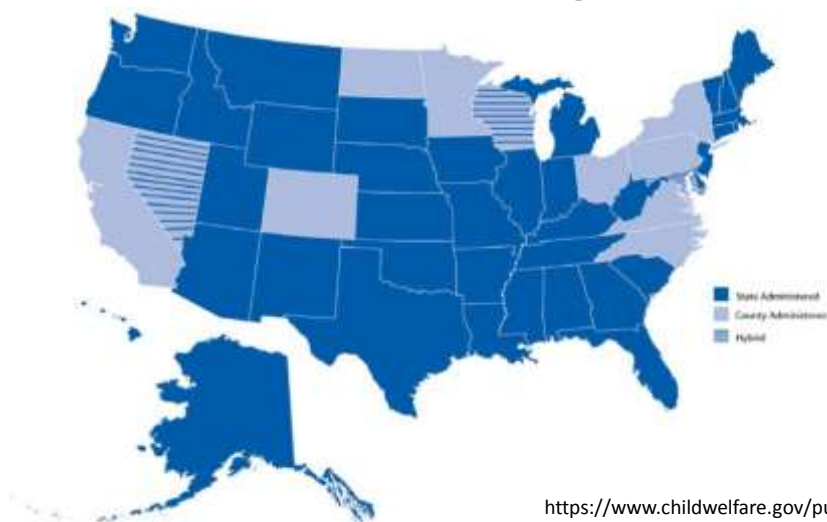
**ABC**

High quality child care



Sufficient income support for lower income families

## Authority and Responsibility for Child Protective Services Differs Among the States



<https://www.childwelfare.gov/pubPDFs/services.pdf>

## Opportunities and Evidence of Change

- Using trauma informed approaches
  - Not “what’s wrong with you?”, but “what happened to you?”
- Reframing conversation as “our problem” rather than just a problem of “those people”
- Criminal justice addressing addiction as a health issue
- Embracing substance misuse and addiction as a public health issue
- Increased openness to addressing ACEs as a primary prevention opportunity
  - Adverse **Childhood** Experiences
  - Adverse **Collective** Experiences
  - Adverse **Community** Environments

## Questions?

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