

# Lobby

Please tell us about yourself!

I primarily work in:

- Substance Misuse Prevention
- Substance Misuse Treatment
- Public Health
- Law Enforcement
- Medical Setting
- School Setting
- Communications and Marketing
- Other



Northwest (HHS Region 10)

PTTC

Prevention Technology Transfer Center Network  
Funded by Substance Abuse and Mental Health Services Administration



# Exploring HOPE:

Healthy Outcomes from Positive Experiences

*Robert Sege, MD, PHD, Dina Burstein, MD, MPH, & Jeffrey Linkenbach, EdD.*

April 29, 2020



# Disclaimer

The views expressed in this webinar do not necessarily represent the views, policies, and positions of the Substance Abuse and Mental Health Services Administration or the U.S. Department of Health and Human Services.

This webinar is being recorded and archived, and will be available for viewing after the webinar. Please contact the webinar facilitator if you have any concerns or questions.



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UNIVERSITY of WASHINGTON



Prevention Science  
Graduate Program

WASHINGTON STATE UNIVERSITY

**CASAT**  
Center for the Application of  
Substance Abuse Technologies  
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## **Upcoming Webinars – Save the Date!**

Why Use Evidence and Where to Find it: Blueprints for Healthy Youth

- May 27, 2020; 2:30 – 4:00 PM Pacific

Child Trends: Research to Improve Children's Lives During COVID-19

- June 11, 2020; 11:00 AM – 12:30 PM Pacific

# Presenters



**Robert Sege, MD, PhD** is a pediatrician at the Floating Hospital for Children at Tufts Medical Center and a Professor of Pediatrics and Medicine at Tufts University School of Medicine, where he directs the new Center for Community-engaged Medicine. His extensive speaking and publication list include contributions to the prevention and treatment of child maltreatment and youth violence.



**Dina Burstein, MD, MPH, FAAP** is the Healthy Outcomes for Positive Experiences (HOPE) Project Director at the Center for Community-Engaged Medicine. Dr. Burstein is an experienced physician, healthcare project designer, and leader with over twenty years of success in scientific research, grant writing, analysis, training, and clinical practice.



**Jeffrey Linkenbach, EdD, MA** is the Founding Director & Research Scientist at The Montana Institute, who has developed national award-winning science-based programs to change norms. He is one of the co-developers of HOPE – Healthy Outcomes from Positive Experiences and is recognized for his pioneering development of the Science of the Positive Framework and the Positive Community Norms Approach.



## HOPE: Healthy Outcomes from Positive Experiences

April 21, 2020 Robert Sege, MD, PhD, Jeff Linkenbach, EdD, Dina Burstein, MD, MPH

proud member of **wellforce**

**Tufts** Medical Center

Floating Hospital  
for Children  
at **Tufts** Medical Center



science:positive

the  
**MONTANA**  
INSTITUTE



## Our purpose for today

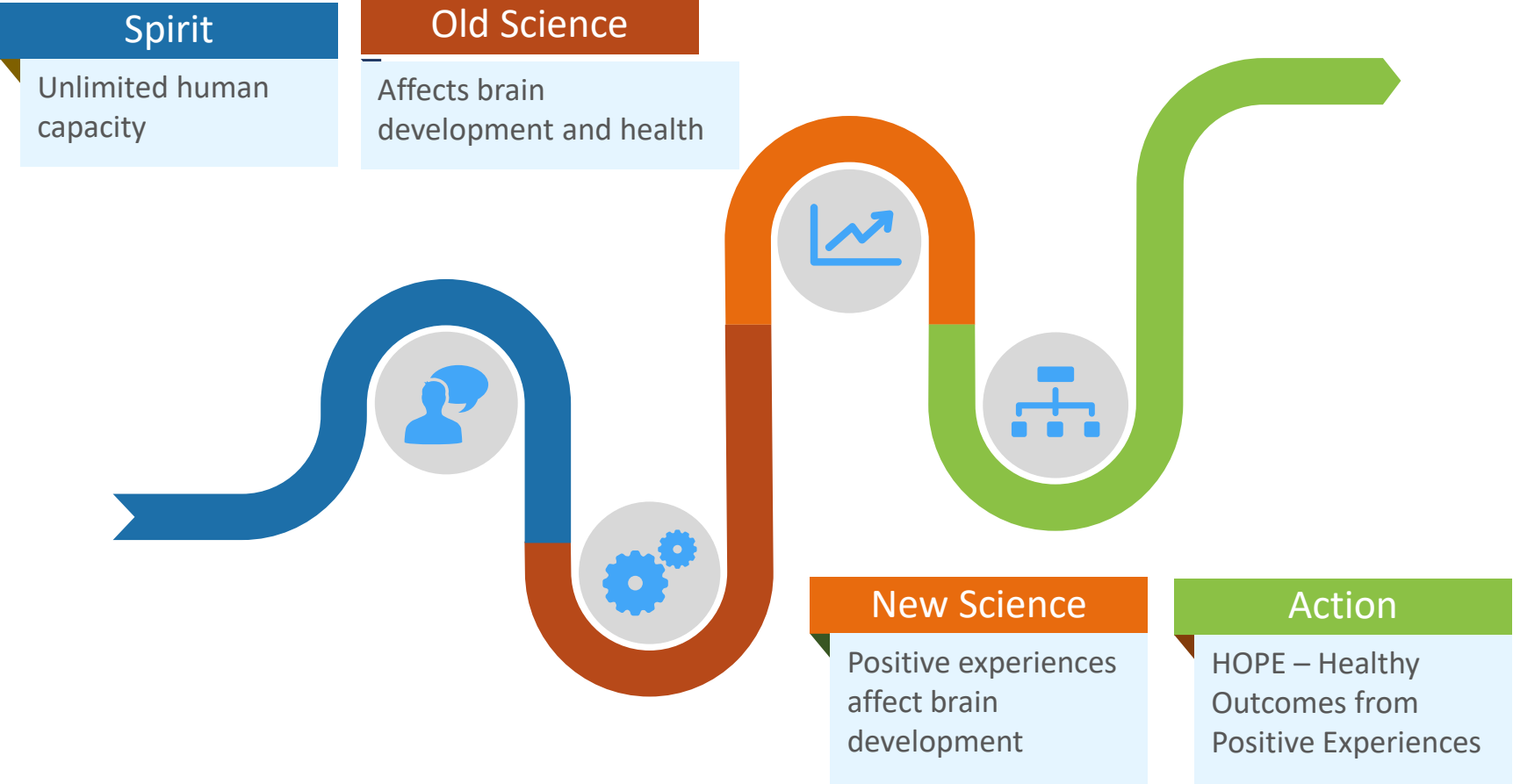
- **Experience** the energy of the Science of the Positive and HOPE
- **Understand** how HOPE builds on current practice
- **Apply** putting HOPE into practice
- **Reflect** on integrating today's teaching



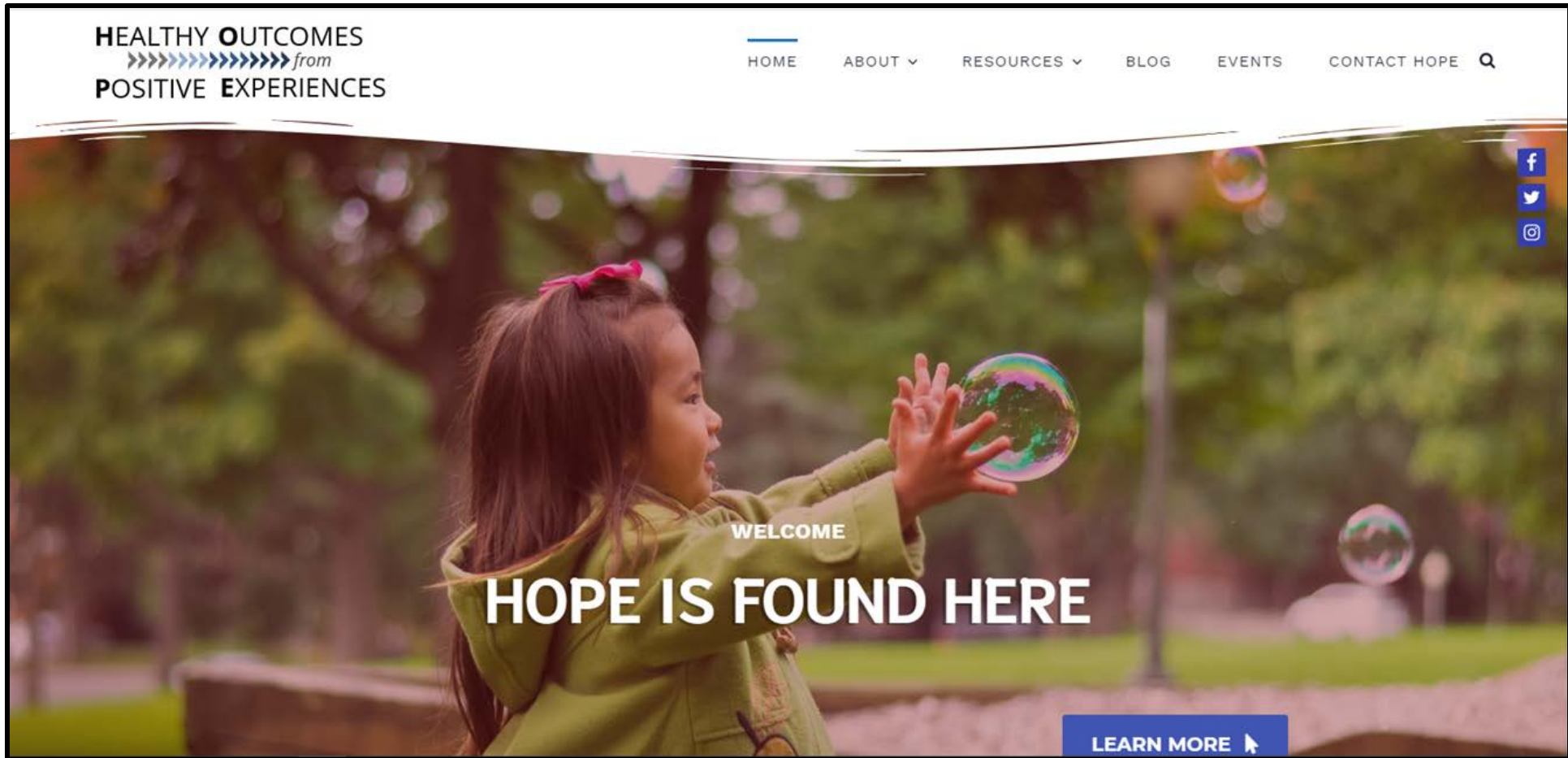
**Hope is the thing with feathers that  
perches in the soul and sings the tune  
without words and never stops at all.**

Emily Dickinson

# Experience Shapes Human Brain Development



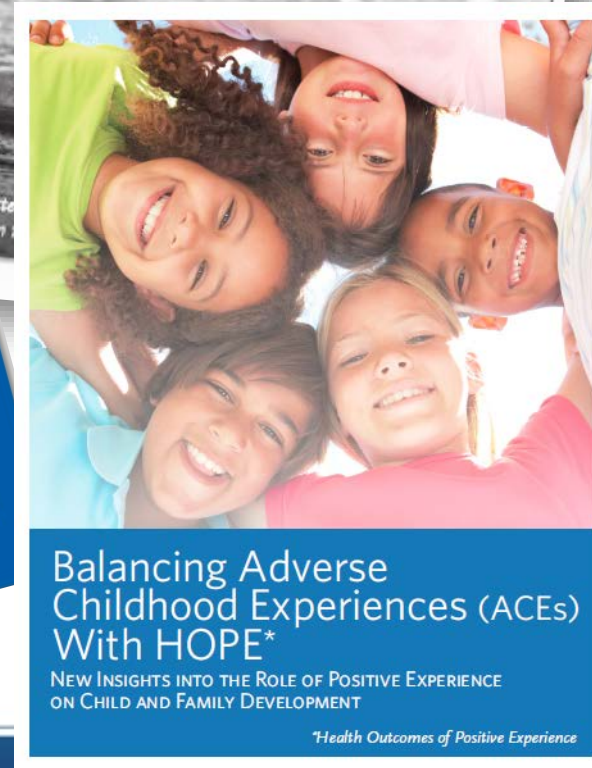
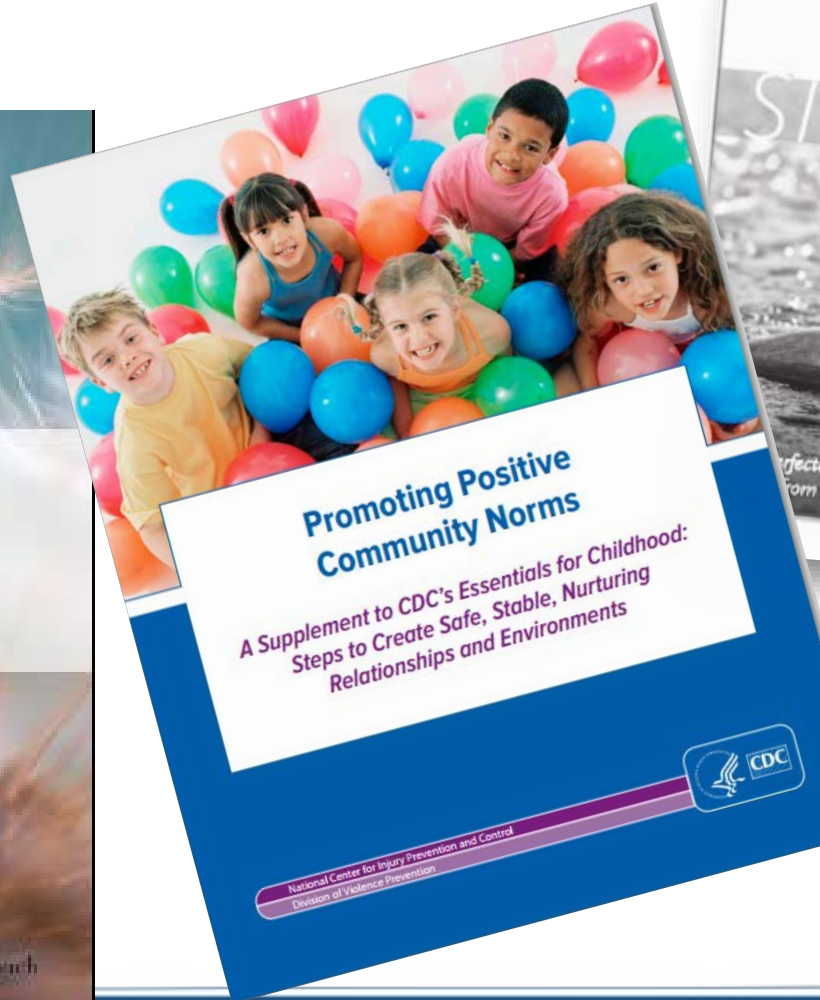
Visit the HOPE website: <https://positiveexperience.org/>



HEALTHY OUTCOMES  
from  
POSITIVE EXPERIENCES



[www.MontanaInstitute.com](http://www.MontanaInstitute.com)





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**WEDNESDAY-THURSDAY, SEPTEMBER 16 & 17, 2020 IN BIG SKY, MONTANA**



The  
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Choose from FOUR Pre-institute tracks!



1. Positive Community Norms Intensive Seminar
2. Healthy Outcomes from Positive Experiences (H.O.P.E.) Seminar
3. Positive Community Norms Message Development and Social Media Lab
4. Crafting Your Transformational Leadership Narrative Workshop

**TUESDAY** SEPTEMBER 15, 2020 IN BIG SKY, MONTANA



**WHY  
HOPE?**





# HOPE

## Verb...

To desire with expectation of obtainment or fulfillment;

To cherish a desire with anticipation : to want something to happen or be true



# HOPE

## Noun...

A desire accompanied by expectation of or belief in fulfillment or success;

Someone or something on which hopes are centered



Acronym

**H.O.P.E.**

H ealthy Outcomes  
from Positive  
Experiences







## Core Assumption of The Science of the Positive:

The **POSITIVE**  
exists, it is real,  
and is worth  
growing

Linkenbach, J. (2007, 2018). The Science of the Positive: The Seven Core Principles Workbook: A Publication of The Montana Institute, LLC.





# The solutions are in community.

Linkenbach, J. (2007, 2009-2011, 2015-2016). The Science of the Positive: The Seven Core Principles Workbook.

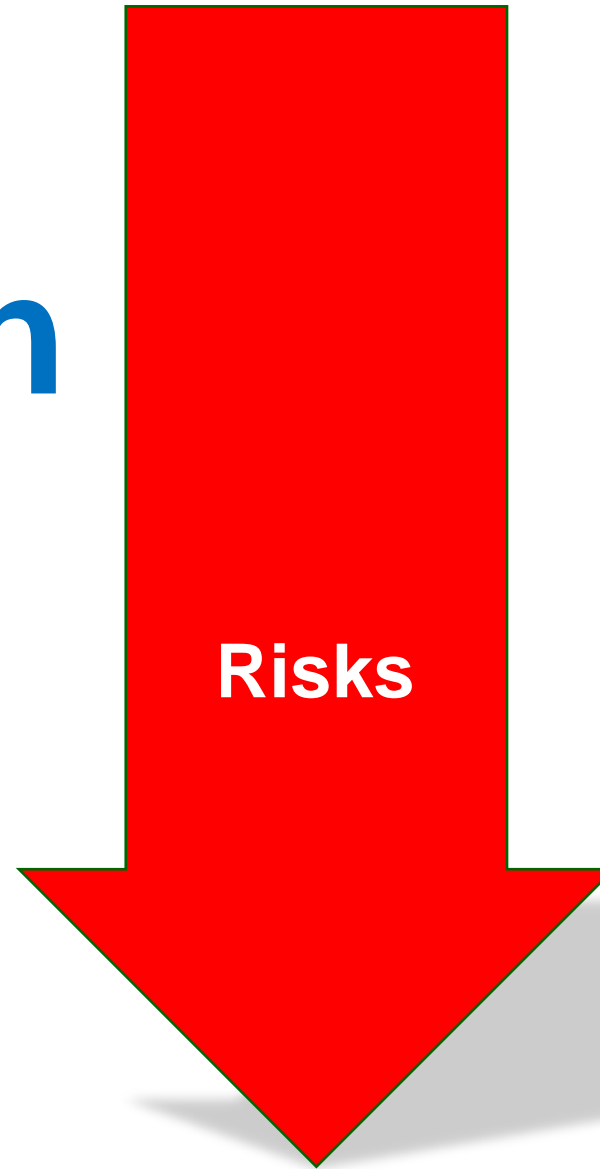




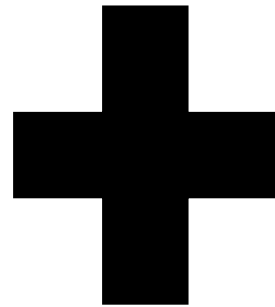
**HOPE**  
**is Centered on**  
**The POSITIVE**



# Public Health 101

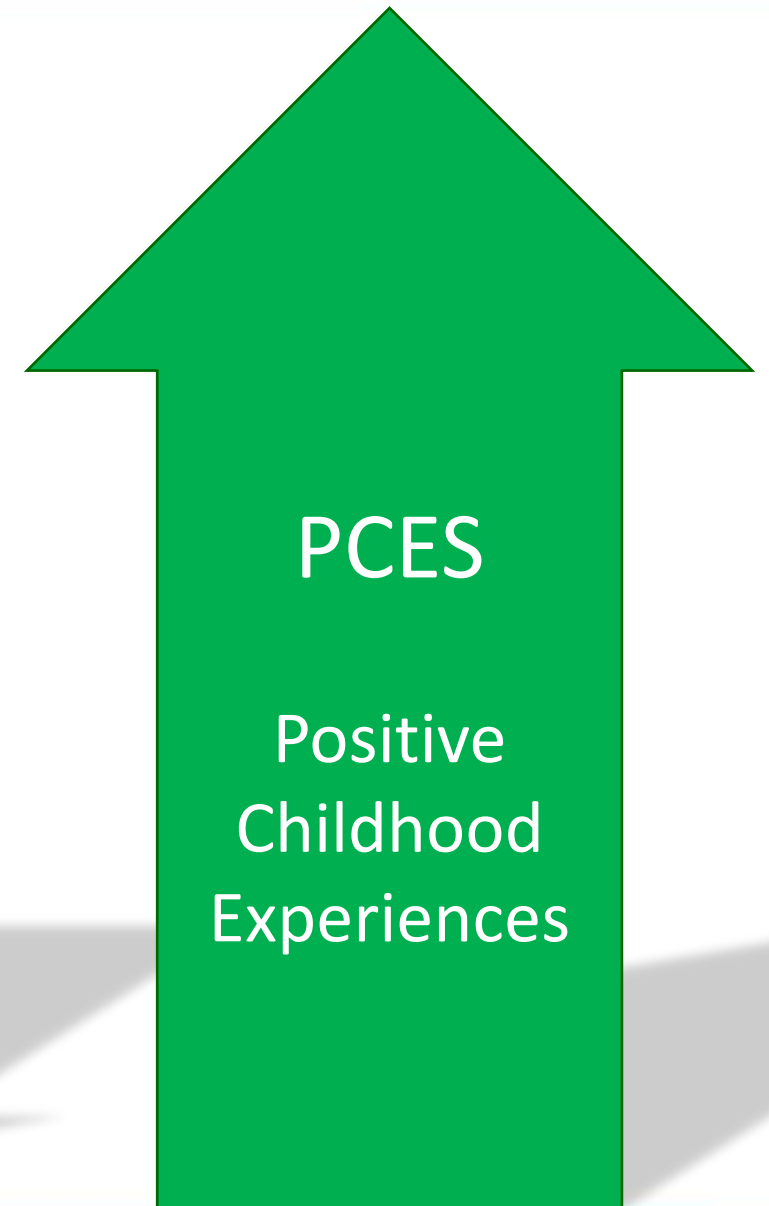


# Concern + Hope





# Spoiler Alert!



# What is the Science of the Positive?



# The Science of the Positive Framework



# What is the Science of the Positive?

The Science of the Positive is the study of how positive factors impact culture and experience.

The focus is on how to measure and grow the positive, and is based upon the core assumption that the positive is real and is worth growing – in ourselves, our families, our workplaces and our communities.



science:positive



# Science of the Positive Framework



THE SCIENCE OF THE POSITIVE  
CYCLE OF TRANSFORMATION



Linkenbach, 2015

# Guiding Questions

## Spirit

What will be the spirit of our work?

## Science

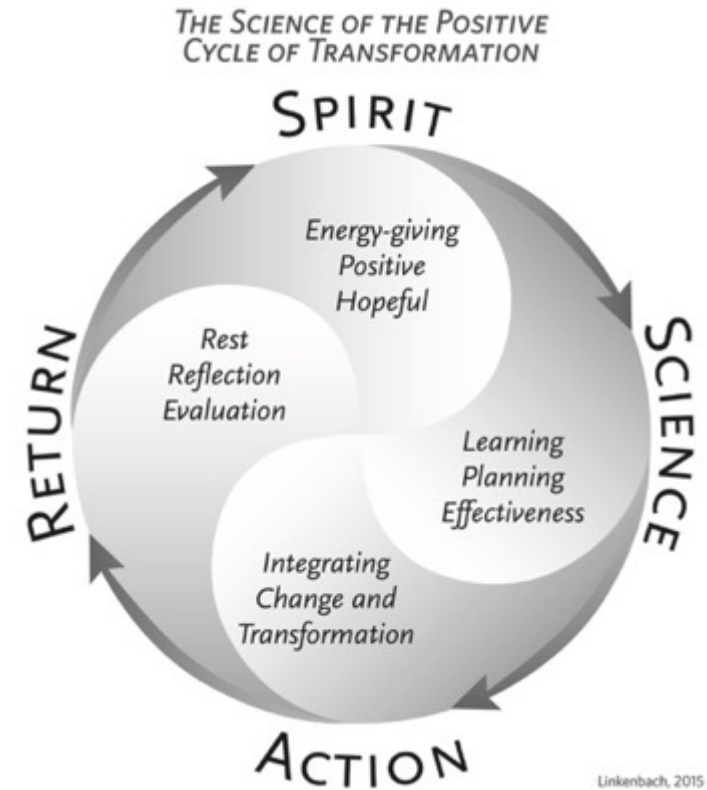
How will we approach the science?

## Action

What will be our actions?

## Return

What returns will we seek?

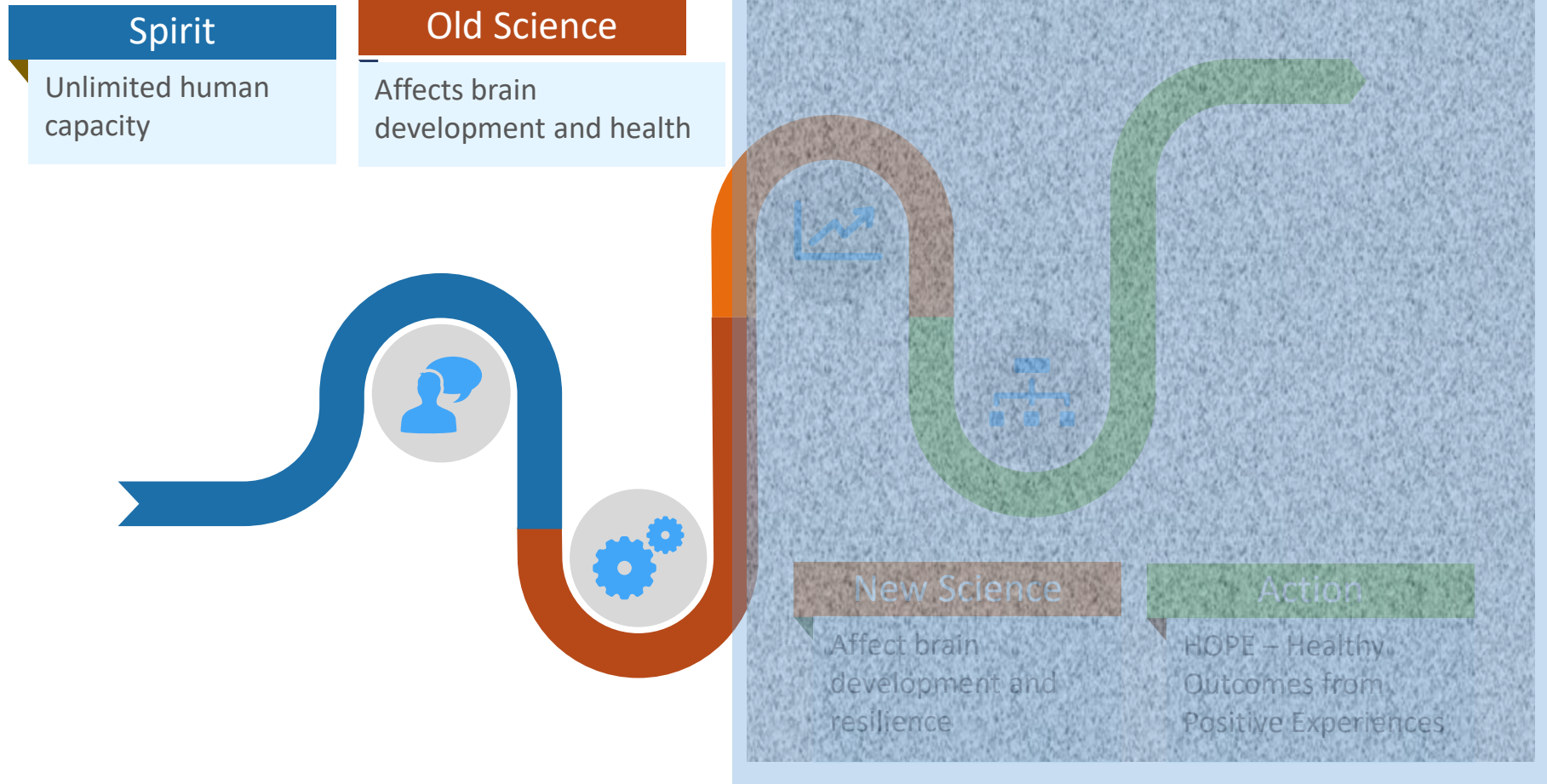






H O P E

# Experience Shapes Human Brain Development



# Adverse Childhood Experiences and Other Risk Factors for Toxic Stress

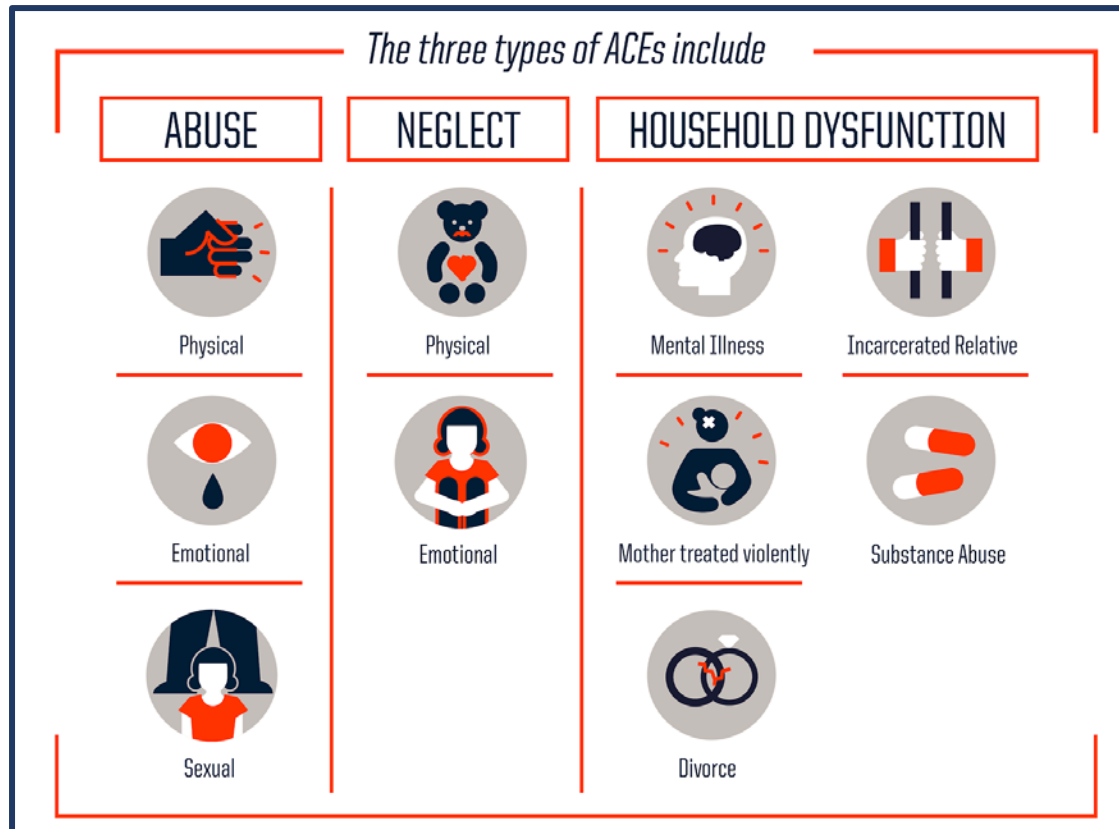


Image courtesy of RWJF



## ACEs cause chronic disease: Population attributable fractions by ACEs score

Outcome	1 ACE	2-3 ACE	4 or more	Overall
CHD	2.6	3.4	6.6	12.7
Asthma	4.2	8.1	11.7	24.0
Depression	6.4	14.7	23.0	44.1
Heavy Drinker	5.6	9.0	9.3	23.9
Education < HS			4.6	4.6

Merrick MT, Ford DC, Ports KA, et al. *Vital Signs*: Estimated Proportion of Adult Health Problems Attributable to Adverse Childhood Experiences and Implications for Prevention — 25 States, 2015–2017. MMWR Morb Mortal Wkly Rep. ePub: 5 November 2019

# Adverse Childhood Experiences and Other Risk Factors for Toxic Stress

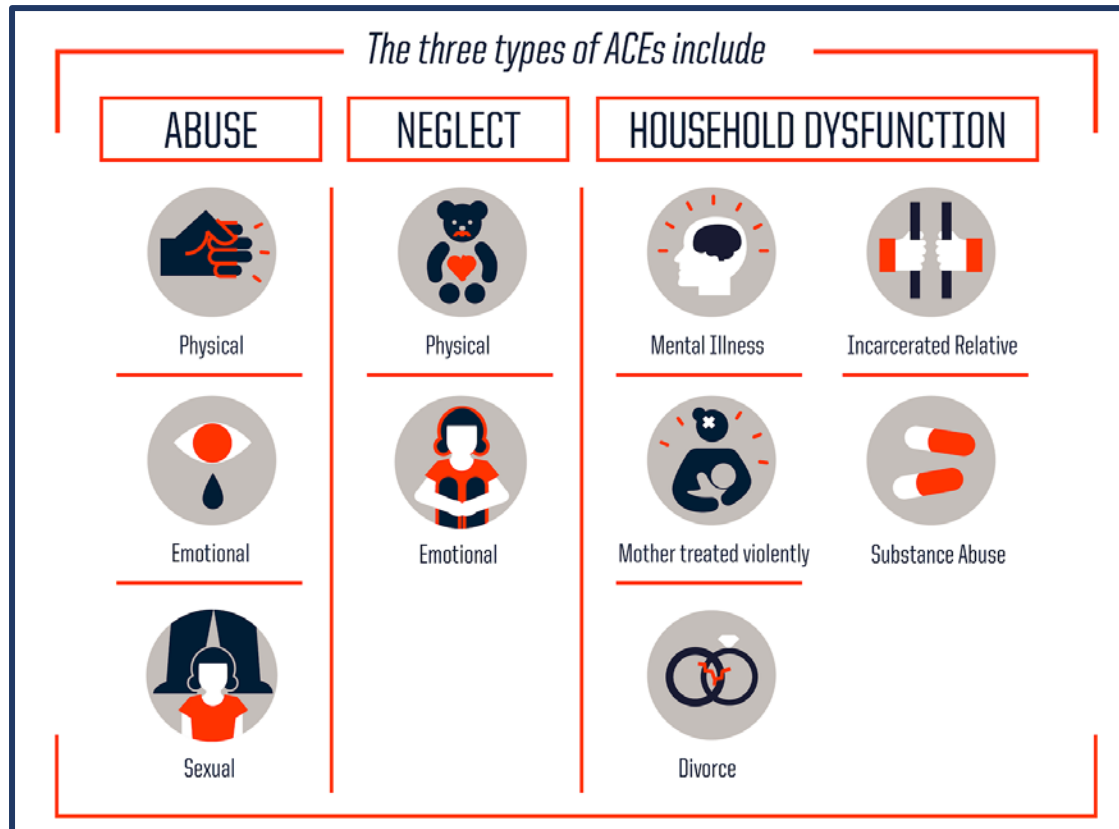


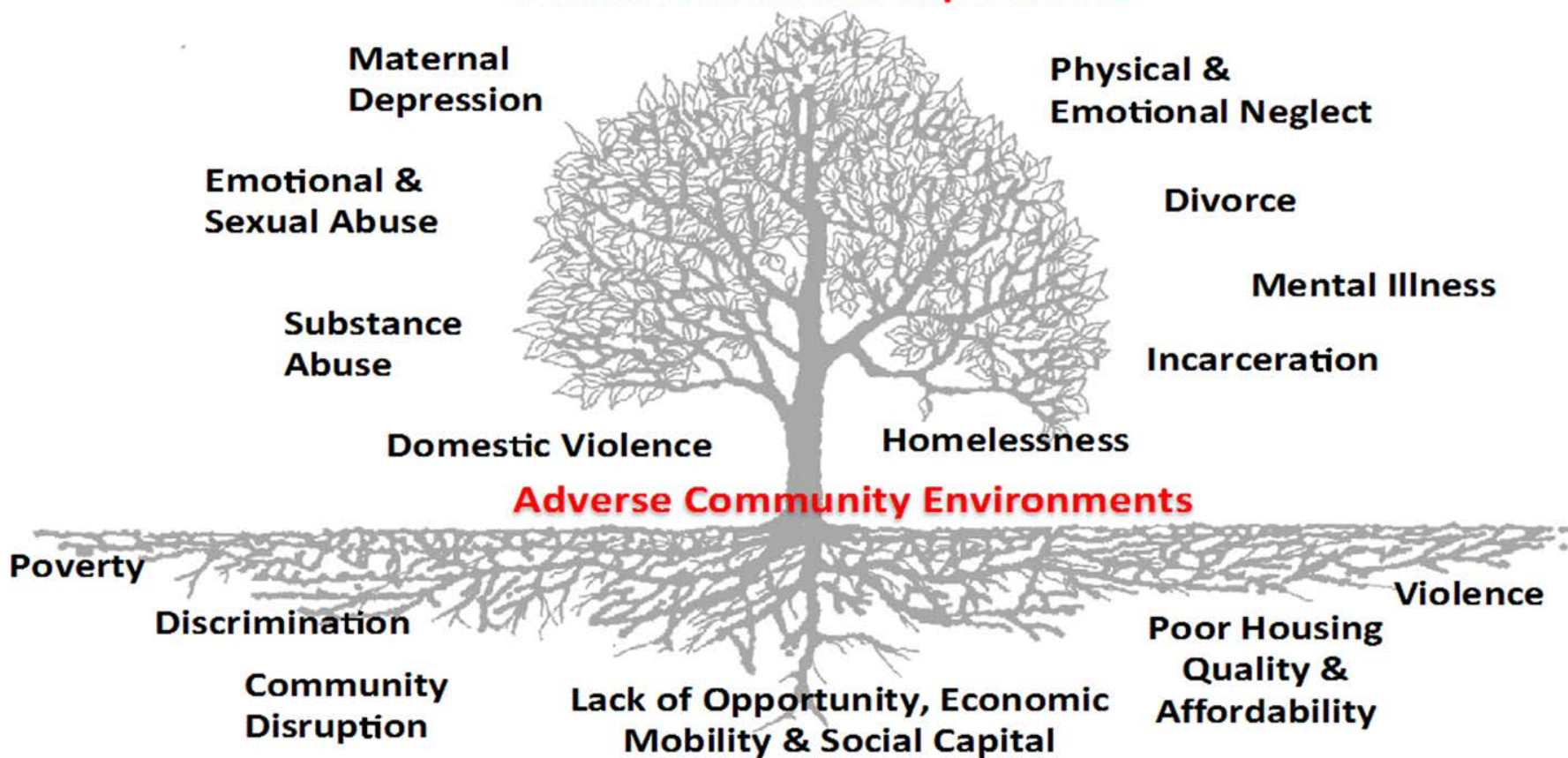
Image courtesy of RWJF

Additional community and societal factors that contribute to toxic stress:

- Poverty
- Institutional racism
- Historical Trauma
- War and migration
- Neighborhood effects

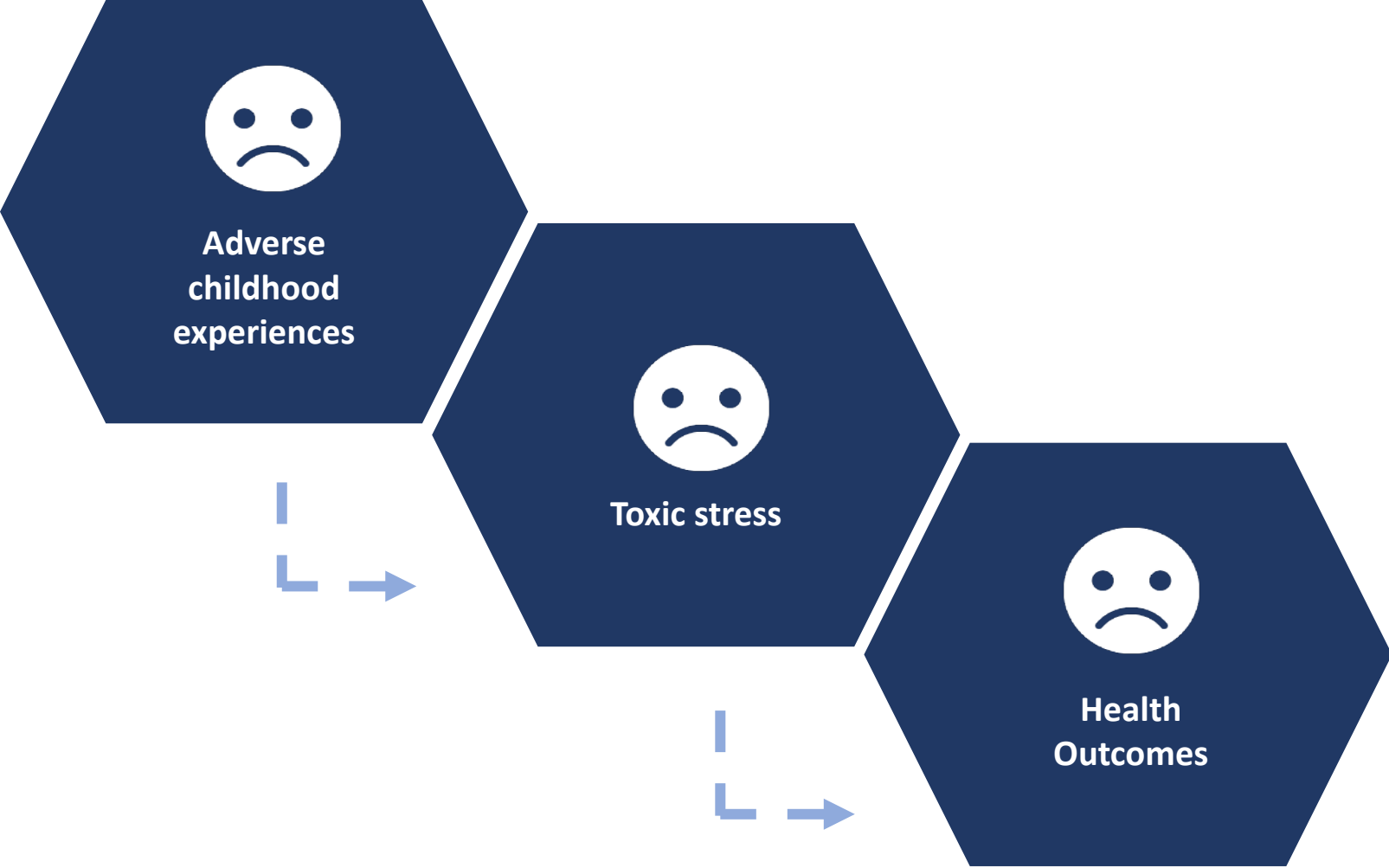
## The Pair of ACEs

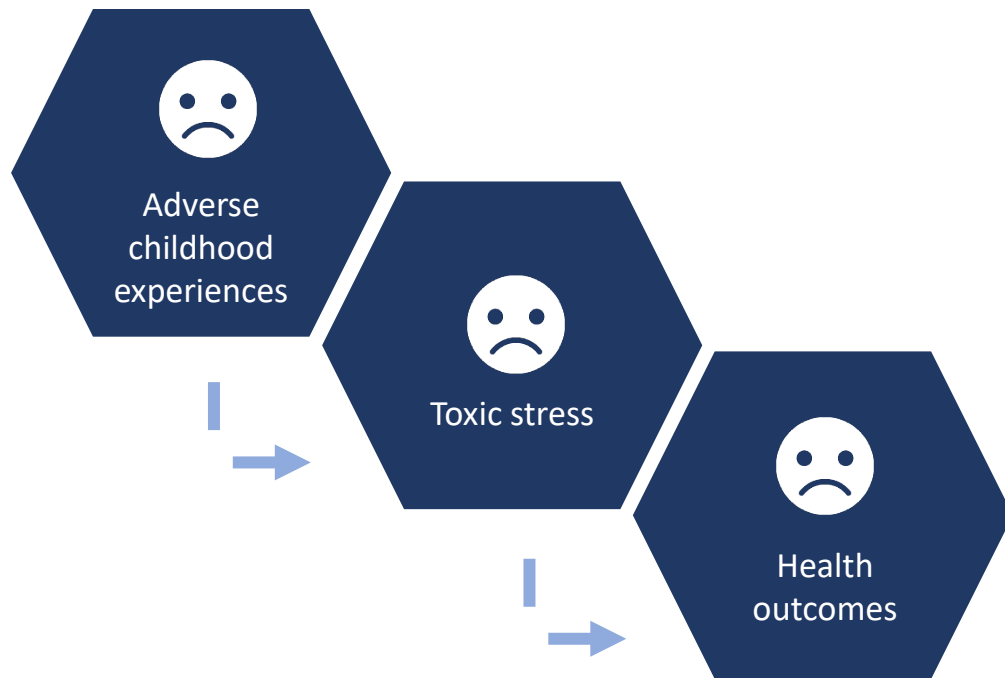
### Adverse Childhood Experiences



Ellis, W., Dietz, W. (2017) A New Framework for Addressing Adverse Childhood and Community Experiences: The Building Community Resilience (BCR) Model. *Academic Pediatrics*. 17 (2017) pp. S86-S93. DOI information: 10.1016/j.acap.2016.12.011







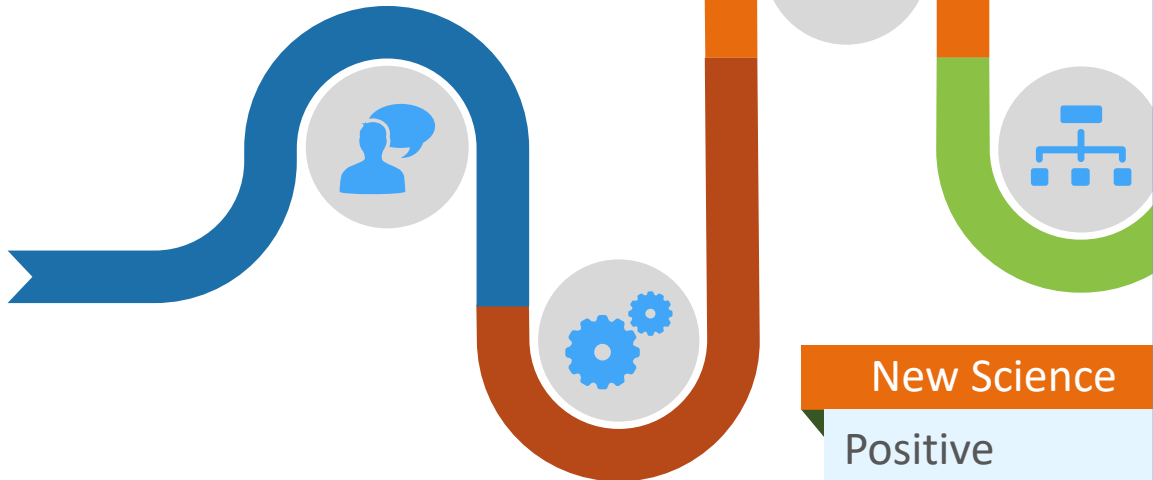
## ACEs are only part of the picture

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

# Experience Shapes Human Brain Development

**Spirit**  
Unlimited human capacity

**Old Science**  
Affects brain development and health



**New Science**  
Positive experiences affect brain development

**Action**  
HOPE – Healthy Outcomes from Positive Experiences



## 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

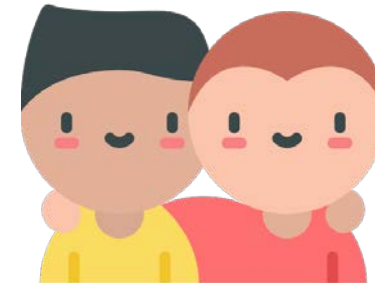
**NEW**

- 2015 population study in Wisconsin
- Part of the BRFSS
- Asked about ACEs
- Asked about Positive Childhood experiences
- Correlated with mental health

# Cumulative Positive Childhood Experiences Score

Positive Childhood Experiences (PCEs) questions asked how often respondent:

1. Felt able to talk to their family about feelings
2. Felt their family stood by them during difficult times
3. Enjoyed participating in community traditions
4. Felt a sense of belonging in high school
5. Felt supported by friends
6. Had at least two non-parent adults who took genuine interest in them
7. Felt safe and protected by an adult in their home



- Internal consistency reliability: 0.77
- Principal components factor analysis: single factor with an Eigenvalue > 1 (2.95).
- Factor loadings ranged from 0.57 (“felt safe/home”) to 0.72 (“family stood by/difficult times”)

JAMA Pediatrics | [Original Investigation](#)

# Positive Childhood Experiences and Adult Mental and Relational Health in a Statewide Sample

## Associations Across Adverse Childhood Experiences Levels

Christina Bethell, PhD, MBA, MPH; Jennifer Jones, MSW; Narangerel Gombojav, MD, PhD; Jeff Linkenbach, EdD; Robert Sege, MD, PhD

[+ Supplemental content](#)

**IMPORTANCE** Associations between adverse childhood experiences (ACEs) and risks for adult depression, poor mental health, and insufficient social and emotional support have been documented. Less is known about how positive childhood experiences (PCEs) co-occur with and may modulate the effect of ACEs on adult mental and relational health.

**OBJECTIVE** To evaluate associations between adult-reported PCEs and (1) adult depression and/or poor mental health (D/PMH) and (2) adult-reported social and emotional support (ARSES) across ACEs exposure levels.

**DESIGN, SETTING, AND PARTICIPANTS** Data were from the cross-sectional 2015 Wisconsin Behavioral Risk Factor Survey, a random digit-dial telephone survey of noninstitutionalized Wisconsin adults 18 years and older (n = 6188). Data were weighted to be representative of the entire population of Wisconsin adults in 2015. Data were analyzed between September 2016 and January 2019.

**MAIN RESULTS AND MEASURES** The definition of D/PMH includes adults with a depression

Bethell C, Jones J, Gombojav N, Linkenbach J, Sege R. Positive Childhood Experiences and Adult Mental and Relational Health in a Statewide Sample: Associations Across Adverse Childhood Experiences Levels. JAMA Pediatr. 2019:e193007.

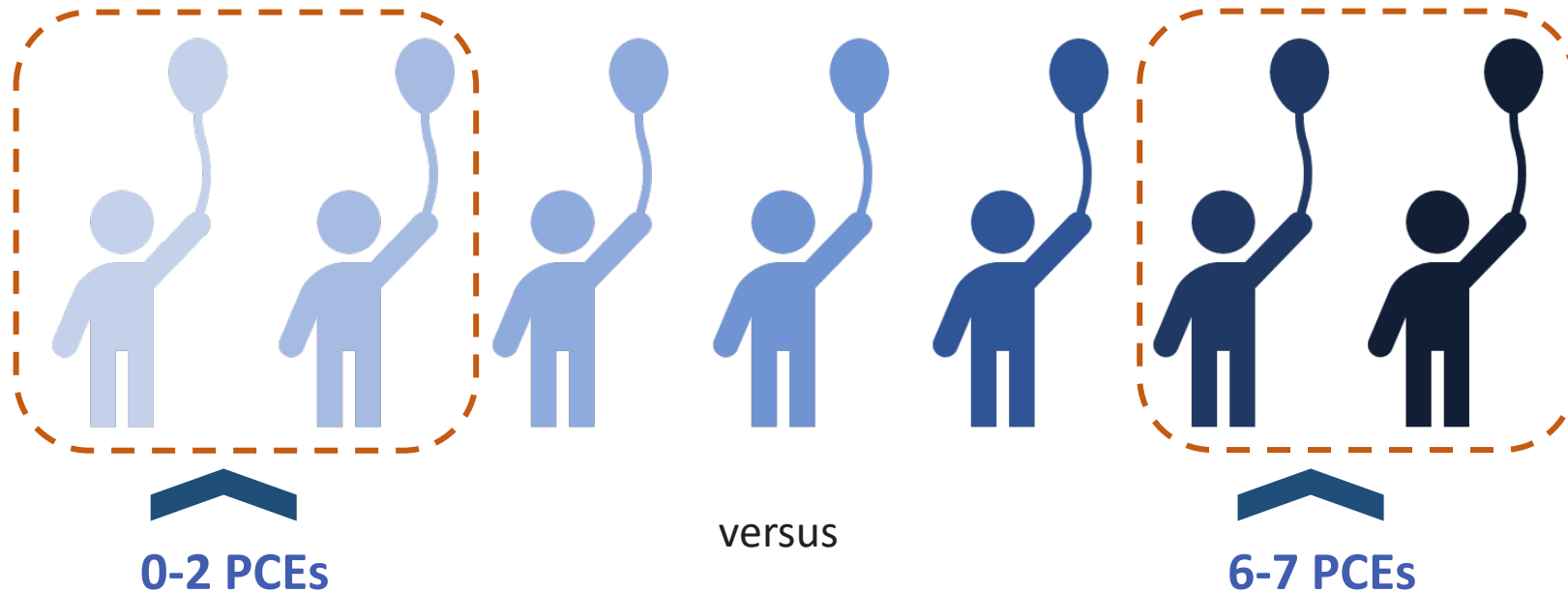


# Positive Childhood Experiences (PCEs) Protect Adult Mental Health



**6-7 vs. 0-2 PCEs:** Adults reporting 6-7 PCEs have **72% lower odds** of having depression or poor mental health compared to those reporting 0-2 PCEs.

48% v. 12.6%, OR 0.28; 95% CI 0.21-0.39. 3.8x higher rate for 0-2 vs. 6-7 PCEs.



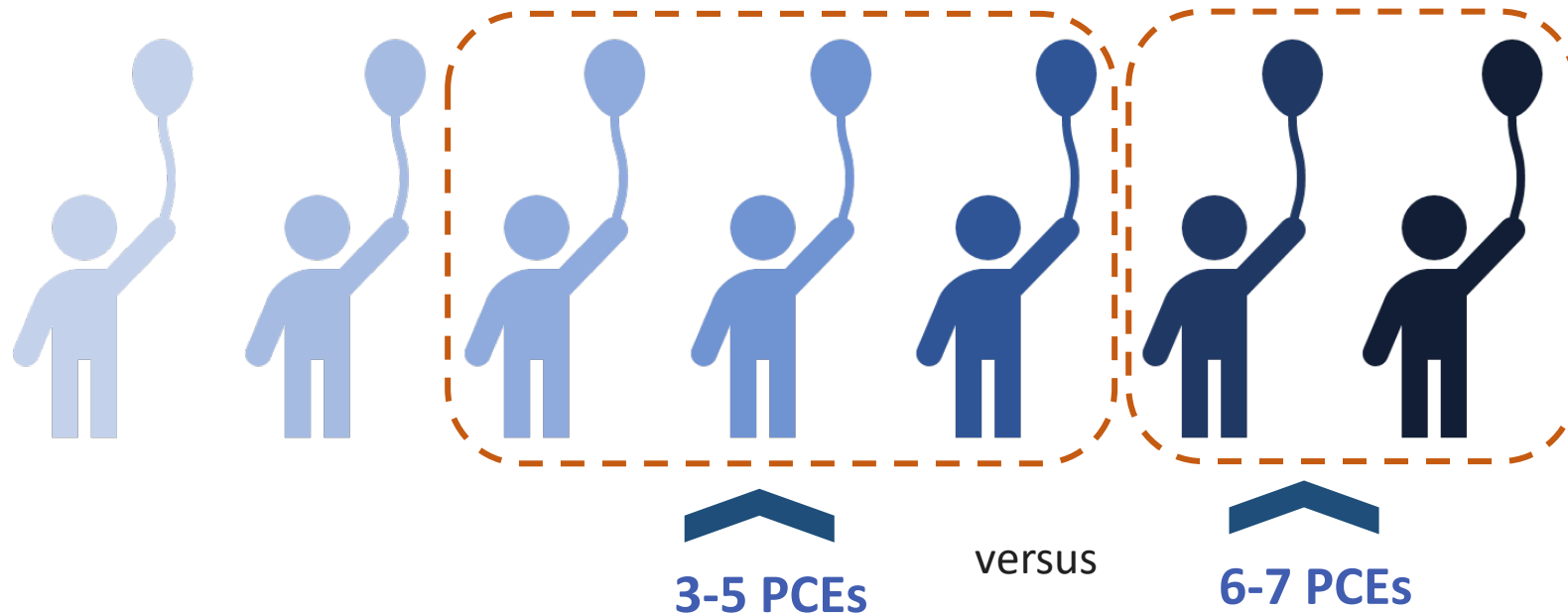
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**HEALTHY OUTCOMES**  
from  
**POSITIVE EXPERIENCES**

# Positive Childhood Experiences (PCEs) Protect Adult Mental Health



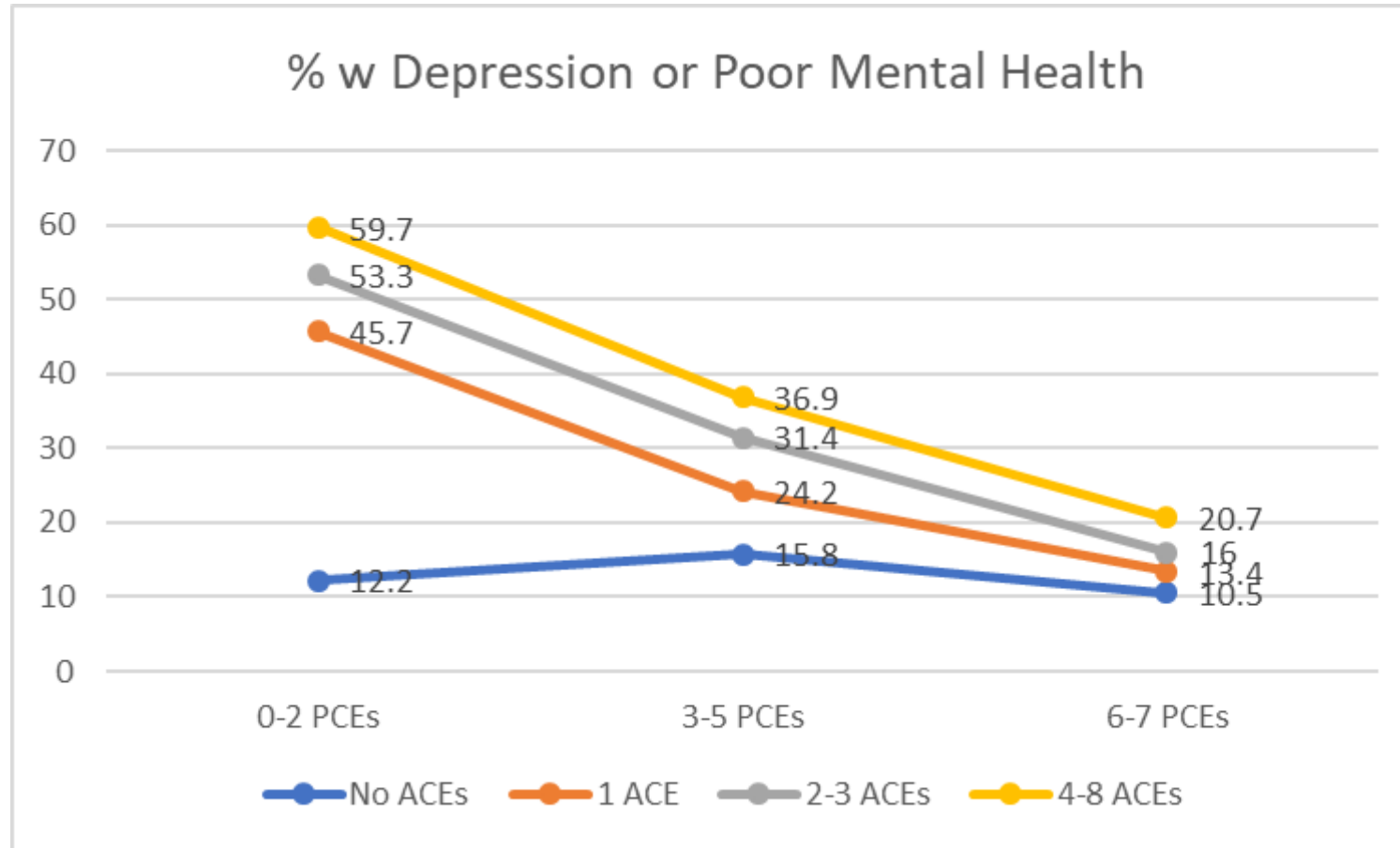
**6-7 vs 3-5 PCEs:** Adults with 6-7 PCEs have **50% lower odds of** adult depression or poor mental health compared to those with 3-5 PCEs. 25% v. 12.6%, OR 0.50; 95% CI 0.36-0.69. 1.98x higher rate for 3-5 vs. 6-7 PCEs.



Bethell C, Jones J, Gombojav N, Linkenbach J, Sege R. Positive Childhood Experiences and Adult Mental and Relational Health in a Statewide Sample: Associations Across Adverse Childhood Experiences Levels. JAMA Pediatr. 2019:e193007.

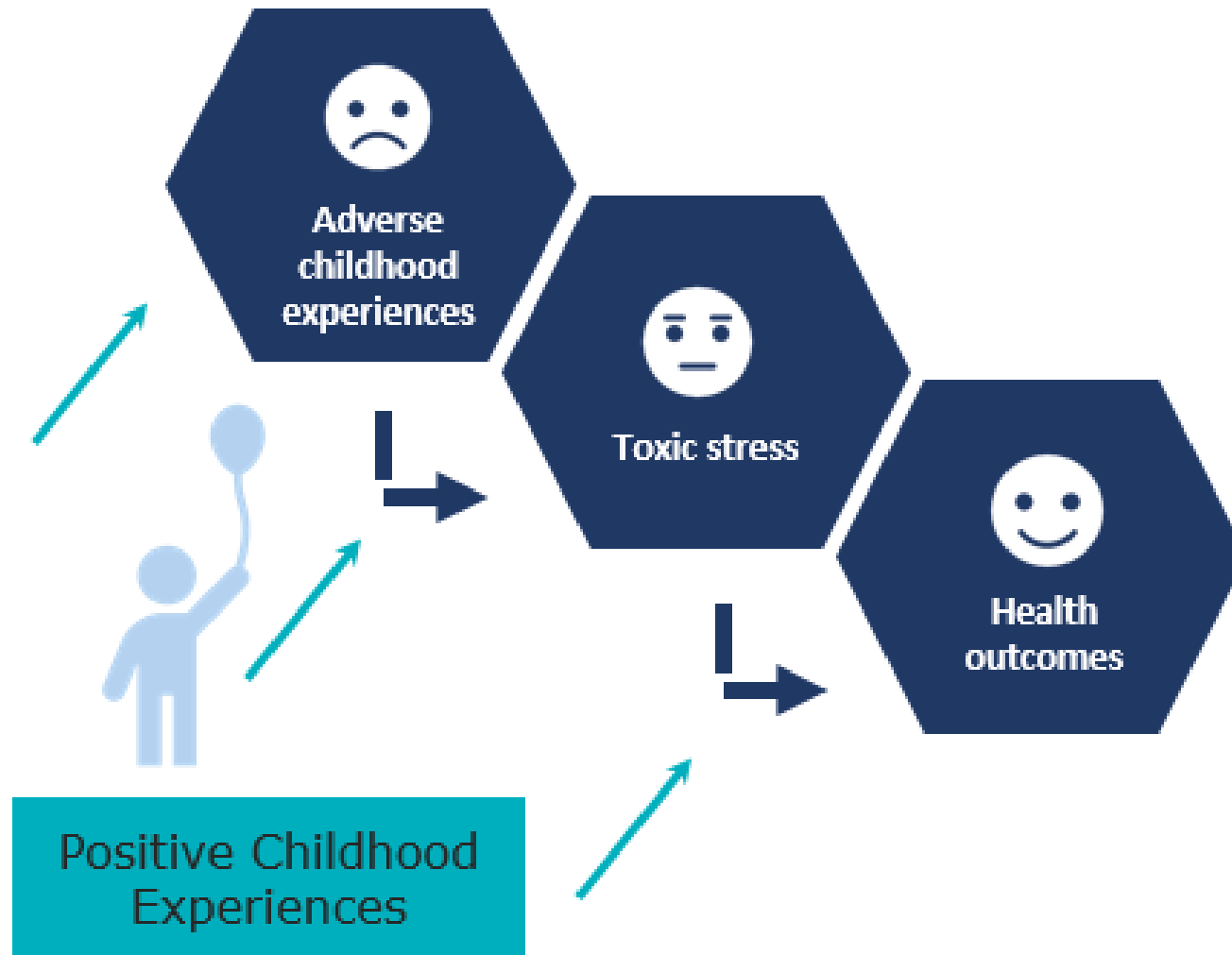
**HEALTHY OUTCOMES**  
from  
**POSITIVE EXPERIENCES**

## Positive Childhood Experiences Mitigate ACEs Effects



Bethell C, Jones J, Gombojav N, Linkenbach J, Sege R. Positive Childhood Experiences and Adult Mental and Relational Health in a Statewide Sample: Associations Across Adverse Childhood Experiences Levels. JAMA Pediatr. 2019:e193007.





## PCEs

- Prevent ACEs
- Reduce toxic stress
- Promote healing

# Biological mechanism of action

Toxic stress model built on observed changes in brain architecture from adversity

Growing evidence of broader brain plasticity

Stroke recovery

Brain changes observed with positive experiences

Post-traumatic brain growth

Role of oligodendrocytes in recovery



# Brain changes with positive experiences

## Meditation

- ⑩ Intense meditation training v attention control (relaxation).
- ⑩ Meditation participants :
  - ⑩ ^Cognitive and Affective Mindfulness Scale (CAMS) and
  - ⑩ ^Resilience Quotient Test (RQT)\*
  - ⑩ ^ **increased resting state functional connectivity measured by fMRI**

*\*Kwak et al., (2019) The Immediate and Sustained Positive Effects of Meditation on Resilience Are Mediated by Changes in the Resting Brain. Front. Hum. Neurosci. 13:101.*

## Learning to Read

- ⑩ Pre-post evaluation of illiterate adults who learned to read
- ⑩ Learning to Read Changes the Cortical Networks for Vision and Language \*\*, \*\*\*

*\*\* Thiebaut de Schotten et al., (2014). Cerebral Cortex. 24:989-995. and \*\*\* T Dehaene, et al SCIENCE DEC 2010 : 1359-1364*



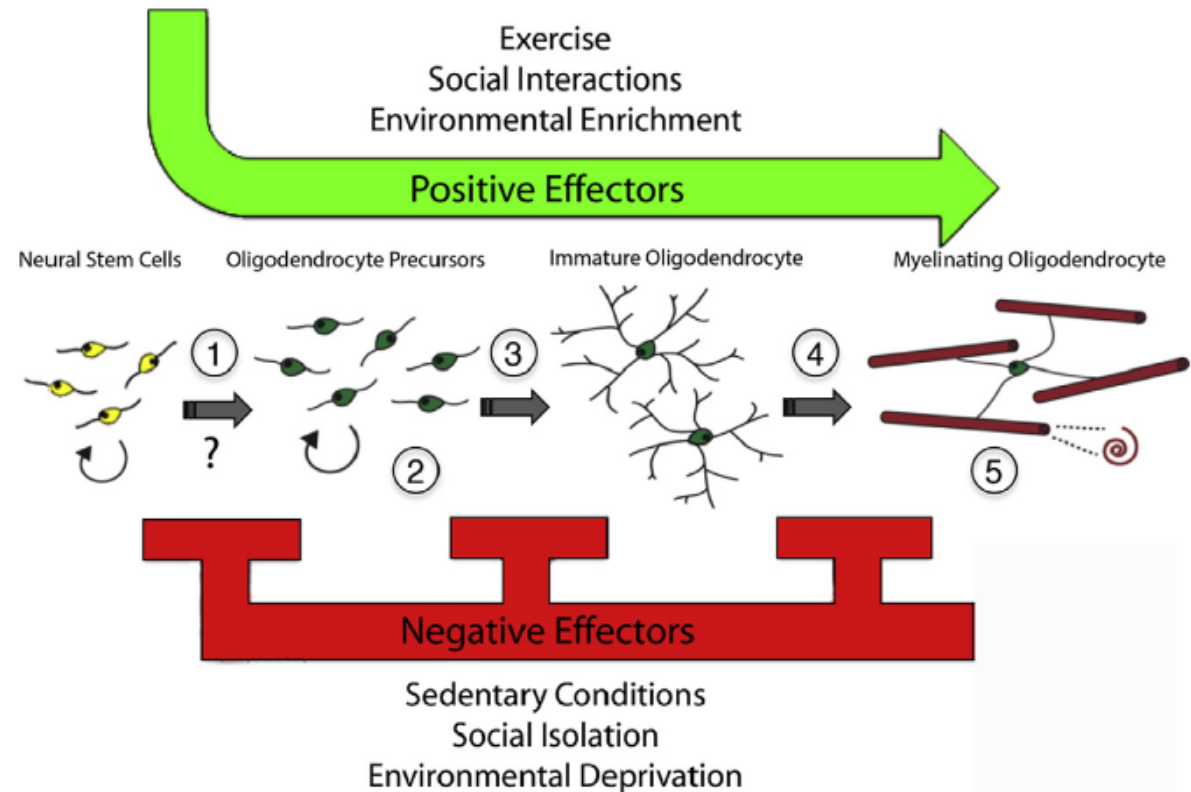
# Oligodendrocytes build brain super highways

Experiences that **promote** oligodendrocyte development:

- exercise,
- social interactions,
- environmental stimulation.

Experiences that **suppress** oligodendrocyte development:

- sedentary lifestyle,
- social isolation
- environmental deprivation.





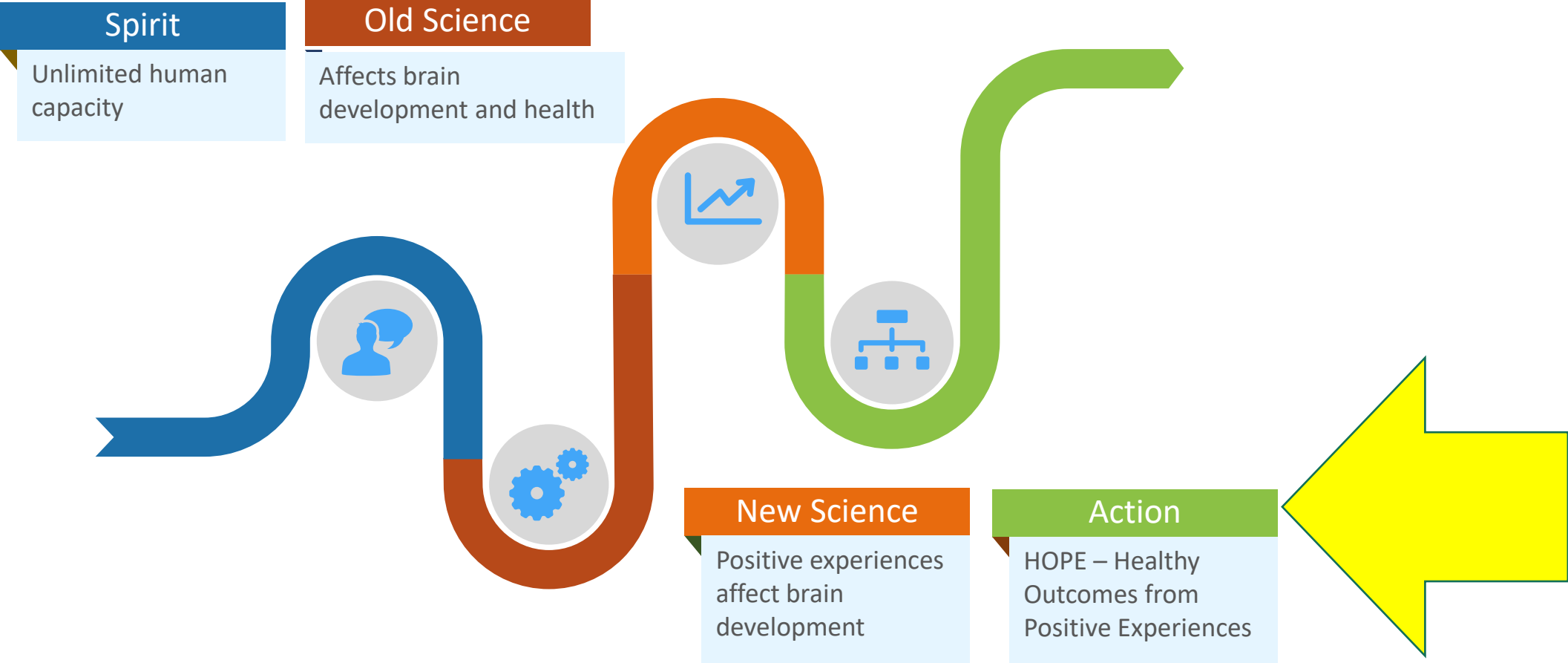
HEALTHY **OUTCOMES**  
»»»»»»»»»»»»»»»» from  
POSITIVE **EXPERIENCES**

# Temperature Check

1. I am good with this – I can begin to see how this fits with my work
2. Sounds good – I am looking forward to figuring out how this fits in my work
3. I have lots of questions
4. All of the above!



# Experience Shapes Human Brain Development



**HEALTHY OUTCOMES**  
from  
**POSITIVE EXPERIENCES**



**HEALTHY OUTCOMES**  
»»»»»»»»»»»»»»»» *from*  
**POSITIVE EXPERIENCES**

# 4

## Building Blocks of HOPE

1



### Relationships

- ...with other children
- ...with other adults
- ...through interactive activities

2



### Environment

- Safe, equitable, & stable
- Living, playing, & learning
- Positive school & home environments

3



### Engagement

- Develop a sense of connectedness
- Social/civic activities

4



### Opportunities for Social Emotional Development

- Playing with peers
- Learning self-reflection
- Collaboration in art, sports, drama, & music

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

# 4

## Building Blocks of **HOPE**

1



### Relationships

- ...with other children
- ...with other adults
- ...through interactive activities



# 4

## Building Blocks of **HOPE**

2



### Environment

- Safe, equitable, & stable
- Living, playing, & learning
- Positive school & home environments

# 4

## Building Blocks of **HOPE**

3



### **Engagement**

- Develop a sense of connectedness
- Social/civic activities

# 4

## Building Blocks of **HOPE**

4



### **Opportunities** for Social Emotional Development

- Playing with peers
- Learning self-reflection
- Collaboration in art, sports, drama, & music

# Different Perspectives on Positive Influences



Individual — HOPE

Family — The Strengthening Families Approach

Community Norms— Education, childcare, home visiting

Norms and Policies — Essentials for Childhood, paid family leave







## Step One

1. How do we see ourselves and our clients?
2. *Risk and Strengths*
3. *Cognitive re-framing*



*Courtesy – change in Mind Initiative, National Alliance for Strong Families and Communities*

HEALTHY **OUTCOMES**  
from  
POSITIVE **EXPERIENCES**



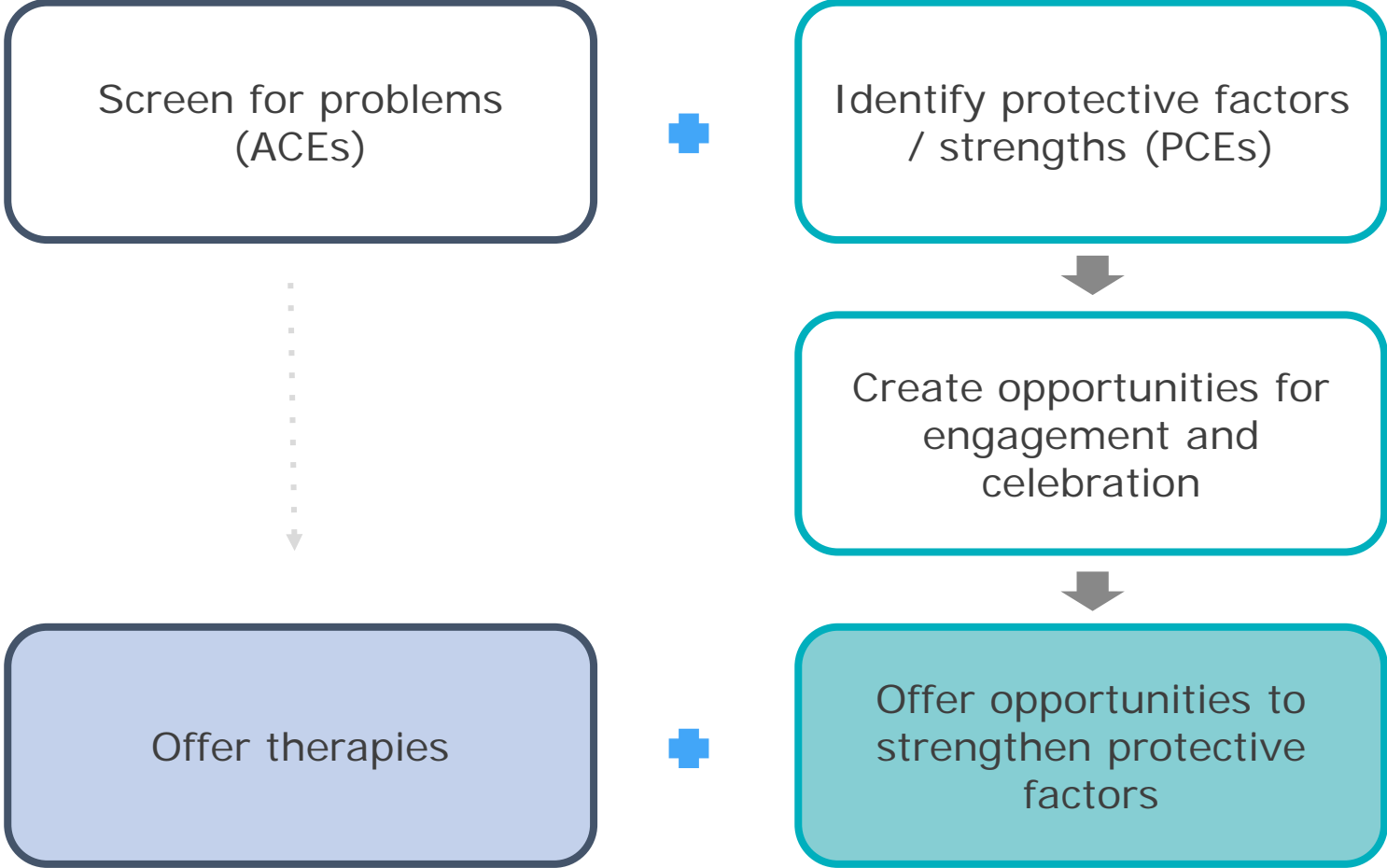


## Interacting with adults with histories of trauma

- Ms. S has been sober for three years. At a recent community event, she calculated that her ACE score was 5.
- She mentions this to you, and wonders how her history will affect her 2-year old son
- Armed with knowledge of PCEs, how would you talk with her?



# Balance ACEs with HOPE



# Positive Community Norms

## The Norm

MOST Wisconsin adults, **(70%)**, strongly agree that improving the well-being of children and families is important for healthy, strong communities.

## The GAP

## The Perceived Norm

However, **(72%)** did not think most other Wisconsin adults felt the same way.



# ▶▶▶▶ Programming Positive Childhood Experiences



**Parent Café** 

*Conversations to keep your family strong*





# Parent Wellness

Parental mental and physical health promotes child development



## Ideas

Time and permission for self-care

Promote activities known to improve health: exercise, mindfulness, sleep

Promote relationships with others who provide support

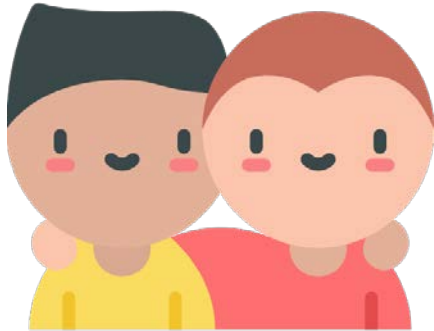


**A HOPE-informed Guide to  
Coronavirus**

# Post-traumatic growth (PTG)

Post-traumatic growth (PTG): positive psychological changes resulting from major life crises or traumatic events.

## Recovery



{Post Traumatic Growth} following the East Japan Great Earthquake {was} . . . associated with increased regional grey matter volume.\*

## Resilience



Higher PTG Inventory scores had stronger activation in the executive functioning network region of the brain on fMRI.\*\*

\*Nakagawa et al. (2016) Effects of post-traumatic growth on the dorsolateral prefrontal cortex after a disaster. *Nature/Scientific Reports*. 6:34364

\*\*Fujisawa et al., (2015) Neural Basis of Psychological Growth following Adverse Experiences: A Resting-State Functional MRI Study. *PLoS ONE* 10(8)

# Childhood Experiences last a lifetime

## Creating Positive Experiences

- Children are people with disrupted lives
- Maintain **Relationship** with family and friends
- Developmentally safe **environments**
- **Engagement** with community
- **Opportunities** for growth



# Childhood Experiences last a lifetime

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A HOPE-informed Guide to  
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<https://positiveexperience.org/blog>

1. Intro
2. Engagement
3. Environment
4. Virtual world
5. 10 ways to avoid ACEs
6. Foundational Relationship (Willis)
7. Inequities and Supporting Children (Laraque-Arena)

# Childhood Experiences last a lifetime

## Preventing Adverse Experiences

- **Parental Resilience**
- **Concrete Supports**
- **Maintain Social Connection**
- **Knowledge of Parenting**
- **Social-Emotional Competence**

Childhood  
Experiences last  
a lifetime

**CSSP:**

**COVID-19: Our  
Response Must Protect  
the Health and Well-  
Being of All Children,  
Youth, and Families**

**Preventing Adverse  
Experiences**

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Make sure to fill out a feedback form!

<https://ttc-gpra.org/P?s=525521>

