Adverse Childhood Experiences: What Happens Early Can Change Lives
Objectives

• Define/explain Adverse Childhood Experiences (ACE)
  – An overview of the Adverse Childhood Experiences (ACE) study

• Explain why ACEs are important
  – How what happens early can change lives

• Provide strategies for building the foundation for healthier lives
  – Translating the science into action
What is the Adverse Childhood Experiences (ACE) Study?

The largest study of its kind that looks at the health and social effects of adverse childhood experiences over a lifespan.
What is the Adverse Childhood Experiences (ACE) Study?

Study participants were middle-class Americans from San Diego, 80% white, 74% attended college, average age of 57, split evenly between men and women.

NOTE: Not exactly an impoverished or “at-risk population”
The True Nature of Preventive Medicine

Mechanisms By Which Adverse Childhood Experiences Influence Adult Health Status
What are Adverse Childhood Experiences (ACE)?

A mix of experiences and exposures in childhood that are major risk factors for certain illnesses and poor quality of life:

– Physical, sexual or emotional abuse
– Physical or emotional neglect
– Exposure to mental illness, substance abuse, domestic violence
– Divorce or separation of parents or caregivers
– Incarceration of parent or caregiver
We know that:

Early Adverse Experiences (ACEs) contribute directly to the risk for long-term physical and mental health.

U.S. Dept. Health and Human Services, 2010
Prevalence of Adverse Childhood Experiences

Adverse Childhood Experiences

- Physical, sexual or emotional abuse
- Physical or emotional neglect
- Household mental illness
- Living in a household with substance abuse
- Having a parent/caregiver divorce or separate
- Exposure to domestic violence
- Living in a household where a member was or has been incarcerated

<table>
<thead>
<tr>
<th>ACE Score (1 point for each category listed)</th>
<th>Prevalence in Study</th>
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<tbody>
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<td>33%</td>
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Data from: www.cdc.gov/nccdphp/ace/
As the ACE Score increases, the risk of the following health problems increases:

**Health Problems**
- Alcoholism/alcohol abuse
- STDs
- COPD
- Depression
- Fetal death
- Health related QOL
- Liver disease
- Smoking
- Unintended pregnancy
- Suicide attempts
- Intimate partner violence
- Ischemic heart disease

<table>
<thead>
<tr>
<th>ACE Score</th>
<th>Women</th>
<th>Men</th>
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<tbody>
<tr>
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<td>3</td>
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<td>4 or more</td>
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<td>9%</td>
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Data from: [www.cdc.gov/nccdphp/ace/](http://www.cdc.gov/nccdphp/ace/)
Significant Adversity Impairs Development in the First Three Years

ACE and Health Problems Later in Life

Positive or Adverse Childhood Experiences: Its Impact on Brain Architecture

Luby et al., 2012. Available at: www.pnas.org/cgi/doi/10.1073/pnas.1118003109
Why are ACEs important?

Significant adversity in childhood is strongly associated with unhealthy lifestyles and poor health decades later.
However... 

This does not mean that “bad things” are necessarily a long-term negative.
What happens early can change lives . . .

The social and physical environment can serve as a buffer to these “bad things.”
How you can build a foundation for healthier lives?

We know that the effects of adverse childhood experiences can last a lifetime—but they do not have to.
ACEs and the Brain

Early nurturing, responsive interactions build healthy brain architecture that serves as the foundation for health and well-being.
ACEs and the Brain

But if there are no supportive relationships, what occurs is TOXIC STRESS
Toxic Stress

• Toxic Stress is long lasting, frequent, or strong intensity

• More extreme precipitants of childhood stress (ACE)
  – Physical, sexual, emotional abuse
  – Physical, emotional neglect
  – Household dysfunction

• Insufficient social-emotional buffering can mean:
  – Potentially permanent changes and long-term effects on brain architecture that can have negative life-long health effects
Impact of Early Stress

CHILDHOOD STRESS

Hyper-responsive stress response;
calm/coping

Chronic “fight or flight;”
cortisol / norepinephrine

Changes in Brain Architecture
Genes and Experience: Both contribute to development
How You Can Build the Foundation for Healthier Lives

If Toxic Stress is the missing link between ACE exposure and poor adult outcomes, we need to know:

• Are there ways to:
  – treat,
  – mitigate, and/or
  – immunize against the effects of toxic stress?
Universal Primary Preventions
  Bright Futures
  Reach Out and Read
  Connected Kids
  Circle of Security
  Relationships as a “vital” sign

**Basic EBCD Competencies**

Targeted Interventions
  Screening for risks
  (assess the ecology)
  Refer to/advocate for EBI

**Mid-level Competencies**

Collaborating/Developing EBI

Evidence-Based Treatments
  Screening for diagnoses
  Common factors approach
  Refer for/advocate for EBT

**Advanced Competencies**
The Heckman Equation

Source: heckmanequation.org
How You Can Build the Foundation for Healthier Lives

- Routinely seek history of adverse childhood experiences from all patients
- Promote universal primary prevention strategies (Bright Futures, Reach Out and Read, anticipatory guidance)
- Promote parenting and social-emotional skills
- Advocate for services that support parents (respite, quality affordable child care)
- Advocate for early childhood interventions and programs that support high quality early childhood
Questions?