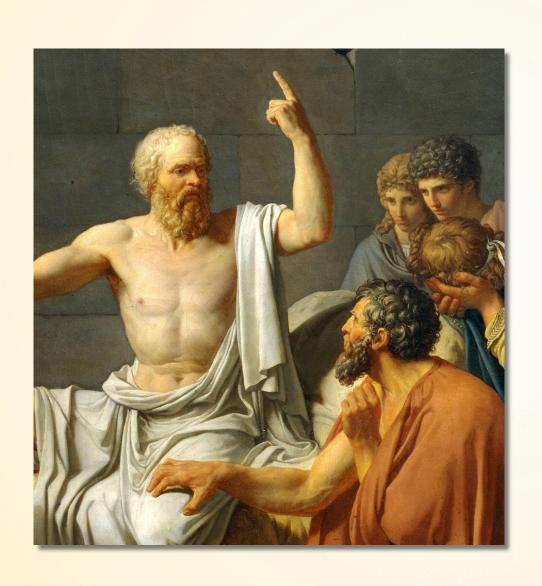
Adverse Childhood Experiences: Where Sciences Collide

Robert Anda, MD, MS ACE Interface

National Summit on Adverse Childhood Experiences May 13, 2013

The Science of Philosophy



"The Death of Socrates"

French painter, David 1787

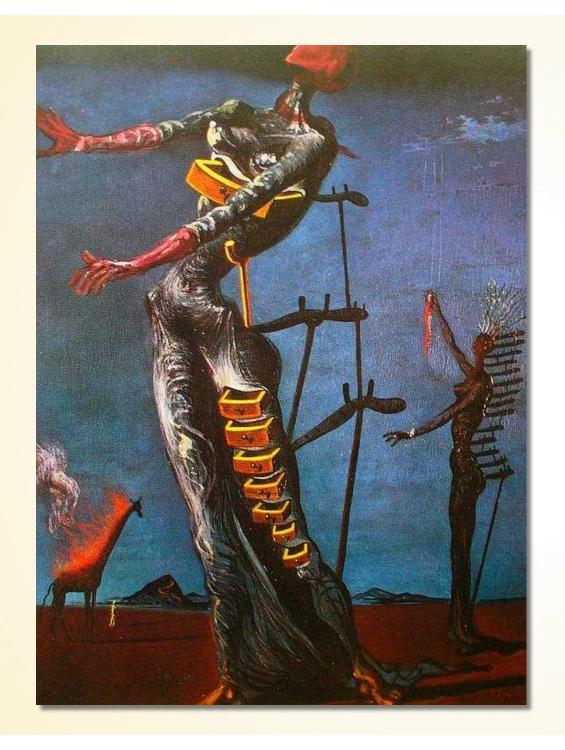
The First Noble Truth

...all people have one thing in common: if they think about their own life, or look at the world around them, they will see that life is full of suffering.

Buddha

And a paradox...

...the human heart is on a quest for happiness.



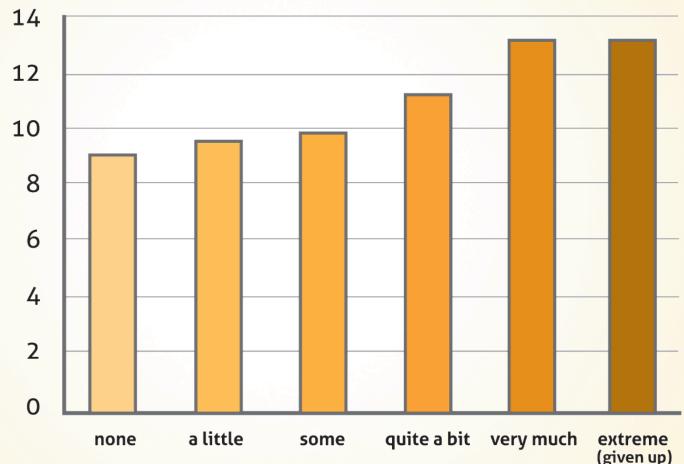
"The Burning Giraffe"

Salvador Dali 1937

The Biology of Hope

Hopelessness and the Incidence of Fatal Heart Disease in National Prospective Study





Level of Hopelessness

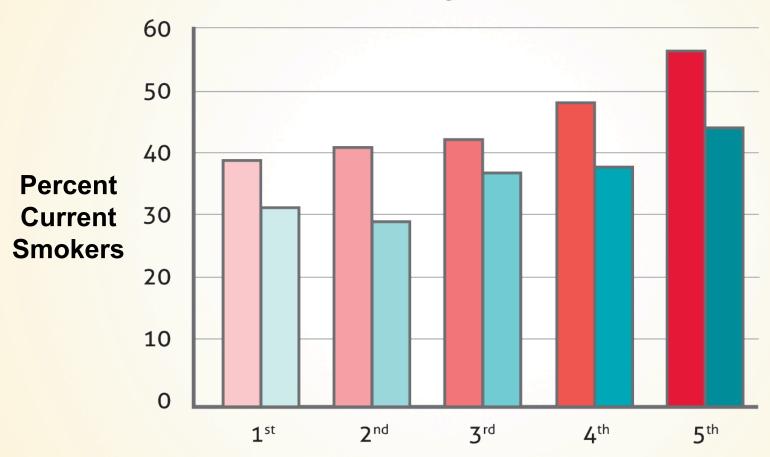
Anda, et al. Epidemiology. 1993:4:285-294.



Becoming Trauma Informed The early (and clueless) years...



Depression and Cigarette Smoking in a National Study of US Adults



Level of Depressive Symptoms (Quintile of CES-D Score)

Anda, et al. JAMA. 1990;254:1541-1545.



What Did the ACE Study Do? Incorporated Facets of Multiple Sciences into the Design

THE ACES
Sociology
Psychology
Criminology
Psychiatry
Medicine
Public Health

The ACE Study

OUTCOMES
Sociology
Psychology
Criminology
Psychiatry
Medicine
Public Health
...and others

Intergenerational Transmission



Power of the ACE Study? SIMPLICITY

The Data Tell a Simple Story

- ACEs are common
- ACEs are highly interrelated
- ACEs "pile up" and have a cumulative impact
- ACEs account for a large percentage of health and social problems
- Biologic Plausibility



Power of the ACE Study? SIMPLICITY

Provides a common language and A conceptual framework that is easy to teach.



ACEs Changed the Landscape

- Provided a compelling tabulation of childhood adversity that directly related to easily understood costly outcomes
- Largely responsible for increased
 awareness of policy makers of the role of childhood trauma in costly medical, psychiatric and social problems
- Legitimized and stimulated interest in childhood adversities for researchers in a range 2013

ACEs and Leading Causes of Death

ACEs increase the risk

- **Heart disease**
 - **Lung cancer**
- **Chronic lung disease** Liver disease
- Stroke
- **Diabetes**
- Cancer

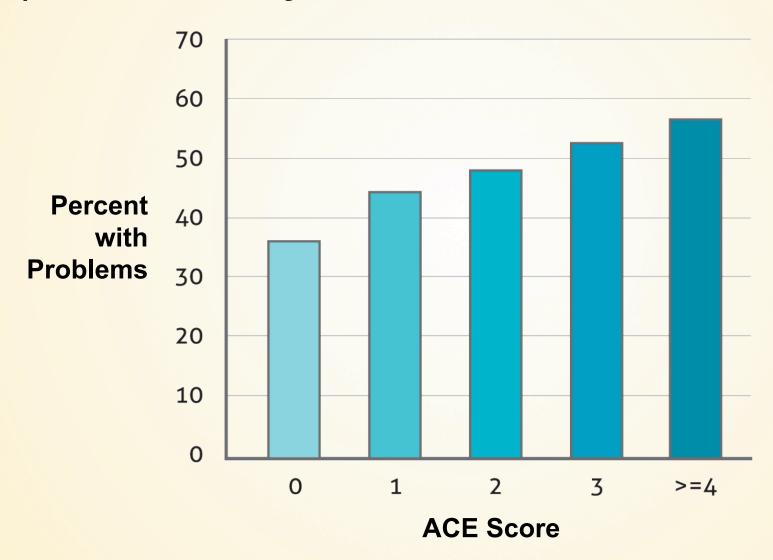
- Suicide
- Injuries
- **HIV and STDs**

The ACE Study... a Trojan Horse?

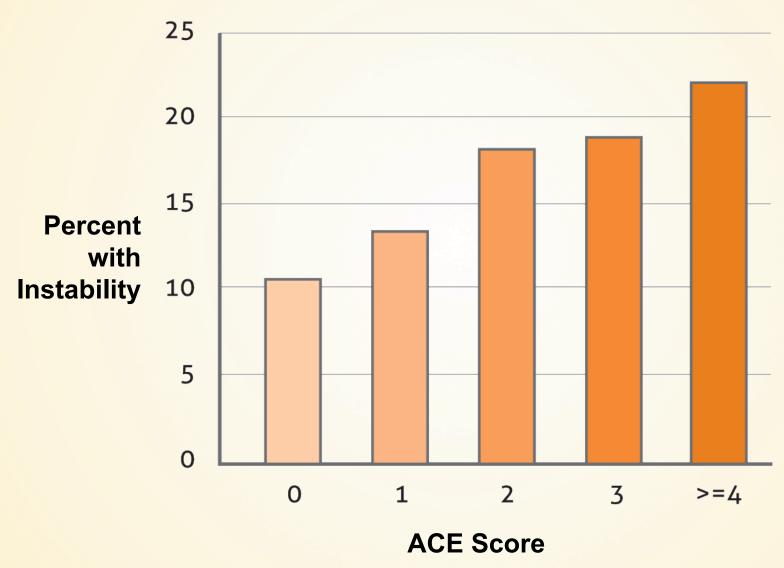


The Destabilizing Effects of ACES on Relationships, Family, Households and Community

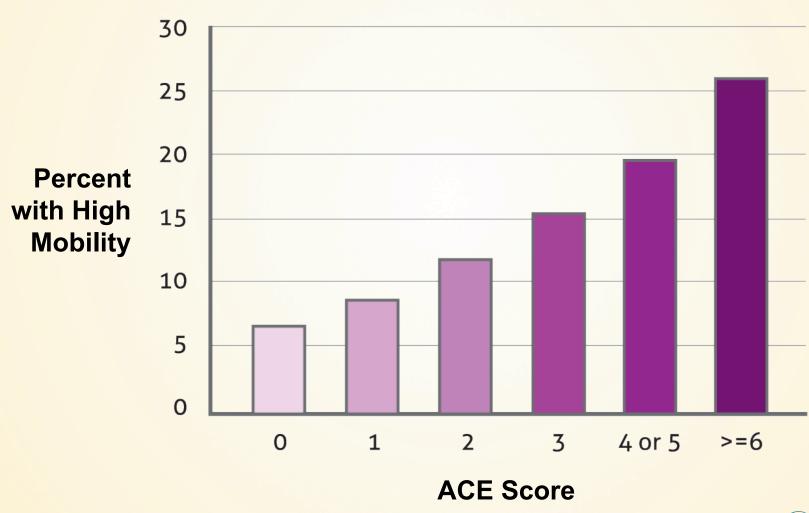
ACEs and Relationship Problems (Divorce, Family Problems, Sexual Dissatisfaction)



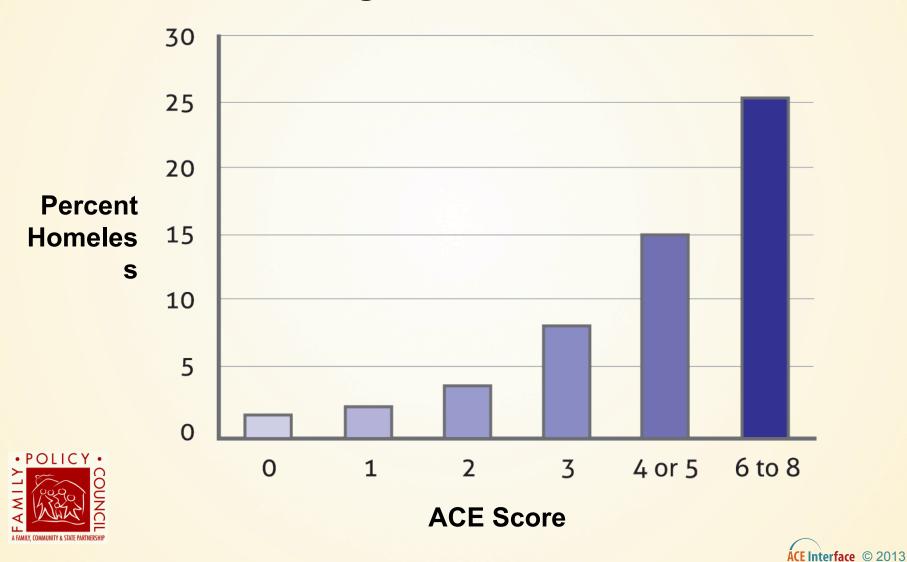
ACEs and Financial Instability



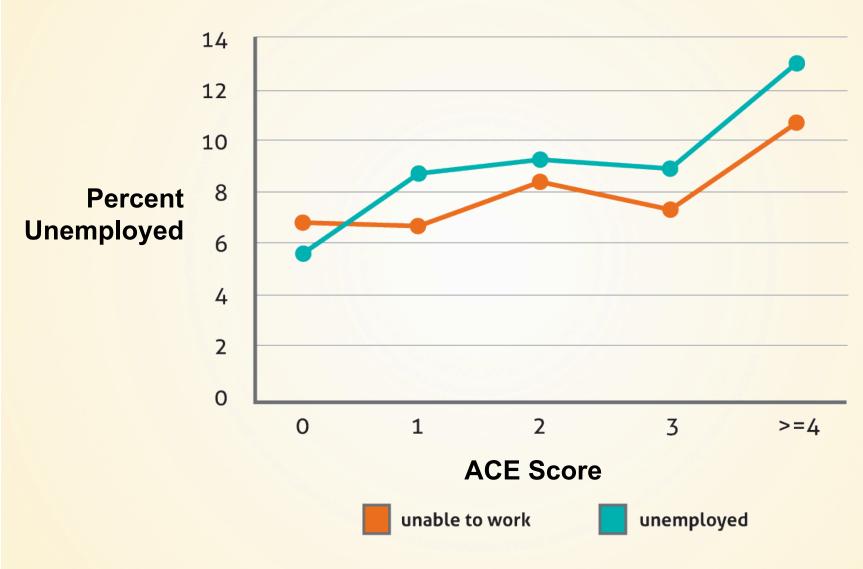
ACEs and High Residential Mobility (Moved More Than 8 Times)



ACEs and Adult History of Homelessness Washington State, BRFSS



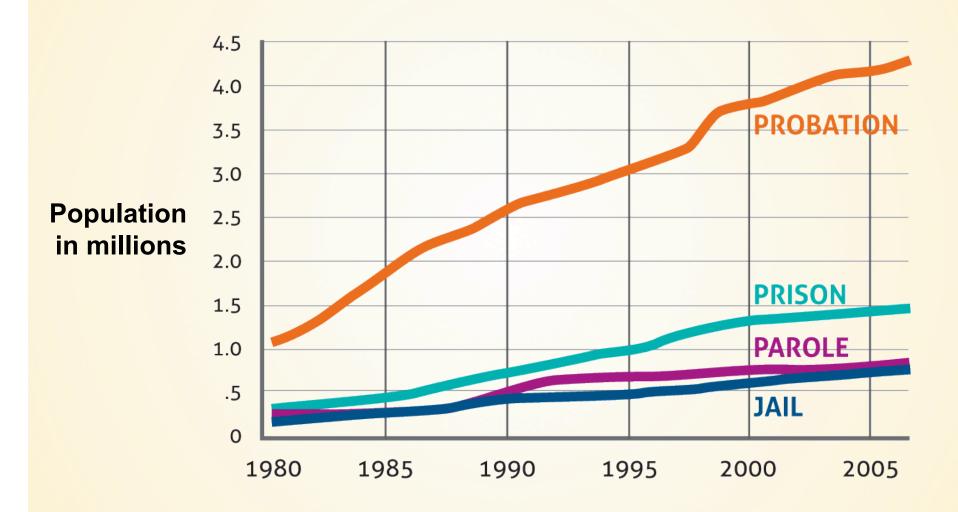
ACEs and Unemployment



Source: Soc Psychiatry & Epidemiology; Liu, et al., (2013)



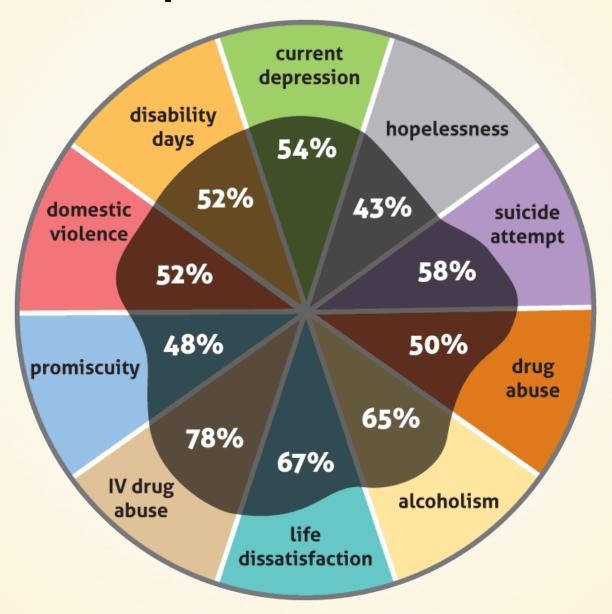
Burgeoning Criminal Justice Populations



Sources: Bureau of Justice Statistics (2007); Skeem, Emke-Francis, et al. (2006)



ACEs and Population Attributable Risks



What is a Paradigm?

A set of dogmas involving assumptions and methodologies

These are never doubted... as long as they work well

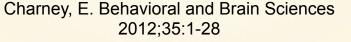
ACEs-A Paradigm Shift?

The discovery of new phenomenon—anomalies...

Can seriously challenge a paradigm

When new phenomenon cannot be incorporated into an existing paradigm a new one will emerge

This is what Thomas Kuhn (1970) called a "paradigm shift" or scientific revolution





Unified Field Theory

-proposed by Einstein

An attempt to unify the fundamental forces of physics between elementary particles into a single theoretical framework

Unproven...



ACEs: A Unified Sciences and Services Theory

An attempt to unify the fundamental fields of science and the service systems based on them...

...into a simple framework to reduce the intergenerational transmission of ACEs

Unproven...



ACEs: A Unified Sciences and Services Theory

Unproven...

Can we overcome:

- categorical thinking?
- categorical funding?
- challenge to roles and identity?
- system complexities?



The Secular Concept of Happiness

Most frequently mentioned ingredients...

- 2. Conquest of nature by science and technology
- 3. Freedom from pain
- 4. Self-esteem (secular psychology)
- 5. Justice and Peace (securing ones rights)
- 6. Sex (mystical transcendence)
- 7. Winning (war, sports, games, and business)
- 8. Honor (being accepted, loved, understood)

ACE Interface © 2013

9. Life (long and healthy)

Ancient Concept Happiness = "Blessedness"

eudaimonia

Etymologically, it consists of the words:

"eu " (good), and
"daimon " (spirit)

Ancient Concept Happiness = "Blessedness"

eudaimonia is a Greek word commonly translated as happiness or welfare however, "human flourishing" has been proposed as a more accurate translation

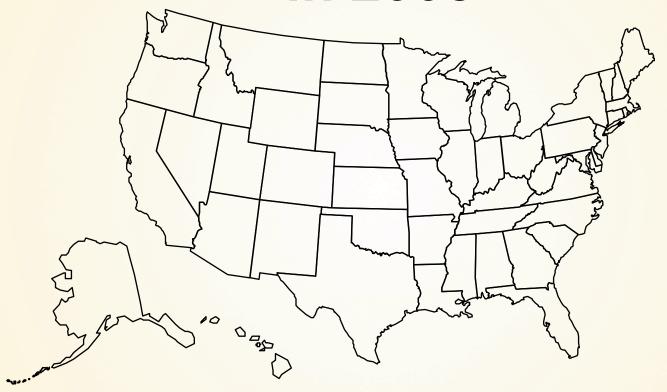
"First do what is necessary Then do what is possible.

And before you know it, you will be doing the impossible."

-Francis of Assisi



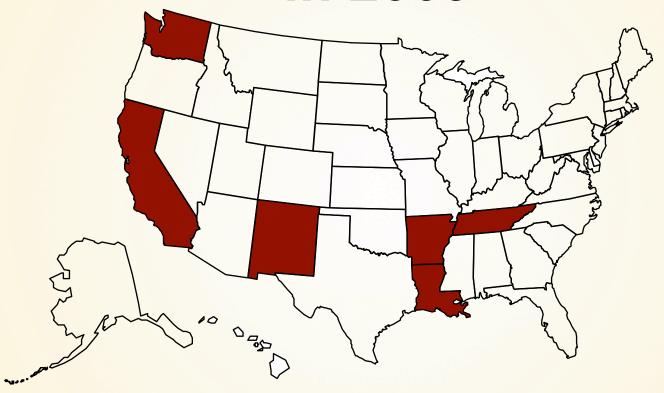
States Collecting ACE Data in 2008



No data



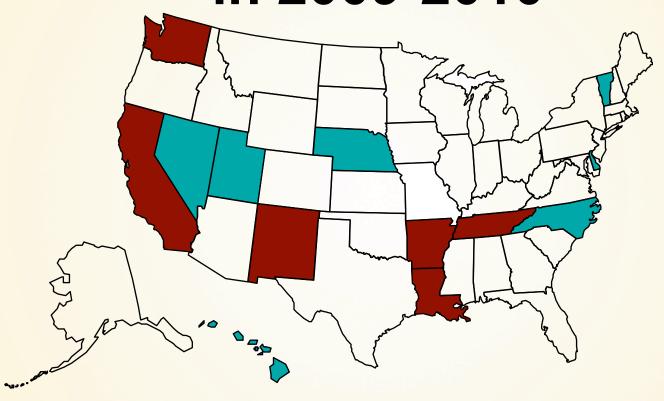
States Collecting ACE Data in 2009



■ No data
■ 2009



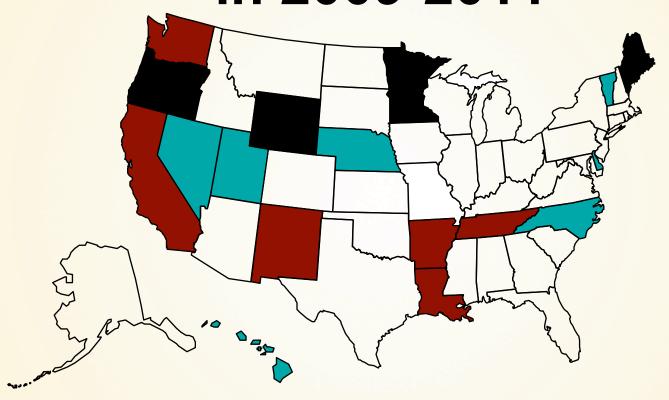
States Collecting ACE Data in 2009-2010



No data 2009 2010



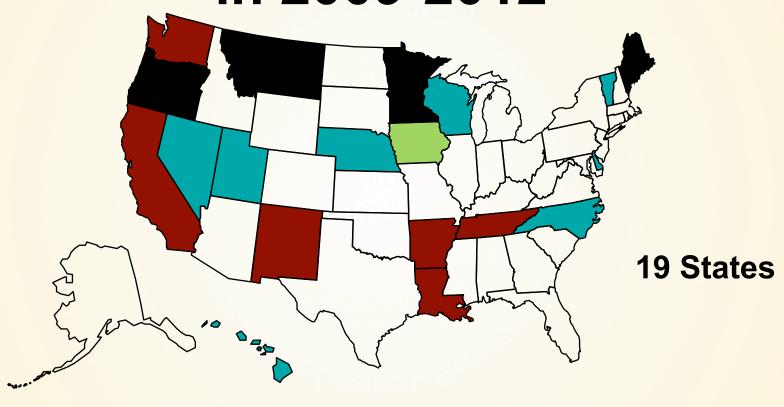
States Collecting ACE Data in 2009-2011



No data 2009 2010 2011



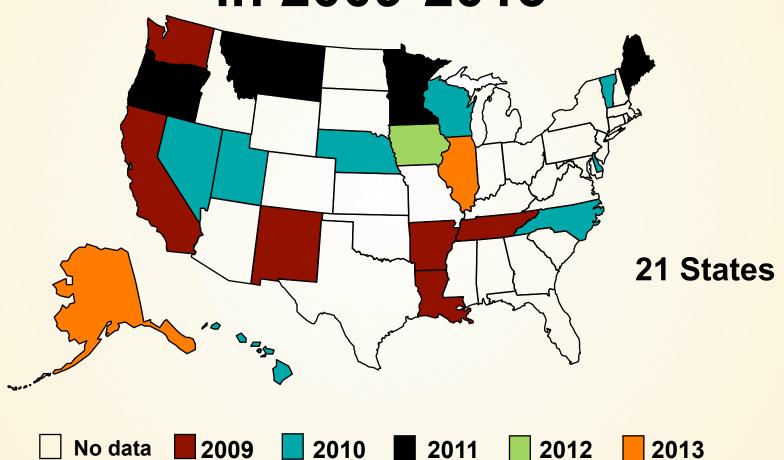
States with ACE Studies in 2009-2012



No data 2009 2010 2011 2012



States with ACE Studies in 2009-2013





Recognizing ACEs as a Global Problem

- World Health Organization (WHO)
- ACE International Questionnaire (ACE-IQ)
- tested in China, Macedonia, Philippines, Saudi Arabia, South Africa, Thailand, and Viet Nam
- ACE surveys had been completed in Albania, Latvia, Lithuania, and Macedonia,
- with further studies underway in Montenegro, Romania, Russian Federation and Turkey

Assess the Population Impact of ACEs

- What "gets measured, gets done"
- The value of surveillance
- Local data speaks locally for policy and legislation
- Public education

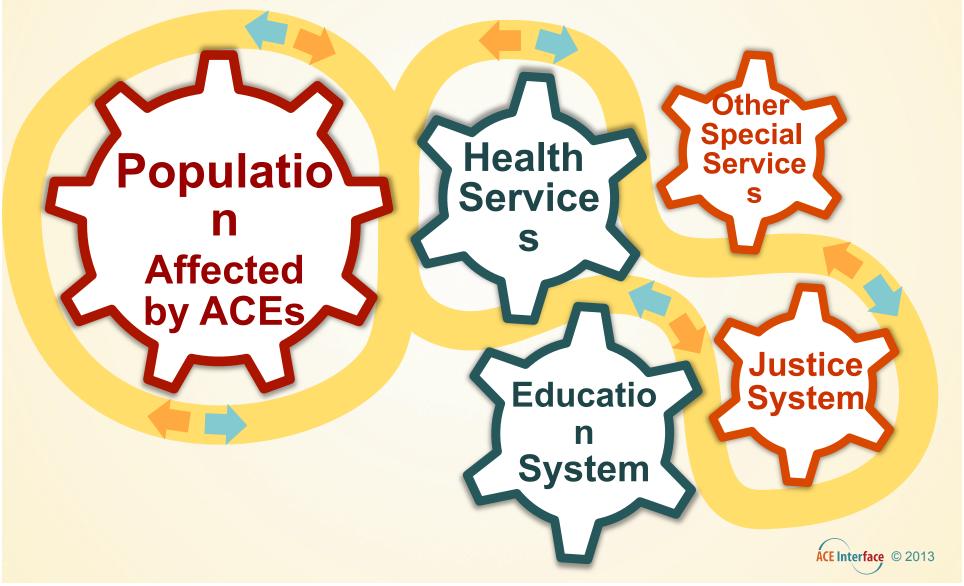
Teach It

- Community wide
- Statewide
- Nationally... and Globally
- Trust the creativity at the grassroots level
- Create synergy between the general public and professionals



Self-Healing Communities

Building Self-Healing Communities



"First do what is necessary Then do what is possible.

And before you know it, you will be doing the impossible."

-Francis of Assisi



Closing Ideas

Finding meaning and purpose in the suffering of ACEs individually and collectively

A sense of purpose individually and collectively

Power of public education

Community engagement and empowerment