ADVERSE CHILDHOOD EXPERIENCES (ACE) AND PREVENTION PLANNING

DOROTHY J. CHANEY, M.ED

This training is supported by Florida Department of Children and Families Office of Substance Abuse and Mental Health

THIS SESSION IS BASED UPON A TRAINING THAT WAS DEVELOPED UNDER THE SUBSTANCE ABUSE AND MENTAL HEALTH SERVICES ADMINISTRATION’ S (SAMHSA) CENTER FOR THE APPLICATION OF PREVENTION TECHNOLOGIES CONTRACT. REFERENCE # HHSS277200800004C.

FOR TRAINING USE ONLY.
LEARNING OBJECTIVES

• Participants will understand what trauma is and what role it plays in childhood development.
• Participants will be able to explain the ACE study and what was discovered.
• Participants will explore how ACES impact the work of substance abuse prevention and treatment.

WHAT DO WE MEAN BY TRAUMA? HOW DOES TRAUMA AFFECT PEOPLE?

WHAT CAN WE LEARN FROM LISTENING TO THE VOICES OF PEOPLE WHO HAVE EXPERIENCED TRAUMA?

WHAT CAN WE DO TO INSURE THAT WE HELP THOSE WE SERVE WHO HAVE EXPERIENCED TRAUMA?
WHAT IS TRAUMA? WHY IS IT IMPORTANT?

• TRAUMA REFERS TO INTENSE AND OVERWHELMING EXPERIENCES THAT INVOLVE SERIOUS LOSS, THREAT OR HARM TO A PERSON’S PHYSICAL AND/OR EMOTIONAL WELL BEING.

• TRAUMA MAY OCCUR AT ANY TIME IN A PERSON’S LIFE. IT MAY INVOLVE A SINGLE TRAUMATIC EVENT OR MAY BE REPEATED OVER MANY YEARS.

• THESE TRAUMATIC EXPERIENCES OFTEN OVERWHELM THE PERSONS COPING RESOURCES. THIS OFTEN LEADS THE PERSON TO FIND A WAY OF COPING THAT MAY WORK IN THE SHORT RUN BUT MAY CAUSE SERIOUS HARM IN THE LONG RUN.
EXAMPLES OF TRAUMATIC LIFE EXPERIENCES

• PHYSICAL, EMOTIONAL AND/OR SEXUAL ABUSE IN CHILDHOOD OR ADULTHOOD

• IN CHILDHOOD
  • NEGLECT OR ABANDONMENT (FOOD INSUFFICIENCY, LACK OF MONEY TO MEET BASIC NEEDS, HOMELESSNESS)
  • DEATH OF A PARENT
  • DIVORCE
  • FAMILY LIFE THAT INCLUDES SUBSTANCE USE, PARENTAL INCARCERATION, VIOLENCE
  • RAPE
  • SERIOUS MEDICAL ILLNESS OR DISEASE (DISABLING CONDITIONS, LOSS OF FUNCTION, INVASIVE AND DISTRESSING PROCEDURES)

EXAMPLES OF TRAUMATIC LIFE EXPERIENCES

• WAR, COMBAT AND CIVIL UNREST AND CONDITIONS INCLUDING TORTURE AFFECTING SOLDIERS AND REFUGEE CIVILIANS

• CATASTROPHIC LOSSES OF ONE’S HOME, LIVELIHOOD, PEOPLE, PETS DUE TO FLOOD, TORNADO, HURRICANES OR OTHER DISASTERS OF NATURE

• INVOLVED IN OR WITNESSING HORRIFIC EVENTS INVOLVING VIOLENCE, GRUESOME ACCIDENTS OR DEATH/SERIOUS INJURY
HOW MAY EXPERIENCING TRAUMA IN CHILDHOOD AFFECT A PERSON?

• LET’S LOOK AT THE FINDINGS FROM THE ADVERSE CHILDHOOD EXPERIENCES (ACE) STUDY

ACE Study slides are from:

- Robert F. Anda MD at the Center for Disease Control and Prevention (CDC)
- September 2003 Presentation by Vincent Felitti MD “Snowbird Conference” of the Child Trauma Treatment Network of the Intermountain West
- “The Relationship of Adverse Childhood Experiences to Adult Medical Disease, Psychiatric Disorders, and Sexual Behavior: Implications for Healthcare” Book Chapter for “The Hidden Epidemic: The Impact of Early Life Trauma on Health and Disease” Lanius & Vermetten, Ed.
**What is the Adverse Childhood Experiences (ACE) Study?**

- Decade long. 17,000 people involved.
- Looked at effects of adverse childhood experiences over the lifespan.
- Largest study ever done on this subject.

**ACE Study Findings**

Childhood experiences are **powerful** determinants of who we become as adults.
## Adverse Childhood Experiences are Common

**Of the 17,000 HMO Members:**

- **1 in 4** exposed to 2 categories of ACEs
- **1 in 16** was exposed to 4 categories.
- **22%** were sexually abused as children.
- **66% of the women** experienced abuse, violence or family strife in childhood.

<table>
<thead>
<tr>
<th>Adverse Childhood Experience* Categories</th>
<th>Impact of Trauma and Health Risk Behaviors to Ease the Pain</th>
<th>Long-Term Consequences of Unaddressed Trauma (ACEs)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abuse of Child</strong></td>
<td><strong>Neurobiologic Effects of Trauma</strong></td>
<td><strong>Disease and Disability</strong></td>
</tr>
<tr>
<td>- Recurrent Severe Emotional abuse</td>
<td>- Disrupted neuro-development</td>
<td>- Ischemic heart disease</td>
</tr>
<tr>
<td>- Recurrent Physical abuse</td>
<td>- Difficulty controlling anger-rage</td>
<td>- Cancer</td>
</tr>
<tr>
<td>- Contact Sexual abuse</td>
<td>- Hallucinations</td>
<td>- Chronic lung disease</td>
</tr>
<tr>
<td><strong>Trauma in Child's Household Environment</strong></td>
<td>- Depression</td>
<td>- Chronic emphysema</td>
</tr>
<tr>
<td>- Substance abuse</td>
<td>- Panic reactions</td>
<td>- Asthma</td>
</tr>
<tr>
<td>- Parental separation or divorce -</td>
<td>- Anxiety</td>
<td>- Liver disease</td>
</tr>
<tr>
<td>Chronically depressed, emotionally</td>
<td>- Multiple (6+) somatic problems</td>
<td>- Skeletal fractures</td>
</tr>
<tr>
<td>disturbed or suicidal household</td>
<td>- Sleep problems</td>
<td>- Poor self rated health</td>
</tr>
<tr>
<td>member</td>
<td>- Impaired memory</td>
<td>- Sexually transmitted disease</td>
</tr>
<tr>
<td>- Mother treated violently</td>
<td>- Flashbacks</td>
<td>- HIV/AIDS</td>
</tr>
<tr>
<td>- Imprisoned household member</td>
<td>- Dissociation</td>
<td></td>
</tr>
<tr>
<td>- Loss of parent – (by death,</td>
<td>- <strong>Health Risk Behaviors</strong></td>
<td></td>
</tr>
<tr>
<td>by suicide, - or by abandonment)</td>
<td>- Smoking</td>
<td></td>
</tr>
<tr>
<td><strong>Neglect of Child</strong></td>
<td>- Severe obesity</td>
<td></td>
</tr>
<tr>
<td>- Abandonment</td>
<td>- Physical inactivity</td>
<td></td>
</tr>
<tr>
<td>- Child's basic physical and/or</td>
<td>- Suicide attempts</td>
<td></td>
</tr>
<tr>
<td>emotional needs unmet</td>
<td>- Alcoholism</td>
<td></td>
</tr>
<tr>
<td>* Above types of ACEs are the “heavy end” of abuse.</td>
<td>- Drug abuse</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 50+ sex partners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Repetition of original trauma</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Self injury</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Eating disorders</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Perpetrate interpersonal violence</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Long-Term Consequences of Unaddressed Trauma (ACEs)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Disease and Disability</td>
<td>- Ischemic heart disease</td>
<td></td>
</tr>
<tr>
<td>- Serious Social Problems</td>
<td>- Cancer</td>
<td></td>
</tr>
<tr>
<td>- Chronic lung disease</td>
<td>- Chronic emphysema</td>
<td></td>
</tr>
<tr>
<td>- Chronic emphysema</td>
<td>- Liver disease</td>
<td></td>
</tr>
<tr>
<td>- Poor self rated health</td>
<td>- Skeletal fractures</td>
<td></td>
</tr>
<tr>
<td>- Sexually transmitted disease</td>
<td>- Homelessness</td>
<td></td>
</tr>
<tr>
<td>- HIV/AIDS</td>
<td>- Prostitution</td>
<td></td>
</tr>
<tr>
<td>- Homelessness</td>
<td>- Delinquency, violence, criminal behavior</td>
<td></td>
</tr>
<tr>
<td>- Prostitution</td>
<td>- Inability to sustain employment</td>
<td></td>
</tr>
<tr>
<td>- Delinquency, violence, criminal</td>
<td>- Re-victimization: rape, DV</td>
<td></td>
</tr>
<tr>
<td>behavior</td>
<td>- compromised ability to parent</td>
<td></td>
</tr>
<tr>
<td>- Inability to sustain employment</td>
<td>- Intergenerational transmission of abuse</td>
<td></td>
</tr>
<tr>
<td>- Re-victimization: rape, DV</td>
<td>- Long-term use of health, behavioral health, correctional,</td>
<td></td>
</tr>
<tr>
<td>- compromised ability to parent</td>
<td>and social services</td>
<td></td>
</tr>
<tr>
<td>- Intergenerational transmission of</td>
<td>- Long-term use of health, behavioral health, correctional,</td>
<td></td>
</tr>
<tr>
<td>abuse</td>
<td>and social services</td>
<td></td>
</tr>
<tr>
<td>- Long-term use of health, behavioral</td>
<td>- Long-term use of health, behavioral health, correctional,</td>
<td></td>
</tr>
<tr>
<td>health, correctional, and social</td>
<td>and social services</td>
<td></td>
</tr>
<tr>
<td>services</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The higher the ACE Score, the greater the likelihood of:

- Severe and persistent emotional problems
- Health risk behaviors
- Serious social problems
- Adult disease and disability
- High health and mental health care costs
- Poor life expectancy

For Example:

The following information and slides are from September 2003 Presentation at “Snowbird Conference” of the Child Trauma Treatment Network of the Intermountain West, by Vincent J. Felitti, MD. And from Lanius/Vermetten Book Chapter 6/2007
Emotional Problems

Childhood Experiences Underlie Chronic Depression

% With a Lifetime History of Depression

ACE Score

- Women
- Men
**Childhood Experiences Underlie Suicide**

![Bar chart showing the relationship between ACE Score and suicide attempt rate.](chart1.png)

**ACE Score and Hallucinations**

![Bar chart showing the relationship between ACE Score and hallucinations.](chart2.png)

*Adjusted for age, sex, race, and education.*
Childhood Sexual Abuse and the Number of Unexplained Symptoms

ACE Score and Impaired Memory of Childhood
Health Risk Behaviors

Adverse Childhood Experiences and Current Smoking

<table>
<thead>
<tr>
<th>ACE Score</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>1-2</td>
<td>12</td>
</tr>
<tr>
<td>3-4</td>
<td>16</td>
</tr>
<tr>
<td>5-6</td>
<td>20</td>
</tr>
<tr>
<td>6 or more</td>
<td>24</td>
</tr>
</tbody>
</table>
Childhood Experiences and Adult Alcoholism

ACE Score and Intravenous Drug Use

N = 8,022   p<0.001
Basic cause of substance misuse is experience-dependent, not substance-dependent

Significant implications for medical practice and treatment programs

Dose - Response

A Classic Causal Relationship
More ACE = More Health Problems

Dose-response is a direct measure of cause & effect. The “response”—in this case the occurrence of the health condition—is caused directly by the size of the “dose”—in this case, the number of ACE.
Current Smokers and History of Adverse Childhood Experience, New Mexico Residents


**Alcohol: Age at First Use**


**Smoking: Age at First Use**

Illicit Drug Use: Age at First Use


Serious Social Problems
Childhood Experiences Underlie Rape

Well-being

ACE Score and the Risk of Being a Victim of Domestic Violence

Risk of Violent Victimization (%)
Adverse Childhood Experiences and Likelihood of > 50 Sexual Partners
ACE Score and Unintended Pregnancy or Elective Abortion

- % have Unintended Pregnancy or AB

Sexual Abuse of Male Children and Their Likelihood of Impregnating a Teenage Girl

- Percent who impregnated a teenage girl
ACE Score and Indicators of Impaired Worker Performance

- Absenteeism (>2 days/month)
- Serious Financial Problems
- Serious Job Problems

Prevalence of Impaired Performance (%)
Adult Disease and Disability

Adverse Childhood Experiences and History of STD
ACE Score and the Prevalence of Liver Disease (Hepatitis/Jaundice)

<table>
<thead>
<tr>
<th>ACE Score</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
</tr>
</tbody>
</table>

ACEs Increase Likelihood of Heart Disease*

- Emotional abuse 1.7x
- Physical abuse 1.5x
- Sexual abuse 1.4x
- Domestic violence 1.4x
- Mental illness 1.4x
- Substance abuse 1.3x
- Household criminal 1.7x
- Emotional neglect 1.3x
- Physical neglect 1.4x
High Health and Mental Health Care Costs

ACE Score and Rates of Antidepressant Prescriptions
approximately 50 years later

<table>
<thead>
<tr>
<th>ACE Score</th>
<th>Prescription rate per 100 person-years</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4 or more</td>
<td>4</td>
</tr>
</tbody>
</table>

08/30/18 Florida Alcohol and Drug Abuse Association
ACE Score and Rates of Antipsychotic Prescriptions

Prescription rate (per 100 person-years)

ACE Score

0 1 2 3 4 >=5

Poor Life Expectancy
Effect of ACEs on Mortality

ACE Study

- www.cdc.gov/nccdphp/ace
- www.acestudy.org

ACE Categories are Interrelated

**Abuse:**
- Child physical abuse
- Child sexual abuse
- Child emotional abuse

**Neglect:**
- Physical neglect
- Emotional neglect
ACE CATEGORIES ARE INTERRELATED

INDICATORS OF FAMILY DYSFUNCTION:

• MENTALLY ILL, DEPRESSED OR SUICIDAL PERSON IN HOME
• FAMILY MEMBER WITH SUBSTANCE USE
• PARENTAL DISCORD – INDICATED BY DIVORCE, SEPARATION, ABANDONMENT
• WITNESSING DOMESTIC VIOLENCE AGAINST THE MOTHER
• INCARCERATION OF ANY FAMILY MEMBER

“What’s predictable is preventable.”

Dr. Robert Anda

How do we move from prediction to prevention?
Life Course Approach


Capabilities can be impacted by trauma.
CAPABILITY & ATTACHMENT & BELONGING

CAPABILITY & ATTACHMENT & BELONGING → COMMUNITY, CULTURE, SPIRITUALITY
High-Leverage Solutions

Moderate ACE Effects Among Parenting Adults: Build on Strengths; Improve Functioning & Coping

Prevent ACE Accumulation in Next Gen.

Virtuous Cycle

- HISTORIC TRAUMA
- ADVERSE CHILDHOOD EXPERIENCES
- ADVERSE PEER/SCHOOL EXPERIENCE
- ADVERSE ADULT EXPERIENCE

Multiple Mental, Physical, Relational, and/or Productivity Problems

ACE Transmission Risk
Elementary Children

- Greatest single predictor for health, attendance, behavior
- Second strongest predictor for academic failure

Among youth with ≥4 ACE:

- 33% of court involved youth re-offend in two years (vs. 13% 0-1 ACE)
- 51% in special Ed. (vs. 33% 0-1 ACE)
- 74% below 2.0 GPA (vs. 58% 0-1 ACE)
- 64% 4+ suspensions
- 85% suspended by 2nd grade

Adult Adversity:

- Incarceration
- Victim of interpersonal violence
- Drug/alcohol Problems
- Mental illness
- Divorce
- Work injury- illness
- Homelessness
- Disability
- Poverty
- Health limits activity
- Unemployment

Parenting Adults:

Parents with ≥5 ACE are 14 X more likely to have 2 or more conditions that make ACE for kids


Longhi, Porter & Silveanu; Stress, Strength, Work, Hope; 2012
HOW ACE INFORMATION INFORMS CHANGE

• TRANSITIONS FROM PRESCHOOL TO KINDERGARTEN
• BETTER TREATMENT FIT FOR ADJUDICATED YOUTH
• ACE ARE COMMON; WORK IN UNIVERSAL SYSTEMS
• HIGH ACE PARENTS BECOME POWERFUL LEADERS OF NEXT GENERATION ACE REDUCTION

What Helps Individuals Self-regulate?

• Massage
• Mindfulness, reflection
• Pleasure
• Biofeedback
• Movement and music
• Exercise and play
• Activities that integrate visual information with fine- and gross-motor movements
• Physical activities for exploration of environment.
• Practicing connection
Concepts of Resiliency

Resilience Occurs at All Levels

- Individual
- Family & Friends
- Community National, Global, Ecosystem
Emergence & Collective Impact: Attend to Health of System as a Whole

Risk is Usually Measured Here

Unseen

Events

Patterns

Structures

Mental Models

Values/Principles

We Increase Probability of Lasting Change When We Notice and Act Below the Waterline
ACEs are a good example of the types of complex issues that the prevention workforce often faces. The negative effects of ACEs are felt throughout the nation and can affect people of all backgrounds. Successfully addressing their impact requires:

• Assessing prevention needs and gathering data
• Effective and sustainable prevention approaches guided by applying the Strategic Prevention Framework (SPF)
• Prevention efforts aligned with the widespread occurrence of ACEs
• Building relationships with appropriate community partners through strong collaboration.

Adverse childhood experiences can impact prevention efforts.

Strategic Prevention Framework (SPF) is used to assess prevention needs and gather data.
Strategic Prevention Framework

SPF requires seven steps of completion

DATA - WHAT TO ASSESS

The nature and extent of substance use problems and related behaviors

The risk and protective factors that influence these problems and behaviors

The existing resources and readiness of the community to address its problems
What We Can Do?

1. Tell everyone
2. Adopt trauma-informed services and supports
3. Shift to dual generation strategies
4. Invest in community capacity
5. Generate feedback
6. Hold a fundamental respect for the wisdom of every person—their culture, experience, capabilities, and aspirations
REFERENCES


• BLODGETT, CHRISTOPHER. (2012). WSU AHEC SPOKANE, WA; PERSONAL COMMUNICATION WITH LAURA PORTER


• GREVSTAD, J. & ANDA, R. (2010), ADVERSE CHILDHOOD EXPERIENCE IN ADJUDICATED YOUTH IN WASHINGTON; REPORT TO WASHINGTON FAMILY POLICY COUNCIL

REFERENCES

• LANIUS & VERMETTEN. THE RELATIONSHIP OF ADVERSE CHILDHOOD EXPERIENCES TO ADULT MEDICAL DISEASE, PSYCHIATRIC DISORDERS, AND SEXUAL BEHAVIOR: IMPLICATIONS FOR HEALTHCARE” BOOK CHAPTER FOR “THE HIDDEN EPIDEMIC: THE IMPACT OF EARLY LIFE TRAUMA ON HEALTH AND DISEASE”, ED.

• LONGHI, PORTER & SILVEANU; STRESS, STRENGTH, WORK, HOPE, 2012

• ROBERT F. AND ANDA MD AT THE CENTER FOR DISEASE CONTROL AND PREVENTION (CDC). ACE STUDY SLIDES.

• SIMMONS, K. & PORTER, L.; ANALYSIS OF 2010-2011 WASHINGTON BRFSS DATA; UNPUBLISHED

• SUBSTANCE ABUSE AND MENTAL HEALTH SERVICES ADMINISTRATION’S (SAMHSA) CENTER FOR THE APPLICATION OF PREVENTION TECHNOLOGIES CONTRACT. REFERENCE # HHSS277200800004C.

• THE ADVERSE CHILDHOOD EXPERIENCES STUDY, HTTP://ACESTUDY.ORG/


• WWW.ACESTUDY.ORG

• WWW.CDC.GOV/NCCDPHP/ACE
ADDITIONAL VIDEO and WEBINAR RESOURCES

- **A Critical Look at Intergenerational Trauma and Substance Misuse: Implications for Prevention** (Archived Webinar). This webinar offers an introduction to intergenerational trauma and its link to substance misuse, and explores ways for prevention practitioners to support and implement trauma-informed prevention approaches.

- **Trauma & Adverse Childhood Experiences: Implications for Preventing Substance Misuse** (Archived Webinar). This webinar outlines SAMHSA's comprehensive approach to trauma-informed care, highlighting the mechanisms by which trauma and ACEs influence substance misuse and related behavioral health problems.

- **Adverse Childhood Experiences: Risk Factors for Substance Abuse and Mental Health** (Video). In this video, Dr. Robert Anda, a co-principal investigator of the landmark ACEs study, describes how ACEs relate to many of the nation's most significant health and social problems, including substance misuse.

- **Adverse Childhood Experiences: Implications for Transforming Our Systems of Care** (Video). In this video, Dr. Heather Larkin, assistant professor at the State University of New York at Albany, underscores the importance of coordinating services to prevent or address the consequences of ACEs.

**ADDITIONAL RESOURCES**


ADDITIONAL RESOURCES


THANK YOU!

QUESTIONS?