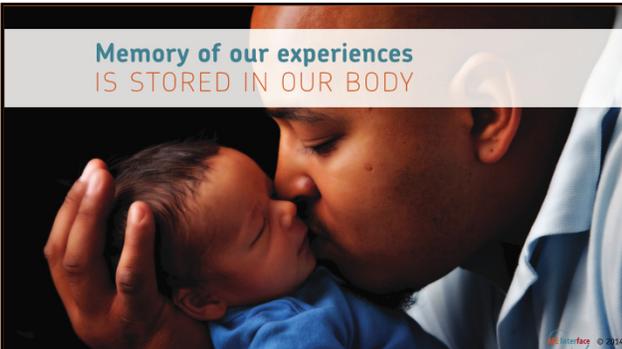


UNDERSTANDING
Adverse Childhood Experiences
Building Self-Healing Communities



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Memory of our experiences
IS STORED IN OUR BODY



© 2014

It's about you and me
CHANGING
the future of
PUBLIC HEALTH

DISCOVERY



ACE Interface © 2014

01/12/14 NEWS

Early Adversity Increases Physical, Mental, Behavioral Problems, Scientists Report



Centers for Disease Control & Prevention, Kaiser Permanente Study
Over 17,000 study participants

The ACE Study confirms, with scientific evidence, that adversity early in life increases physical, mental and behavioral problems later in life.

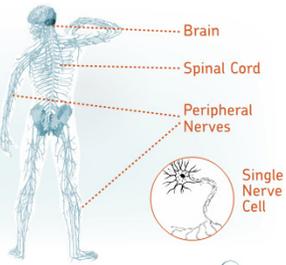
Dr. Robert Anda & Dr. Vincent Felitti
Investigators

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HUMAN NERVOUS SYSTEM

Nervous system
ORCHESTRATES BODY
FUNCTIONS & PERCEPTIONS

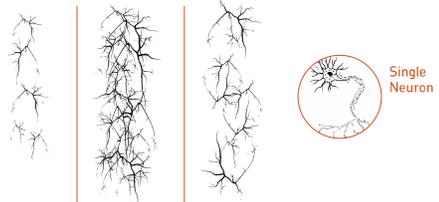
Neuroscience
HELPS US UNDERSTAND WHY
ACEs
ARE SO POWERFUL



Brain
Spinal Cord
Peripheral Nerves
Single Nerve Cell

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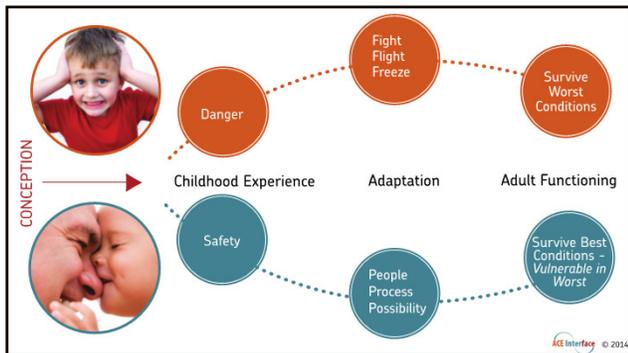
SYNAPTIC DENSITY

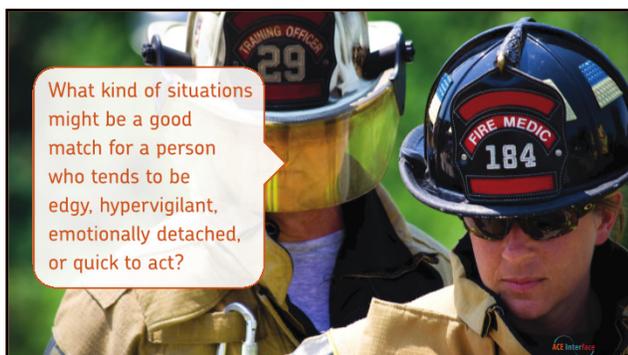


At Birth Elementary Age Puberty

Single Neuron

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EFFECTS OF MALTREATMENT



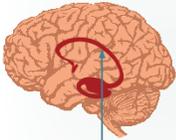
type of maltreatment
GENDER
AGE



EXPERIENCE & ADAPTATION
sensitive periods
Cause-Effect



THE LIMBIC SYSTEM



LIMBIC SYSTEM

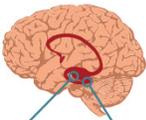
**FIGHT
or
FLIGHT**

vital for
LEARNING
MEMORY
REWARD
REINFORCEMENT

regulates
HORMONES
MOOD
HEARTBEAT
SEXUAL BEHAVIOR



THE HIPPOCAMPUS AND AMYGDALA



Amygdala Hippocampus

VITAL for RELATIONSHIPS

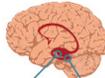


Panic & Fear | Attention | Memory | Social Cues

ACE Interfag © 2014

MALTREATMENT
0-3

SEXUAL ABUSE
Age 0-5

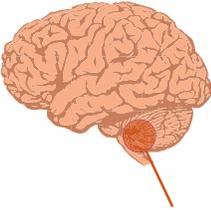


Amygdala Hippocampus



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POSTIVE FEELINGS
Perception
Attention



ADDICTION
Attention Problems
Mental Illness

Cerebellar Vermis

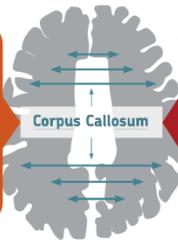
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Cerebellar Vermis
BIOLOGICAL CONNECTIONS
between trauma-induced adaptations in the Vermis and serious and persistent **MENTAL ILLNESS**

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The Corpus Callosum



LEFT HEMISPHERE
Spatial Patterns
Math Calculation & Fact Retrieval
Grammar & Vocabulary
Processing Routine Situations

RIGHT HEMISPHERE
Visual & Auditory Processing
Prosaic Language
Facial Perception
Processing Novel Situations

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♂ NEGLECT in Infancy

♀ SEXUAL ABUSE Age 9-10



At Birth Elementary Age

SYNAPTIC DENSITY



ACE Interflag © 2014

STRESS
Interpretations Can Differ
set points in place by
EARLY ADULTHOOD

At Birth Elementary Age

ACE InterFace © 2014

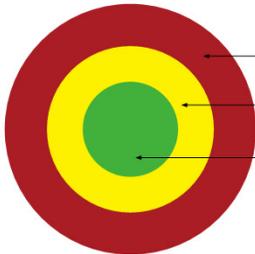
We have a collective **CHOICE**

ACE InterFace © 2014

Bullying

ACE InterFace © 2014

Trauma-Informed School Discipline



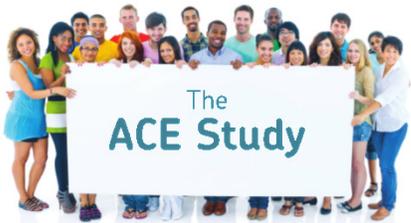
- Wait a Day
- Wait an Hour
- Ready to Talk

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Reflection



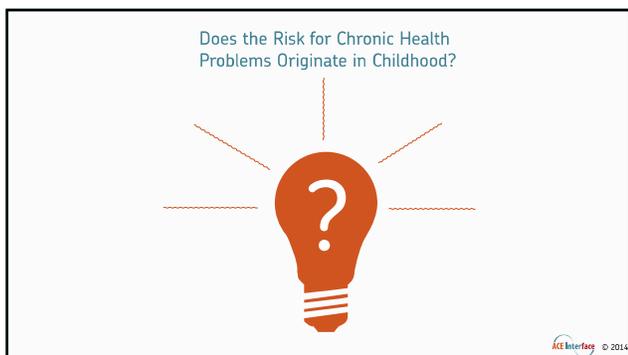
ACE Interfac © 2014

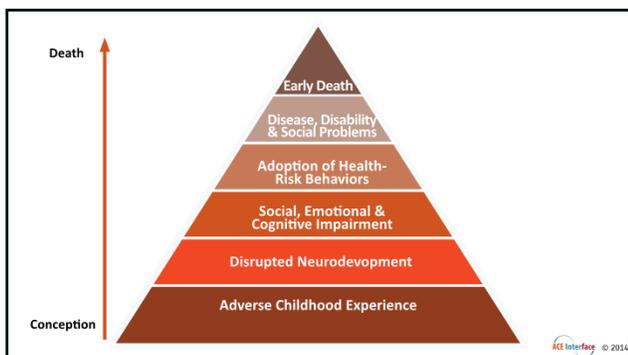


The ACE Study

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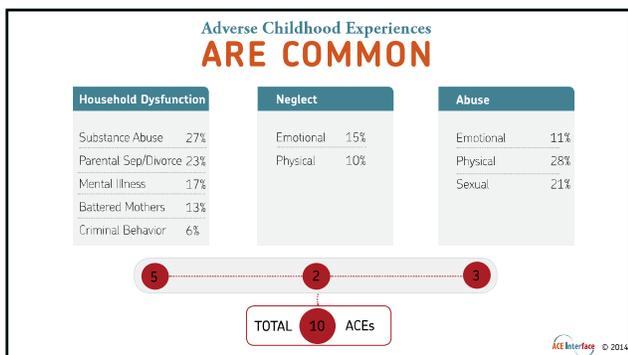


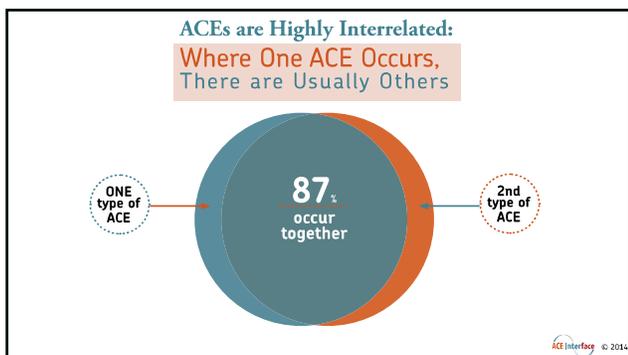


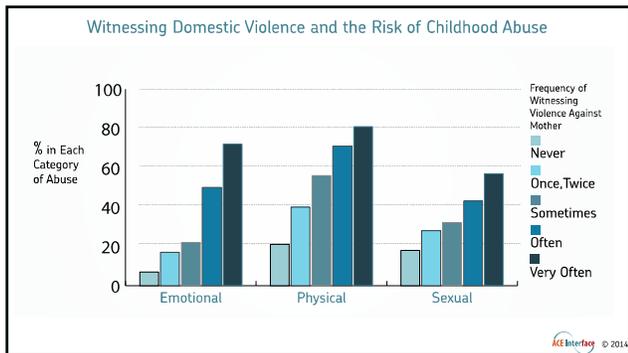
FINDING MORE CONNECTIONS

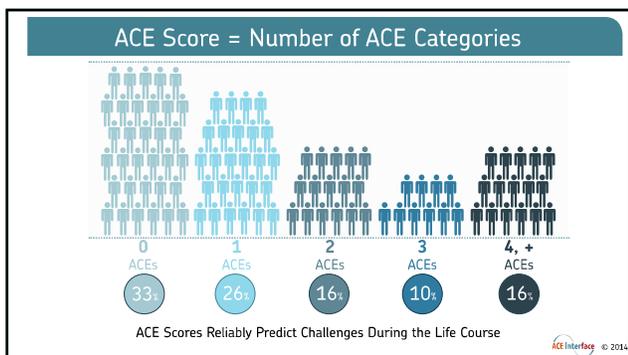
how multiple forms of **childhood adversity** can affect many important **PUBLIC HEALTH PROBLEMS**

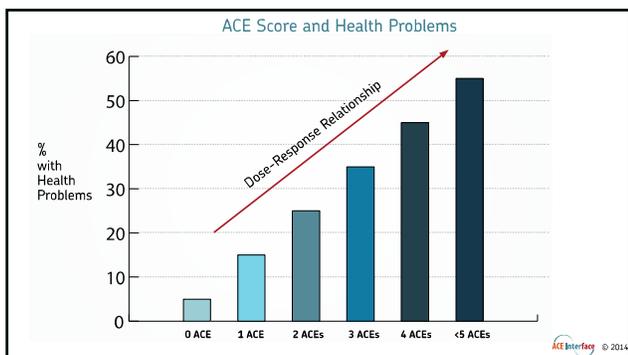
ACE InterTag © 2014

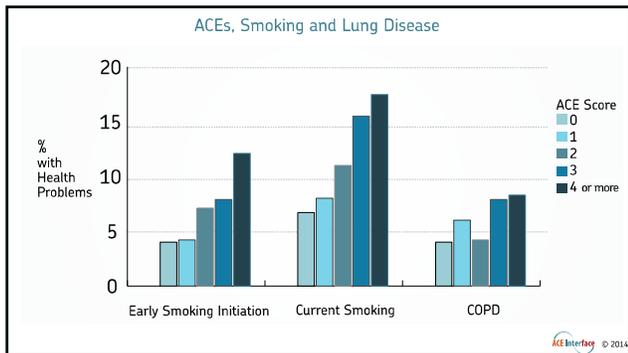


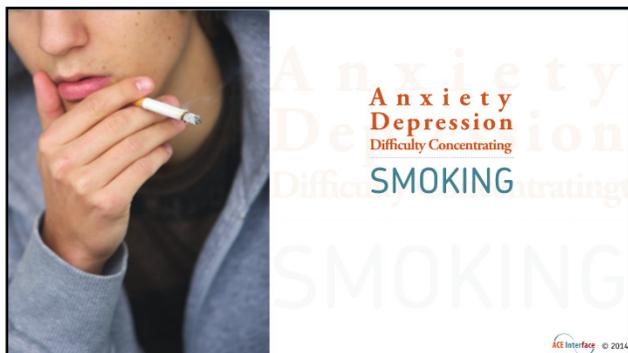


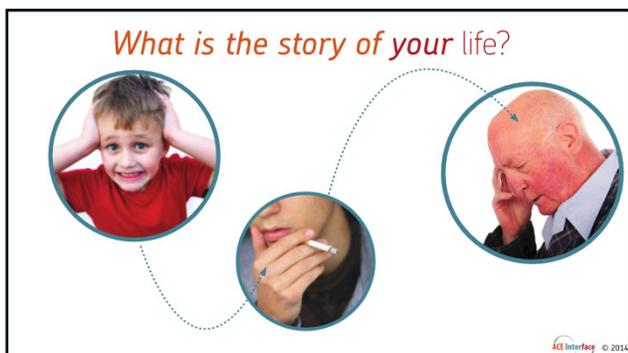












EXAMPLES OF ACE-ATTRIBUTABLE PROBLEMS

Alcoholism & Alcohol Abuse Chronic Obstructive Lung Disease Coronary Heart Disease Depression Drug Abuse & Illicit Drug Use Fetal Death Intimate Partner Violence	Liver Disease Mental Health Problems Obesity Sexual Behavior Problems Smoking Unintended Pregnancy Violence Workplace Problems
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ACEs in Minnesota:

Behavior Risk Factor Surveillance System (BRFSS)



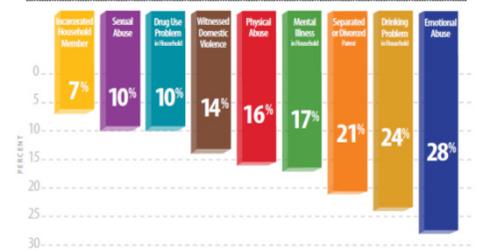
TABLE 1: PREVALENCE OF ACEs IN MINNESOTA MINNESOTA 2011

	NUMBER OF ACEs (PERCENT)					
	0	1	2	3	4	5+
All Minnesotans	45	22	12	8	5	8
Men	46	23	12	7	5	7
Women	43	22	12	9	6	9

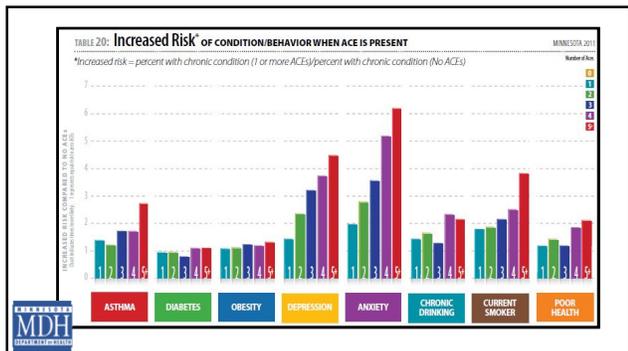
Source: Minnesota Department of Health, Center for Health Statistics, BRFSS Due to rounding, the numbers may exceed 100%.

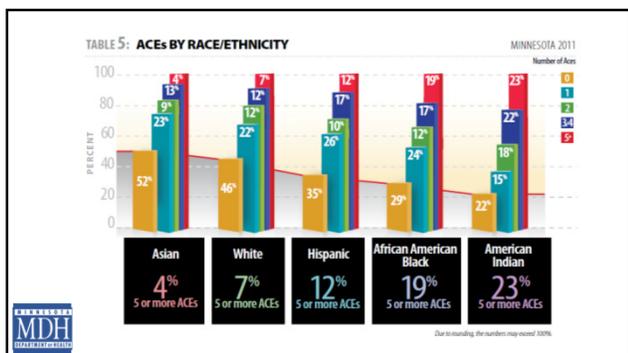
ACEs in Minnesota

TABLE 3: PREVALENCE OF INDIVIDUAL ACEs MINNESOTA 2011

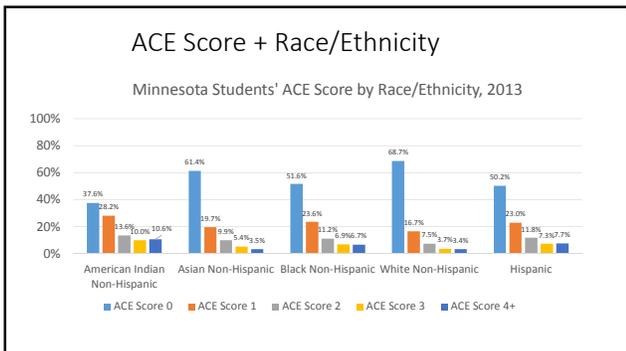



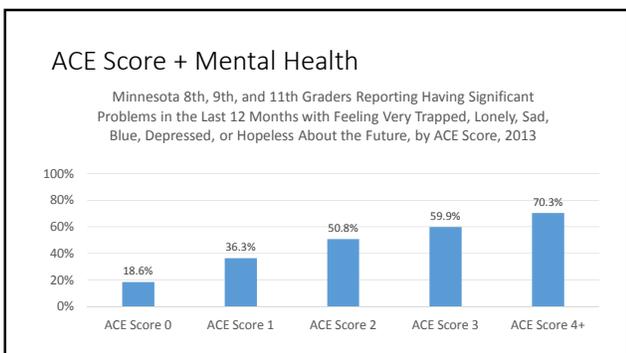
Individual ACE	Prevalence (%)
Neglected Household Member	7%
Sexual Abuse	10%
Drug Use Problems in Household	10%
Witnessed Domestic Violence	14%
Physical Abuse	16%
Mental Illness in Household	17%
Separated or Divorced Parent	21%
Drinking Problems in Household	24%
Emotional Abuse	28%

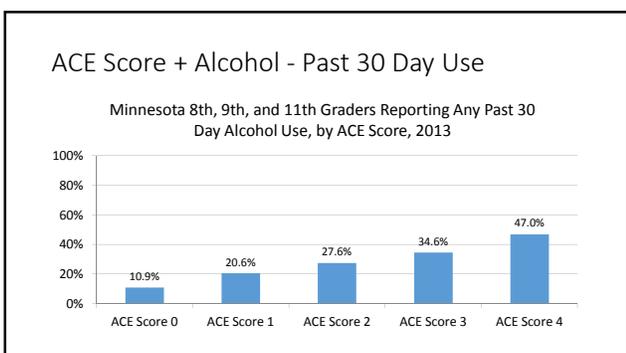




ACEs in Minnesota: Minnesota Student Survey

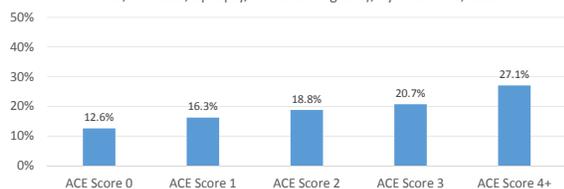






ACE Score + Physical Health

Minnesota 8th, 9th, and 11th Graders Reporting They Have Any Physical Disability or Long-term Health Problems (Such as Asthma, Cancer, Diabetes, Epilepsy, or Something Else), by ACE Score, 2013



Moving Beyond the Original ACEs

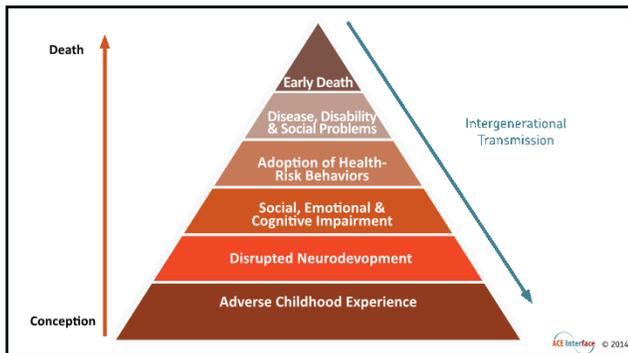


“It is important to recognize that the current ACE questions do not explore how historical trauma becomes embedded by virtue of epigenetic mechanisms into the intergenerational hand-me-downs associated with our DNA...Future efforts could explore the impact of Adverse Childhood Experiences on racial/ethnic populations and perhaps shed greater light on the effect of ACEs on current racial/ethnic health disparities in Minnesota.”

“The BRFSS does not measure the economic situation, poverty, homelessness, deprivation, death of parents, education factors, toxic exposures and other powerful experiences that may have occurred during childhood. We need to find additional data to more properly assess the role that adverse childhood experiences play in the development of adult health.”

Pathways to Poverty and Homelessness





ACEs are Common, Interrelated, Powerful



High ACE Scores
in Population

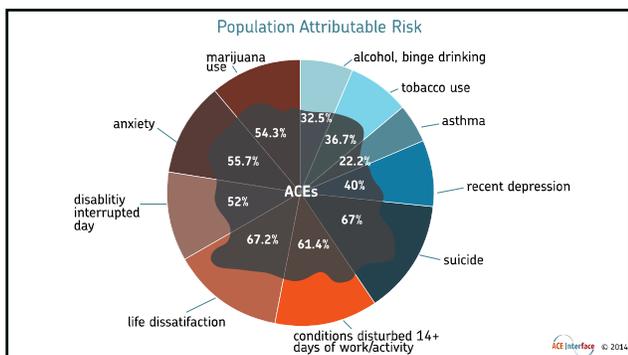


Increased Risk of Multiple
Health and Social Problems



Intergenerational
Transmission of ACEs

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COMMON CAUSE
everyone can contribute
prevent accumulation
of ACEs

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We have the power to
shift the dynamics
that lead to high
ACE scores.

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Core Protective Systems

- Capabilities
- Attachment & Belonging
- Community Culture Spirituality

“Nurturing the healthy development of these protective systems affords the most important preparation or ‘inoculation’ for overcoming potential threats and adversities in human development. Similarly, damage or destruction of these systems has dire consequences for the positive adaptive capacity of individuals.”

Ann Masten, 2009

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Individual Capabilities



Positive
view lets me know I am
important and valuable

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Attachment & Belonging



RELATIONSHIPS
with caring and competent
people are
-VITAL-
contributors to
resilience & recovery

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Community, Faith &
Cultural Processes

WE

foster
thriving
communities

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Community Capacity Development

- Leadership Expansion
- Coming Together
- Shared Learning
- Results-Oriented Decisions



Leadership Expansion

Where will **YOU** lead us



Leadership Expansion:
Children's Resilience Initiative



<http://resiliencetrumpsaces.org/>







Shared Learning:
Public Health Process



www.jeffersoncountypublichealth.org/index.php?family-health-services

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WE ARE DECIDING
to build on past successes
and engage more people
to help our communities
to THRIVE

Decision Making



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Results Oriented Decision Making: Data



Not Safe at Home Not Welcome at School

Among Adjudicated Youth with High ACE Scores, 85% were first suspended from school in second grade

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Cultural Respect and Continuity is Vital

Reclaiming cultural ways after a time of loss is a powerful driver of well-being. "One of the first things that has to be done is to ask the community what is important to the community."

Duran & Duran, 1995



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lifting all beings



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CHANGE is up to **US**



It is shaped by our thoughts, our conversations, the way we relate with one another in relationships, in families, and in communities.

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Thank YOU!

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