



# Opioid Addiction Treatment ECHO

## For Providers and Primary Care Teams at Neighborhood health Centers of the Lehigh Valley

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# ACEs and Addiction

How **A**dverse **C**hildhood **E**xperiences Can Help us Understand People with Substance Use Disorders.

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# Disclosures

Eric Arzubi has no financial conflicts of interest to disclose

Abby Letcher has no financial conflicts of interest to disclose





# Learning Objectives

- Following this presentation, you should be able to answer the following questions:
  - What is the ACE Study?
  - How are adverse childhood experiences (ACEs) related to later substance use?
  - How does understanding the link between ACEs and substance use disorders inform treatment?



# What is the ACE Study?

## What prompted the Study?

- Observations in mid-1980's at Kaiser Permanente's Department of Preventive Medicine
- Patients who successfully lost weight in the Weight Program were the ones most likely to drop out
- Is a “personal solution” the cause of a public health problem?





# What is the ACE Study?

## What did the Study examine?

- Relationship between exposure to 10 different ACEs and physical/mental health status as an adult

## What did the Study find?

- A direct, dose-dependent relationship between the number of ACEs (the ACE score) and negative physical/mental health outcomes

# What is the ACEs Study?

## ACEs can have lasting effects on....



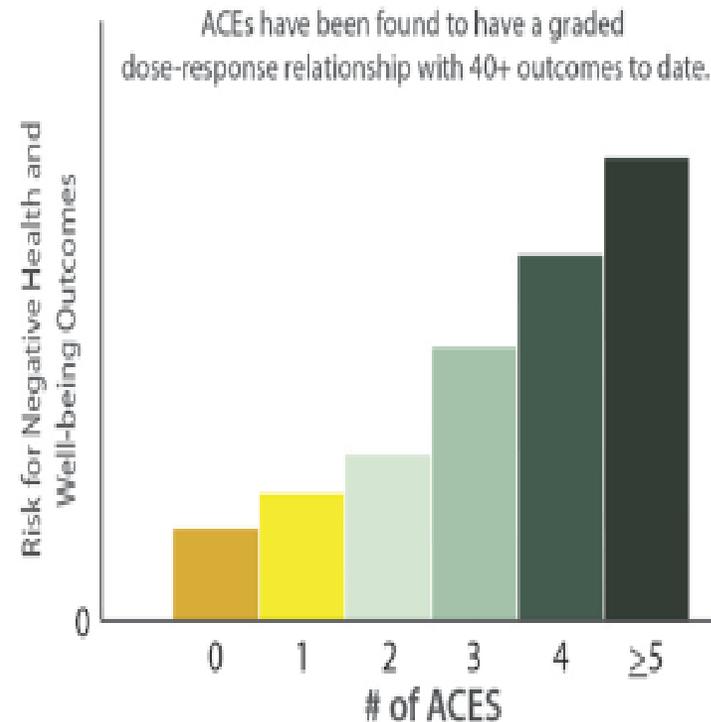
Health (obesity, diabetes, depression, suicide attempts, STDs, heart disease, cancer, stroke, COPD, broken bones)



Behaviors (smoking, alcoholism, drug use)



Life Potential (graduation rates, academic achievement, lost time from work)



\*This pattern holds for the 40+ outcomes, but the exact risk values vary depending on the outcome.



# What is the ACE Study?

## Which ACEs were included in the Study?

- 3 forms of abuse
  - Sexual
  - Emotional
  - Physical
- 2 forms of neglect
  - Emotional
  - Physical





# What is the ACE Study?

## Which ACEs were included in the Study?

- 5 forms of family challenges
  - Battered mother
  - Parental separation or divorce
  - Mental illness in household
  - Household substance abuse
  - Incarcerated household member





# What is the ACE Study?

- 2 survey waves were conducted
  - Wave I (n = 9508) from Aug 1995 to Mar 1996
  - Wave II (n = 8667) from Jun 1997 and Oct 1997
- Wave II involved a more thorough analysis of the link between ACEs and addiction

# What is the ACEs Study?

Prevalence of ACEs by Category for CDC-Kaiser ACE Study Participants, Waves 1 and 2.

→ **TYPES of ACEs**

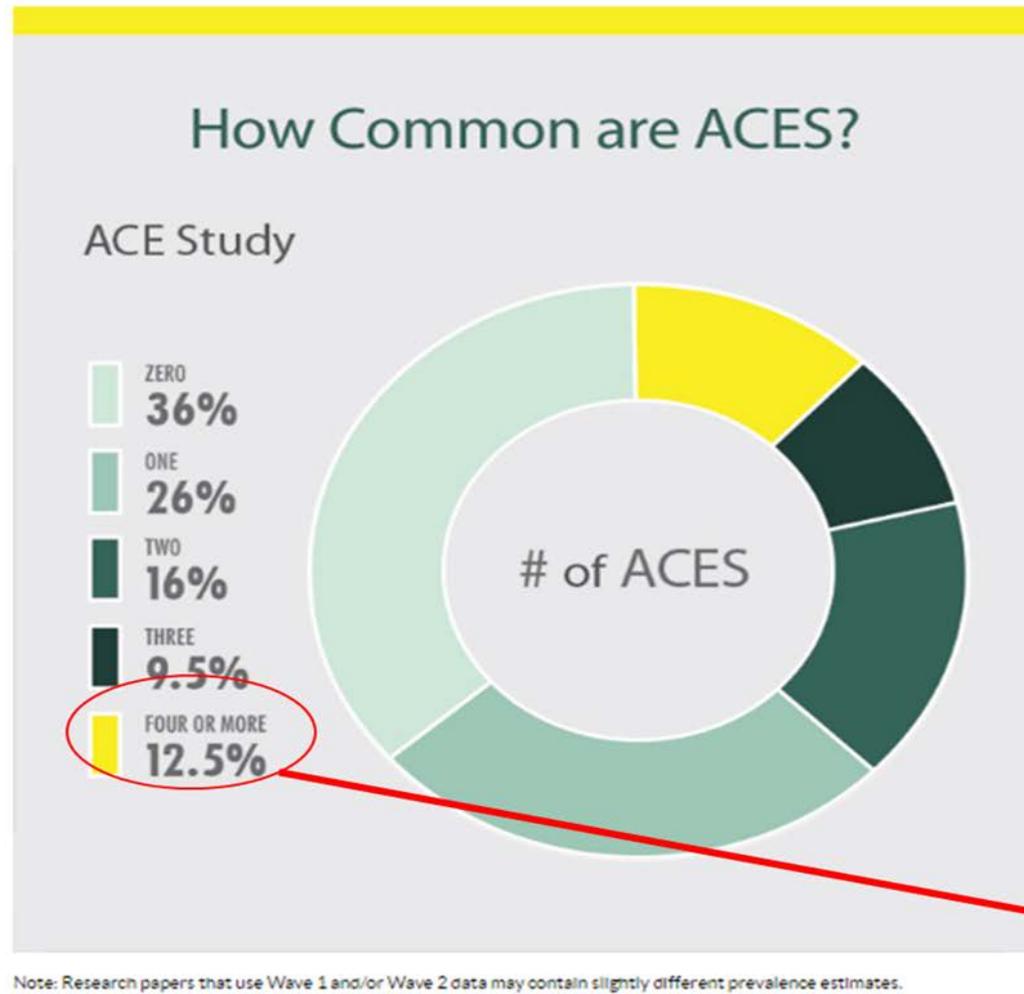
The ACE study looked at three categories of adverse experience: **childhood abuse**, which included emotional, physical, and sexual abuse; **neglect**, including both physical and emotional neglect; and **household challenges**, which included growing up in a household where there was substance abuse, 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.



Note: Research papers that use Wave 1 and/or Wave 2 data may contain slightly different prevalence estimates.

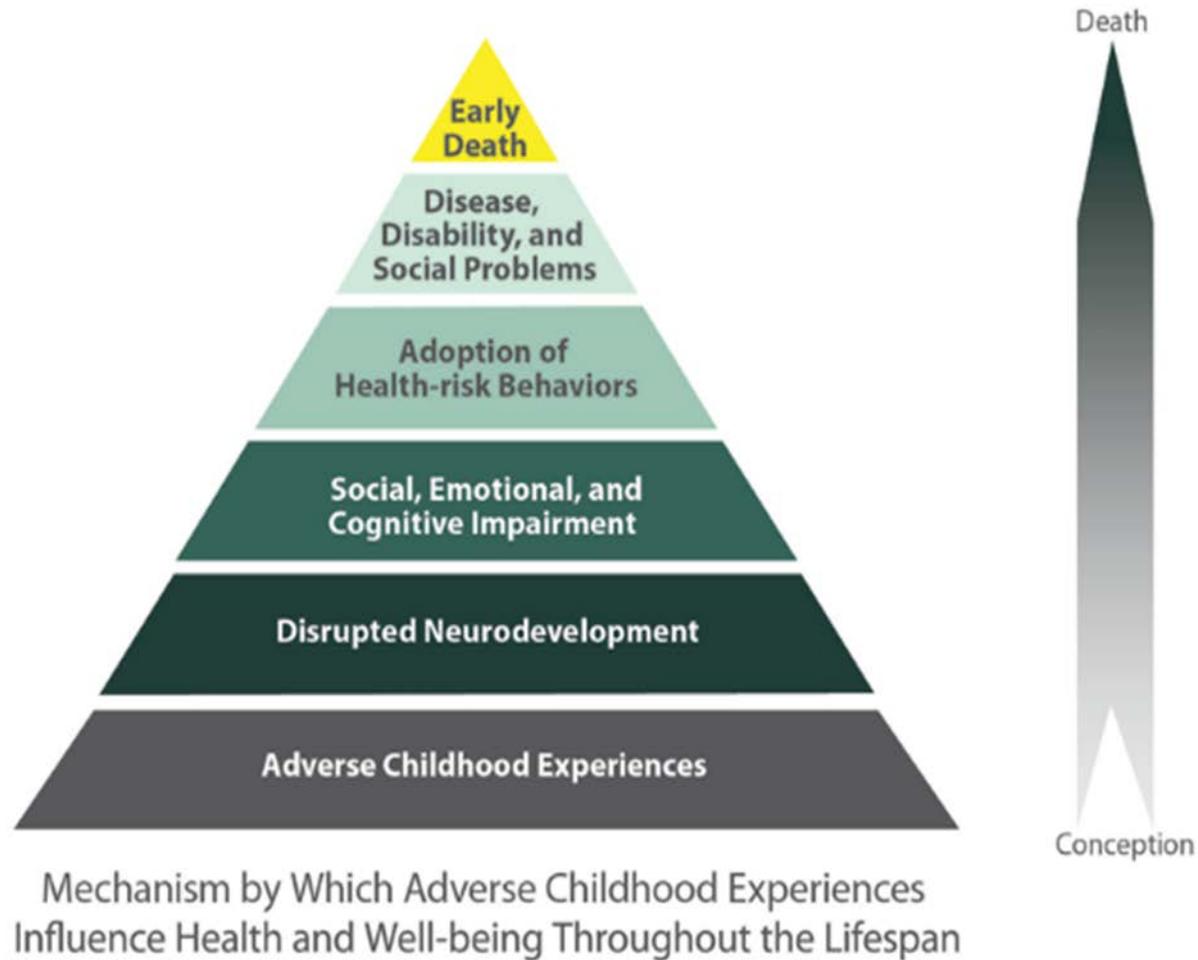
# What is the ACEs Study?

ACE Score Prevalence for CDC-Kaiser ACE Study Participants, Waves 1 and 2.



**1 in 8  
people!**

# What is the ACEs Study?





# ACEs and Substance Use Disorders (SUDs)

- Data based on wave II of the Study:
  - 4665 (54%) women and 3948 (46%) men
  - Mean age was 55yrs (+/- 15.5) for women and 57yrs (+/- 14.5) for men
  - 73% of women and 75% of men were white;
  - 32% of women and 42% of men were college graduates
  - 8% of women and 7% of men had not graduated from high school

# ACEs and SUDs

- Key concepts:
  - Lifetime use = “Have you ever used street drugs?”
  - Drug problem = “Have you ever had a problem with street drugs?”
  - Addicted = “Have you ever considered yourself addicted to street drugs?”
  - Parenteral use = “Have you ever injected street drugs?”



# ACEs and SUDs

- Mean age at initiation was 19.7yrs (+/- 6.7; 7-54yrs)
  - Early adolescence = 14yrs
  - Mid-adolescence = 15 to 18yrs
  - Adulthood = 19yrs and older





# ACEs and SUDs

- ACEs travel in clusters:
  - If exposed to 1 ACE, then median probability of exposure to second ACE was 86.5%
  - Median probability of exposure to 2 additional ACEs was 69.5%





# ACEs and SUDs

- Each of the 10 ACEs increased...
  - By 2x to 4x the likelihood of early drug initiation (14yrs or younger)
  - The likelihood of drug initiation during mid-adolescence and adulthood
  - The likelihood of lifetime use



# ACEs and SUDs

- A higher ACE score reflected an increased risk of initiating illicit drug use during early adolescence, mid-adolescence, and adulthood in a strong, graded manner
- Initiation during early adolescence had the strongest graded relationship with the ACE score
- This was statistically significant for ACE scores of 2 and above



# ACEs and SUDs

- For every increase in the number of ACEs, the likelihood of initiation of illicit drug use increases by...
  - 40% during early adolescence
  - 10% during mid-adolescence
  - 10% during adulthood
  - 30% at any age (lifetime)



# ACEs and SUDs

- ACE score increased the likelihood, in a dose-response manner, of...
  - Ever having drug problems
  - Ever being addicted to drugs
  - Parenteral drug use
- As the ACE score increased, there was a 30% to 40% increase in risk for each of the three illicit drug problems listed above

# ACEs and SUDs

- What proportion of a population, if exposed to at least 1 ACE, will develop each of the following problems due to that exposure? (i.e. the attributable risk fraction, or ARF)?
  - Ever having a drug problem = 56%
  - Ever being addicted to illicit drugs = 63%
  - Ever using parenteral drugs = 64%



# Trauma-Informed Treatment

- Reconsider the cause of addiction;
  - Unrecognized ACEs are likely the major determinant of who becomes addicted to psychoactive substances
  - Individuals may be seeking, unconsciously, chemical relief from the ongoing effects of old trauma
- ACEs travel in clusters, revealing a complex failure of family and community systems
- Systems of oppression (e.g. war, racism) predispose to these adverse effects



# Trauma-Informed Treatment

- A deep understanding of the impact of ACEs can improve our ability to use motivational interviewing (MI):
  - Express empathy: first principle of MI
  - Person-centered care: key tenet of MI





# Trauma-Informed Treatment

- According to SAMHSA, trauma-informed programs, organizations, or systems:
  - **Realize** the widespread impact of trauma and understand potential paths for recovery
  - **Recognize** signs and symptoms of trauma in patients, families, staff, and other stakeholders
  - **Respond** by fully integrating knowledge about trauma into policies, procedures, and practices
  - Seek to actively resist **re-traumatization**



# Trauma-Informed Treatment

- SAMHSA recommends that trauma-specific interventions recognize...
  - The survivor's need to be respected, informed, connected, and hopeful regarding their own recovery
  - The interrelation between trauma and symptoms of trauma, including substance abuse, eating disorders, depression, and anxiety
  - The need to work in a collaborative way with survivors, family and friends of survivors, other human services agencies to empower survivors and patients



# Trauma-Informed Treatment

- Example of a trauma-informed treatment: **Seeking Safety**
  - A highly flexible, evidence-based treatment that was developed in 1992 via funding from the National Institute on Drug Abuse (NIDA)
  - Addresses both trauma and addiction in group or individual therapy settings
  - Implemented across many different vulnerable populations, including homeless, criminal justice, domestic violence, severely mentally ill, veterans



# Trauma-Informed Treatment

- Seeking Safety: key principles
  - Help patients attain **safety** in relationships, thinking, behaviors, and emotions
  - **Integrated** treatment to work on both trauma and substance abuse at the same time
  - Focusing on **ideals** in an effort to counteract the loss of ideals in both trauma and substance abuse
  - **Four** content areas, including cognitive, behavioral, interpersonal, and case management
  - Attention to **clinician processes**, including emotional responses, self-care, etc





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