The Magnitude of the Solution

Building Self-Healing Communities
Disclosure

“The content of this activity does not relate to any product of a commercial interest as defined by the ACCME; therefore, there are no relevant financial relationships to disclose.”

Thank you!
Experience & Adaptation

Dangerous World

World with Challenges & Support

BRAIN
Prepares for anticipated world

POSITIVE STRESS
Stress is buffered by adult protection & nurturance

BIOLOGY & SOCIETAL EXPECTATIONS ALIGN

Safe World

Adapted from the research of Martin Teicher, MD, Ph.D
By Washington Family Policy Council
Hardwired for Anticipated World

Dangerous

Conception

BRAIN Prepares for anticipated world

TOXIC STRESS

CHARACTERISTICS

“Brawn over Brains”
Focused: Fight, Flight or Freeze

OUTCOME
Individual & species survive the worst conditions

Dissonance between biological expectations & social reality fuels problems

Safe

"Process over Power”
Multi-focused: Relational

OUTCOME
Individual & species survive in good times; vulnerable in poor conditions

Adapted from the research of Martin Teicher, MD, Ph.D
Each Person; A Unique Experience of the World
Epigenetics

“Parents with their own genetic vulnerabilities can pass on protection to the next generation provided that they are given the right support.”

Van der Kolk, 2014, The Body Keeps the Score, p. 157
Adverse Childhood Experiences

The Adverse Childhood Experience (ACE) Study is a retrospective and prospective population health study designed to examine the childhood origins of many of our nation’s leading health and social problems.
Early Death
Disease, Disability, Social Problems
Health-Risk Behavior/Experience
Social, Emotional & Cognitive Adaptation
Adaptive Neuro & Epigenetic Development
Adverse Childhood Experiences

Whole Life Perspective
ACE Categories Considered in Study

**Abuse**
1. Child physical abuse
2. Child sexual abuse
3. Child emotional abuse

**Neglect**
4. Physical Neglect
5. Emotional Neglect

**Indicators of Family Dysfunction**
6. Mentally ill, depressed or suicidal person in the home
7. Drug addicted or alcoholic family member
8. Parental discord – indicated by divorce, separation
9. Witnessing domestic violence against the mother
10. Incarceration of any family member
ACEs are Common

- 65% ≥1 ACE
- 28% ≥3 ACEs

Oregon ACE Data, 2011 & 2013 Combined
ACE Study Major Findings

ACE Categories (ACEs) are Interrelated

ACEs are Common

Accumulation of ACEs Matters

Graded Relationship: Disease, Disability, Social, Productivity

Scores = Good Proxy Measure Childhood Toxic Stress Dose

ACEs are the Most Powerful Known Determinant of Health
ACEs and Risk

Early & Continuing Smoking

Early, Heavy, & Binge Drinking

Drinking and Driving

Had a Drug Problem

Addicted to Drugs

Ever Injected Drugs

Prescription Drug Use

Self-Reported Addiction

Smoking- Washington

Ever Had a Drug Problem - ACE Study

ACE Interface, 2016
# Alcohol: Age at First Use

Percentage of Participants’ reported Age of Initiation of Alcohol Use by total number of Adverse Childhood Experiences (ACE score)\(^6\)

<table>
<thead>
<tr>
<th>ACE Score</th>
<th>Percentage of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4.2%</td>
</tr>
<tr>
<td>1</td>
<td>6.1%</td>
</tr>
<tr>
<td>2</td>
<td>8.5%</td>
</tr>
<tr>
<td>3</td>
<td>12.1%</td>
</tr>
<tr>
<td>4+</td>
<td>25.7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACE Score</th>
<th>Percentage of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>33.4%</td>
</tr>
<tr>
<td>1</td>
<td>36.2%</td>
</tr>
<tr>
<td>2</td>
<td>33.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age at Initiation of Alcohol Use</th>
<th>14 years old or younger</th>
<th>15 to 17 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 years old or younger</td>
<td>4.2%</td>
<td>16.9%</td>
</tr>
<tr>
<td>15 to 17 years old</td>
<td>6.1%</td>
<td>28.5%</td>
</tr>
</tbody>
</table>
Adult Alcohol Use

Percentage of Participants’ reported Heavy Drinking, Alcoholism, and Marrying an Alcoholic by ACE score

- **Heavy Drinking**: 10.2%, 15.7%, 16.1%, 19.9%
- **Alcoholic**: 3.1%, 5.2%, 7.8%, 10.4%, 12.2%
- **Married Alcoholic**: 17.1%, 20.9%, 26.2%, 33.9%
Illicit Drug Use: Age at First Use

Percentage of Participants’ reported Age at Initiation of Illicit Drug Use by ACE score

Age at Initiation of Illicit Drug Use

- 0.7% of participants aged 14 years old or younger initiated drug use.
- 3.8% initiated drug use between the ages of 15 to 18 years old.
- 1.5% initiated drug use at 14 years old or younger.
- 6.5% initiated drug use between the ages of 15 to 18 years old.
- 9.3% initiated drug use at 14 years old or younger.
- 9.9% initiated drug use between the ages of 15 to 18 years old.
- 4.1% initiated drug use at 14 years old or younger.
- 13.4% initiated drug use between the ages of 15 to 18 years old.
- 10.6% initiated drug use at 14 years old or younger.
- 9.9% initiated drug use between the ages of 15 to 18 years old.
- 14.3% initiated drug use at 14 years old or younger.
Adult Illicit Drug Use

Percentage of Participants’ reported Lifetime Use of Illicit Drugs by ACE score

ACE Score

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5+</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.4%</td>
<td>15.2%</td>
<td>22.3%</td>
<td>25.6%</td>
<td>28.8%</td>
<td>37.4%</td>
</tr>
</tbody>
</table>
ACEs and Behavioral Health Problems

Depression
Sleep disturbance
Serious & persistent mental illness
Frequent mental distress
Nervousness
Suicide attempts
Emotional problems restrict activities
Sexual risk behaviors
Teen pregnancy

### Anxiety

<table>
<thead>
<tr>
<th>Number of ACE Categories</th>
<th>Percent of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1.9</td>
</tr>
<tr>
<td>1</td>
<td>2.8</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>4 or 5</td>
<td>8.8</td>
</tr>
<tr>
<td>6,7, or 8</td>
<td>15</td>
</tr>
</tbody>
</table>

### Treatment for Mental Health Condition

<table>
<thead>
<tr>
<th>Number of ACE Categories</th>
<th>Percent of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>7.3</td>
</tr>
<tr>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>15.5</td>
</tr>
<tr>
<td>4 or 5</td>
<td>19.3</td>
</tr>
<tr>
<td>6,7, or 8</td>
<td>24.5</td>
</tr>
</tbody>
</table>
ACEs and Somatic Symptoms

Patients with 5 or More Unexplained Symptoms

![Bar Chart]

**ACE Score**

0             1              2              3           4             >=5

**Percent with 5 or More Symptoms**

0  10  15  20  25  30
Early Death
Disease, Disability, Social Problems
Health-Risk Behavior/Experience
Social, Emotional & Cognitive Adaptation
Adaptive Neuro & Epigenetic Development
Adverse Childhood Experiences
Historical Trauma
Adverse Childhood Exposures and Alcohol Dependence Among Seven Tribes
Adverse Childhood Exposures

Analysis from “The Ten Tribes Study”

ABUSE AND NEGLECT
1. Physical abuse (men: 40%; women: 42%)
2. Sexual Abuse (men: 26%; women: 31%)
3. Emotional abuse (men: 26.5%; women: 36.4%)
4. Physical neglect (men: 45%; women: 43%)
5. Emotional neglect (men: 20%; women 23%)

FAMILY/CONTEXT
6. Boarding school placement (25%)
7. Foster care placement, (men: 10%; women: 14.5%)
8. Adoption (5%)
9. Having an alcoholic parent(s) (men: 66%; women: 66.5%)

86% participants experienced one or more categories

33% reported four or more categories.
Times More Likely Than People with 0 ACEs

Number of Adverse Childhood Exposures

- Combined sexual and physical abuse increased alcohol dependence for men.
- Combined sexual abuse and boarding school attendance were significant for women.

Koss, M., Polacca, M., Yuan N., et al “Adverse Childhood Exposures and Alcohol Dependence Among Seven Tribes” American Journal of Preventative Medicine, 2003, pp. 238-244
ACEs and Co-Occurring Problems

Mean # of Co-Occurring Outcomes

ACE Score

0 1 2 3 4 5 6 7,8

Health & Social Problems
- Panic Reactions
- Depression
- Anxiety
- Hallucinations
- Sleep Disturbances
- Severe Obesity

Pain
- Smoking
- Alcoholism
- Illicit Drug Use
- IV Drug Use
- Early Intercourse
- Promiscuity
- Sexual Dissatisfaction
- Amnesia (Childhood)
- Problems with Anger
- Perpetration of Family Violence

Affect Regulation
Somatic Issues
Substance Use
Sexuality
Memory
Arousal

ACE Interface, 2016
## Outcomes Attributable to ACEs

### Risk
- Smoking
- Heavy drinking
- Obesity
- Risk of AIDS
- Taking painkillers to get high
- Obesity

### Prevalent Disease
- Cardiovascular
- Cancer
- Asthma
- Diabetes
- Auto immune
- COPD
- Ischemic heart disease
- Liver disease

### Poor Mental Health
- Frequent mental distress
- Sleep disturbances
- Nervousness
- MH problem requiring medication
- Emotional problems restrict activities
- Serious & persistent mental illness

### Health & Social Problems
- Fair or poor health
- Life dissatisfaction
- Health-related limits to quality of life
- Disability that impedes daily functioning
- Don’t complete secondary education
- Unemployment
- History of adult homelessness

### Intergenerational ACE Transmission
- Mental Illness
- Drugs or Alcohol Problem
- Multiple divorces, separations
- Victim of family violence
- Adult incarceration
Population Attributable Risk

- Life Dissatisfaction
- Painkillers to get high
- ≥ 15 of 30 days emotional problem interrupted work
- Receive med treatment for mental illness
- Incarceration as adult
- Promiscuity
- Chronic depression
- Anxiety
- Alcoholism
- Drinking & driving (30 days)
- Serious/persistent mental illness
- Suicide attempt
- IV drug use

ACEs

Controls: gender, age, income, education, race-ethnicity
ACEs Are Not Destiny

People affected by ACEs are becoming the leaders of Self-Healing Communities
Promote Virtuous Cycle of Health

Moderate ACE Effects, Improve Wellbeing Among Parenting Adults

Prevent High ACE Scores among Children

Mutually Reinforcing
Core Protective Systems

“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*
Flourishing “begins with a new understanding of the problem.”

Sandra Bloom
Reduced pain tolerance associated with hyper-arousal can look like misbehavior.
Framing the ACE History for Providers and Clinic Settings

Adopt Protocol: Ask, Listen, Educate, Affirm, Remember

“We now know that childhood experience has a big impact on health throughout our lives. Understanding your history of adversity while you were growing up will help us to work together to improve your health and the health of your family.”
“Establishing Safety First is Paramount”
Dr. Kate McLaughlin

- Self Efficacy
- Ability to Direct Attention
- Positive View
- Ability to Recognize ACE-attributable problems
- Self Regulation
“Self regulation depends on having a friendly relationship with your body. Without it you have to rely on external regulation – from medication, drugs like alcohol, constant reassurance, or compulsive compliance with the wishes of others.”

What Helps Individuals Self-regulate?

Activate Social Engagement:
1. Healing Power of Community Expressed in Music, Rhythm, Theatre
2. Exercise & Play
3. Practicing Connection

Calm Physical Tensions in Body:
1. Massage, Movement, Breathing
2. Mindfulness, Reflection, Yoga
3. Tapping Acupressure Points
4. Biofeedback, Neurofeedback
5. Eye Movement Desensitization & Reprocessing
Mindfulness

• “The Busy Mind” – fighting what is
• Mindfulness=Presence
  – The observer mind
  – Non-judgmental
• Mindfulness based stress reduction
  – Feeling your breath
  – Tuning into your body
  – Using movement
  – Practicing in daily life
Diaphragmatic Breathing and Yoga

- Stimulates the body’s “rest and digest” (parasympathetic nervous system)
- Improves brain calming (GABA)
- Decreases fight/flight/freeze activators (catecholamines and cortisol)
Movement
Music
Dance
Exercise

Song & Dance
Sleep

• How much sleep do you need?
  School-age 9-11; adults 7-9
• Lack of sleep may contribute:
  – Cardiovascular issues
  – Cancer
  – Weight gain
  – Mental health problems
  – Safety issues
“Social support is the most powerful protection against becoming overwhelmed by stress and trauma. The critical issue is reciprocity: being truly heard and seen by the people around us, feeling that we are held in someone else’s mind and heart.”

Van der Kolk, 2014, The Body Keeps the Score,
Help that Helps

1. **Support**: Feeling socially and emotionally supported and hopeful
2. **Help**: Having two or more people who give concrete help when needed
3. **Community Reciprocity**: watching out for children, intervening when they are in trouble, and doing favors for one another
4. **Social Bridging**: reaching outside one’s immediate circle of friends to recruit help for someone inside that circle.
Support

Feeling socially and emotionally supported and hopeful

... Always or Usually
(vs Rarely or Never)
Smoking & Support

Smoker With Support & Hope

% of Population

0 ACE 1-3 ACEs 4-8 ACEs

Low Support & Hope High Support & Hope

Foundation for Healthy Generations 2014
ACEs & Sleep

Not Enough Sleep 7 or more Days Past Month With Support & Hope

% of Population

0 ACE  1-3 ACEs  4-8 ACEs

Low Support & Hope  High Support & Hope

Foundation for Healthy Generations 2014
Sleep & Support

Not Enough Sleep 7 or more Days Past Month With Support & Hope

% of Population

0 ACE 1-3 ACEs 4-8 ACEs

Low Support & Hope  High Support & Hope
ACEs & Poor Mental Health

Poor Mental Health More Than Half Last Month With Support & Hope

% of Population

0 10 20 30 40 50

0 ACE 1-3 ACEs 4-8 ACEs

Low Support & Hope  High Support & Hope

Foundation for Healthy Generations 2014
Mental Health & Support

Poor Mental Health More Than Half Last Month With Support & Hope

% of Population

0 10 20 30 40 50

0 ACE 1-3 ACEs 4-8 ACEs

Low Support & Hope  High Support & Hope

Foundation for Healthy Generations 2014
ACEs & Poor Health

Poor Physical Health More Than Half Last Month With Support & Hope

% of Population

- 0 ACE
- 1-3 ACEs
- 4-8 ACEs

Low Support & Hope  High Support & Hope
Poor Physical Health More Than Half Last Month With Support & Hope

% of Population

0 ACE 1-3 ACEs 4-8 ACEs

Low Support & Hope  High Support & Hope

Foundation for Healthy Generations 2014
Help

Having two or more people who give concrete help when needed
ACEs & Poor Health

Fair or Poor Health With Help

% of Population

0 ACE | 1-3 ACEs | 4-8 ACEs

Low Help | High Help
Poor Health & Help

Fair or Poor Health With Help

% of Population

0 ACE 1-3 ACEs 4-8 ACEs

Low Help High Help

Foundation for Healthy Generations 2014
ACEs & Depression

Depressed All or Most of Last Month With Help

<table>
<thead>
<tr>
<th>% of Population</th>
<th>0 ACE</th>
<th>1-3 ACEs</th>
<th>4-8 ACEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Help</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Help</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Foundation for Healthy Generations 2014
Depression & Help

Depressed All or Most of Last Month With Help

% of Population

Depressed All or Most of Last Month With Help

0 ACE 1-3 ACEs 4-8 ACEs

Low Help High Help

Foundation for Healthy Generations 2014
ACEs & Mental Illness Symptoms

Moderate-Serious Mental Illness With Help

% of Population

<table>
<thead>
<tr>
<th></th>
<th>Low Help</th>
<th>High Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ACE</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>1-3 ACEs</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>4-8 ACEs</td>
<td>50</td>
<td>60</td>
</tr>
</tbody>
</table>

Foundation for Healthy Generations 2014
Mental Illness Symptoms & Help

Moderate-Serious Mental Illness With Help

% of Population

0 ACE 1-3 ACEs 4-8 ACEs

Low Help High Help

Foundation for Healthy Generations 2014
Community Resilience

Community Reciprocity
watching out for children, intervening when they are in trouble, and doing favors for one another

Social Bridging
reaching outside one’s immediate circle of friends to recruit help for someone inside that circle.
Reciprocity & Bridging: Two Generation Benefits

Better Child Well-Being:
- School Performance
- Mental Health (depression, suicide)
- Physical Health (asthma, diabetes, obesity)
- Drug Use
- Alcohol Use
- Less Physical Fights

Adults: Better Health & Health Behaviors:
- Obesity
- Mental Illness Symptoms
- Alcohol Consumption among Women
- Physical Activity
- Happiness
- Worry about Money for Rent
- Having A Primary Care Physician
- Experiencing Housing Instability
- Being Hungry Because of No Money

Youth wellbeing & contextual resilience (2015)
Preliminary analysis of WA BRFSS & Youth Survey, S. Reed & D. Longhi

Adult wellbeing & contextual resilience (2015)
Preliminary analysis of WA BRFSS, A. Reeves

ACE Interface
“Restoring relationships and community is central to restoring well-being”

- Language gives us the power to change ourselves and others by communicating our experiences and finding common meaning.
- We have the ability to regulate our own physiology with basic activities: breathing, moving, touching, tuning to others.
- We can change social conditions and create environments where people can feel safe and thrive.

Van der Kolk, 2014, The Body Keeps the Score, p. 38
Thank You
lauraportergarden@gmail.com