Addressing ACEs at Local Health Jurisdictions

Melanie Gillespie and Laura Porter
ACEs Learning Institute
Comprehensive Health Education Foundation (CHEF)

**Founded:** 1974

**Mission:** Create enduring health equity.

We believe that people and communities thrive when all are healthy, included and connected.

**Strategic focus:** Community based health solutions

By uniting community wisdom, proven science, emergent best practices and effective policy, we support people, communities and policy makers to create the conditions for health at the local, grassroots level.
Poll Question

Do you have an ACE-informed public health initiative?

If you do, please share your initiatives in the Chat box.
When societal resources are distributed unequally by any factor, population health will be distributed unequally along those lines as well.

“Unnatural Causes
www.unnaturalcauses.org

In order to improve public health, we need to improve society.”

Sir Michael Marmot, Epidemiologist
Ecological Model of Determinants of Health

Macro Conditions
Social, economic, and political factors

Macro Determinants
Living, work, school conditions; family and community networks

Micro Determinants
Biological traits, individual behavior, access
The Role of Time

A life course approach recognizes the role of time in shaping health outcomes.
Life Course Approach: A New Set of Questions

- Pathways
- Trajectories
- Critical and sensitive periods
- Cumulative impacts
- History and context
- Complex interplay of biological and social factors
The Ace Study

Whole Life Perspective

Conception

Death

Adverse childhood experiences

Social, emotional, and cognitive impairment

Adoption of health-risk behaviors

Disease, disability, social problems

Early death

Scientific gaps
Experiences Considered

Indicators of Family Dysfunction

1. Mentally ill, depressed, or suicidal person in home
2. Drug addicted or alcoholic family member
3. Parental discord (divorce, separation, abandonment)
4. Witnessing domestic violence against the mother
5. Incarceration of any family member

Abuse of Child

6. Physical
7. Sexual
8. Emotional

Neglect

9. Physical
10. Emotional

ACE Score = Number of Categories (1-10)
# Major Findings

<table>
<thead>
<tr>
<th>ACE categories (ACEs) are interrelated</th>
<th>87% of people with 1 have more than one</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACEs are common</td>
<td>2/3 of adults have 1 or more</td>
</tr>
<tr>
<td></td>
<td>27% have 3 or more</td>
</tr>
<tr>
<td></td>
<td>5% have six or more</td>
</tr>
<tr>
<td>Accumulation of ACEs matters</td>
<td>Higher # (ACE Score) = higher population risk</td>
</tr>
<tr>
<td>ACEs are the most powerful known determinant of health</td>
<td>Mental, physical, behavioral, productivity, disability, &amp; social problems</td>
</tr>
</tbody>
</table>
Disease Risk

Attributable to ACEs:
- Smoking
- Heavy drinking
- Binge drinking
- Drinking and driving
- Had a drug problem
- Addicted to drugs
- Ever injected drugs

Current Smoking - Washington

<table>
<thead>
<tr>
<th>Number of ACE Categories</th>
<th>Percent of Population Currently Smoking</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10.4</td>
</tr>
<tr>
<td>1</td>
<td>13.2</td>
</tr>
<tr>
<td>2</td>
<td>11.1</td>
</tr>
<tr>
<td>3</td>
<td>16.3</td>
</tr>
<tr>
<td>4 or 5</td>
<td>20.8</td>
</tr>
<tr>
<td>6, 7, or 8</td>
<td>28.5</td>
</tr>
</tbody>
</table>

Original ACE Study - Ever Had a Drug Problem

<table>
<thead>
<tr>
<th>Number of ACE Categories</th>
<th>Percent of Population with Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1.3</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>3.9</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>7.5</td>
</tr>
<tr>
<td>≥5</td>
<td>12</td>
</tr>
</tbody>
</table>
Mental Illness

**Attributable to ACEs:**
- Depression
- Serious and persistent mental illness
- Frequent mental distress
- Nervousness
- Suicide attempts
- Emotional problems restrict activities
ACEs and Work/Life

Attributable to ACEs:
Worker injury
Work-related illness
Drugs/alcohol
Hopelessness
Health limits activity
Serious job problems
Serious financial problems
Disability-related days (can’t do usual activities)

---

Work-Related Injury/Illness in Past Year

<table>
<thead>
<tr>
<th>% with Injury/Illness</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4, 5</th>
<th>6, 7, 8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.6</td>
<td>5</td>
<td>7</td>
<td>6.1</td>
<td>8.9</td>
<td>10.1</td>
</tr>
</tbody>
</table>

Missed Work

<table>
<thead>
<tr>
<th>% Missing ≥ 10 Work Days</th>
<th>0</th>
<th>≥ 3</th>
<th>≥ 6</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>Physical, Mental, &amp; Behavioral Health Outcomes Linked to ACEs</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td></td>
<td></td>
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<tr>
<td><strong>Prevalent Disease</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Cardiovascular</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Cancer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Asthma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Diabetes</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Auto-immune</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• COPD</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Ischemic heart disease</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Liver disease</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Poor Mental Health</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Frequent mental distress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Sleep disturbances</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Nervousness</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Requires medication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Problems restrict activities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Serious &amp; persistent mental illness</td>
<td></td>
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</tr>
<tr>
<td><strong>Health &amp; Social Problems</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Fair or poor health</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Life dissatisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Health-related limits to quality of life</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Disability that impedes daily functioning</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Doesn’t complete secondary education</td>
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<td></td>
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<tr>
<td>• Unemployment</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• History of adult homelessness</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Risk</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Smoking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Heavy drinking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Obesity</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Risk of AIDS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Taking painkillers to get high</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Obesity</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Intergenerational ACE Transmission</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Mental illness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Drugs or alcohol problem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Multiple divorces, separations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Victim of family violence</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Adult incarceration</td>
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Magnitude of the solution...

It’s in OUR hands.
In Washington

School-aged children

- Elementary children - 12% had more than three ACEs
- Increased absence and behavior problems

High school-aged youth

- 42% had more than three ACES
- Increase in poor grades, suspensions, court involvement

Parents

- With more than 5 ACEs
- Were 14 X more likely to have conditions that make ACES for kids
ACEs & Determinants of Health

**Macro Conditions**
Values, economic opportunities

**Macro Determinants**
Housing access, family and social conditions

**Micro Determinants**
Learning, memory, risky behavioral choices
Too Common to Rely Exclusively on Intervention/Treatment

Public Health Approach

• Assessment
• Policy
• Assurance

Public Education **Necessary** But Not Sufficient

• Hope-filled action
• Attend to macro conditions
• Macro determinants of health
Assessment

- Add ACE module each decade
- Systematically adding questions to surveillance instruments
  - Life course
  - Cumulative effects
  - Community context
  - Resilience
ACEs and History of Homelessness

25-54 yr Old Adult Population

% Homelessness

# of ACE's

2010 BRFSS – Preliminary; based on less than full year of data
Adult Adversity Compounds Effects

% with 15-30 Disability-Interrupted Days a Month

Number of Adult Major Stress Categories Added to ACE Score of ≥3

- 0: 3.6
- 1: 4.8
- 2: 17.4
- 3: 56.2

Adults with ≥3 ACEs Plus Major Stress Categories:
1. Homelessness
2. Incarceration
3. Chronic illness
4. Separation/Divorce
5. Severe Depression
6. Work-related Injury/Illness
ACEs and Co-Occurring Problems

- Mean Number of Co-Occurring Outcomes

<table>
<thead>
<tr>
<th>ACE Score</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7,8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Social Problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panic Reactions</td>
<td>Depression</td>
<td>Anxiety</td>
<td>Hallucinations</td>
<td>Sleep Disturbances</td>
<td>Severe Obesity</td>
<td>Pain</td>
<td>Smoking</td>
<td>Alcoholism</td>
</tr>
</tbody>
</table>
Resilience Questions in BRFSS*

Individual

- How often do you get your social/emotional needs met?
- How many people can you count on for help?
- In general, how satisfied are you with our life?

* Behavioral Risk Factor Surveillance System
Community

- How often do you and people in your community do favors for each other? By favors we mean such things as helping with shopping, lending garden or house tools, watching over property, and other small acts of kindness.

- Please tell me how much you agree or disagree with the following statement: You can count on adults in your community to watch out that children are safe and don’t get in trouble.

- Think about the people you rely on for help and support. How common is it for you to reach outside this circle of people to give or receive practical help or social and emotional support?
ACERs and Social Emotional Support

<table>
<thead>
<tr>
<th>Number of ACEs</th>
<th>% Who Rarely or Never Receive Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ACE</td>
<td>4%</td>
</tr>
<tr>
<td>1 ACE</td>
<td>6%</td>
</tr>
<tr>
<td>3 ACE</td>
<td>6%</td>
</tr>
<tr>
<td>4-5 ACE</td>
<td>7%</td>
</tr>
<tr>
<td>6-8 ACE</td>
<td>12%</td>
</tr>
</tbody>
</table>
Cardiovascular Diabetes Receive Treatment for Mental Illness

Rarely/Never

Sometimes

Always/Usually Have Support

Resilience: Social/Emotional Support
Learning from the Data

• Which resilience factors correlate with better outcomes?
• Are there geographic or demographic differences for resilience factors?
• Are some resilience factors correlated with lower intergenerational transmission of ACEs?
Community Variation

Ages 18-54, 3 or More ACEs
Same Quantiles as for All Ages

Low

% 3 or more ACEs
- 09.8-20.2
- 20.3-24.5
- 24.6-28.0
- 28.0-31.1
- 31.2-34.6
- 34.7-60.2
- < 30 Responses

High
Unemployment ACEs by Social/Emotional Support

% Unemployed

Number of Aces

0 1 2 3 4-5 6-8

High Support
Low Support
Promote Virtuous Cycle of Health

Moderate ACE Effects, Improve Wellbeing Among Parenting Adults

Prevent High ACE Scores among Children

Mutually Reinforcing
Principles of Trauma Informed Care

• Understanding trauma and its impact
• Promoting safety
• Ensuring cultural competence
• Supporting consumer control, choice, autonomy
• Sharing power and governance
• Integrating care for whole person
• Healing happens in relationships
• Recovery is possible
Resilience-Building Systems

- Community, Culture, Spirituality
- Attachment & Belonging
- Capability

Macro Conditions & Macro Determinants
Micro Determinants
New Era of Prevention

- Affects whole person and context
- Considers experience over time
- Invests in positive adaptation
- Employs dual generation strategies
- Shifts the status-quo interplay of stress & neurogenesis
Application of ACEs Science

Macro Conditions
Policies to equalize and include

- Learning communities
- Social marketing
- Policy to protect ACE scores
- Policy to equalize access
- Civic engagement re: norms
- Inclusion of marginalized groups
Application of ACEs Science

Macro Conditions
Policies to equalize and include

Macro Determinants
Invest in art and workplace safety

- Investment in art
- Peer education
- Workplace safety
- Service innovation & evaluation
- Use of ACE histories
- Professional training
- Trauma audits
- Leadership development
- Peer helping systems
- Community organization & engagement
Application of ACEs Science

Macro Conditions
Policies to equalize and include

Macro Determinants
Invest in art and workplace safety

Micro Determinants
Integrate, support, and build resilience

- Accommodate normal response to developmental stress
- Multiple supports in relationship-based programming
- Eligibility
- Professional accountability
- Partner to improve access
- Parenting education
- Build resilience at sensitive developmental periods
Community Capacity Development

A Public Health Approach to Solving Interrelated Problems

- By improving people’s connections
- By sharing responsibility
- Resulting in the collective impacts of their efforts
Next Steps

• Develop next questions for surveillance
• Let CHEF know what information is useful
• Improve understanding about public health approach
• Learn & distribute new knowledge
• Share strategies
• Upcoming events hosted by CHEF
CHEF turns 40 this fall!
To celebrate, we are throwing a two day party (aka a statewide summit) and inviting you all to join us!

September 17 & 18, 2014

Coalescing for Change:
Community Based Health Solutions
at the intersection of
Neuroscience, ACEs, Resilience
and Community Wisdom

Register Now
“Birthday Special” Registration Rate Available until 6/15: $275

Hilton Seattle Airport & Conference Center
17620 International Blvd, Seattle, WA 98188
September 17 & 18, 2014
Questions?

Melanie Gillespie: melanieg@chef.org
Laura Porter: laurap@chef.org
Or ACELearning@chef.org
Upcoming Trainings

The Public Health Management Certificate
August 2014 to July 2015

Summer Institute for Public Health Practice
August 4–7, 2014

Visit www.nwcphp.org to learn more.