



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 MET 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 Experience* Categories	Impact of Trauma and Health Risk Behaviors to Ease the Pain	Long-Term Consequences of Unaddressed Trauma (ACEs)
<p>Abuse of Child</p> <ul style="list-style-type: none"> ■ Recurrent Severe Emotional abuse ■ Recurrent Physical abuse ■ Contact Sexual abuse <p>Trauma in Child's Household Environment</p> <ul style="list-style-type: none"> ■ Substance abuse ■ Parental separation or divorce - ■ Chronically depressed, emotionally disturbed or suicidal household member ■ Mother treated violently ■ Imprisoned household member ■ Loss of parent – (by death, by suicide, - or by abandonment) <p>Neglect of Child</p> <ul style="list-style-type: none"> ■ Abandonment ■ Child's basic physical and/or emotional needs unmet <p>* Above types of ACEs are the "heavy end" of abuse.</p>	<p>Neurobiologic Effects of Trauma</p> <ul style="list-style-type: none"> ■ Disrupted neuro-development ■ Difficulty controlling anger-rage ■ Hallucinations ■ Depression ■ Panic reactions ■ Anxiety ■ Multiple (6+) somatic problems ■ Sleep problems ■ Impaired memory ■ Flashbacks ■ Dissociation <p>Health Risk Behaviors</p> <ul style="list-style-type: none"> ■ Smoking ■ Severe obesity ■ Physical inactivity ■ Suicide attempts ■ Alcoholism ■ Drug abuse ■ 50+ sex partners ■ Repetition of original trauma ■ Self Injury ■ Eating disorders ■ Perpetrate interpersonal violence 	<p>Disease and Disability</p> <ul style="list-style-type: none"> ■ Ischemic heart disease ■ Cancer ■ Chronic lung disease ■ Chronic emphysema ■ Asthma ■ Liver disease ■ Skeletal fractures ■ Poor self rated health ■ Sexually transmitted disease ■ HIV/AIDS <p>Serious Social Problems</p> <ul style="list-style-type: none"> ■ Homelessness ■ Prostitution ■ Delinquency, violence, criminal behavior ■ Inability to sustain employment ■ Re-victimization: rape, DV ■ compromised ability to parent ■ Intergenerational transmission of abuse ■ Long-term use of health, behavioral health, correctional, and social services

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.

The higher the ACE Score, the greater the likelihood of :

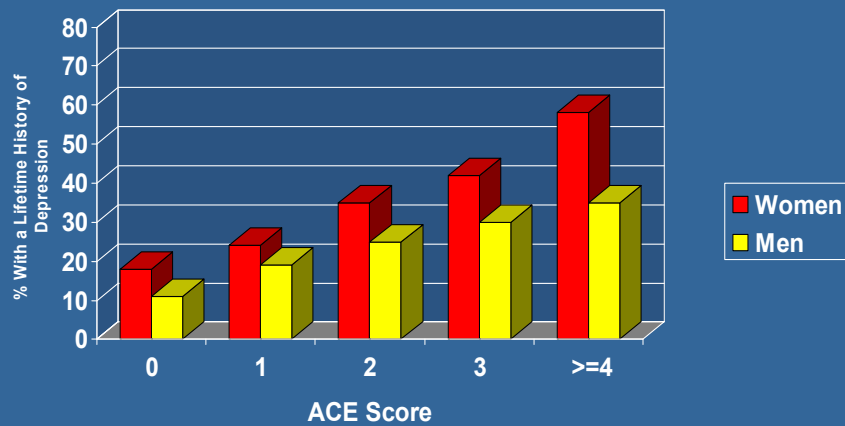
- Severe and persistent emotional problems
- Health risk behaviors
- Serious social problems
- Adult disease and disability
- High health and mental health care costs
- Poor life expectancy

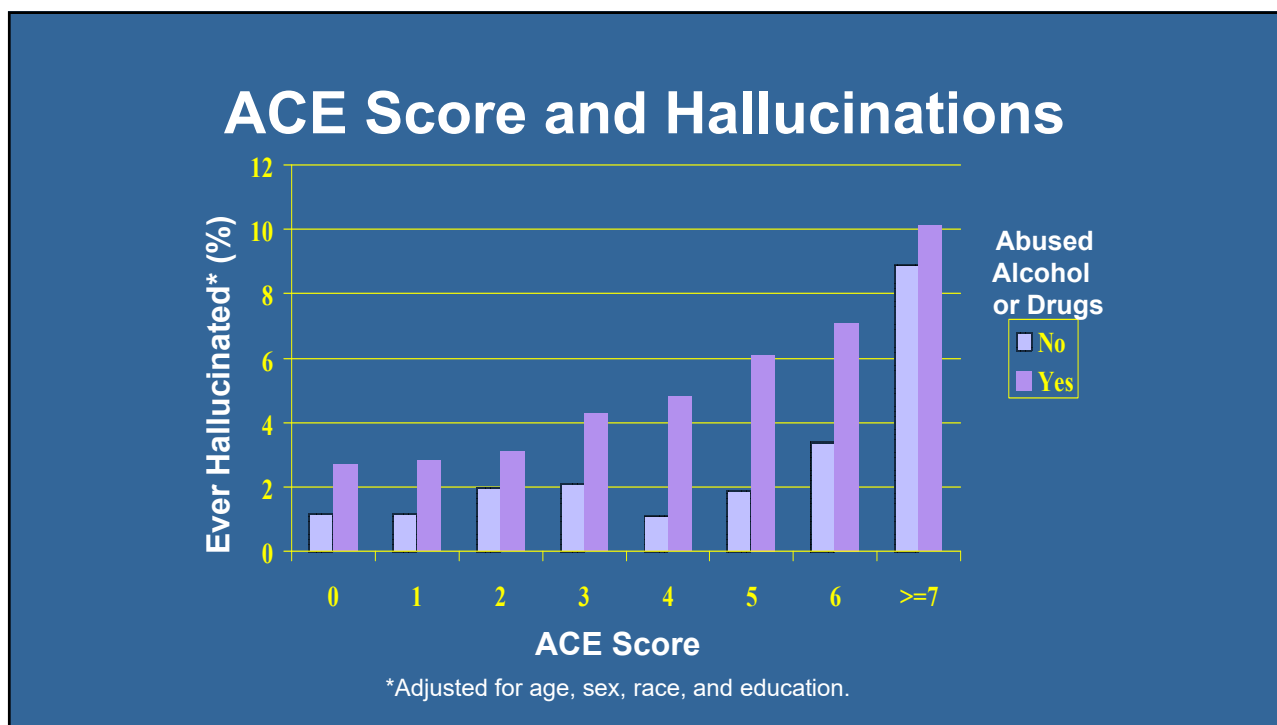
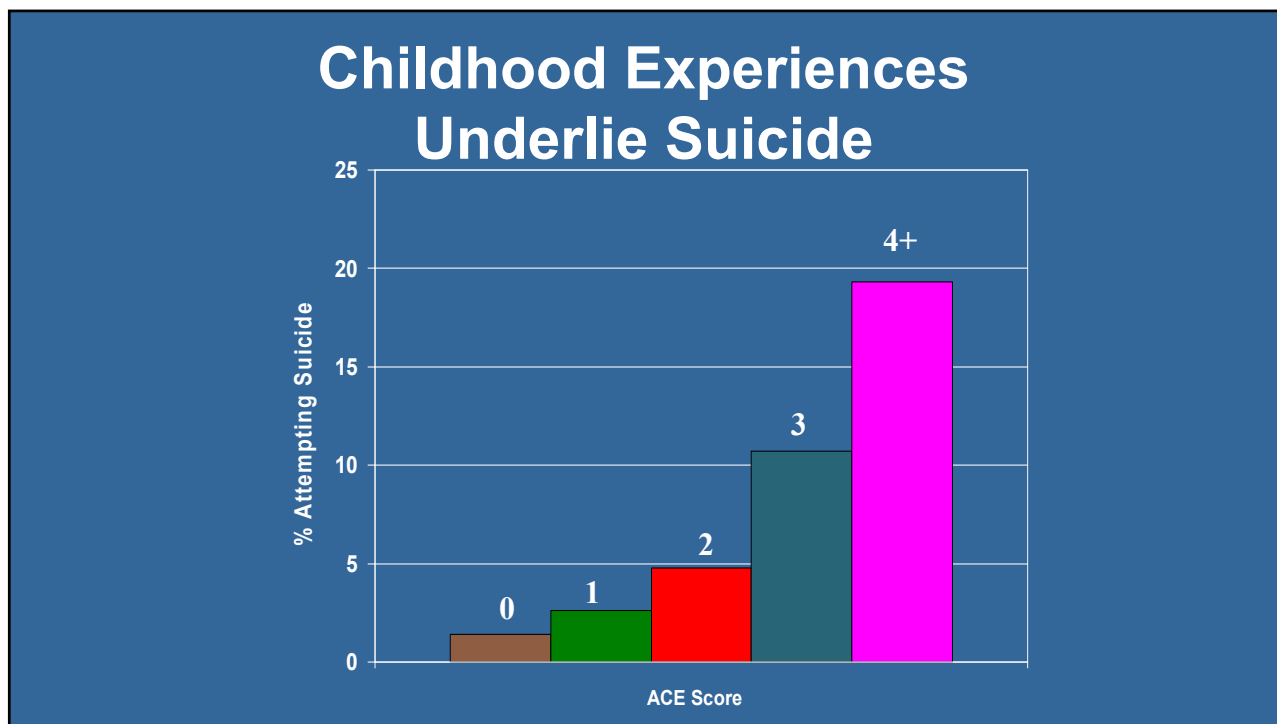
For Example:

***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***

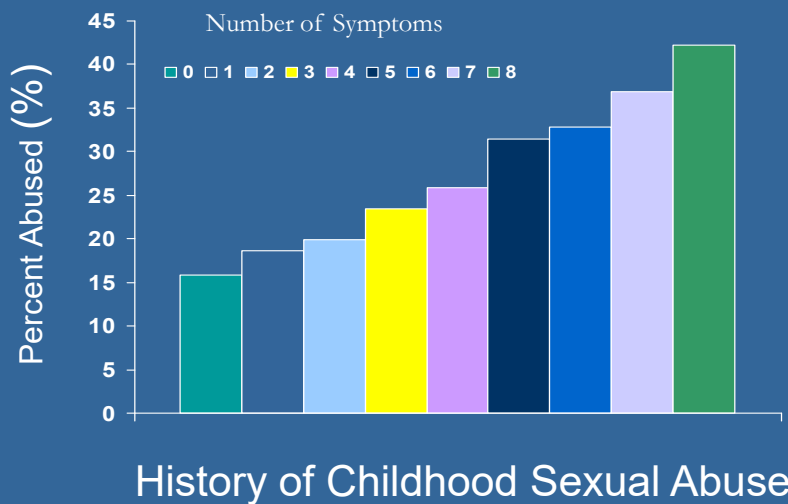
Emotional Problems

Childhood Experiences Underlie Chronic Depression

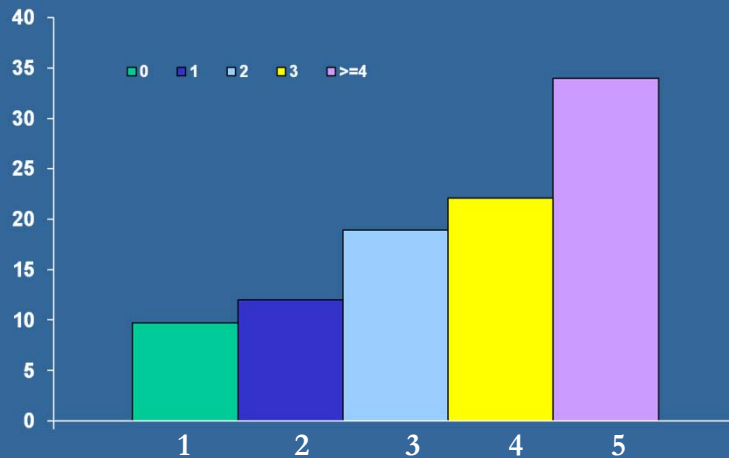




Childhood Sexual Abuse and the Number of Unexplained Symptoms

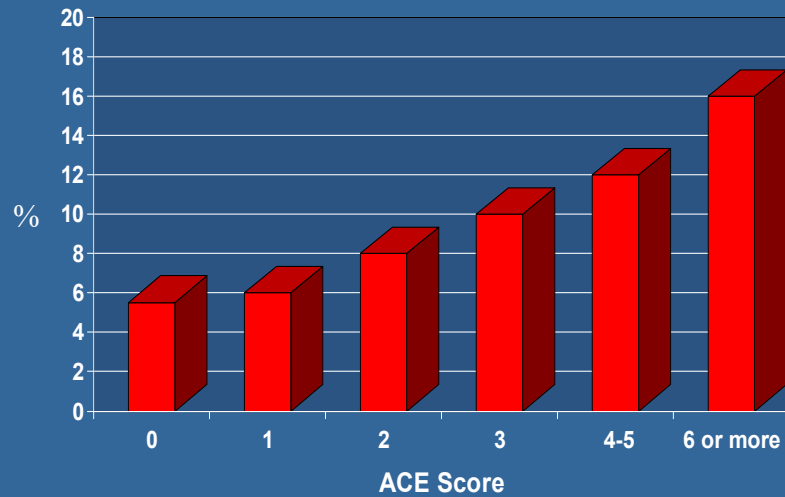


ACE Score and Impaired Memory of Childhood

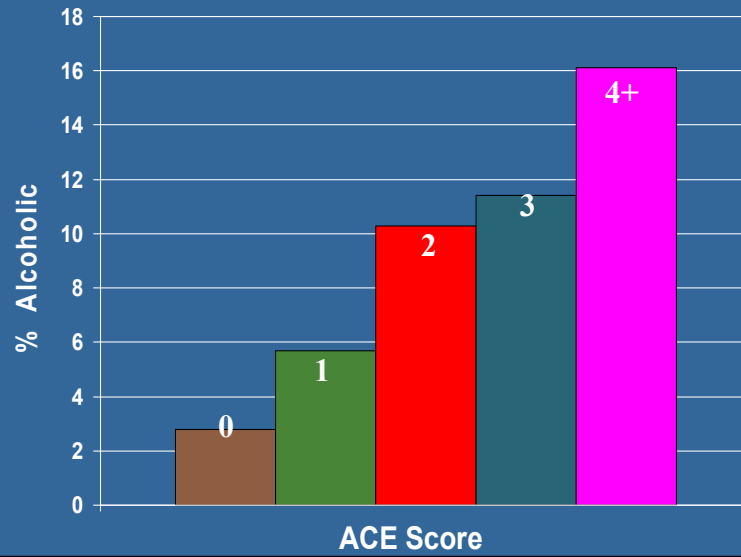


Health Risk Behaviors

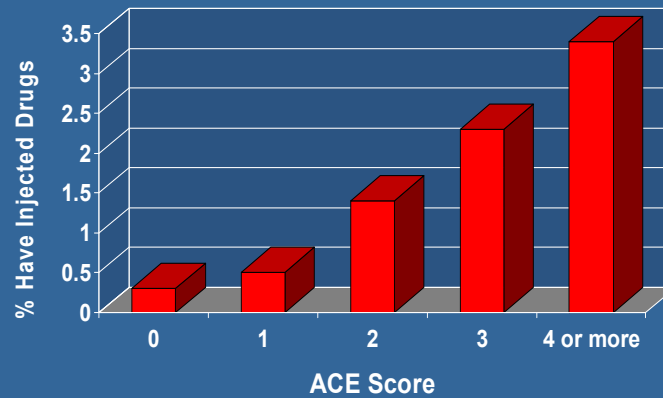
Adverse Childhood Experiences and Current Smoking



Childhood Experiences and Adult Alcoholism



ACE Score and Intravenous Drug Use

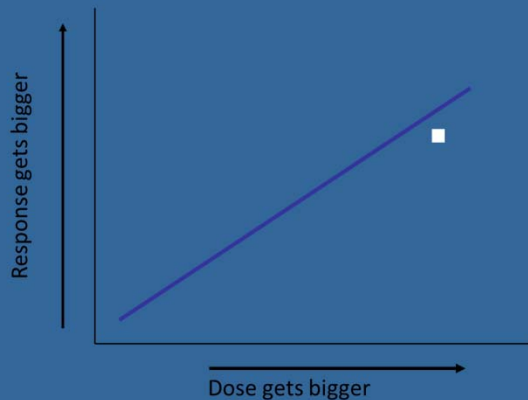


N = 8,022 p<0.001

- **Basic cause of substance misuse is experience-dependent, not substance-dependent**
- **Significant implications for medical practice and treatment programs**

Dose - Response

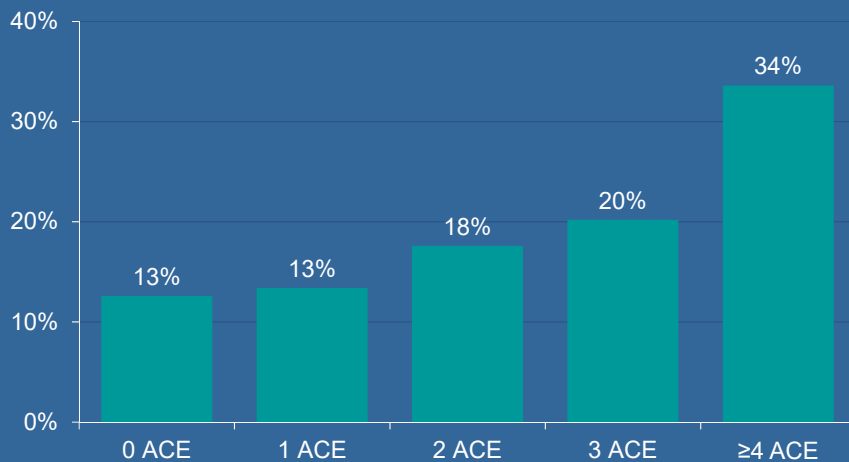
A Classic Causal Relationship
More ACE = More Health Problems



Dose-response is a direct measure of cause & effect.

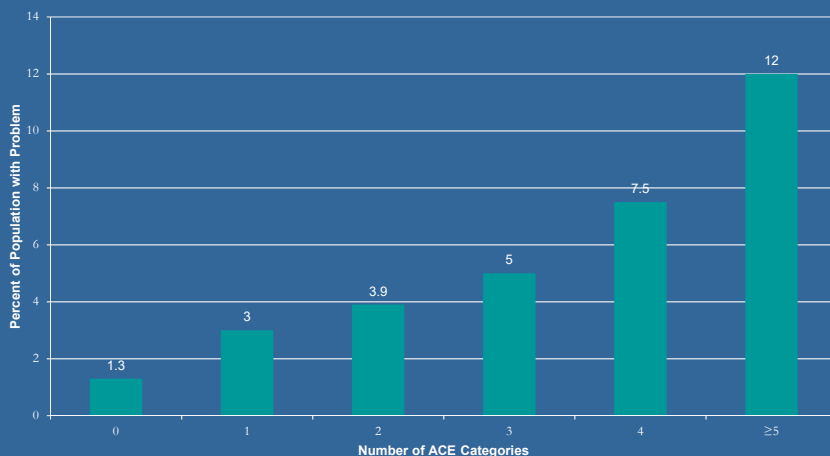
The “response”—in this case the occurrence of the health condition—is caused directly by the size of the “dose”—in this case, the number of ACE.

Current Smokers and History of Adverse Childhood Experience, New Mexico Residents



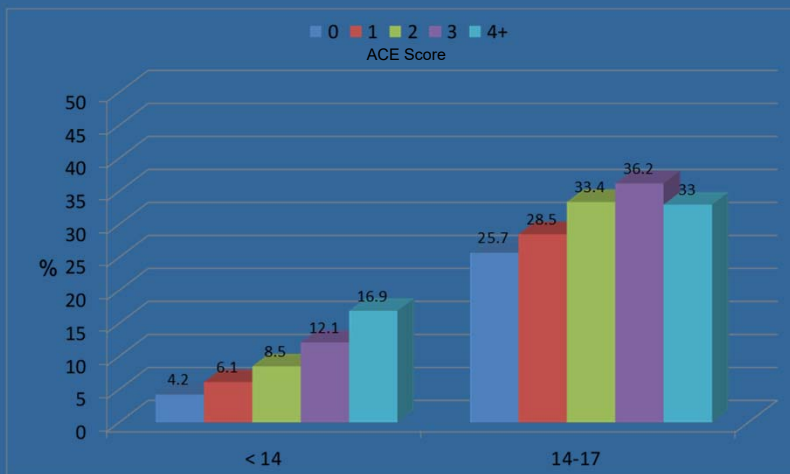
Laura Tomedi. (June 7, 2012) New Mexico Behavioral Risk Factor Surveillance System, 2009. New Mexico Department of Health..

Ever Had a Drug Problem



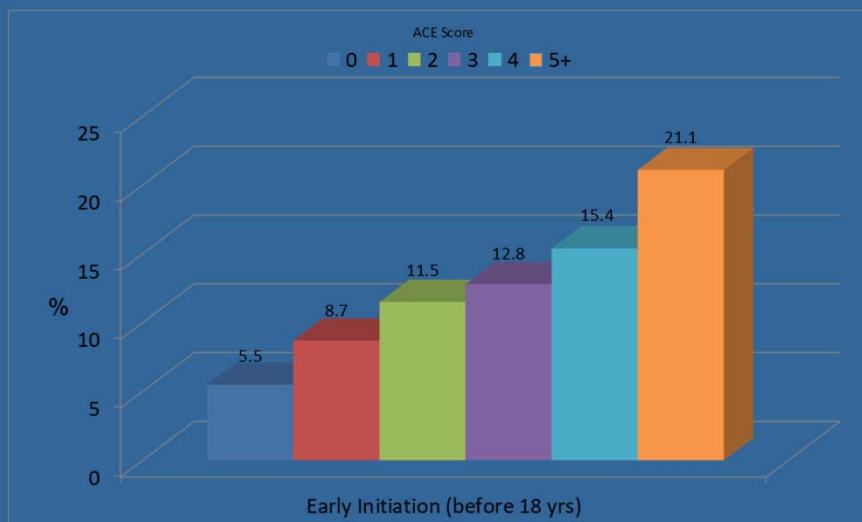
Dube, S. R., Felitti, V. J., Dong, M., Chapman, D. P., Giles, W. H., & Anda, R. F. (2003). Childhood abuse, neglect and household dysfunction and the risk of illicit drug use: The Averse Childhood Experience Study. *Pediatrics*, 111(3), 564-572.

Alcohol: Age at First Use



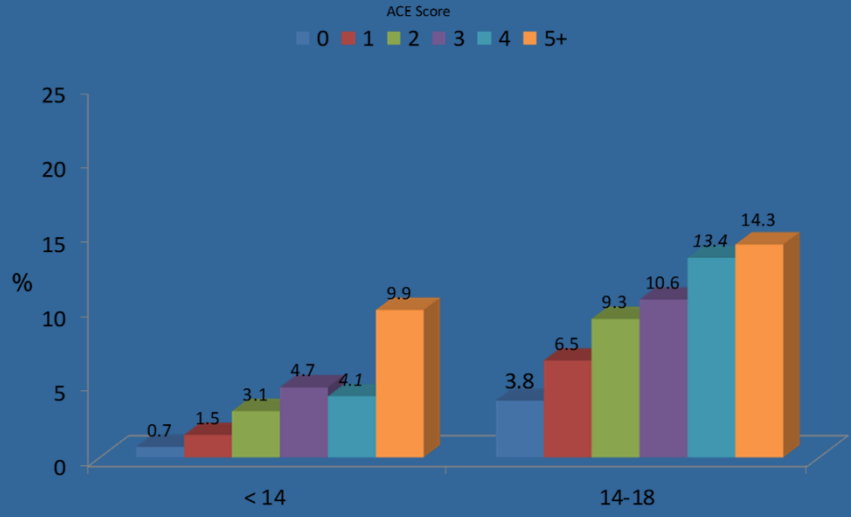
Dube, S. R., Miller, J. W., Brown, D. W., Giles, W. H., Felitti, V. J., Dong, M., & Anda, R. F. (2006). Adverse childhood experiences and the association with ever using alcohol and initiating alcohol use during adolescence. *Journal of Adolescent Health, 38*(4), 444.

Smoking: Age at First Use



Anda, R. F., Croft, J. B., Felitti, V. J., Nordenberg, D., Giles, W. H., Williamson, D. F., & Giovino, G. A. (1999). Adverse childhood experiences and smoking during adolescence and adulthood. *Journal of the American Medical Association, 282*, 1652-1658.

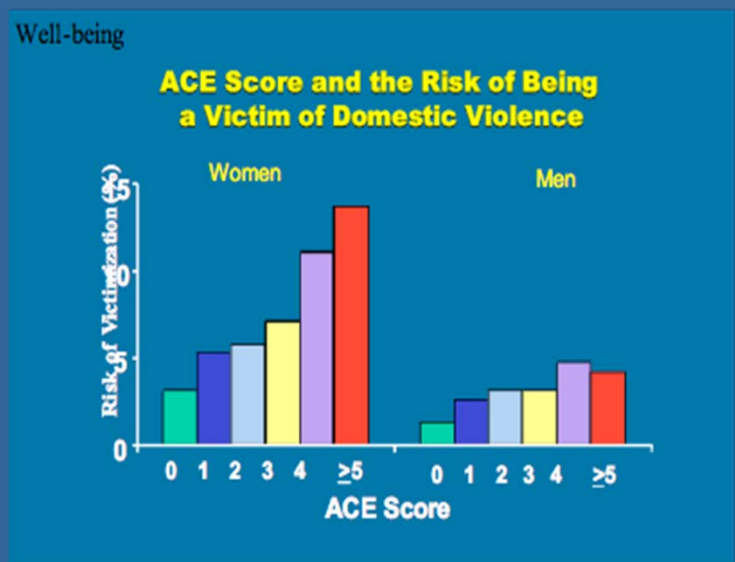
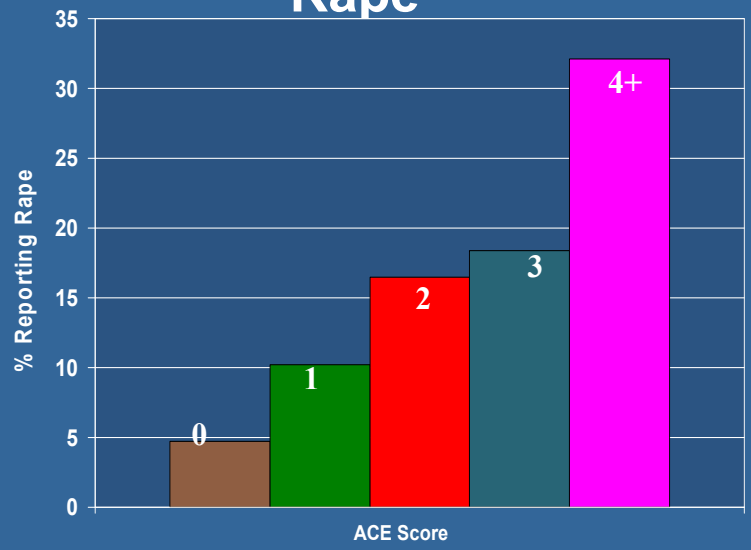
Illicit Drug Use: Age at First Use

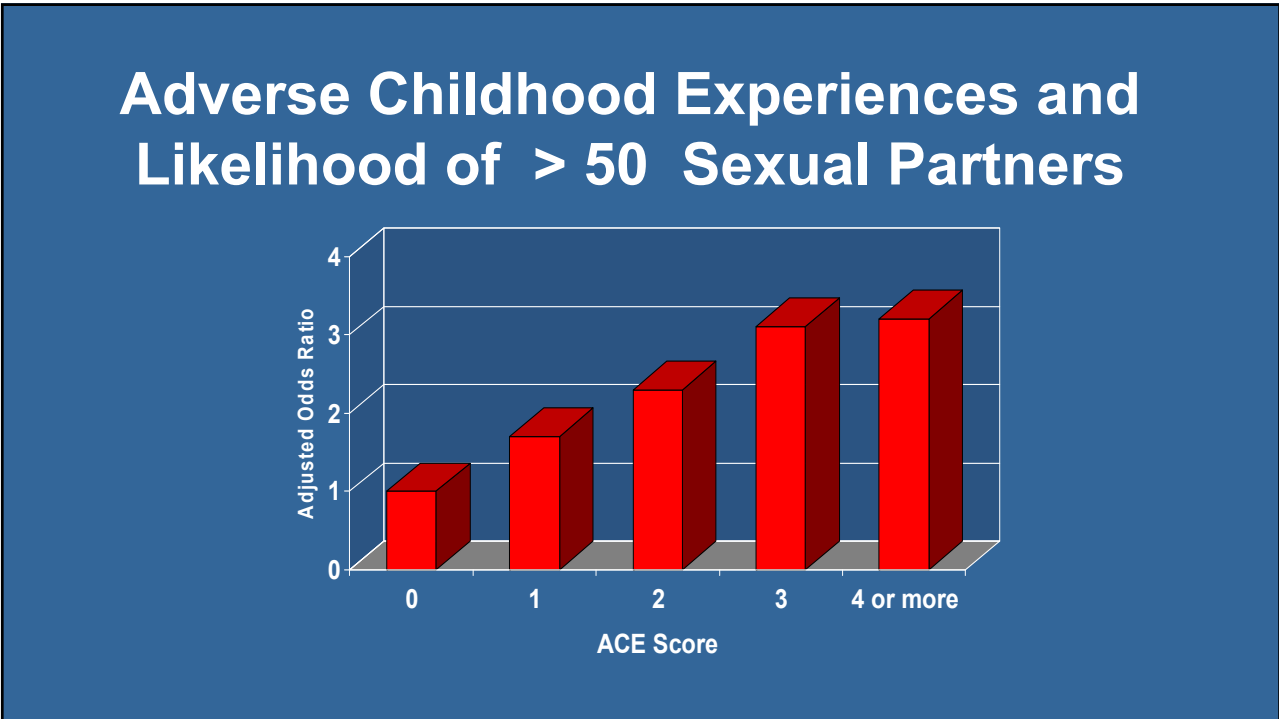
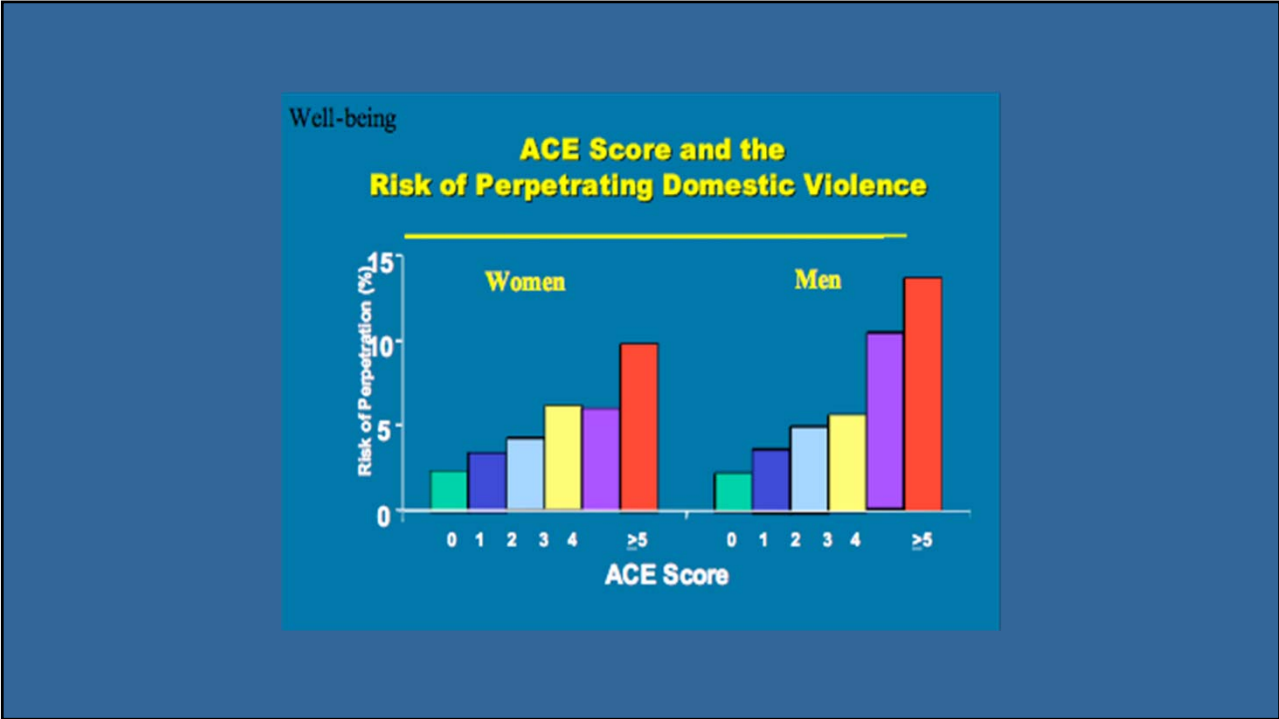


Dube, S. R., Felitti, V. J., Dong, M., Chapman, D. P., Giles, W. H., & Anda, R. F. (2003). Childhood abuse, neglect and household dysfunction and the risk of illicit drug use: The Averse Childhood Experience Study. *Pediatrics*, 111(3), 564-572.

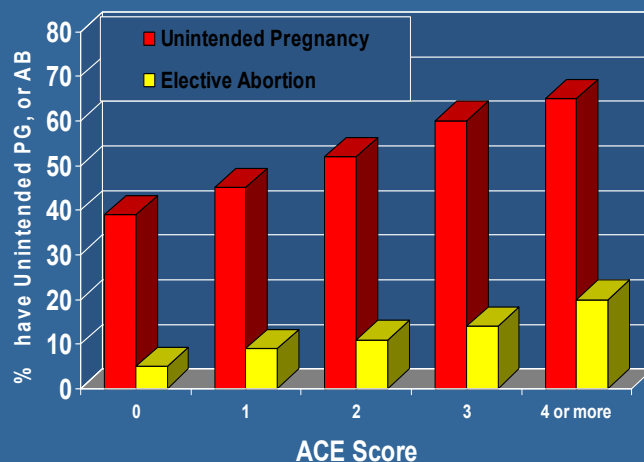
Serious Social Problems

Childhood Experiences Underlie Rape

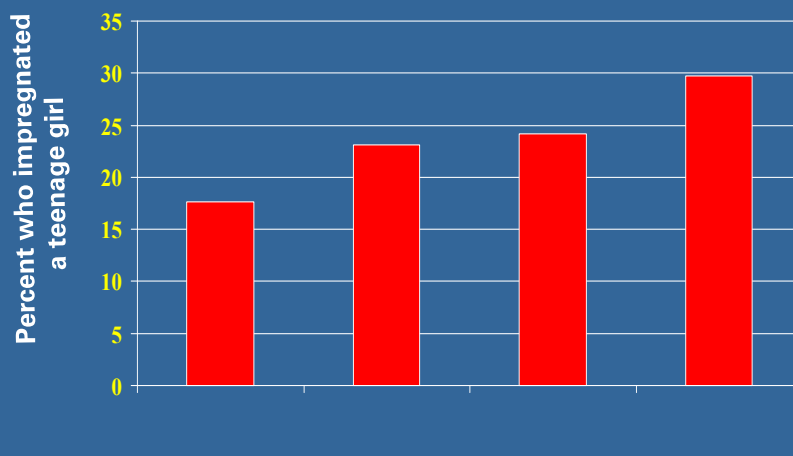


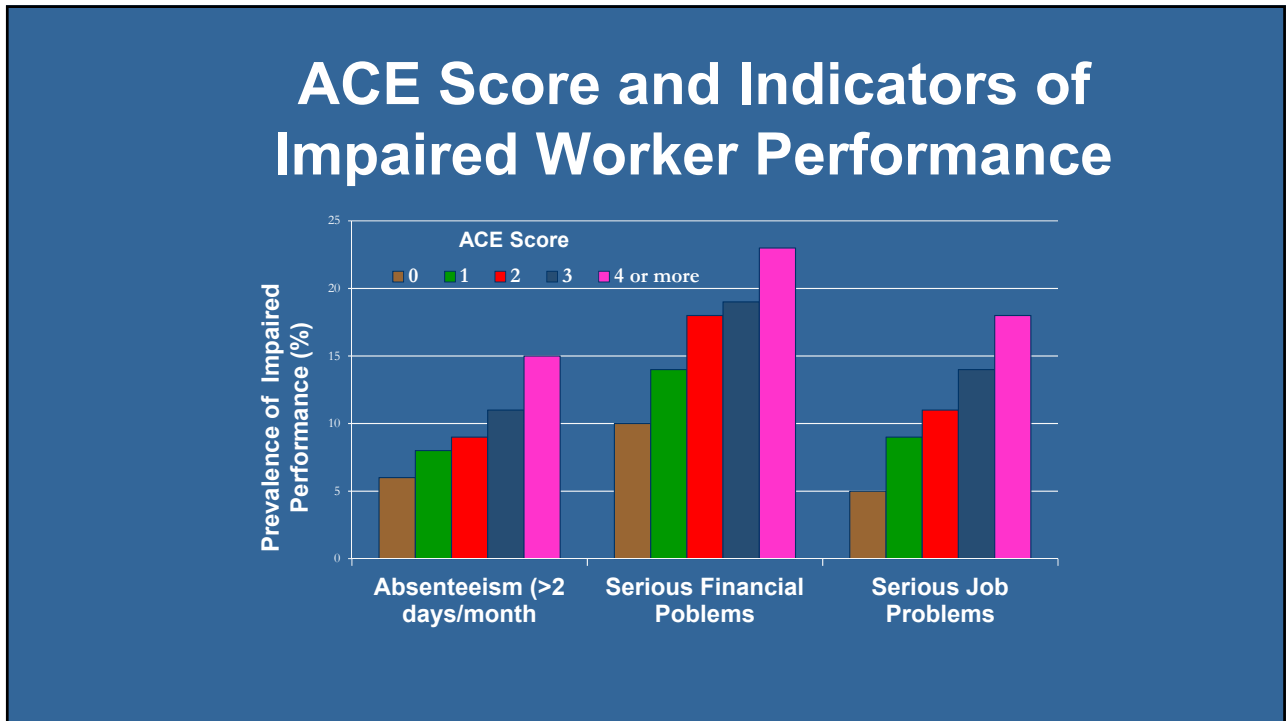
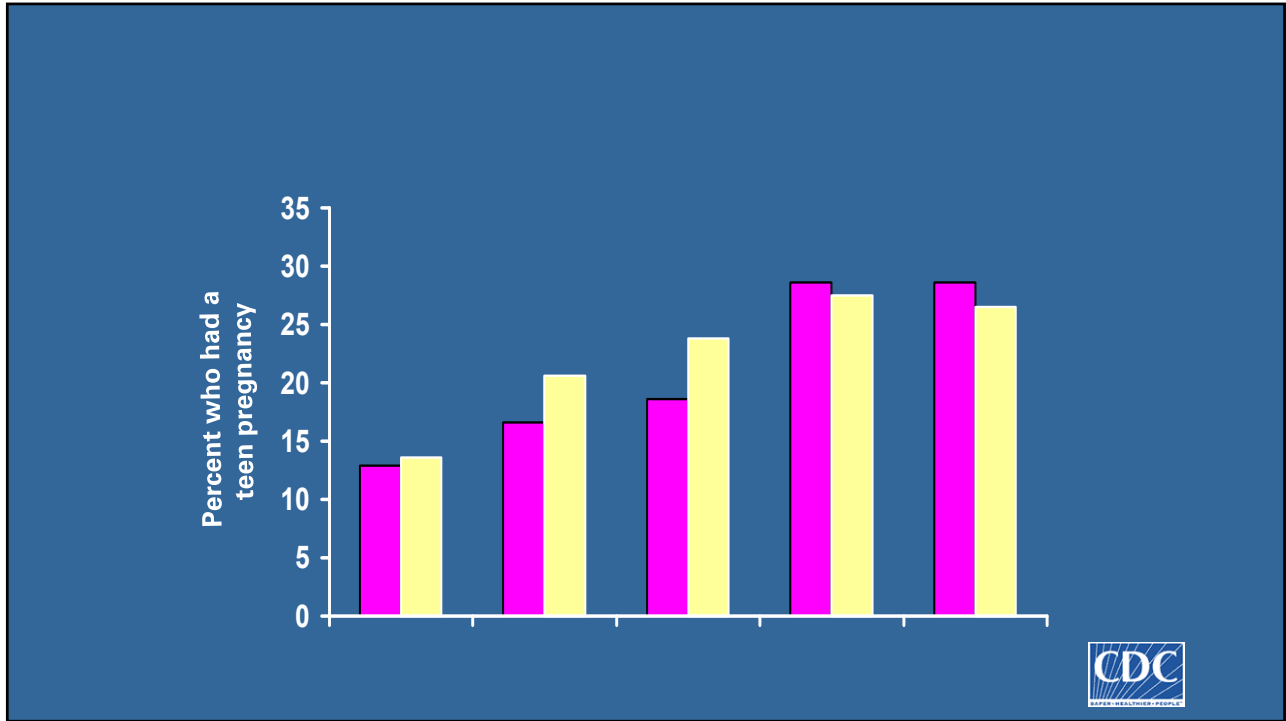


ACE Score and Unintended Pregnancy or Elective Abortion

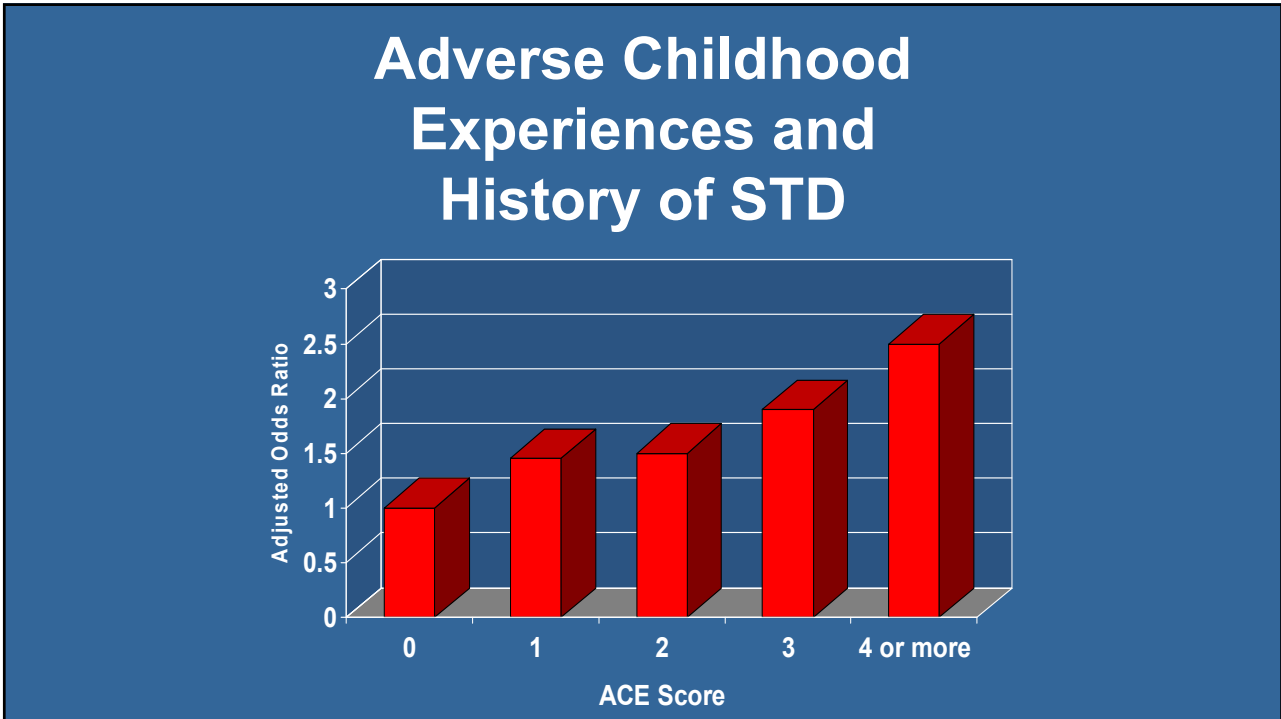


Sexual Abuse of Male Children and Their Likelihood of Impregnating a Teenage Girl

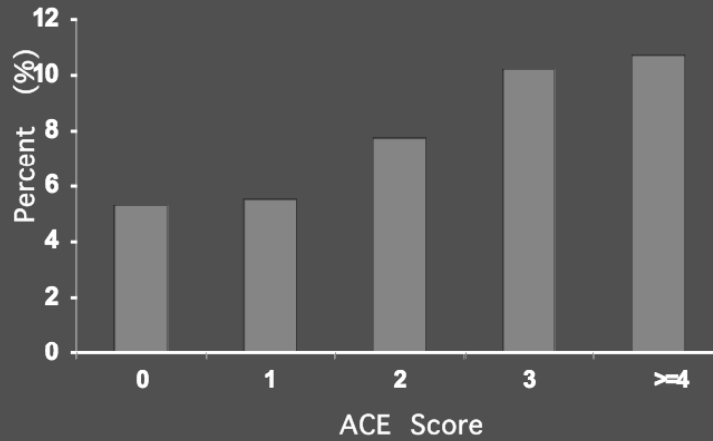




Adult Disease and Disability



The ACE Score and the Prevalence of Liver Disease (Hepatitis/Jaundice)



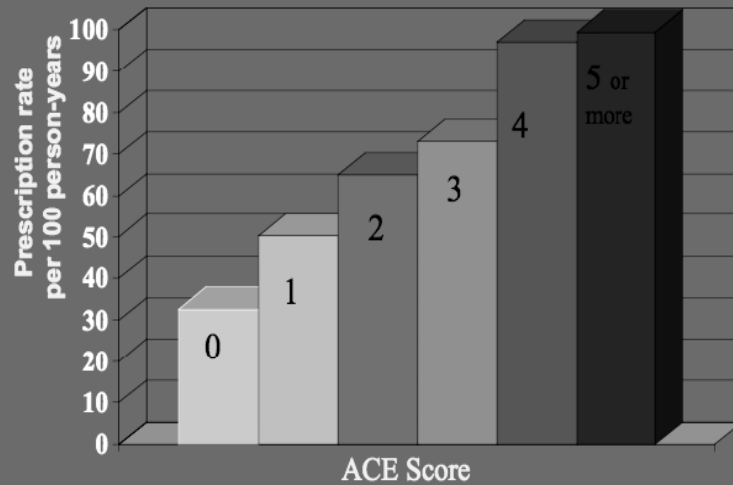
ACEs Increase Likelihood of Heart Disease*

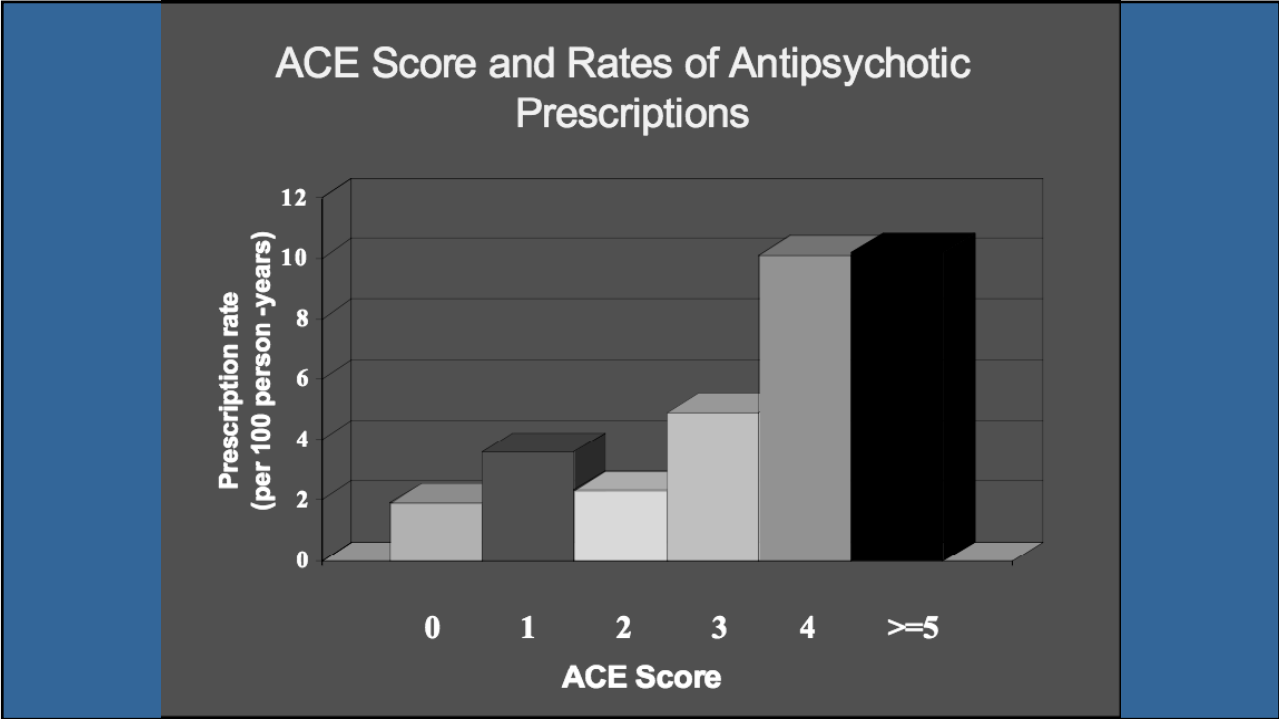
- Emotional abuse 1.7x
- Physical abuse 1.5x
- Sexual abuse 1.4x
- Domestic violence 1.4x
- Mental illness 1.4x
- Substance abuse 1.3x
- Household criminal 1.7x
- Emotional neglect 1.3x
- Physical neglect 1.4x



High Health and Mental Health Care Costs

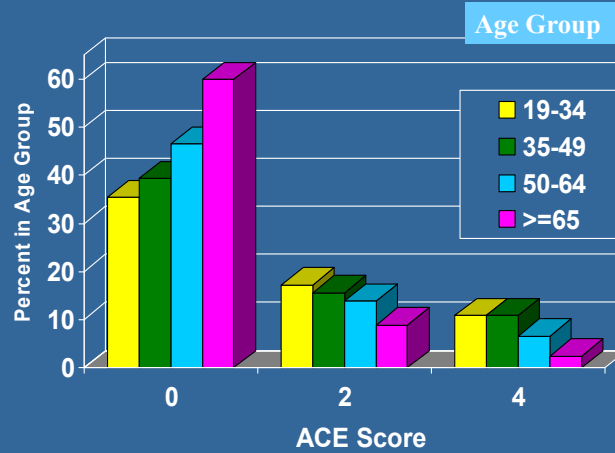
ACE Score and Rates of Antidepressant Prescriptions
approximately 50 years later





Poor Life Expectancy

Effect of ACEs on Mortality



Adverse Childhood Experience Study



The Adverse Childhood Experiences Study, <http://acestudy.org/>

ACE Study

- www.cdc.gov/nccdphp/ace
- www.cestudy.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:

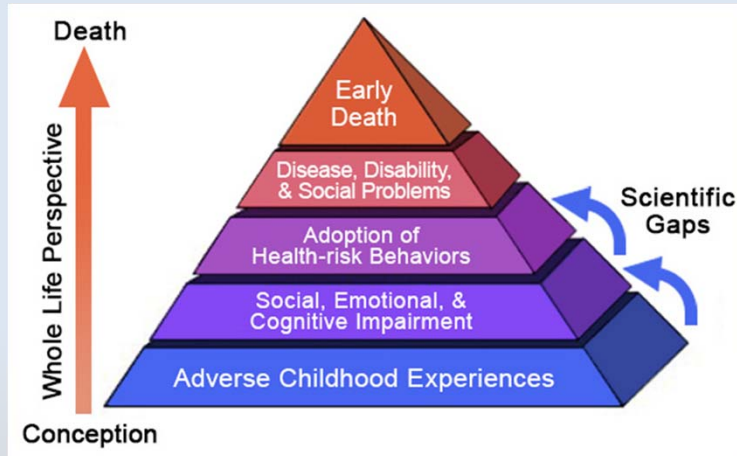
- MENTALLY ILL, DEPRESSED OR SUICIDAL PERSON IN HOME
- FAMILY MEMBER WITH SUBSTANCE USE
- PARENTAL DISCORD – INDICATED BY DIVORCE, SEPARATION, ABANDONMENT
- WITNESSING DOMESTIC VIOLENCE AGAINST THE MOTHER
- INCARCERATION OF ANY FAMILY MEMBER

**“What’s predictable is
preventable.”**

Dr. Robert Anda

**How do we move
from prediction to prevention?**

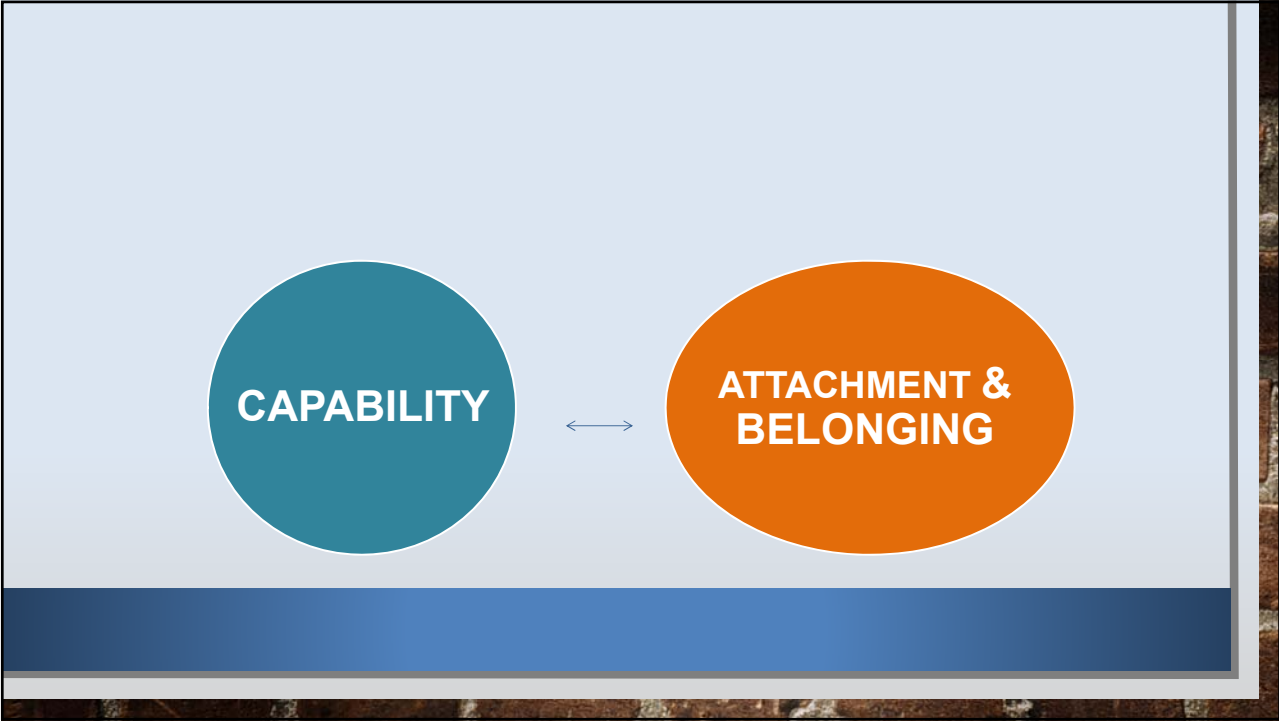
Life Course Approach

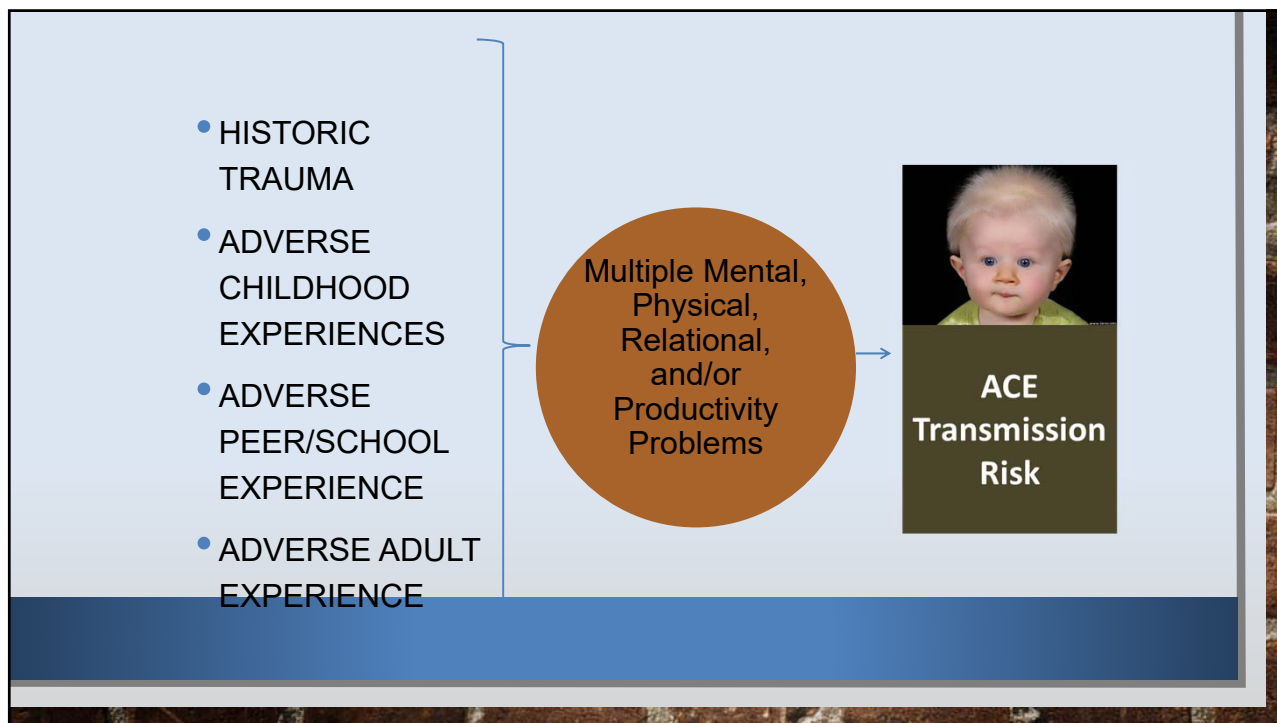
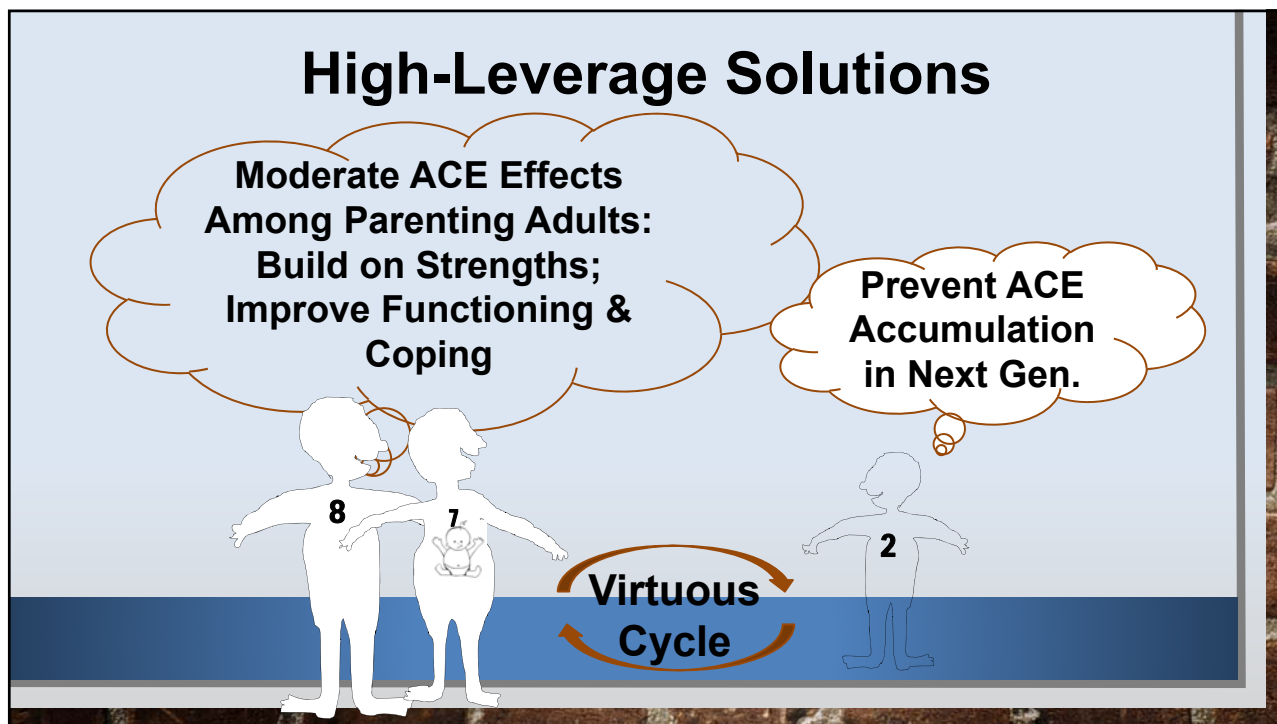


The Adverse Childhood Experiences Study, <http://acestudy.org/>

CAPABILITY

Capabilities can be impacted by trauma.





Elementary Children

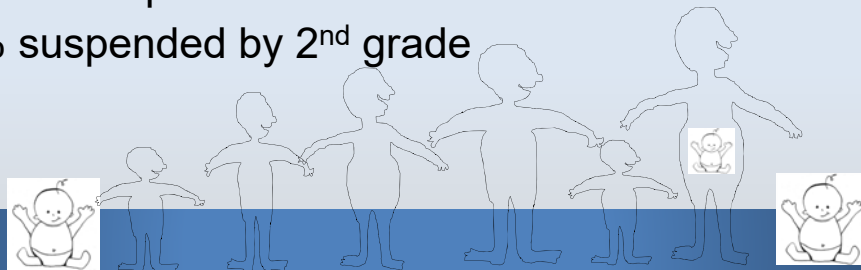
- Greatest single predictor for health, attendance, behavior
- Second strongest predictor for academic failure



Christopher Blodgett, WSU AHEC Spokane, WA; Personal Communication with Laura Porter; 2012

Among youth with ≥ 4 ACE:

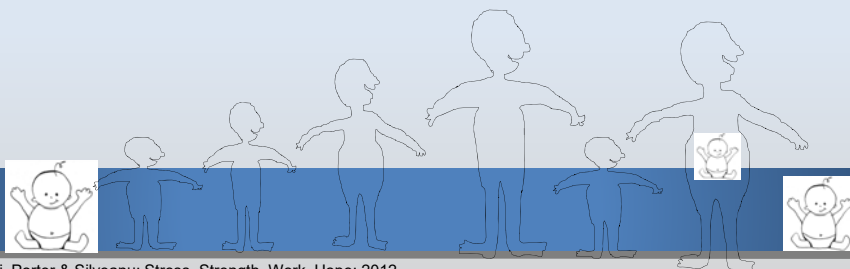
- 33% of court involved youth re-offend in two years (vs. 13% 0-1 ACE)
- 51% in special Ed. (vs. 33% 0-1 ACE)
- 74% below 2.0 GPA (vs. 58% 0-1 ACE)
- 64% 4+ suspensions
- 85% suspended by 2nd grade



Grevstad, J. & Anda, R., Adverse Childhood Experience in Adjudicated Youth in Washington, 2010; Report to Washington Family Policy Council

Adult Adversity:

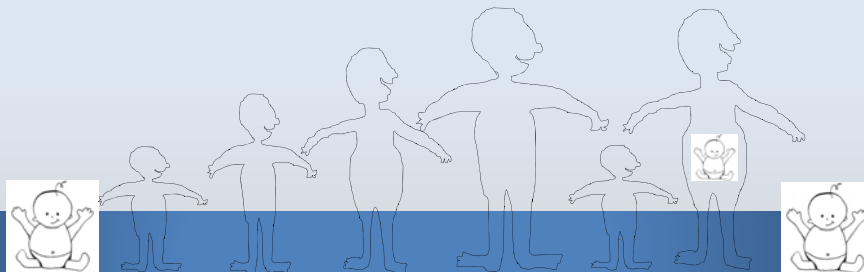
- Incarceration
- Victim of interpersonal violence
- Drug/alcohol Problems
- Mental illness
- Divorce
- Work injury- illness
- Homelessness
- Disability
- Poverty
- Health limits activity
- Unemployment



Longhi, Porter & Silveanu; Stress, Strength, Work, Hope; 2012

Parenting Adults:

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



Simmons, K. & Porter, L.; Analysis of 2010-2011 Washington BRFSS data; unpublished

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?

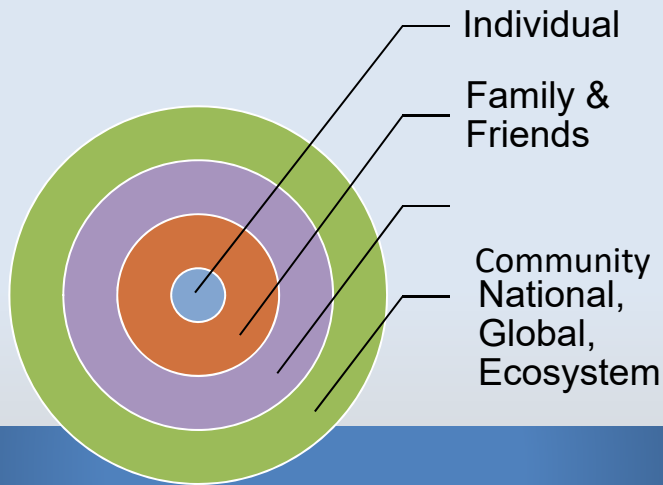
- Massage
- Mindfulness, reflection
- Pleasure
- Biofeedback
- Movement and music
- Exercise and play
- Activities that integrate visual information with fine- and gross-motor movements
- Physical activities for exploration of environment.
- Practicing connection



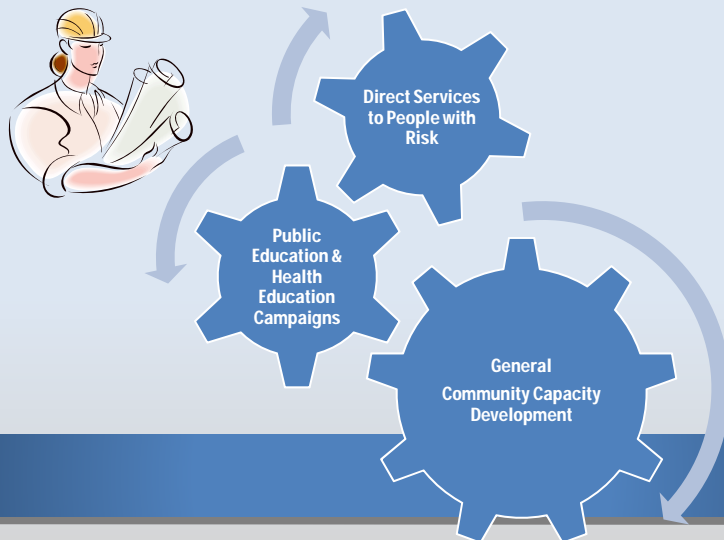
Concepts of Resiliency



Resilience Occurs at All Levels



Emergence & Collective Impact: Attend to Health of System as a Whole



Risk is Usually Measured Here

Unseen

The iceberg diagram shows a small tip above the waterline and a much larger, jagged mass below. The layers are labeled from top to bottom: "Events" (above the waterline), "Patterns", "Structures", "Mental Models", and "Values/Principles" (all below the waterline). A blue line points from the text "Risk is Usually Measured Here" to the tip of the iceberg.

We Increase Probability of Lasting Change When We Notice and Act Below the Waterline

Adverse childhood experiences can impact prevention efforts.

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.

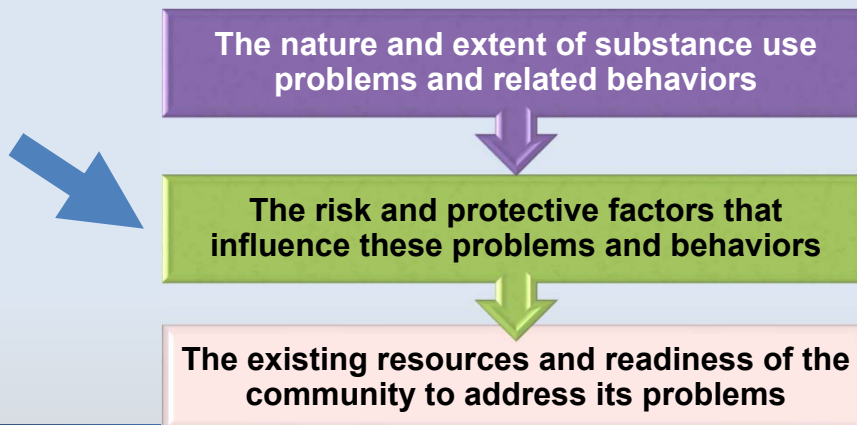
**Strategic Prevention
Framework (SPF)** is used
to assess prevention needs
and gather data

Strategic Prevention Framework

SPF requires seven steps of completion



DATA - WHAT TO ASSESS



SAMHSA'S CENTER FOR THE APPLICATION OF PREVENTION TECHNOLOGIES

INTEGRATING ACES INTO SUBSTANCE MISUSE PREVENTION EFFORTS

Because ACEs are common and strongly related to a variety of substance misuse and related behavioral health outcomes, preventing ACEs and engaging in early identification of people who have experienced them could have a significant impact on a range of critical health problems. Specifically, practitioners can strengthen their substance misuse prevention efforts by:

- Collecting state- and county-level ACEs data to inform local decision-making (e.g., by incorporating ACEs indicators into Behavioral Risk Factors Surveillance Systems).
- Increasing awareness of ACEs among state- and community-level substance misuse prevention professionals, emphasizing the relevance of ACEs to behavioral health disciplines.
- Including ACEs among the primary risk and protective factors when engaging in prevention planning efforts.
- Selecting and implementing programs and strategies designed to address ACEs, including efforts focused on reducing intergenerational transmission of ACEs.
- Using ACEs research and local ACEs data to identify groups of people who may be at higher risk for substance use disorders and to conduct targeted prevention.

<https://www.samhsa.gov/capt/sites/default/files/resources/aces-behavioral-health-problems.pdf>

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

- ANDA, R. F., CROFT, J. B., FELITTI, V. J., NORDENBERG, D., GILES, W. H., WILLIAMSON, D. F., & GIOVINO, G. A. (1999). ADVERSE CHILDHOOD EXPERIENCES AND SMOKING DURING ADOLESCENCE AND ADULTHOOD. *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*, 282, 1652–1658.
- BLODGETT, CHRISTOPHER. (2012). WSU AHEC SPOKANE, WA; PERSONAL COMMUNICATION WITH LAURA PORTER
- DUBE, S. R., FELITTI, V. J., DONG, M., CHAPMAN, D. P., GILES, W. H., & ANDA, R. F. (2003). CHILDHOOD ABUSE, NEGLECT AND HOUSEHOLD DYSFUNCTION AND THE RISK OF ILLICIT DRUG USE: THE AVERSE CHILDHOOD EXPERIENCE STUDY. *PEDIATRICS*, 111(3), 564–572.
- DUBE, S. R., MILLER, J. W., BROWN, D. W., GILES, W. H., FELITTI, V. J., DONG, M., & ANDA, R. F. (2006). ADVERSE CHILDHOOD EXPERIENCES AND THE ASSOCIATION WITH EVER USING ALCOHOL AND INITIATING ALCOHOL USE DURING ADOLESCENCE. *JOURNAL OF ADOLESCENT HEALTH*, 38(4), 444.
- FELITTI, V., (2003). "SNOWBIRD CONFERENCE" OF THE CHILD TRAUMA TREATMENT NETWORK OF THE INTERMOUNTAIN WEST.. ACE STUDY SLIDES.
- 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 BRFFSS 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/](http://ACESTUDY.ORG/)
- TOMEDI, LAURA. (JUNE 7, 2012). NEW MEXICO BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2009. NEW MEXICO DEPARTMENT OF HEALTH..
- 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.

Developed under the Substance Abuse and Mental Health Services Administration's Center for the Application of Prevention Technologies task order. Reference #HHSS283201200024/HHSS28342002T. For training use only. Updated June 2018
<https://www.samhsa.gov/capt/sites/default/files/resources/aces-behavioral-health-problems.pdf>

ADDITIONAL RESOURCES

- Bright, M. A., Alford, S. M., Hinojosa, M. S., Knapp, C., & Fernandez-Baca, D. E. (2015). **Adverse childhood experiences and dental health in children and adolescents. Community Dentistry and Oral Epidemiology** 43(3), 193–199. doi:10.1111/cdoe.12137
- Brown, M. J., Masho, S. B., Perera, R. A., Mezuk, B., & Cohen, S. A. (2015). **Sex and sexual orientation disparities in adverse childhood experiences and early age at sexual debut in the United States: Results from a nationally representative sample. Child Abuse & Neglect** 46, 89–102. doi:10.1016/j.chiabu.2015.02.019
- Choi, N. G., DiNitto, D. M., Marti, C. N., & Choi, B. Y. (2017). **Association of adverse childhood experiences with lifetime mental and substance use disorders among men and women aged 50+ years.** International Psychogeriatrics 29(3), 359–372. doi:10.1017/S1041610216001800
- Dube, S. R., Anda, R. F., Felitti, V. J., Chapman, D. P., Williamson, D. F., Giles, W. H. (2001). **Childhood abuse, household dysfunction and the risk of attempted suicide throughout the lifespan: findings from the Adverse Childhood Experiences Study.** JAMA 286(24), 3089–3096.
- Dube, S. R., Felitti, V. J., Dong, M., Chapman, D. P., Giles, W. H., Anda, R. F. (2003). **Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: the adverse childhood experiences study.** Pediatrics 111(3), 564–572.

Developed under the Substance Abuse and Mental Health Services Administration's Center for the Application of Prevention Technologies task order. Reference #HHSS283201200024/HHSS28342002T. For training use only. Updated June 2018
<https://www.samhsa.gov/capt/sites/default/files/resources/aces-behavioral-health-problems.pdf>

ADDITIONAL RESOURCES

- Ege, M. A., Messias, E., Thapa, P., & Krain, L. P. (2015). **Adverse Childhood Experiences and Geriatric Depression: Results from the 2010 BRFSS.** *American Journal of Geriatric Psychiatry* 23(1), 110–114. doi:10.1016/j.jagp.2014.08.014
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., ... & Marks, J. S. (1998). **Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study.** *American Journal of Preventive Medicine* 14(4), 245–258. doi:10.1016/S0749-3797(98)00017-8
- Ford, E. S., Anda, R. F., Edwards, V. J., Perry, G. S., Zhao, G., Li, C., & Croft, J. B. (2011). **Adverse childhood experiences and smoking status in five states.** *Preventive Medicine* 53(3), 188–193. doi:10.1016/j.ypmed.2011.06.015
- Forster, M., Gower, A. L., Borowsky, I. W., & McMorris, B. J. (2017). **Associations between adverse childhood experiences, student-teacher relationships, and non-medical use of prescription medications among adolescents.** *Addictive Behaviors* 68, 30–34. doi:10.1016/j.addbeh.2017.01.004
- Hillis, S. D., Anda, R. F., Dube, S. R., Felitti, V. J., Marchbanks, P. A., & Marks, J. S. (2004). **The association between adverse childhood experiences and adolescent pregnancy, long-term psychosocial consequences, and fetal death.** *Pediatrics* 113(2), 320–327.

Developed under the Substance Abuse and Mental Health Services Administration's Center for the Application of Prevention Technologies task order. Reference #HHSS2832012000241/HHSS28342002T. For training use only. Updated June 2018
<https://www.samhsa.gov/capt/sites/default/files/resources/aces-behavioral-health-problems.pdf>

ADDITIONAL RESOURCES

- Hillis, S. D., Anda, R. F., Felitti, V. J., & Marchbanks, P. A. (2001). **Adverse childhood experiences and sexual risk behaviors in women: a retrospective cohort study.** *Family Planning Perspectives* 33(5), 206–211. doi:10.1363/3320601
- Kajeepeta, S., Gelaye, B., Jackson, C. L., & Williams, M. A. (2015). **Adverse childhood experiences are associated with adult sleep disorders: a systematic review.** *Sleep Medicine* 16(3), 320–330. doi:10.1016/j.sleep.2014.12.013
- Merrick, M. T., Ports, K. A., Ford, D. C., Affifi, T. O., Gershoff, E. T., & Grogan-Kaylor, A. (2017). **Unpacking the impact of adverse childhood experiences on adult mental health.** *Child Abuse & Neglect* 69, 10–19. doi:10.1016/j.chiabu.2017.03.016
- Monnat, S. M., & Chandler, R. F. (2015). **Long term physical health consequences of adverse childhood experiences.** *The Sociology Quarterly* 56(4), 723–752. doi:10.1111/tsq.12107
- Rothman, E. F., Edwards, E. M., Heeren, T., & Hingson, R. W. (2008). **Adverse childhood experiences predict earlier age of drinking onset: results from a representative US sample of current or former drinkers.** *Pediatrics* 122(2), e298–e304.
- Smith, M. V., Gotman, N., & Yonkers, K. A. (2016). **Early childhood adversity and pregnancy outcomes.** *Maternal and Child Health Journal* 20(4), 790–798. doi:10.1007/s10995-015-1909-5
- Windle, M., Haardörfer, R., Getachew, B., Shah, J., Payne, J., Pillai, D., & Berg, C. J. (2018). **A multivariate analysis of adverse childhood experiences and health behaviors and outcomes among college students** *American College Health* 66(4), 246–251. doi:10.1080/07448481.2018.1431892

Developed under the Substance Abuse and Mental Health Services Administration's Center for the Application of Prevention Technologies task order. Reference #HHSS2832012000241/HHSS28342002T. For training use only. Updated June 2018
<https://www.samhsa.gov/capt/sites/default/files/resources/aces-behavioral-health-problems.pdf>

THANK YOU!

QUESTIONS?