

## Understanding the Impact of Adverse Childhood Experiences on Adult Health and Well-being

University of Michigan CAN Conference



**Children's Trust Fund**  
Protecting Michigan's Children

**OCTOBER 27, 2014**  
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## Goals for Today

- Learn about the Adverse Childhood Experiences (ACE) study and the long-term impacts of toxic stress
- Look at preliminary Michigan ACE data
- Talk briefly about strategies to prevent and mitigate ACEs
- Discuss ways to use ACE data

## ACEs – Intro Comments


- **ACE data is both conclusive and dramatic proof of adult health and well-being consequences tied to childhood experiences**
  - True, yet not surprising
- **So what do we do with this information?**
  - Broad array of reactions from "Thanks" to using this information to build a groundswell of public understanding to "Rethink how we do business"
- **ACE data points to two key strategies**
  - Prevention and mitigation efforts for children
  - Interventions for adults who, as children, experienced ACEs
- **Michigan data**
  - How do we use it for public awareness/education and in the public policy arena

## The Adverse Childhood Experiences (ACE) Study













A collaborative effort of Kaiser Permanente and the CDC  
Felitti, VJ et al. American Journal of Preventive Medicine 1998;14:245-258  
[www.acestudy.org](http://www.acestudy.org)

- Retrospective cohort study of Kaiser Permanente HMO population in San Diego
  - Over 17,000 participants
  - Average age of 57
- Study of the impact of adverse childhood experiences on health throughout the lifespan

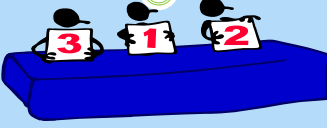


## ACEs = ADVERSE CHILDHOOD EXPERIENCES

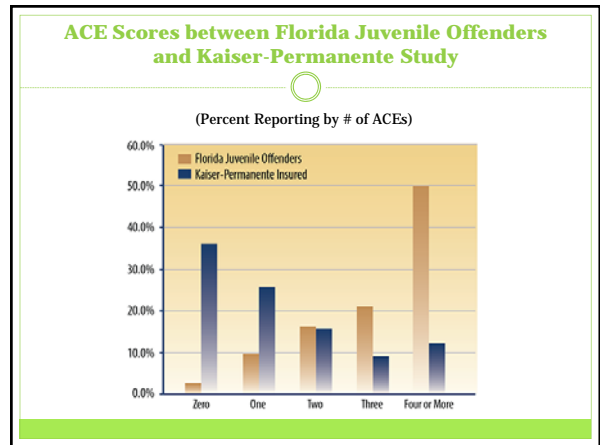
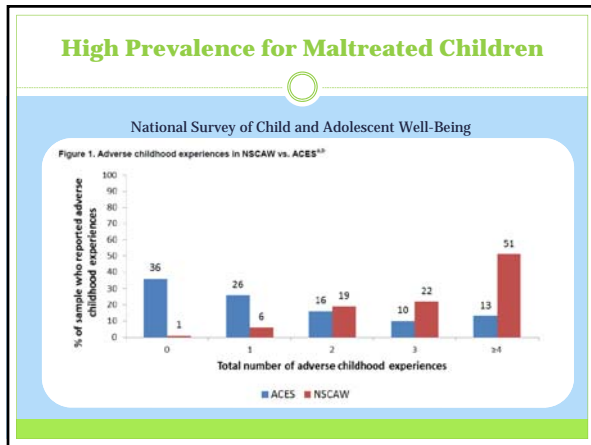
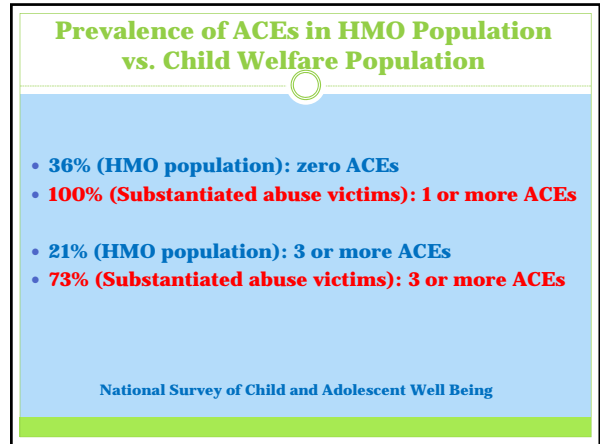
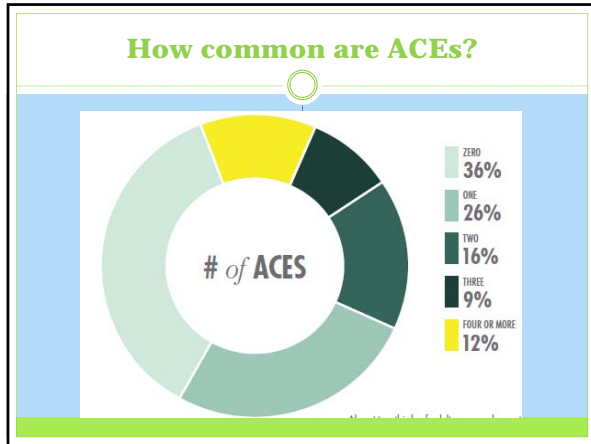
*The three types of ACEs include*

ABUSE	NEGLECT	HOUSEHOLD DYSFUNCTION	
 Physical	 Physical	 Mental Illness	 Incarcerated Relative
 Emotional	 Emotional	 Mother treated violently	 Substance Abuse
 Sexual		 Divorce	

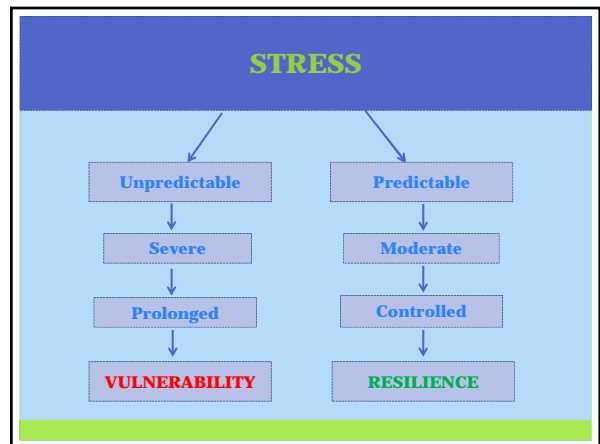
## ACE Score



- Total number of categories of ACEs that each participant reported  
 Example: Experiencing physical abuse as a child is an ACE score of one.  
 Experiencing physical abuse plus witnessing IPV is an ACE score of two.
- More than **half of participants** had at least one ACE.
- If one category of ACE is present, there is an 84% likelihood of additional categories being present.

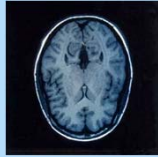


- ### ACE Study Findings
- As ACE score goes up, so does risk for:**
- Smoking
  - Organic disease (pulmonary, heart & liver disease)
  - Adult alcoholism & drug use
  - Depression and suicide attempts
  - Multiple sexual partners
  - STDs and rape
  - Hallucinations
  - Risk for intimate partner violence
  - Addictions
  - Job problems and lost time from work
  - Early death

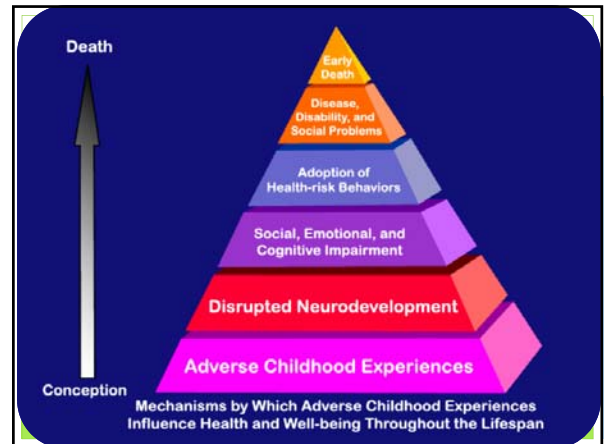


### Explanation for Lifetime Effect of ACEs

- Increases in
  - heart rate, blood pressure, serum glucose, stress hormones, "fight or flight" response
- Related to long-term disruptions in
  - brain architecture, immune systems, metabolic regulation, cardio-vascular function



(Center on Developing Child, Harvard University) <http://www.youtube.com/watch?v=rVwFkcOZHJw>



### Snapshot of Selected Findings

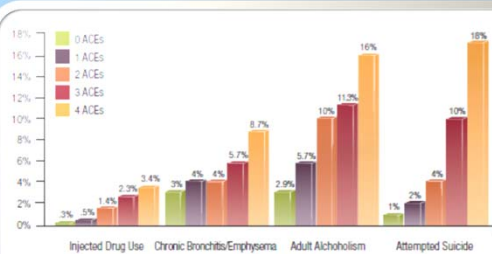


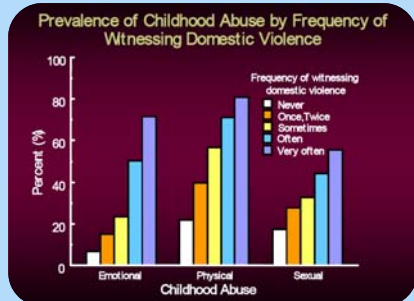
Figure 2. Prevalence of selected outcomes among adults in the Kaiser ACE study<sup>11</sup>

### Domestic Violence and ACEs

Child abuse and perpetrating domestic violence have links to ACEs



### Domestic Violence and the Risk of Child Abuse

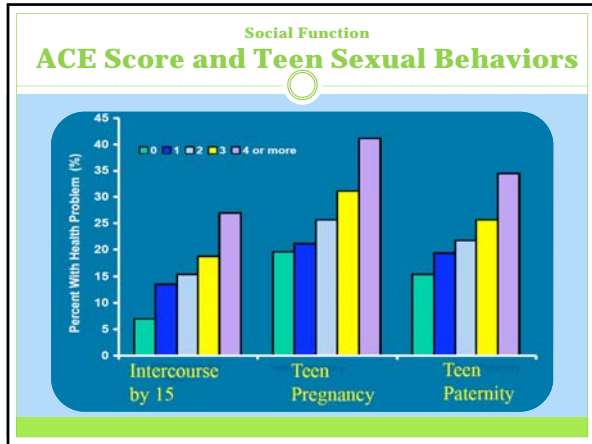


### Sexual Behavior and ACEs

ACEs increase the likelihood of sexual intercourse by age 15, increasing the likelihood of parenthood, AIDS and other STDs

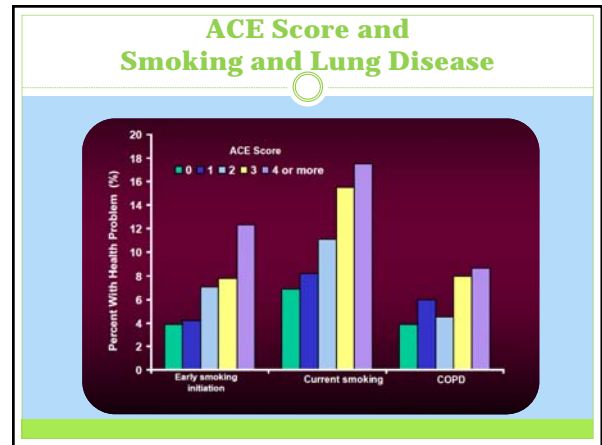


(Hillis et al. 2001, Anda et al. 2002b)



### Adult Health Problems and ACEs

The more stressors in childhood, the more adults show increased **physical health problems.**  
(Dube et al. 2003a)



### How do ACEs affect the lifespan?

- LIFE EXPECTANCY**
  - People with six or more ACEs died nearly 20 years earlier on average than those without ACEs.

ACE Score	Life Expectancy (Years)
0	80
6+	60

### How do ACEs affect our society?

**ECONOMIC TOLL**  
The Centers for Disease Control and Prevention (CDC) estimates that the lifetime costs associated with child maltreatment are \$124 billion.

Category	Cost (Billion \$)
PRODUCTIVITY LOSS	93.5
HEALTH CARE	25
SPECIAL EDUCATION	4.4
CHILD WELFARE	4
CRIMINAL JUSTICE	3.5
<b>Total</b>	<b>124</b>

### What we can expect in Michigan

STATE	0 ACEs	1 ACEs	2 ACEs	3 ACEs	4 ACEs
Wisconsin*	44	22	12	7	14
Arkansas*	47	21	11	7	14
Louisiana*	43	25	13	10	12
New Mexico*	39	22	13	10	17
Tennessee*	44	21	13	8	15
Washington*	35	23	15	10	18
Kaiser**	36	26	16	10	13

\*State population estimates are based on weighted analysis of BRFSS results and are reported at a 95% confidence interval.  
 \*\*Kaiser results reflect the percentage among study participants, stratified from Kaiser Childhood Experiences (Kaiser Family Foundation, 2008; Center for Disease Control and Prevention, Morbidity and Mortality Weekly Report, 2008).

Table 3. Percentage of adults reporting adverse childhood experiences (ACEs), by number of ACEs reported

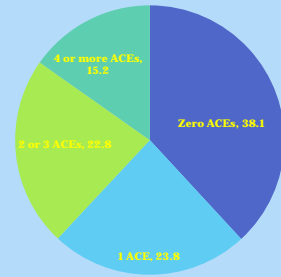
Number of ACEs	0	1	2 or 3	4
Michigan	38.1	23.8	22.8	15.2

### ACE Findings in Michigan

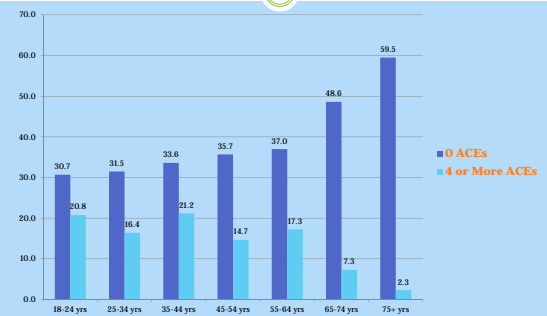
A PRELIMINARY SNAPSHOT

### Michigan Citizenry Prevalence of ACEs

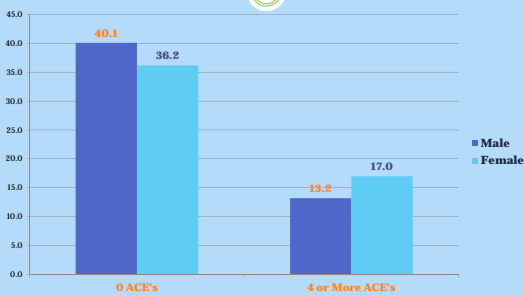
38% of Michigan's adult citizenry experienced at least 2 ACEs as children, representing over 2.4 million people



### Michigan Citizenry Prevalence of ACEs by Age

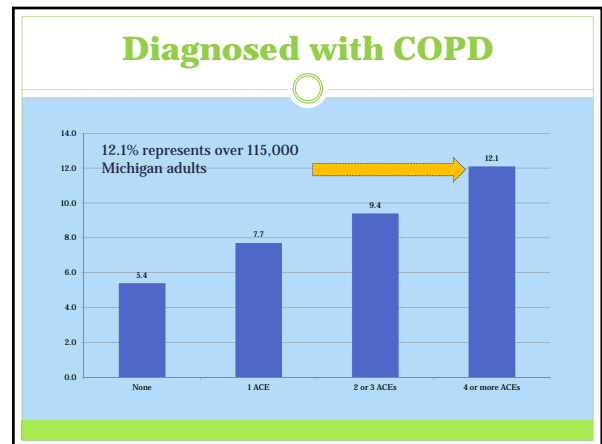
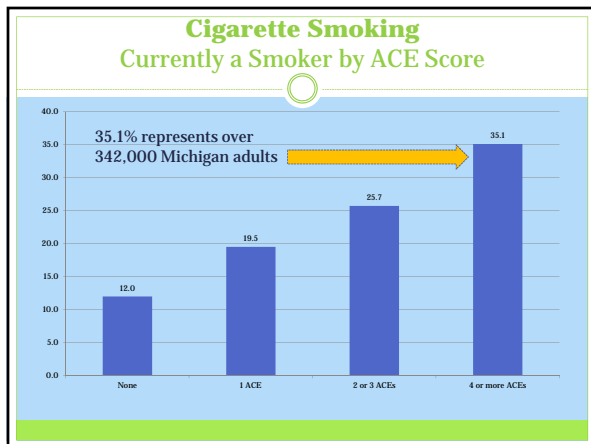
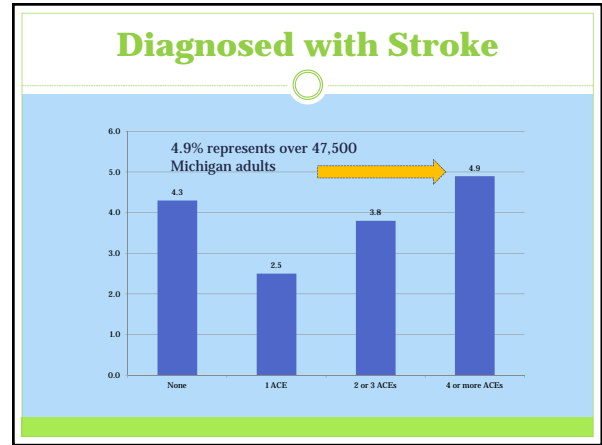
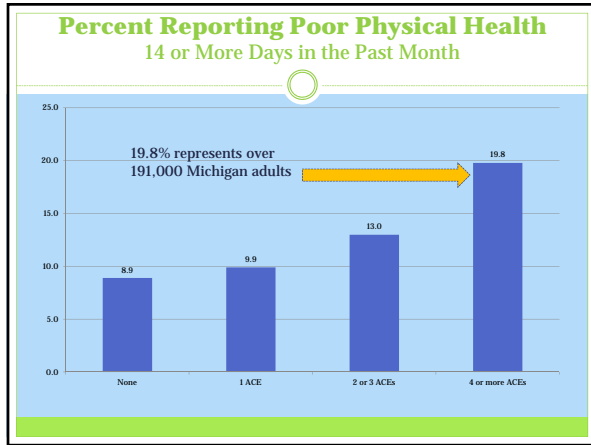
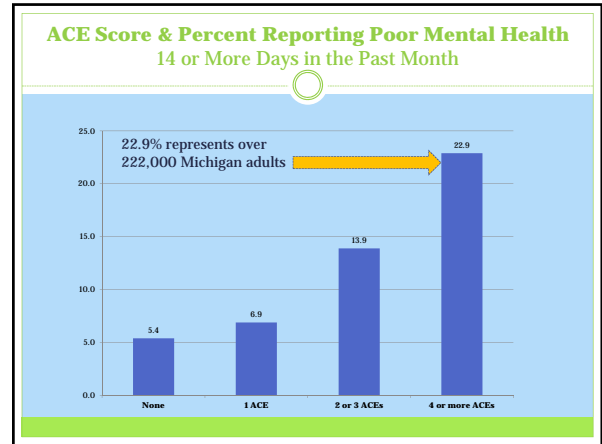
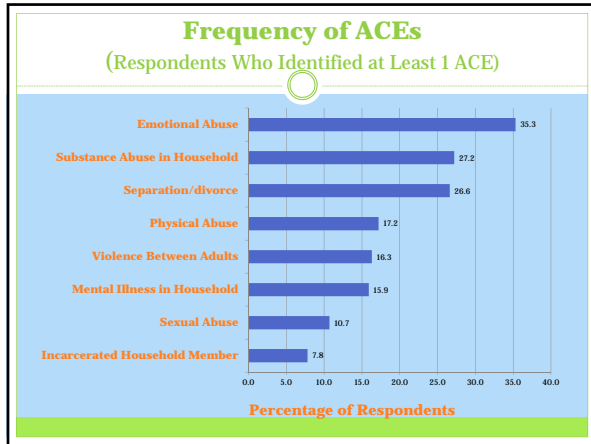


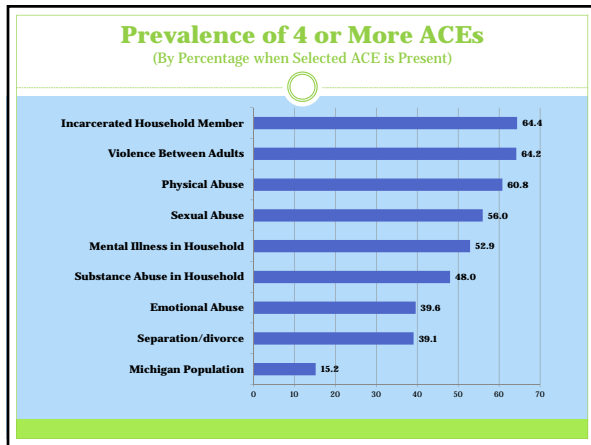
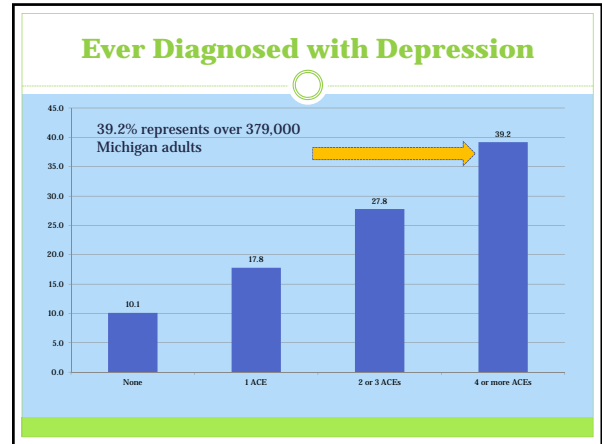
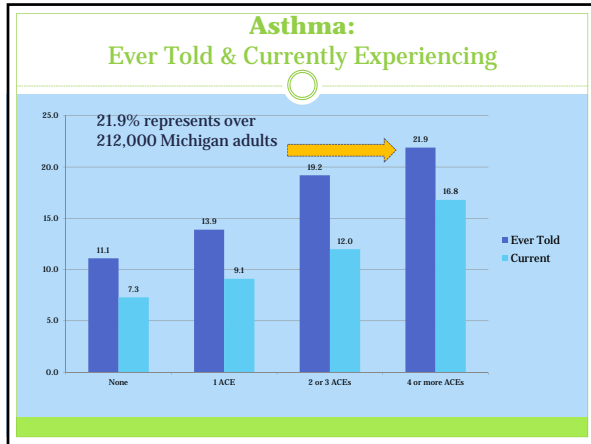
### Michigan Citizenry Prevalence of ACEs by Gender



### Michigan Citizenry Prevalence of ACEs by Race





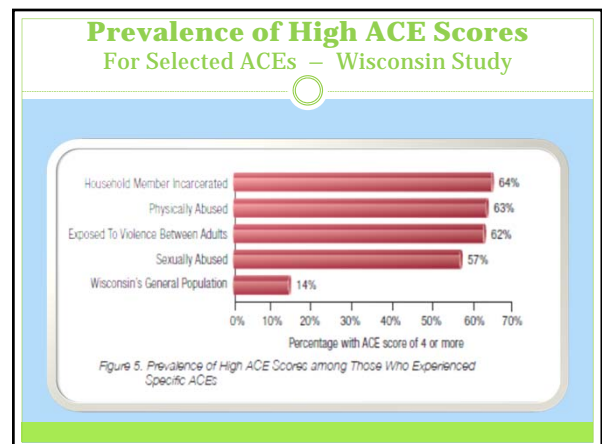
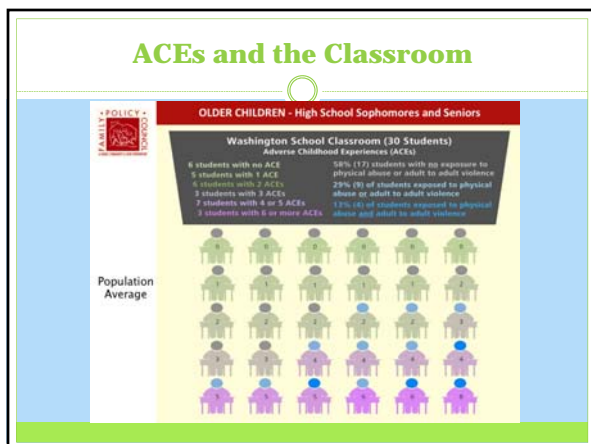


### Response Examples from Other States

Washington

Wisconsin

California



### When I first heard about ACEs ... "I could hear the angels singing."

Dr. Nadine Burke Harris, CEO and Founder of the Center for Youth Wellness, San Francisco



Dr. Nadine Burke Harris


### Summary of ACE Findings

ACEstoohigh.com

- ACEs are very common, but largely unrecognized.
- ACEs are strong predictors of later social malfunction, mental illness, health risks, disease, and premature death.
- ACEs are interrelated, not solitary.
- ACEs are *the leading* determinant of the health, social, and economic outcomes of our nation.
- ACEs are the basis for much of adult medicine and of many common public health and social problems.

### Impact of ACE Knowledge

*"The chronic public health disaster of adverse childhood experiences and their effects on human development are real. The public health impact of ACEs can now only be ignored as a matter of conscious choice. Thus, with this information comes the responsibility to use it."*



- Dr. Robert Anda

### So what do we do?




- Prevent
- Mitigate
- Treat

### What strategies can we use?

- **Awareness and education**
- **Action**
  - ✦ Trauma-informed practice
  - ✦ Protective Factors Framework
    - Strengthening Families
    - YouthThrive
  - ✦ Build individual and family capacities
  - ✦ Community planning and coordination
- **Advocacy**

### Preventing Child Maltreatment & Promoting Optimal Development



- The highest rates of abuse and neglect occur to children under 4.
- The brain's primary architecture is developing from birth to 5.
- 5 out of 10 Adverse Childhood Experiences (ACEs) are related to child abuse and neglect.



## One Strategy: Build Protective Factors

- Conditions or attributes of individuals, families, communities, or the larger society that **reduce or eliminate risk and promote healthy development and well-being** of children and families
- Serve as **buffers**, helping parents who might otherwise be at risk of maltreating their children to find resources, supports, or coping strategies that allow them to parent effectively, **even under stress**.

\*Adapted from *Making Meaningful Connections: 2014 Prevention Resource Guide*

## Center for Study of Social Policy Protective Factors Framework

### Strengthening Families

1. Parental Resilience
2. Social Connections
3. Knowledge of Parenting & Child Development
4. Concrete Support in Times of Need
5. Social & Emotional Competence of Children

### Youth Thrive

1. Youth Resilience
2. Social Connections
3. Knowledge of Adolescent Development
4. Concrete Support in Times of Need
5. Cognitive & Social-Emotional Competence of Youth

## Strengthening Families as a Platform for Collaboration

"One Approach, Many Adaptations"



## Making the Connection

"Assessment of ACEs ... only represents one side of the prevention coin. As healthcare providers work to **identify and lessen the number and impacts of ACEs, they must also begin to understand the current and potential sources of protection** which can **foster resilience** for all of their patients. **Identifying the presence or absence of protective factors** through universal screening allows healthcare providers to make targeted referrals to address deficiencies in protective factors."



—Machelle D. Madsen Thompson and Bart Kilka. "Increasing Resilience: Primary Healthcare Providers' Opportunities to Promote Protective Factors Before and After Childhood Trauma." In *Adverse Childhood Experiences: Healing and Health – Next Steps White Paper*. (2013)

## Making the Connection



**"Resilience Trumps ACEs"**

© CRI Walla Walla, WA [www.resiliencetrumpsaces.org](http://www.resiliencetrumpsaces.org)

## The Role of Resilience

**"Even when people score high on ACEs, it doesn't mean that this is determinative of their life course."**

— Jane Isaacs Lowe, senior program adviser for program development at the Robert Wood Johnson Foundation



## Making the Connection

### “From ACES to HOPE”

HOPE = Healthy Outcomes from Positive Experiences

- Dr. Robert Sege, Boston University School of Medicine

<http://www.youtube.com/watch?v=GbSp88PBe9E>  
“Change the First Five Years”



## Application to Practice & Policy

### How can we use the ACE data to inform:

- Agencies, programs, and daily practice?
- Cross-disciplinary work?
- Policymakers?
- Community and business leaders?
- Media?
- Others?



## Resources

- **ACE Study**  
[www.cdc.gov/ace/index.htm](http://www.cdc.gov/ace/index.htm) & [www.acestoohigh.com](http://www.acestoohigh.com)
- **Prevent Child Abuse Iowa (online ACE training)**  
[www.pcaiowa.org/resources/training](http://www.pcaiowa.org/resources/training)
- **Center for the Study of Social Policy**  
[www.cssp.org/reform/strengthening-families](http://www.cssp.org/reform/strengthening-families)
- **Child Welfare Information Gateway (Resource Guide)**  
[www.childwelfare.gov/can/factors/protective.cfm](http://www.childwelfare.gov/can/factors/protective.cfm)
- **National Alliance of Children's Trust and Prevention Funds (online SF training)**  
[www.ctfalliance.org/onlinetraining.htm](http://www.ctfalliance.org/onlinetraining.htm)
- **Mike Foley**, 517-335-1938, [foley2@michigan.gov](mailto:foley2@michigan.gov)