

From Adversity to Resilience

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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

ABUSE

- Physical
- Emotional
- Sexual

NEGLECT

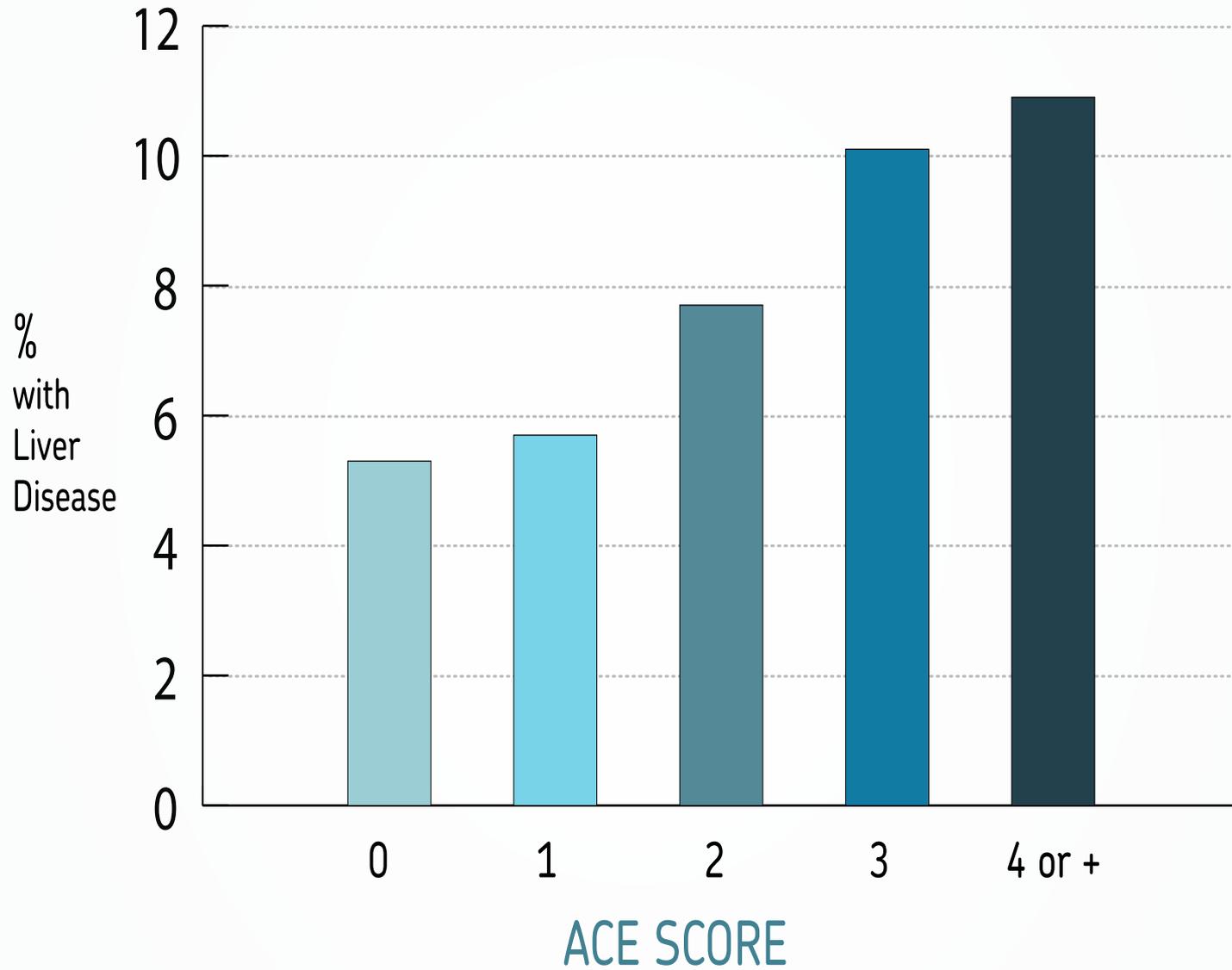
- Physical
- Emotional

FAMILY DYSFUNCTION

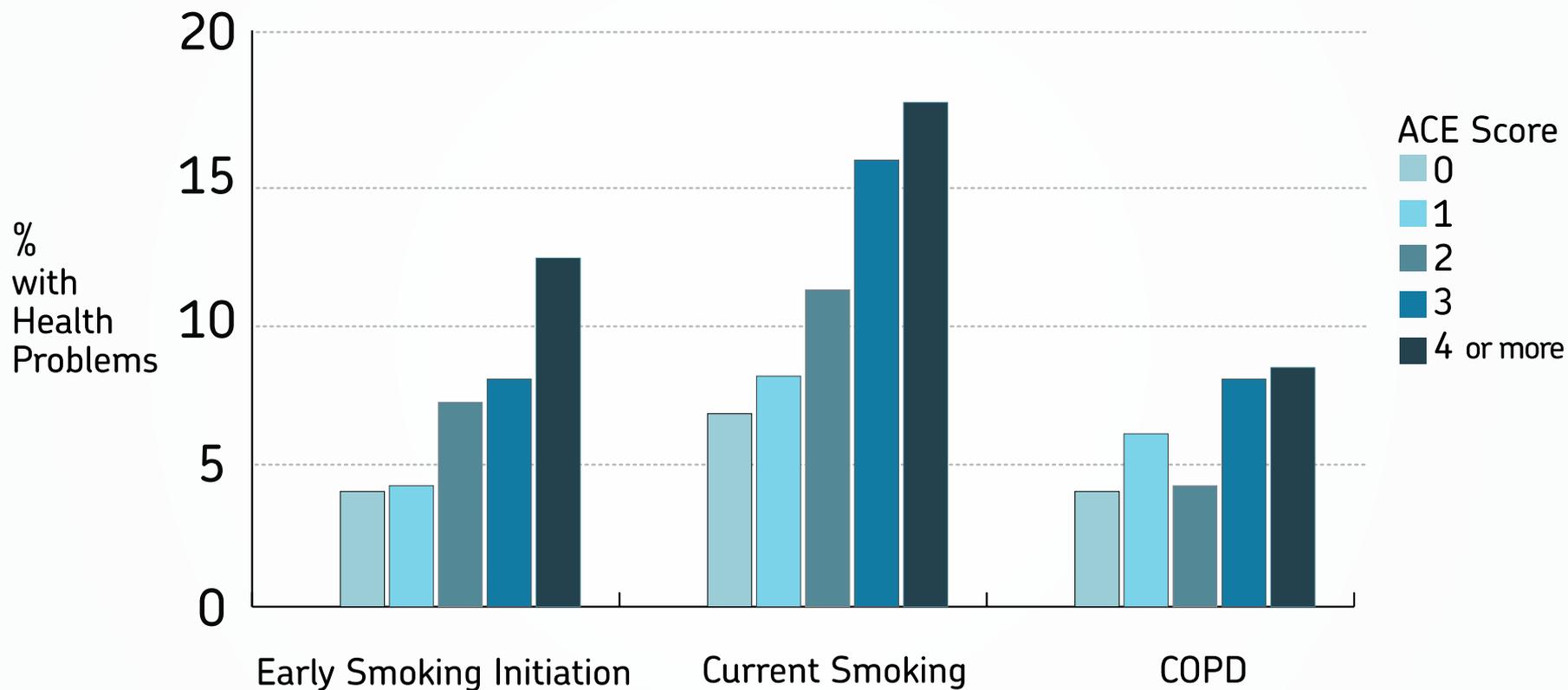
- Mental illness, depression, suicide
- Substance abuse/addiction
- Parental discord – divorce, separation, abandonment
- Observing domestic violence
- Incarceration of any family member

Poverty, Homelessness, Racism

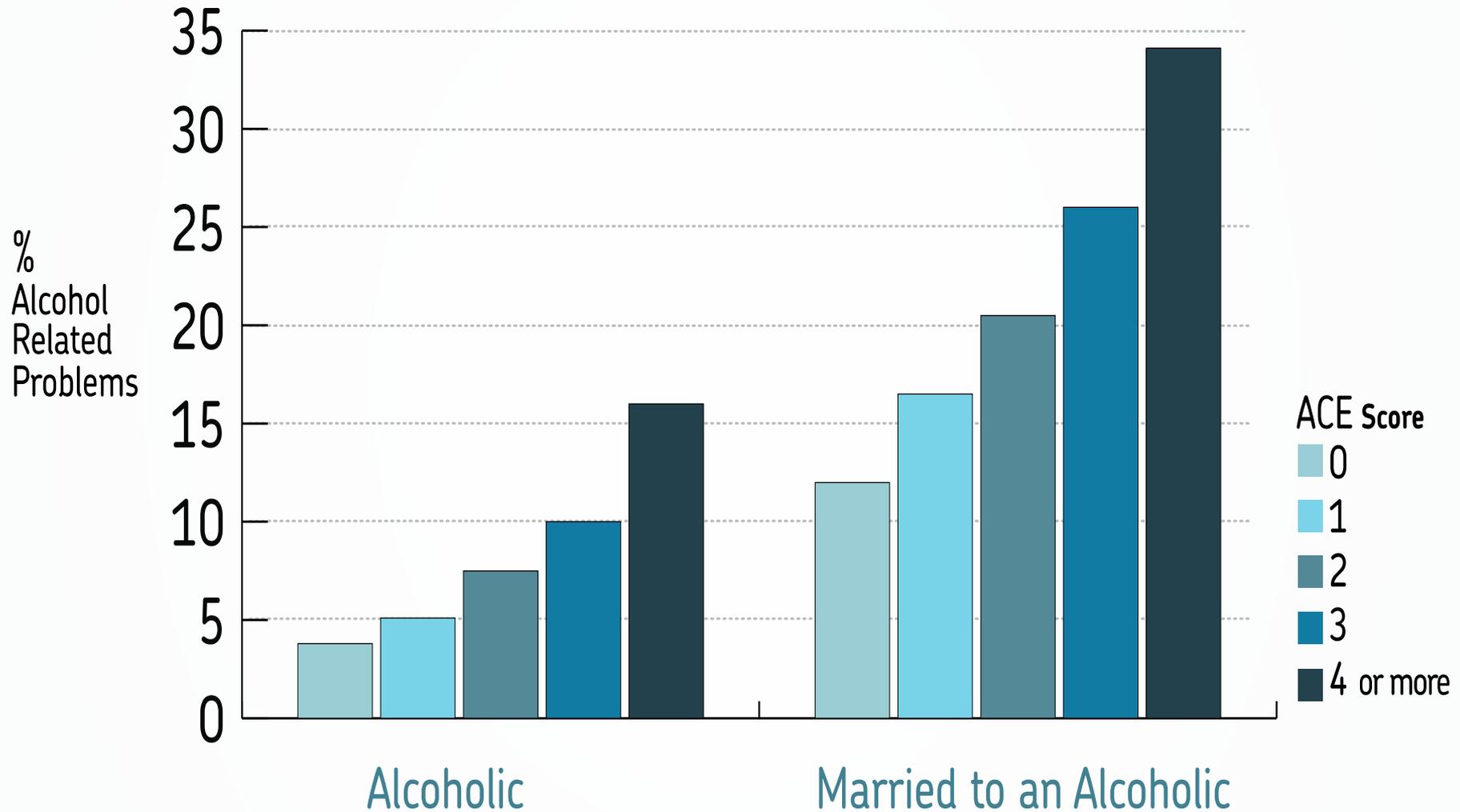
ACE Score and Liver Disease



ACEs, Smoking and Lung Disease



ACEs & Alcoholism & Marrying an Alcoholic

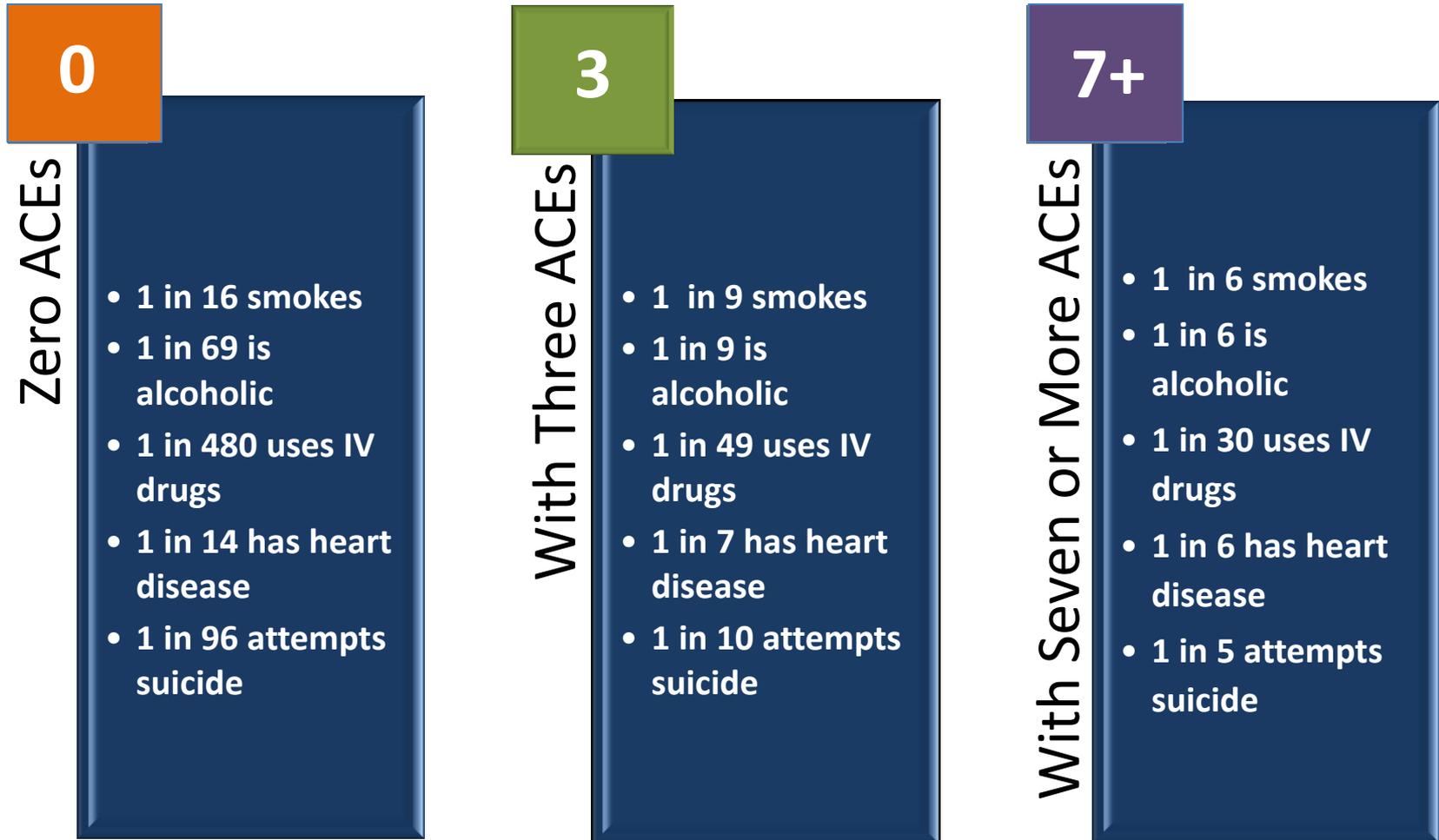


Dose response

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...



0

Zero ACEs

- 1 in 16 smokes
- 1 in 69 is alcoholic
- 1 in 480 uses IV drugs
- 1 in 14 has heart disease
- 1 in 96 attempts suicide

3

With Three ACEs

- 1 in 9 smokes
- 1 in 9 is alcoholic
- 1 in 49 uses IV drugs
- 1 in 7 has heart disease
- 1 in 10 attempts suicide

7+

With Seven or More ACEs

- 1 in 6 smokes
- 1 in 6 is alcoholic
- 1 in 30 uses IV drugs
- 1 in 6 has heart disease
- 1 in 5 attempts suicide

The brain under stress

Immediate, Intermediate, Long-term consequences



The brain under stress...

Limbic system:

Fight or Flight

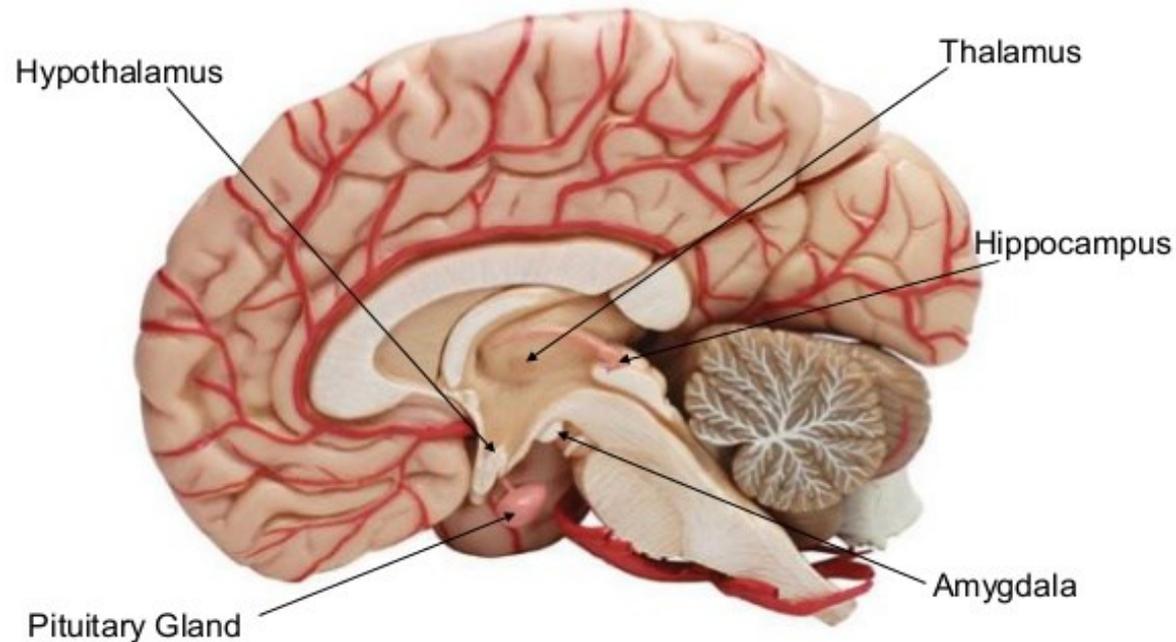
Regulates: heart rate, mood, hormones, Sexual behavior

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...**



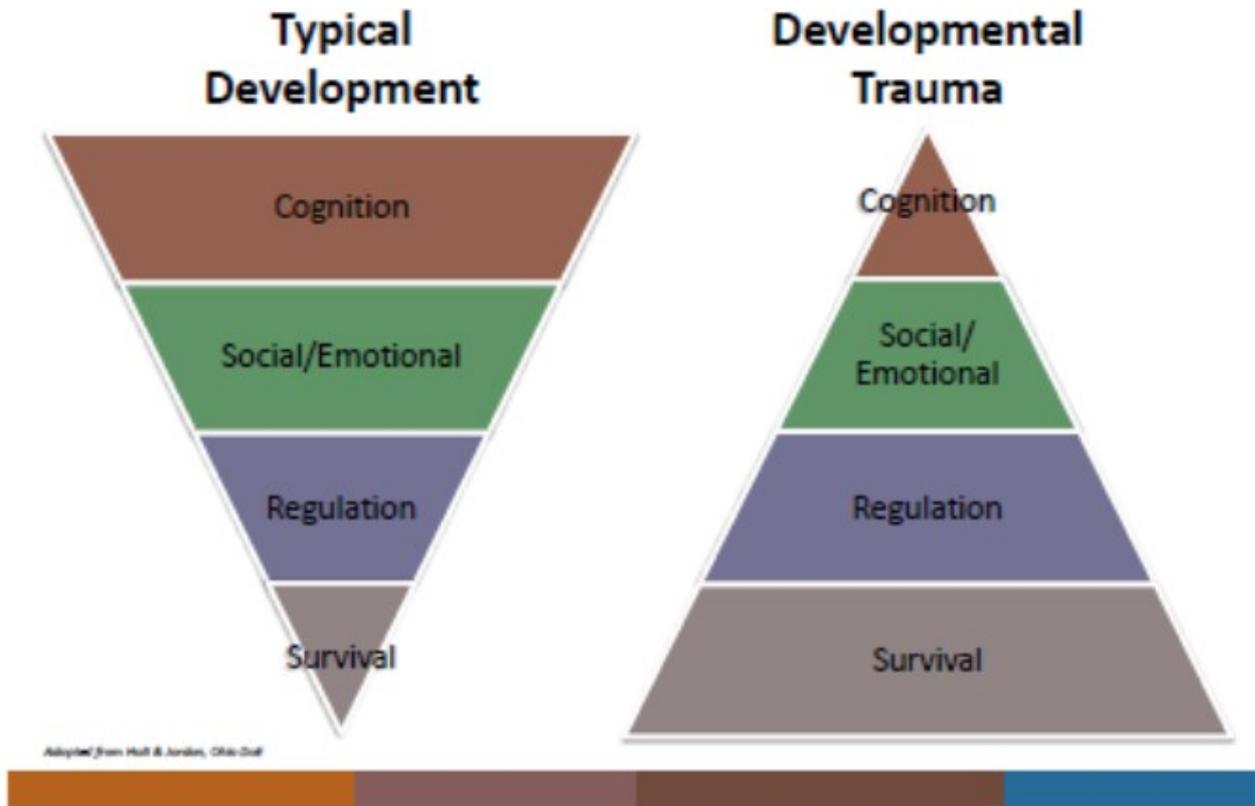
**But, what if the bear
lives in your home?**



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.



Intermediate impact

Childhood trauma interrupts
healthy brain development

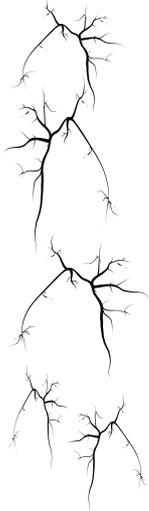


The impact of maltreatment on the developing brain depends on...

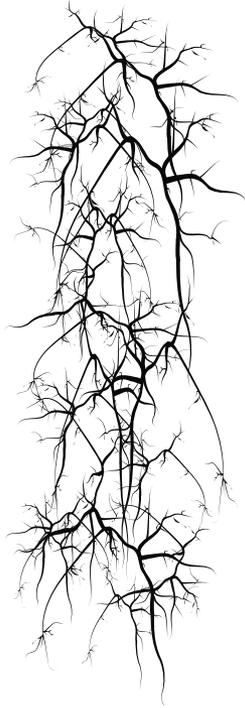
- Age of child
- Gender
- Type of abuse
- Frequency & duration
- Identity of abuser
- Access to caring adult



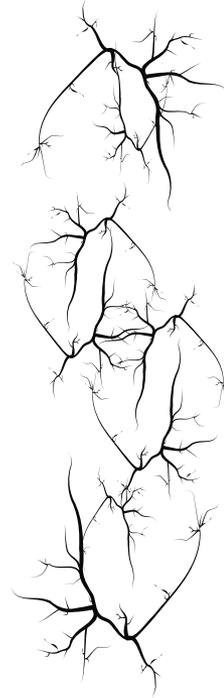
Synaptic Density



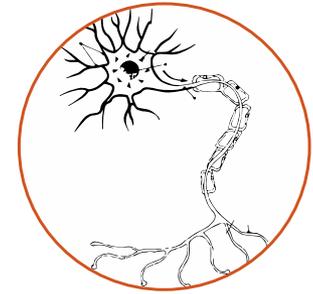
At Birth



Elementary Age



Puberty



Single
Neuron

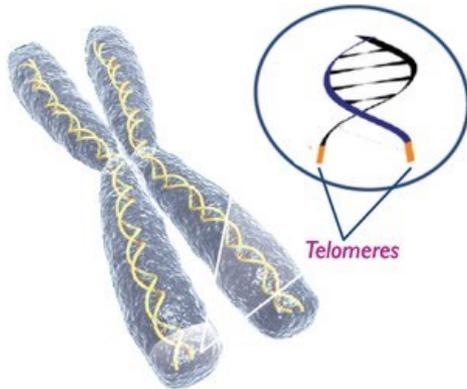
Neuroplasticity and adaptation

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**



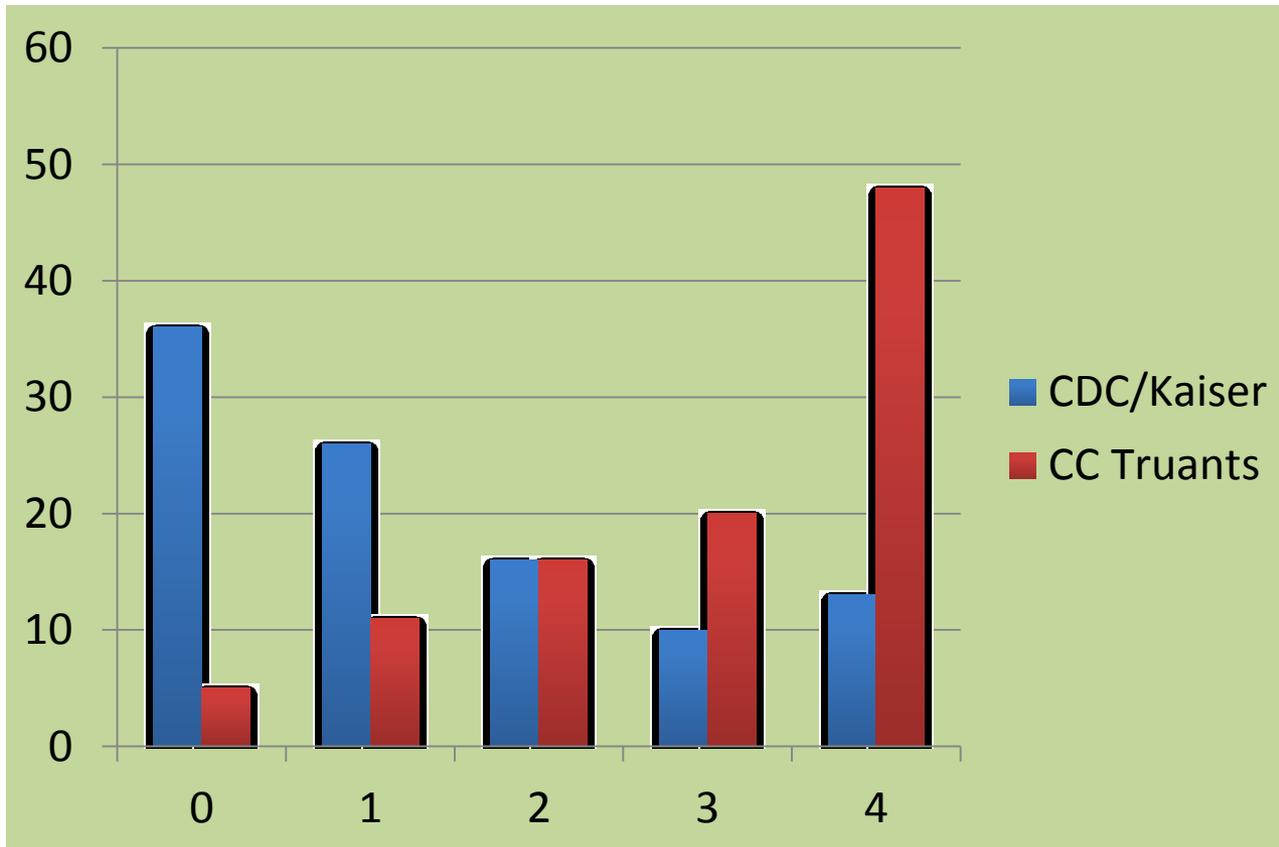
In Washington State...

- 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



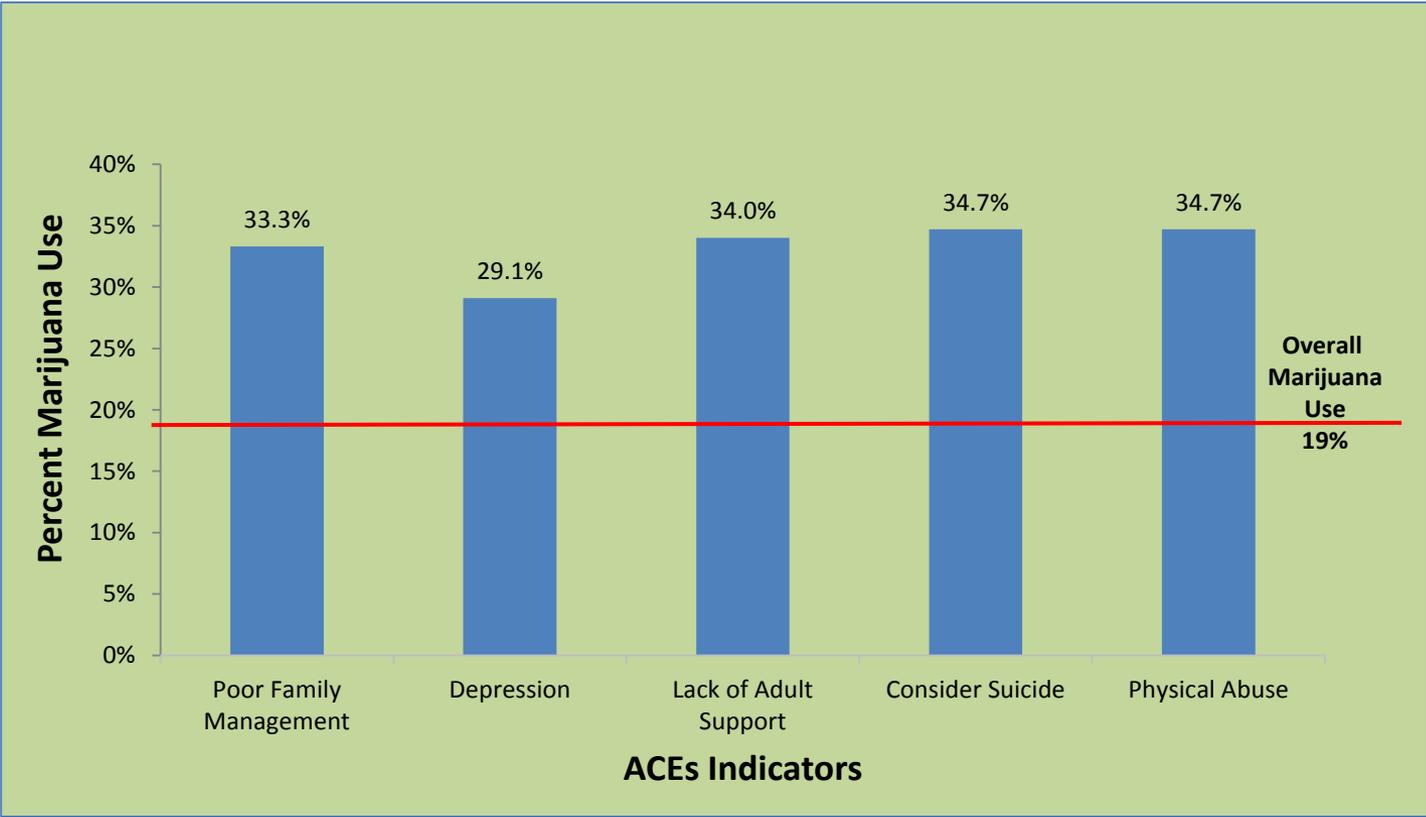
ACE Score Comparison

Kaiser Study v. Clark County Truants

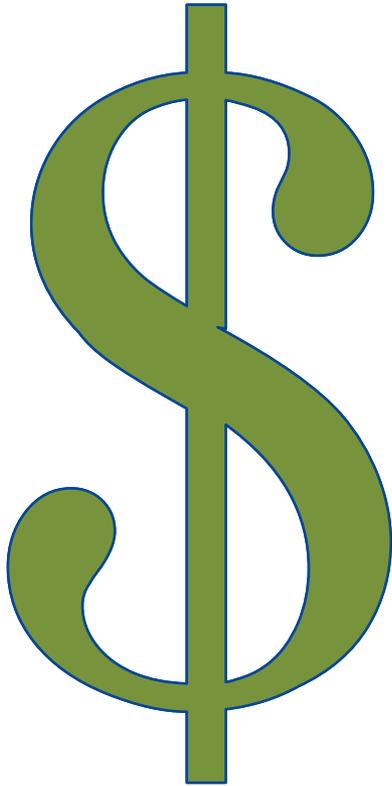


Researchers:
Clayton Mosher, WSU Vancouver
Jodi Martin, Clark County Juvenile Court

Marijuana Use among Clark County Youth Overall v. ACE Indicators



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 **2** information
- A doorway to **5** 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

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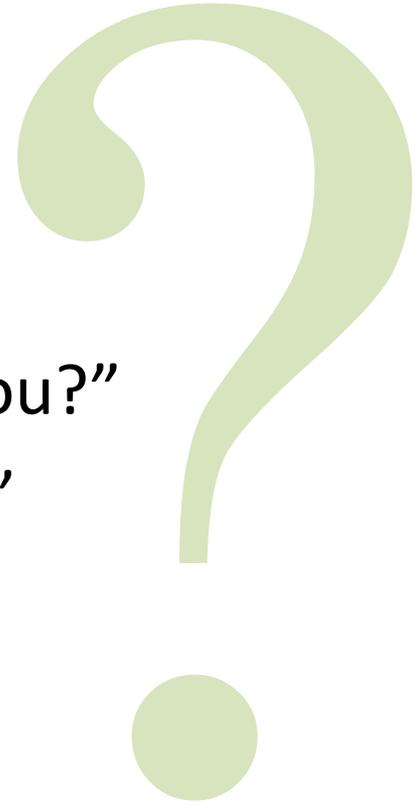
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How do we move our community from adversity to resilience?



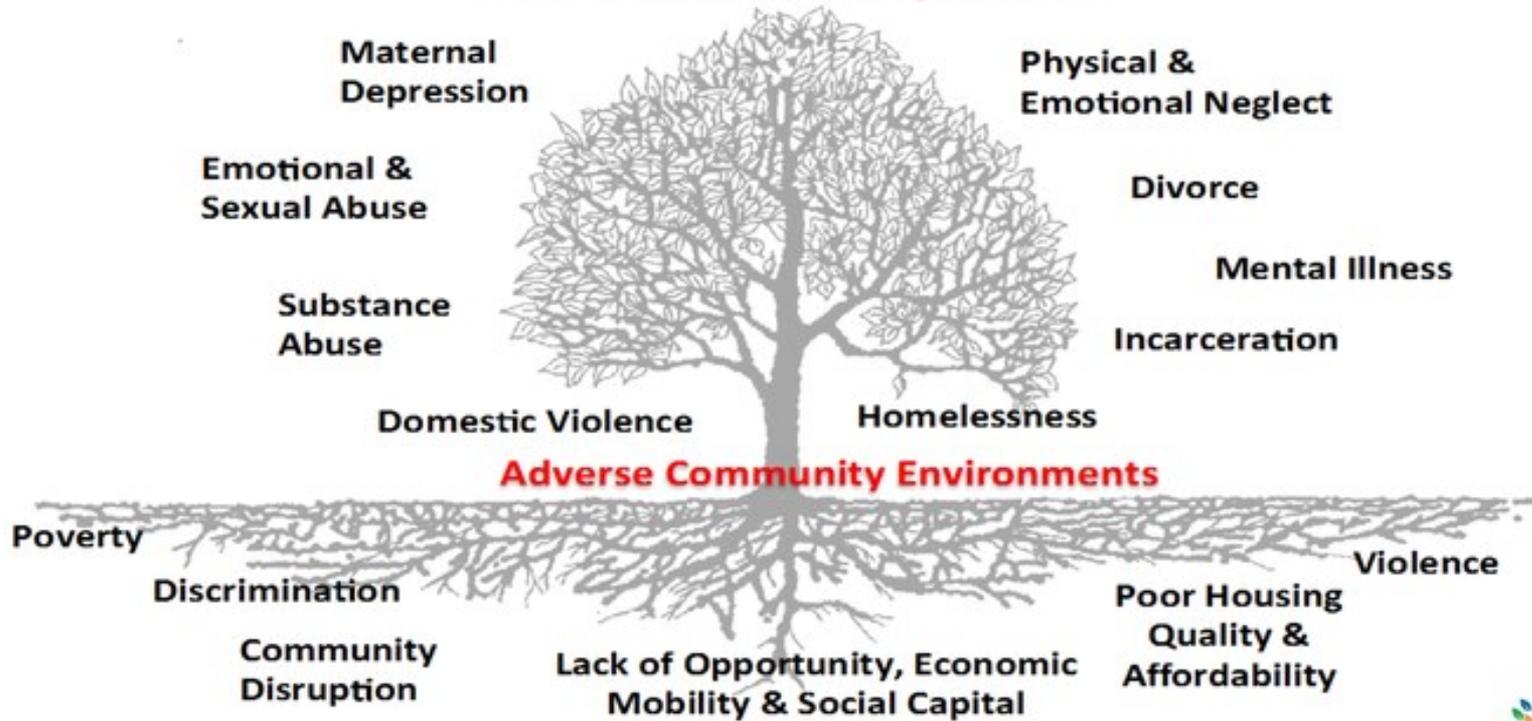
Change the question:

- From: “What’s **WRONG** with you?”
- To: “What **HAPPENED** to you?”



The Pair of ACEs

Adverse Childhood Experiences



Ellis W., Dietz W. BCR Framework *Academic Peds* (2017)



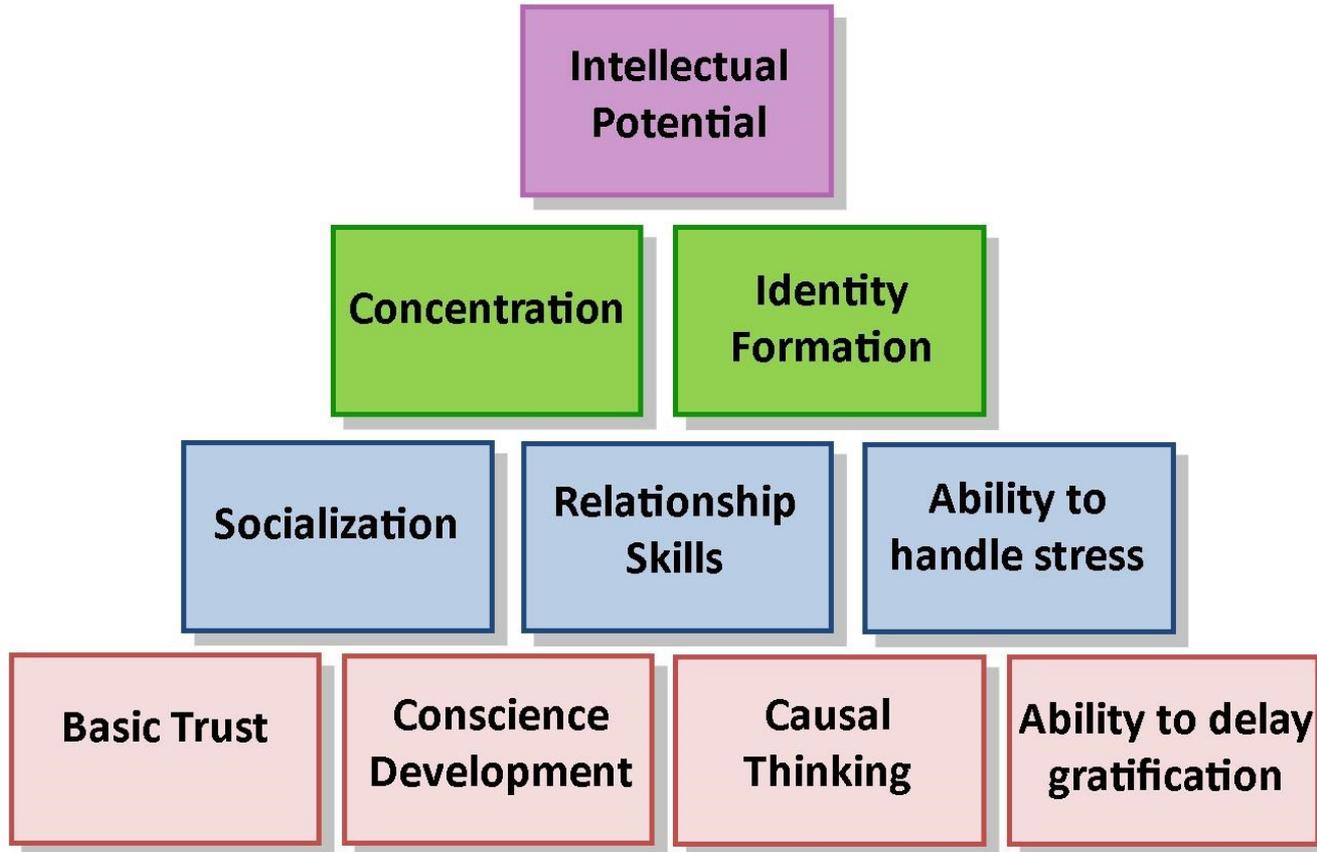
Building Community Resilience

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

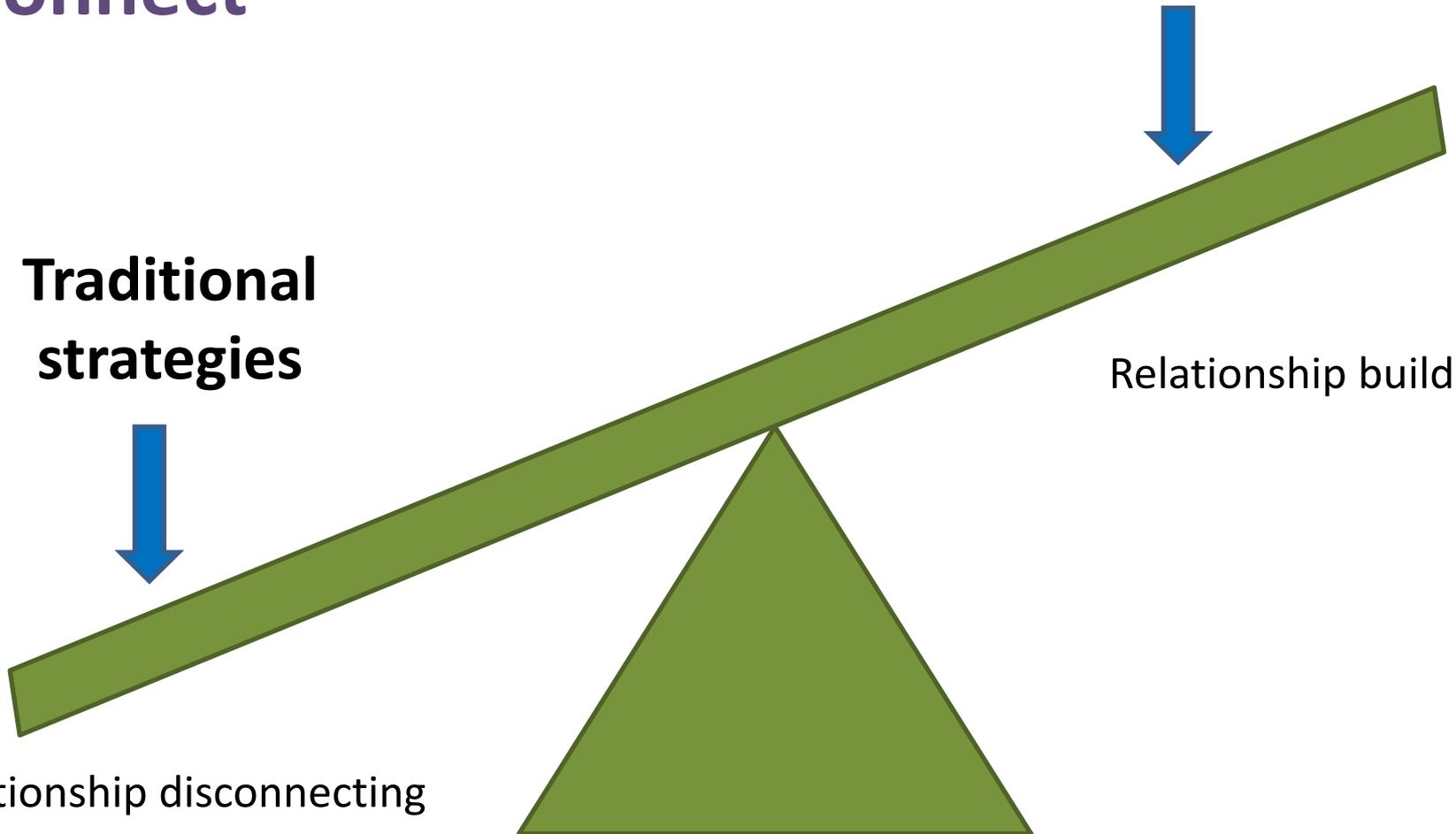
Misbehavior is an opportunity to connect

Trauma-informed strategies

Traditional 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



Drug or Alcohol-Addicted Parent

Physical Abuse

Incarcerated Family Member

Sexual Abuse

Community Protective Factors

Trauma-informed Services

Caring Adults and Mentors

Compassionate Schools

Community Connectedness

Depressed, Mentally-ill or Suicidal Person at Home

Nurturing Parenting Skills

Consistent Household Rules

Emotional Abuse

Parenting Support

Parental Employment

Child Monitor-

Restorative Justice/Law Enforcement

Family Protective Factors

Healthy Resilient Children

Family Stability

Quality Early Childhood Education

Affordable Housing and Food

Domestic Violence

Parental Dis-cord (Divorce, Separation, Abandonment)

Trauma-Informed Foster Care

Sufficient Social and Health Services

Emotional Neglect

Physical Neglect

ACEs Action Alliance

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!