Improving Children’s Chances by Combatting Early Trauma

Monday, August 7, 2017
Poll Question 1: have you ever heard of Adverse Childhood Experiences, or ACEs?

- First, text “ncslhealth” to 22333 to join the poll
- Second, text “YES” or “NO” to 22333 in response to the question
Poll Question 2: what is your ACEs score?

▪ First, tally your score.

▪ Give yourself a point for each of the following that you, a family member, a friend, a client, or a constituent have/has experienced at least once:
  ▪ Physical Abuse;
  ▪ Emotional Abuse;
  ▪ Sexual Abuse;
  ▪ Physical Neglect;
  ▪ Emotional Neglect;
  ▪ Household Domestic Violence;
  ▪ Household Substance Abuse;
  ▪ Mental Illness in the Household;
  ▪ Parental Separation or Divorce;
  ▪ Incarcerated Household Member
Poll Question 2: what is your ACE score?

- Text “A” to 22333 if your ACE score is 1-2
- Text “B” to 22333 if your ACE score is 3-4
- Text “C” to 22333 if you ACE score is 4 or more
How Childhood Adversity Affects Health Across a Lifetime
And What We Can Do About It

Nadine Burke Harris, MD, MPH, FAAP
CEO/Founder, Center for Youth Wellness
August 7, 2017
THREE CATEGORIES OF ADVERSE CHILDHOOD EXPERIENCES

**ABUSE**
- Physical
- Emotional
- Sexual

**NEGLECT**
- Physical
- Emotional

**HOUSEHOLD DYSFUNCTION**
- Mental Illness
- Incarcerated Relative
- Mother treated violently
- Substance Abuse
- Divorce

Image courtesy of the Robert Wood Johnson Foundation
Nearly two-thirds of adults have at least one ACE

Source: CDC-Kaiser ACE Study (1998)
# ACEs prevalence across the US

<table>
<thead>
<tr>
<th>State</th>
<th>% of adults with &gt; 1 ACE</th>
<th>% of adults with &gt; 4 ACEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>61.7%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Iowa</td>
<td>55%</td>
<td>14%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>55%</td>
<td>13%</td>
</tr>
<tr>
<td>Montana</td>
<td>61%</td>
<td>17%</td>
</tr>
<tr>
<td>Vermont</td>
<td>57%</td>
<td>13%</td>
</tr>
<tr>
<td>Washington</td>
<td>61.9%</td>
<td>17%</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>56%</td>
<td>14%</td>
</tr>
</tbody>
</table>

Source: Childhood Adversity and Adult Chronic Disease
ACEs across race and ethnicity

Though there is relatively little difference in moderate levels of ACE exposure by income, prevalence of 4+ ACEs in low-income populations is substantially greater.

ACEs dramatically increase risk for 7 out of 10 leading causes of death

<table>
<thead>
<tr>
<th></th>
<th>Leading Causes of Death in US, 2013</th>
<th>Odds Ratio Associated with ≥ 4 ACEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Heart Disease</td>
<td>2.2</td>
</tr>
<tr>
<td>2</td>
<td>Cancer</td>
<td>1.9</td>
</tr>
<tr>
<td>3</td>
<td>Chronic Lower Respiratory Diseases</td>
<td>3.9</td>
</tr>
<tr>
<td>4</td>
<td>Accidents</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Stroke</td>
<td>2.4</td>
</tr>
<tr>
<td>6</td>
<td>Alzheimer’s</td>
<td>4.2</td>
</tr>
<tr>
<td>7</td>
<td>Diabetes</td>
<td>1.6</td>
</tr>
<tr>
<td>8</td>
<td>Influenza and Pneumonia</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Kidney Disease</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Suicide</td>
<td>12.2</td>
</tr>
</tbody>
</table>

Odds Ratio associated with ≥ 4 ACEs  
CDC 2015, Feletti 1998
ACEs dramatically increase risk for 7 out of 10 leading causes of death

<table>
<thead>
<tr>
<th>Leading Causes of Death in US, 2013</th>
<th>Odds Ratio Associated with ≥ 4 ACEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Disease</td>
<td>2.2</td>
</tr>
<tr>
<td>Influenza and Pneumonia</td>
<td></td>
</tr>
<tr>
<td>Kidney Disease</td>
<td></td>
</tr>
<tr>
<td>Suicide</td>
<td>12.2</td>
</tr>
</tbody>
</table>

Without intervention, there can be a 20-year difference in life expectancy

Odds Ratio associated with ≥ 4 ACEs
CDC 2015, Feletti 1998
Prevalence of smoking in adults by number of ACEs

Source: Felitti, 1998
Prevalence of alcoholism in adults by number of ACEs

Source: Felitti, 1998
ACEs and adolescent pregnancy

Source: Hillis, et al. 2004
*OR adjusted for race, education, and age
ACE score and teen sexual behaviors

Source: Felitti 1998
The Biology Of Adversity
EARLY LIFE ADVERSITY

Protective factors → Predisposed vulnerability

NEURO

CHRONIC DYSREGULATION

ENDOCRINE

IMMUNE

TOXIC STRESS

CLINICAL IMPLICATIONS

Epigenetic

Endocrine Metabolic Reproductive

Neurologic Psychiatric Behavioral

Immune Inflammatory Cardiovascular
Health and behavioral outcomes in children

- Development delay
- Growth delay
- Failure to thrive
- Sleep disruption
- Atopy
- Asthma
- Infection
- Learning difficulties
- Behavioral problems
- Autoimmune disease
- Poor impulse control
- Obesity
- Smoking
- Bullying
- Violence
- Headache
- Abdominal pain
- Teen pregnancy
- High risk behavior
What Can We Do About It?
Learning/Behavior Problems in Youth

Adapted from Burke et al, 2011
34.8M children in US impacted by ACEs
State ranking map of the proportion of children 0-17 with ≥ 2 ACEs

Prevalence of Adverse Child and family Experiences among US Children Age 0-17 years, 2011/2012
National Survey of Children's Health
Source: Bethell, C 2016
Yet ACEs continue to be a public health crisis hidden in plain sight
The issue is being viewed through a narrow lens

- The evidence of widespread prevalence of ACEs is often being ignored (particularly in media) and it is being framed primarily as a poverty or socioeconomic issue
- Most often linkage stops at mental and behavioral health outcomes
- When physical health is talked about, the discussion is limited to biology of the brain and cognitive development
- In public forum, few are talking about the linkage to chronic illness and life course health
But science tells us that we can mitigate the impacts of ACEs with early intervention
We Can Create Change!

1. Raising awareness
2. Early detection and prompt intervention requires routine screening
3. Reducing dose of adversity and enhancing capacity of caregivers to be a buffer: Current best practices including home visiting, mental health, social work, two generation interventions

• **Next Steps:** Basic science, clinical and translational research to catalyze stepwise advancements in assessment of toxic stress and prevention of morbidity and mortality
This doctor pioneered a way to treat stress in children, a startling source of future disease

By Michael Allison Chandler  October 6

Nadine Burke Harris, a pediatrician in San Francisco, is advocating for all children to be screened for traumatic experiences, which, research shows, have a long-term impact on health. She is a Holmz Award winner. (Photo by Jason Henry)
Sleep, Exercise, Nutrition, Mindfulness, Mental Health, Healthy Relationships
Adversity can change our biology

But that does not mean that the die has been cast
Thank you

centerforyouthwellness.org
@CYWSanFrancisco
@DrBurkeHarris
Activity: Table Talk

1. Share your reactions to what you have heard.

2. Given what you have heard, what are some policies you might consider to address ACEs?

- NOTE: we have handouts on the tables to help you organize your thoughts and takeaways.
Policy Options for Preventing Early Adversity and Assuring Health and Wellbeing

Melissa T. Merrick, PhD
NCSL Legislative Summit
August 7, 2017
Early Adversity has Lasting Impacts on Health

- Traumatic Brain Injury
- Fractures
- Burns

- Depression
- Anxiety
- PTSD

- Unintended Pregnancy
- Pregnancy Complications
- Fetal death

- HIV
- STDs

- Cancer
- Diabetes

- Chronic Disease

- Infectious Disease

- Mental Health

- Maternal Health

- Injury

- Risky Behaviors

- Alcohol & Drug Abuse
- Unsafe Sex

- ACEs
5 Strategies to Prevent Child Abuse & Neglect

- Change social norms to support parents and positive parenting
- Enhance parenting skills to promote healthy child development
- Strengthen economic supports for families
- Provide quality care and education early in life
- Intervene to lessen harms and prevent future risk
Evidence-Based Policy

• Policy development is a core function of public health
  • Conducting rigorous analyses to identify and report on strategies and policies that can protect health and prevent disease
  • Educating the public and stakeholders about these strategies
  • Implementing effective strategies and policies to maximize impact

• Policy development and education are not lobbying
  • Federal law prohibits the use of federal funds to lobby at the federal, state or local level

• Public Health’s greatest achievements originated through policy efforts that maximize impact
Strengthen Economic Supports to Families

- Strengthen household financial security
  - Child support payments
  - Tax credits
  - State nutrition assistance programs
  - Assisted housing mobility
  - Subsidized child care
Strengthen Economic Supports to Families

- Family friendly work policies
  - Livable wages
  - Paid leave
  - Flexible and consistent schedules
Policies with impacts on risk factors for child abuse & neglect

- Increased minimum wage
- Earned Income Tax Credit
- Child Tax Credit
- Housing vouchers
- Head Start
- Bans on corporal punishment
- Family-friendly work

Klevens et al., 2014
Policies associated with impacts on child abuse and neglect reductions

- Child Tax Credit
- Head Start
- Medicaid coverage of teens
- Bans on corporal punishment
- Access to family planning services
- Paid sick leave, paid vacation, flexible schedules

De Leew et al. (2014)
Early Adversity Prevention is Strategic

Developing New Partnerships and Working Across Sectors

Including:
Public Health, Government, Health Care Services, Social Services, Education, Businesses, Justice, Housing, Non-Governmental Organizations, Foundations
Melissa T. Merrick, PhD
mmerrick@cdc.gov

www.cdc.gov/violenceprevention/acestudy

For more information, contact CDC
1-800-CDC-INFO (232-4636)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
Questions?
State Examples

Tennessee

Senator Bo Watson

Washington

Representative Ruth Kagi
Questions?

For More Information, Contact:

Kate Blackman: kate.blackman@ncsl.org
Meghan McCann: meghan.mccann@ncsl.org
Margaret Wile: margaret.wile@ncsl.org
Emily Heller: emily.heller@ncsl.org