From Adversity to Resilience

Cyndie Meyer, RD
Program Manager for Chronic Disease Prevention
Clark County Public Health
Chronic diseases account for...

- Seventy-five cents of every health care dollar
- Seven of every 10 deaths in the U.S.
- Fifty-four percent of ER visits made by high ER utilizers

- One in three adults have hypertension
- Heart disease alone cost the U.S. $315 billion in 2012
- Diabetes is leading cause of kidney failure, non-injury lower-limb amputation and blindness
Where is “upstream”?
The ACE* study

- Mid-1990s -- Kaiser Permanente San Diego
- Drs. Felitti and Anda
- 17,000 participants... and growing
- All insured
- 54% female
- 78% Caucasian
- 75% college educated

*Adverse Childhood Experiences
Reference: Turning Gold into Lead
ACE study factors

ACE Score = Number of categories to which a person is exposed

<table>
<thead>
<tr>
<th>ABUSE</th>
<th>NEGLECT</th>
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<tbody>
<tr>
<td>• Physical</td>
<td>• Physical</td>
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<tr>
<td>• Emotional</td>
<td>• Emotional</td>
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<tr>
<td>• Sexual</td>
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<table>
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<tr>
<th>FAMILY DYSFUNCTION</th>
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<tbody>
<tr>
<td>• Mental illness, depression, suicide</td>
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<tr>
<td>• Substance abuse/addiction</td>
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<tr>
<td>• Parental discord – divorce, separation, abandonment</td>
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<td>• Observing domestic violence</td>
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<td>• Incarceration of any family member</td>
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Poverty, Homelessness, Racism
Higher ACE scores correlate with increased health risks, chronic diseases, and poor health outcomes.

- Alcoholism and alcohol abuse
- Chronic obstructive pulmonary disease (COPD)
- Depression
- Fetal death
- Health-related quality of life
- Illicit drug use
- Ischemic heart disease (IHD)
- Liver disease
- Risk of intimate partner violence
- Multiple sexual partners
- Sexually transmitted diseases (STDs)
- Smoking
- Suicide attempts
- Unintended pregnancies
- Early initiation of smoking
- Early initiation of sexual activity
- Adolescent pregnancy
## As ACEs increase...

<table>
<thead>
<tr>
<th>Zero ACEs</th>
<th>With Three ACEs</th>
<th>With Seven or More ACEs</th>
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<tbody>
<tr>
<td>• 1 in 16 smokes&lt;br&gt;• 1 in 69 is alcoholic&lt;br&gt;• 1 in 480 uses IV drugs&lt;br&gt;• 1 in 14 has heart disease&lt;br&gt;• 1 in 96 attempts suicide</td>
<td>• 1 in 9 smokes&lt;br&gt;• 1 in 9 is alcoholic&lt;br&gt;• 1 in 49 uses IV drugs&lt;br&gt;• 1 in 7 has heart disease&lt;br&gt;• 1 in 10 attempts suicide</td>
<td>• 1 in 6 smokes&lt;br&gt;• 1 in 6 is alcoholic&lt;br&gt;• 1 in 30 uses IV drugs&lt;br&gt;• 1 in 6 has heart disease&lt;br&gt;• 1 in 5 attempts suicide</td>
</tr>
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The brain under stress
Immediate, Intermediate, Long-term consequences
The brain under stress...

**Limbic system:**
**Fight or Flight**
*Regulates:* heart rate, mood, hormones, Sexual behavior
*Vital for:* Learning, memory, reward, reinforcement

**Amygdala & Hippocampus:**
**Connection**
*Controls:* Panic and fear, social cues, memory, attention
All good if you are in the forest, being chased by a bear...
But, what if the bear lives in your home?
What does fight, freeze or flight look like?
ACEs, trauma and brain development
Behavior may not be a choice...

- Traumatized children function out of the limbic system, which is automatic. They have little control.

- The natural reaction for traumatized children is survival. This is what living in fear does.

- Children with high ACE scores often perceive traditional consequences as threats. This activates the limbic response even more.

- Children with high ACE scores may be “on point” for flight, freeze or flight.

From Help for Billy – Forbes, Sporleder
Intermediate impact
Childhood trauma interrupts healthy brain development
The impact of maltreatment on the developing brain depends on...

- Age of child
- Gender
- Type of abuse
- Frequency & duration
- Identity of abuser
- Access to caring adult
Synaptic Density

At Birth  Elementary Age  Puberty

Single Neuron
Neuroplasticity and adaptation

The developing brain responds to experience and stimulation with synaptic growth and/or pruning. Toxic, prolonged stress (in the absence of a caring adult) changes brain structure.
Long-term: The impact of childhood trauma is inheritable (epigenetics)

- Methylation Model of Heritability (on/off switch)
- Histone Modification Model
- Telomere Shortening Model
In Washington State...

- 12% of elementary children have three or more ACEs
- 42% of high school students have three or more ACEs

- In an average Washington state high school classroom:
  - Seven students will have four to five ACEs
  - Three students will have six or more ACEs
ACE Score Comparison
Kaiser Study v. Clark County Truants

Researchers:
Clayton Mosher, WSU Vancouver
Jodi Martin, Clark County Juvenile Court
Marijuana Use among Clark County Youth Overall v. ACE Indicators

- Poor Family Management: 33.3%
- Depression: 29.1%
- Lack of Adult Support: 34.0%
- Consider Suicide: 34.7%
- Physical Abuse: 34.7%

Overall Marijuana Use: 19%
Economic consequence of ACEs

• “Approximately 579,000 new substantiated cases of nonfatal child maltreatment (CM) and 1,740 cases of fatal CM per year in the United States result in a total economic burden of $124 billion/year.
• This estimate is based on discounted lifetime costs of $210,012 per victim of nonfatal CM and $1,272,900 per victim of fatal CM.
• These estimates are based on an incidence-based approach, which facilitates economic analysis for public health interventions.
• Compared with other health problems, the burden of CM is substantial, even after conservative assumptions are used, indicating the importance of preventing and treating CM. “

– Fang, et al., 2012
Resilience

All the world is full of suffering. It is also full of overcoming.

- Helen Keller
An ACE score is:

- A way to communicate without details
- A common language
- A key to share information
- A doorway to compassion, understanding and treatment

An ACE score is not:

- A fun quiz
- A diagnosis
- A prognosis or prediction
- A life sentence
- An indicator of bad parenting
- The whole story
How do we move our community from adversity to resilience?
Change the question:

• From: “What’s **WRONG** with you?”
• To: “What **HAPPENED** to you?”
The Pair of ACEs

Adverse Childhood Experiences

Maternal Depression

Physical & Emotional Neglect

Emotional & Sexual Abuse

Divorce

Substance Abuse

Mental Illness

Domestic Violence

Incarceration

Homelessness

Adverse Community Environments

Poverty

Violence

Discrimination

Poor Housing Quality & Affordability

Community Disruption

Lack of Opportunity, Economic Mobility & Social Capital

Ellis W., Dietz W. BCR Framework Academic Peds (2017)
Every child who winds up doing well has had at least one stable and committed relationship with a supportive adult.

– The Harvard Center for the Developing Child
Attachment builds resilience

Attachment Building Blocks

Penny Davis, adapted from "Attachment Parenting" by Grossmont College
Misbehavior is an opportunity to connect.

Traditional strategies

Trauma-informed strategies

Relationship building

Relationship disconnecting
Keys to Resilience

**ATTACHMENT AND BELONGING**
- Family bonds
- Caring adults
- Relationships
- Inclusion
- Intrinsic and extrinsic value

**CAPABILITY**
- Skills
- Knowledge
- Self-regulation
- Mindfulness
- Focus
- Discipline

**COMMUNITY CULTURE FAITH**
- Faith
- Hope
- Meaning
- Traditions
- Network of services
- Belonging
Adverse Childhood Experiences

Community Protective Factors

- Trauma-informed Services
- Caring Adults and Mentors
- Community Connectedness
- Restorative Justice/Law Enforcement
- Affordable Housing and Food

Family Protective Factors

- Consistent Household Rules
- Child Monitoring
- Sufficent Social and Health Services

Family Stability

- Quality Early Childhood Education
- Trauma-Informed Foster Care

Parental Employment

- Parenting Support
- Nurturing Parenting Skills

Parental Discord (Divorce, Separation, Abandonment)

- Depressed, Mentally-Ill or Suicidal Person at Home
- Incarcerated Family Member

Drug or Alcohol-Addicted Parent

- Physical Abuse
- Sexual Abuse
- Emotional Abuse
- Domestic Violence
- Emotional Neglect

Physical Neglect
Aligning community efforts to promote resilience in Clark County, Washington

**Action Teams:**
- Assessment and Evaluation Team
- Trauma-Informed Organizations Team
- Outreach Team
- Trauma-Informed Schools Team
- Clinical Intervention Team

Interested? Please email ACEsActionAlliance@clark.wa.gov
• Training clinics, residents and nursing students on ACEs, trauma-informed approaches, self-care
• Forming Clinical Applications Team to explore ACEs screening
• Developing referral resource list

• Trauma-informed Schools Team
  • Trained >750 Early Childhood Educators and >1,000 K-12 educators
  • Policies & environments changing
  • Teaching children self-regulation, mindfulness
  • Changing disciplinary policies

• Juvenile Justice
• Youth and adult mentors
• Gang Prevention Task Force
• Two County Sherriff’s office employees are now certified ACEs trainers by SAMHSA
Community Conversations

In Clark County:

• One in seven children under the age of five lives in poverty
• Six of every 1,000 children live in foster care
• One-third of Clark County children aged 0-5 live with a single parent.
• Only 42 percent of our county’s children have the foundational skills, knowledge and abilities needed to succeed in Kindergarten. The percentage was even lower for children living in poverty and children of color.
Community Input

- Increase pay for caregivers and early childhood educators
- Establish more preschool and quality child care programs
- Create and promote parenting resources for children who do not attend an organized preschool so they are ready for Kindergarten
- Assess and support social-emotional competence to the same degree as academic achievement
- Educate parents on the impact of childhood trauma and toxic stress
- Teach parenting approaches that support loving and stable parent-child relationships
- Support family resilience with policies such as paid and flexible family leave, breastfeeding or baby-at-work policies, and quality, affordable child care
- Increase support for foster care services and group homes so they can offer nurturing, trauma-informed care
- Encourage mentoring programs that connect children with responsible, caring adults who teach kids that they matter
- Create a system to identify, follow and support high-needs children with wrap-around care so they don’t fall through the cracks
The solution to all adult problems tomorrow depends in large measure upon the way our children grow up today.

– Margaret Mead

Thank you!