September 2019 PLC:
Hope Conquers ACEs

September 11, 2019
Children’s Bureau Updates

September 11, 2019
HOPE: Healthy Outcomes from Positive Experiences

September 11, 2019  Robert Sege, MD, PhD
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- In memory of Paula Duncan, MD who inspired this work
Science of the Positive

Cycle of Transformation

![Diagram of the Cycle of Transformation](image-url)
Experience Shapes Human Brain Development

**Spirit**
Unlimited human capacity

**Old Science**
Trauma effects brain development

**New Science**
Positive Experiences support health

**Action**
HOPE frames our work
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How does the brain work?
Neurons connect with each other

**Neuron**

**Connection (synapse)**
Microscopic view
fMRI: Brain Function now visible

Hand movement is controlled by the opposite side of the brain
fMRI: Brain Function now visible

After a stroke, the healthy side of the brain can be trained to take over
TAKE HOME MESSAGE:

BRAINS CAN HEAL!!
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Review - ACES Items

**Child**
1. Emotional abuse
2. Physical abuse
3. Sexual abuse
4. Emotional neglect
5. Physical neglect
6. Loss of a parent

**Household**
7. Domestic violence
8. Alcohol or drug abuse
9. Household mental illness or suicide attempt
10. Household member imprisoned

https://www.cdc.gov/violenceprevention/acestudy
Beyond ACEs: Community and Societal Factors lead to Toxic Stress

- Poverty
- Institutional racism
- Historical Trauma
- War and migration
- Neighborhood effects
Detrimental Health Effects of ACEs

- Alcoholism & alcohol abuse
- Chronic obstructive pulmonary disease (COPD)
- Depression
- Fetal death
- Health-related quality of life
- Illicit drug use
- Ischemic heart disease (IHD)
- Liver disease
- Risk for intimate partner violence
- Sexually transmitted diseases (STDs)
- Smoking
- Suicide attempts
- Unintended pregnancies
- Adolescent pregnancy
Summary: The Old Science of Toxic Stress

- Adverse Childhood Experiences (ACEs)
- Toxic Stress
- Poor Health Outcomes
Old Science: Understanding Risk

Current state

- Unmitigated exposure to childhood adversity is associated with child and adult health problems
- Beginning to screen for adversity

However:
Family Connections
Cultural Connection
ACEs Score is Incomplete

ACEs score of 4
At least 2 ACEs due to racism
No points for strong family
No points for community
What does her score mean?
ACEs are only part of the picture

- Many people with 4+ ACEs are OK
- Other experiences affect the brain
- Do positive experiences affect outcomes?
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We studied PCEs just like ACEs

ACEs
• 1998 study of employed people in the Pacific Northwest
• Patients answered questions about their childhood
• Correlated with mental and physical health

PCEs
• 2015 population study in Wisconsin
• Part of the BRFSS
• Asked about ACEs
• Asked about Positive Childhood experiences
• Correlated with mental health
ACEs are only part of the picture

- Many people with 4+ ACEs are OK
- Other experiences affect the brain
- Do positive experiences affect outcomes?

Adverse childhood experiences → Toxic stress → Poor health outcomes
Positive Childhood Experiences (PCEs) Protect Adult Mental Health

72% less adult depression or poor mental health
48% v. 12.6%, OR 0.28; 95% CI 0.21-0.39

Bethell, Jones, Gombojav Linkenbach and Sege. *Positive Childhood Experiences...* JAMA Pediatrics 2019
Positive Childhood Experiences Protect Adult Mental Health

50% less adult depression or poor mental health
25% v. 13%, OR 0.50; 95% CI 0.36-0.69

Bethell , Jones, Gombojav Linkenbach and Sege. Positive Childhood Experiences . . . JAMA Pediatrics 2019
Differences in reported adult depression or poor mental health were **similar in magnitude** regardless of the number of reported ACEs
Adults reporting more PCEs were more likely to report *always* receiving social and emotional support.

\[ \text{aOR 3.53; 95\% CI 2.60-4.80} \]

How do PCEs and ACEs interact?

• Can people have both positive and adverse childhood experiences?
• Can PCEs mitigate the effects of ACEs?
Recall of both Positive and Adverse Childhood Experiences

Positive Childhood Experiences Mitigate ACEs Effects

![Diagram showing the mitigation of depression/poor mental health with increasing Positive Childhood Experiences (PCEs) and the presence of ACEs.]

- **Depression / poor MH (%)**
  - No ACEs: 59.7, 53.3, 45.7, 12.2
  - 1 ACE: 20.7, 16, 13.4, 10.5

- **Groups:**
  - 0-2 PCEs
  - 3-5 PCEs
  - 6-7 PCEs

Summary:
PCEs protect adult mental health

Positive childhood experience mitigate the effects of ACEs and prevent toxic stress
Positive childhood experiences promote healing and recovery

Bethell, Jones, Gombojav Linkenbach and Sege. Positive Childhood Experiences... JAMA Pediatrics 2019
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Four Pillars of HOPE

- Relationship
- Environment
- Engagement
- Social Emotional Learning

Sege and Browne. Responding to ACEs with HOPE: Health Outcomes from Positive Experiences. Academic Pediatrics 2017; 17:S79-S85
The four pillars of HOPE

1. **Being** in nurturing supportive relationships

Sege and Browne. Responding to ACEs with HOPE: Health Outcomes from Positive Experiences. Academic Pediatrics 2017; 17:S79-S85
Pillars of HOPE – BEING in supportive relationships

**BEING in supportive relationships**

**Infants** learn about love – parents create memories of supportive relationships

**Adolescents** learn about friendship, group dynamics, and love / romance / sex

**Adults** who care about teens can make a difference

- **Resources:**
  - Healthychildren.org
  - https://www.cdc.gov/parents/essentials/
The four pillars of HOPE

1. **Being** in nurturing supportive relationships
2. **Living, playing, and learning** in safe, stable, protective and equitable environments

- Parks, rec centers, and other safe spaces for play
- Equitable support for high quality education
- Positive school environments

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• **Developing** social and emotional competencies
HOPE in context

**Individual** - HOPE

**Family** - The Strengthening Families Approach

**Community** - Education, childcare, home visiting

**Norms and Policies** - Essentials for Childhood, paid family leave,
Bringing HOPE into our work

1. Intake / assessment
2. Creating positive experiences
3. Bringing out the positive
4. Evaluation
Reflections of HOPE – Healthy Outcomes from Positive Experiences
HOPE Conquers ACES

*Explore the interplay of Adverse Childhood Experiences, human development and the power of positive relationships.*
HOPE =

1 5 2

4 3

Health Outcomes from Positive Experiences
HOPE CONQUERS ACES WHEN PROTECTIVE FACTORS OUTWEIGH ADVERSE EXPERIENCES
Positive experiences can help moderate the effects of ACES
Positive Childhood Experiences in HOPE Framework

Being in nurturing, supportive relationships*

* Protective Factors: Parental resilience and social connections, knowledge of parenting and child development
Positive Childhood Experiences in HOPE Framework

Living, developing, playing, and learning in safe, stable, protective, and equitable environments*

*Protective factor: Concrete supports
Positive Childhood Experiences in HOPE Framework

Having opportunities for constructive social engagement and to develop a sense of connectedness*

*Protective Factor: Social connections
Positive Childhood Experiences in HOPE Framework

Learning social and emotional competencies

*Protective Factor: Social and emotional competence
Positive experiences that greatly impact the outcomes for individuals with 4+ ACES

• Feeling that your family stood by you in hard times
• Having someone to talk with about difficult feelings
Factors That Moderate the Effects of More Than 3 ACEs on Adult Health

Adults with >3 ACEs AND selected positive childhood experiences had lower rates of poor/fair health. (∗=p<0.05)

- **Family stood by me**
  - Family did not stand by me
  - 174% vs 27.2%

- **Felt supported by friends**
  - Did not feel supported by friends
  - 18.4% vs 30.1%

- **Sense of belonging at high school**
  - Did not feel a sense of belonging at high school
  - 19.6% vs 25.2%

- **Enjoyed community traditions**
  - Did not enjoy community traditions
  - 17.7% vs 25.1%
Additional Factors that Moderate ACES

• Excellent physical and mental health of the mother
• Protective home environments
• Having neighborhoods that are protective and safe

Family norms related to sharing meals, spending time together and parents participating in child’s activities, limiting television and household exposure to smoke, etc.
Share H.O.P.E.

Be The Change

• Ask students if they feel nurtured and supported at school
• Ask students if they feel connected
• Ask students if they feel like they belong
• Be someone to talk with about difficult feelings; ask for help if you don’t know how

Carry the Conversation

• Evaluate your school through this lens: Safe /Stable /Protective/ Equitable
• Capitalize on existing avenues for constructive social engagement
• Create expectations for each other
• Offer professional development
• Share results