



# Thinking Beyond Neurons and Neighborhoods: New Science for a New Era of Early Childhood Policy

Aug. 18, 2023



# Session Overview



Presentations



Presenter Discussion



Audience Q&A



# Presenters



Jack P. Shonkoff, M.D.

Julius B. Richmond FAMRI Professor of Child Health and Development  
Harvard T.H. Chan School of Public Health and Harvard Graduate School of Education  
Professor of Pediatrics, Harvard Medical School and Boston Children's Hospital  
Director, Center on the Developing Child at Harvard University



Lt. Gov. Suzanne Crouch

State of Indiana  
Serves as the President of the Indiana Senate  
Current Gubernatorial Candidate  
Former State Legislator  
Former State Auditor  
Former County Commissioner



Melissa Klitzman, M.D.

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Center on the Developing Child  
HARVARD UNIVERSITY

# Thinking Beyond Neurons and Neighborhoods: New Science for a New Era of Early Childhood Policy

## **JACK P. SHONKOFF, M.D.**

Julius B. Richmond FAMRI Professor of Child Health and Development,  
Harvard T.H. Chan School of Public Health and Harvard Graduate School of Education.  
Professor of Pediatrics, Harvard Medical School and Boston Children's Hospital.  
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National Conference of State Legislatures Summit  
August 15, 2023

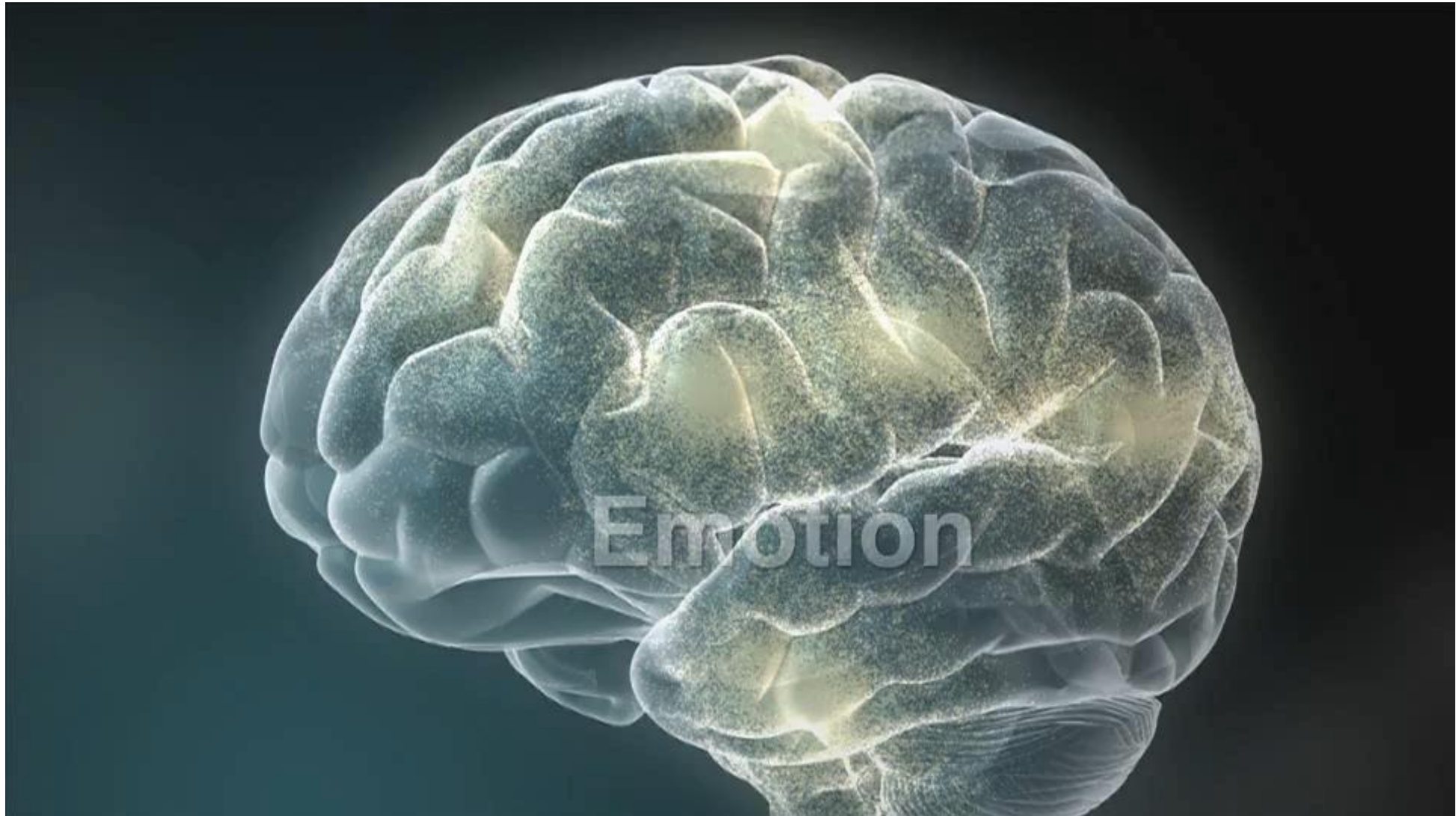
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# Understanding the Impact of Early Experiences on the Architecture of the Developing Brain

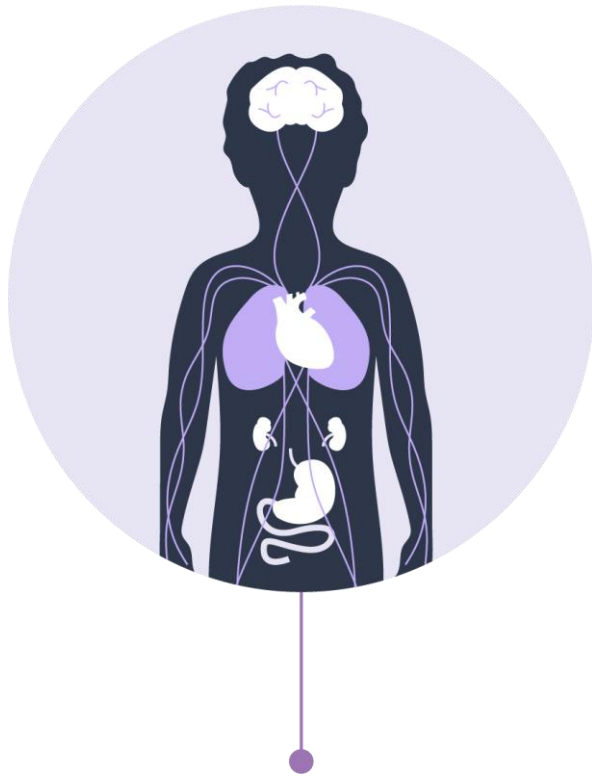


# Toxic Stress Disrupts Brain Architecture with Consequences for Early Learning and Behavior





# Deepening Our Understanding of the Early Foundations of Learning, Behavior & Lifelong Health



Interactive development of multiple biological systems



Variation in sensitivity to diversity of contexts



Place matters for both assets and threats

**The time is ripe for a **mindset shift** in  
science-informed policy and practice:**

**Digging deeper and moving upstream**



# The time is ripe for a **mindset shift** in science-informed policy and practice

## ECD 1.0

**Early brain development  
in an environment of  
relationships**



## ECD 2.0

**Connecting the brain to  
the rest of the body in  
a broader ecosystem**

# The time is ripe for a **mindset shift** in science-informed policy and practice

## ECD 1.0

IT'S STILL ABOUT

Providing enrichment  
for developing minds



## ECD 2.0

AND IT'S ALSO ABOUT

Protecting developing  
brains and bodies from  
biological disruptions of  
excessive adversity

# The time is ripe for a **mindset shift** in science-informed policy and practice

## ECD 1.0

IT'S STILL ABOUT

Investing in evidence-based programs



## ECD 2.0

AND IT'S ALSO ABOUT

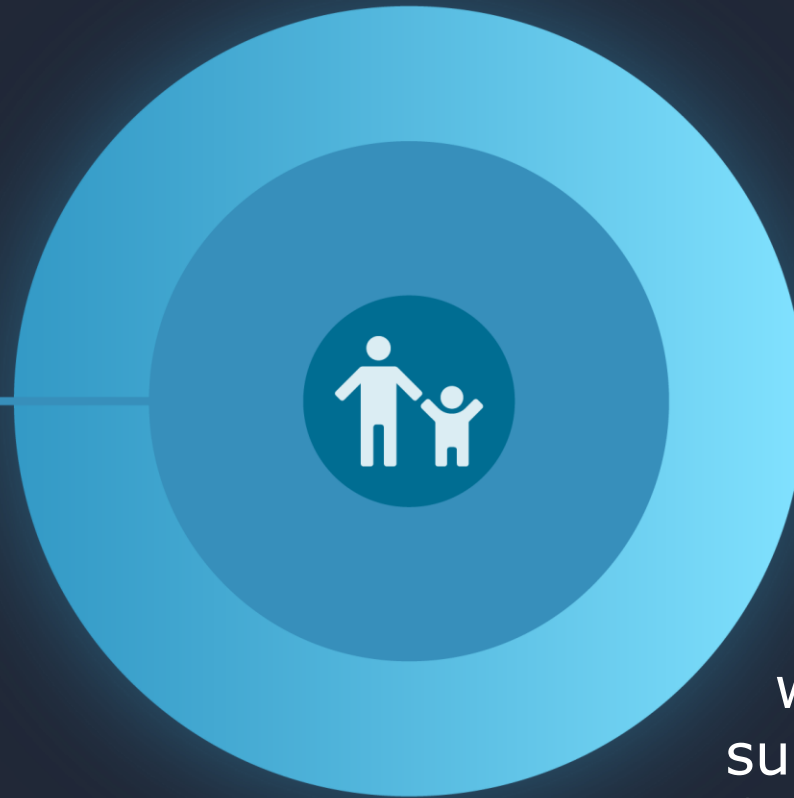
Tailoring interventions to address variation in effectiveness

# The time is ripe for a **mindset shift** in science-informed policy and practice

## ECD 1.0

IT'S STILL ABOUT

Strengthening  
caregiver-child  
relationships



## ECD 2.0

AND IT'S ALSO ABOUT

Communities, government,  
business, and philanthropy  
working together to assure a  
supportive environment for **all**  
families raising young children

**Where children live  
presents a variety of  
assets and threats that  
affect their health and  
development**

## **Child Opportunity Index**

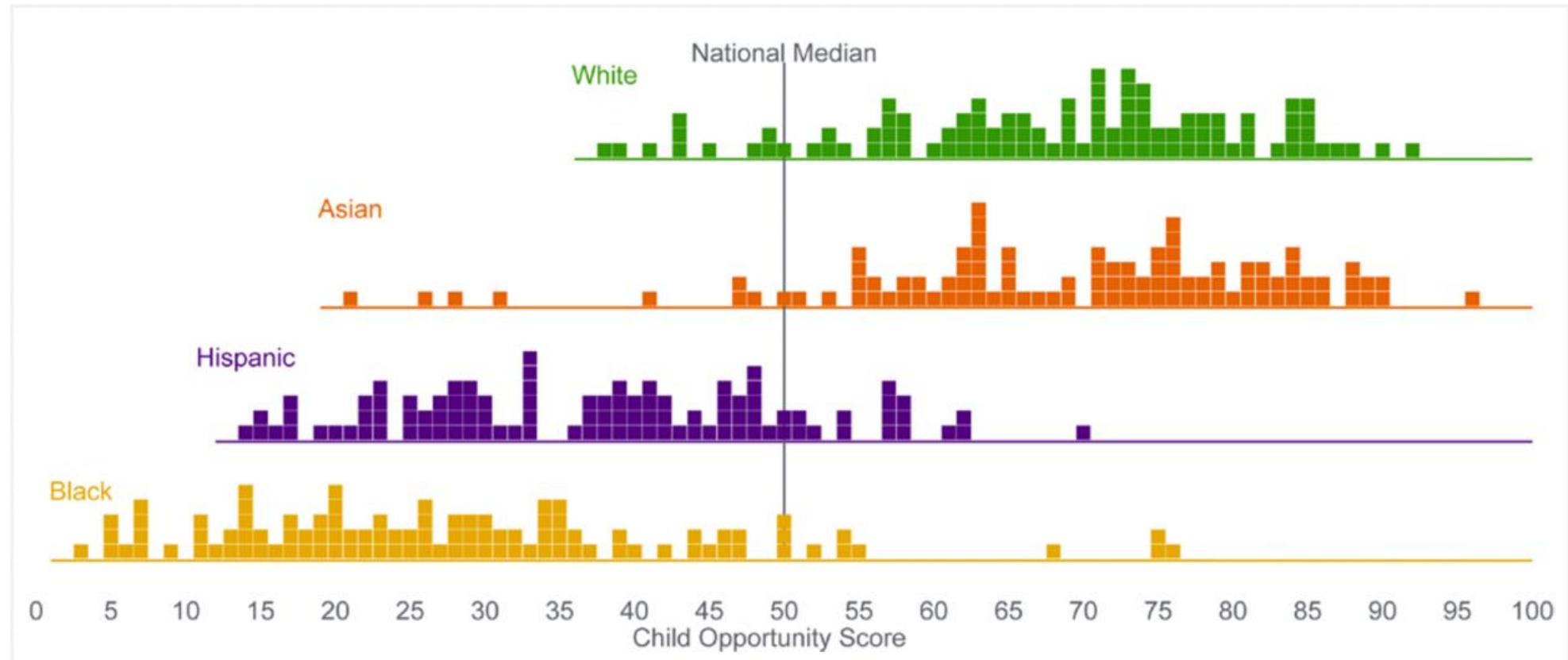
**[100 LARGEST U.S. METRO AREAS; 72,000 CENSUS TRACTS; 29 INDICATORS]**

- High quality child care
- Education resources
- Access to healthy food
- Green space
- Housing vacancy rate
- Toxic waste proximity
- Commuting time

Source: Acevedo-Garcia et. al. (2014)

# Residential Segregation Leads to Striking Inequalities in Exposure to Opportunities and Adversities

This Affects Child Development and Both Physical and Mental Health



[diversitydatakids.org](http://diversitydatakids.org)

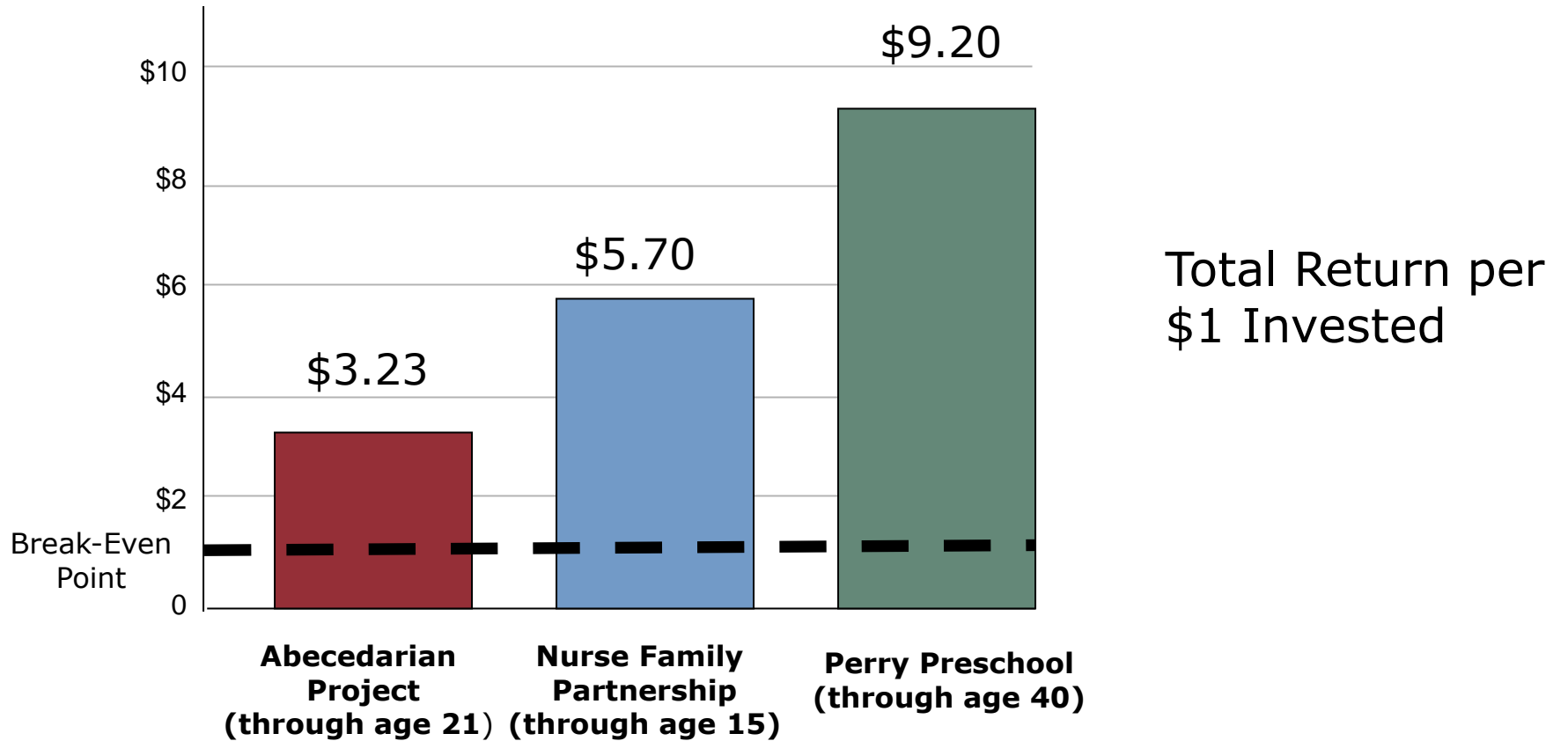
# Leveraging ECD 2.0 to Re-Envision Science-Informed Early Childhood Policy

**Cutting-Edge Science + Diversity of Lived  
Experiences + Public Will = Greater Impact**



# Long-Term Impacts of Model Early Childhood Programs Have Documented Substantial ROI

This includes education costs, economic productivity, and decreased incarceration.

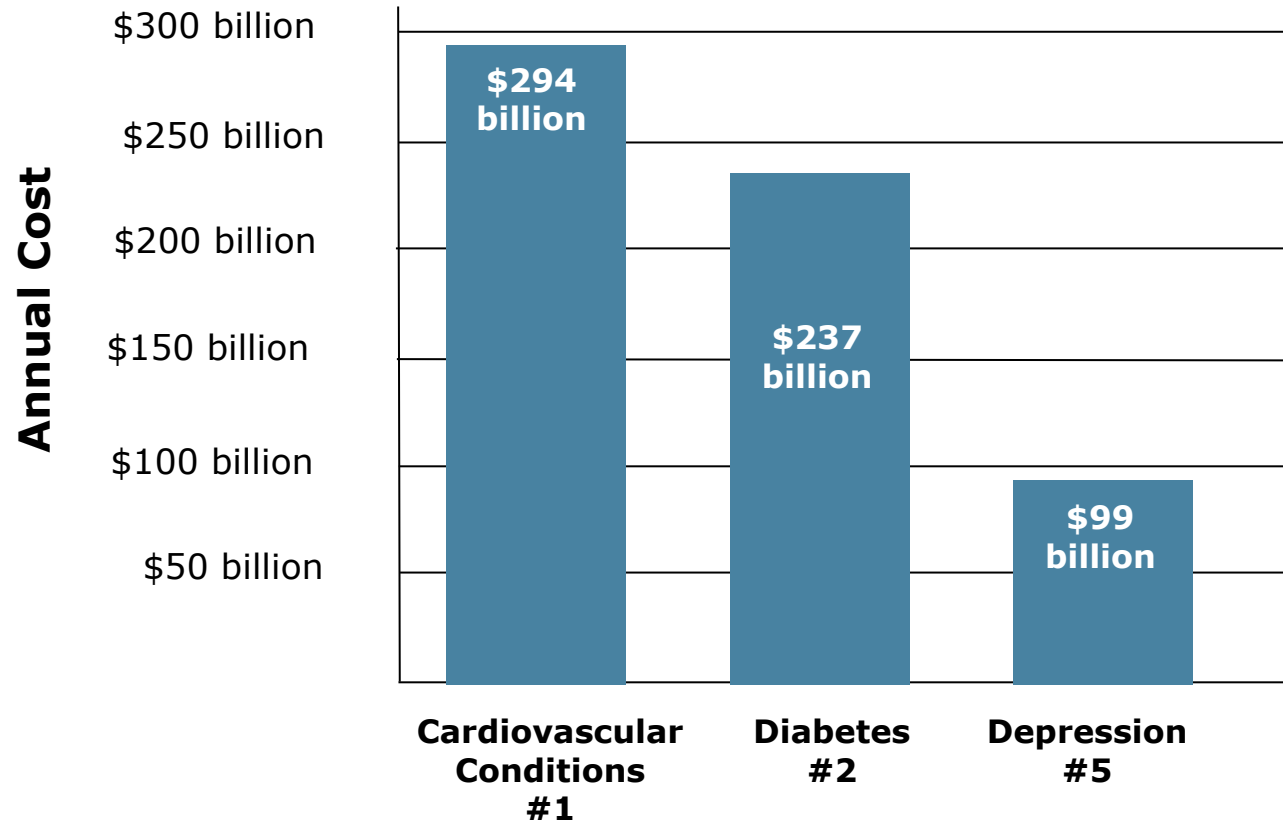


Sources:

Karoly et al. (2005)

Heckman et al. (2009)

# Investments that Protect Developing Biological Systems from Excessive Adversity Have Potential to Generate Even Higher ROI

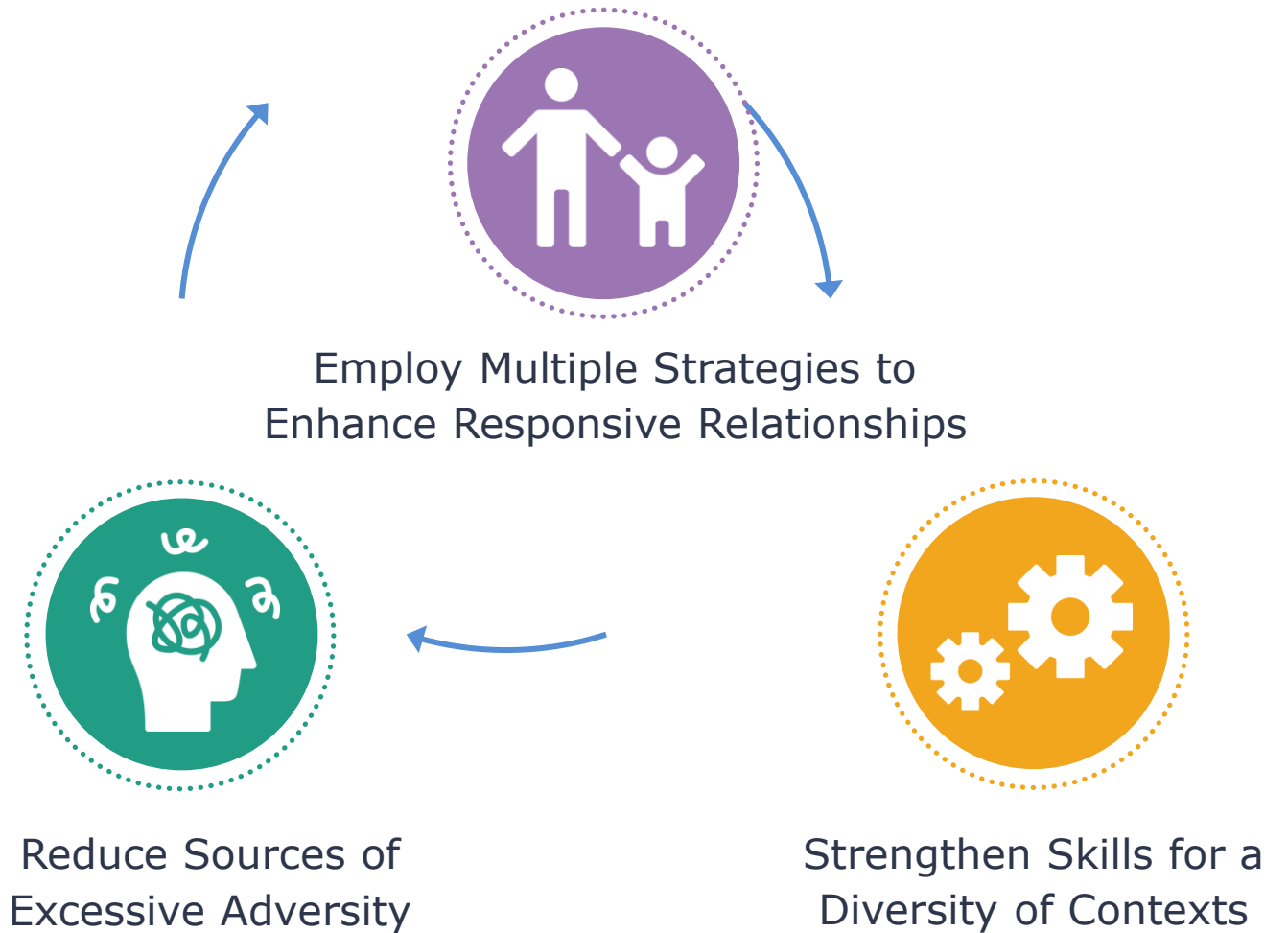


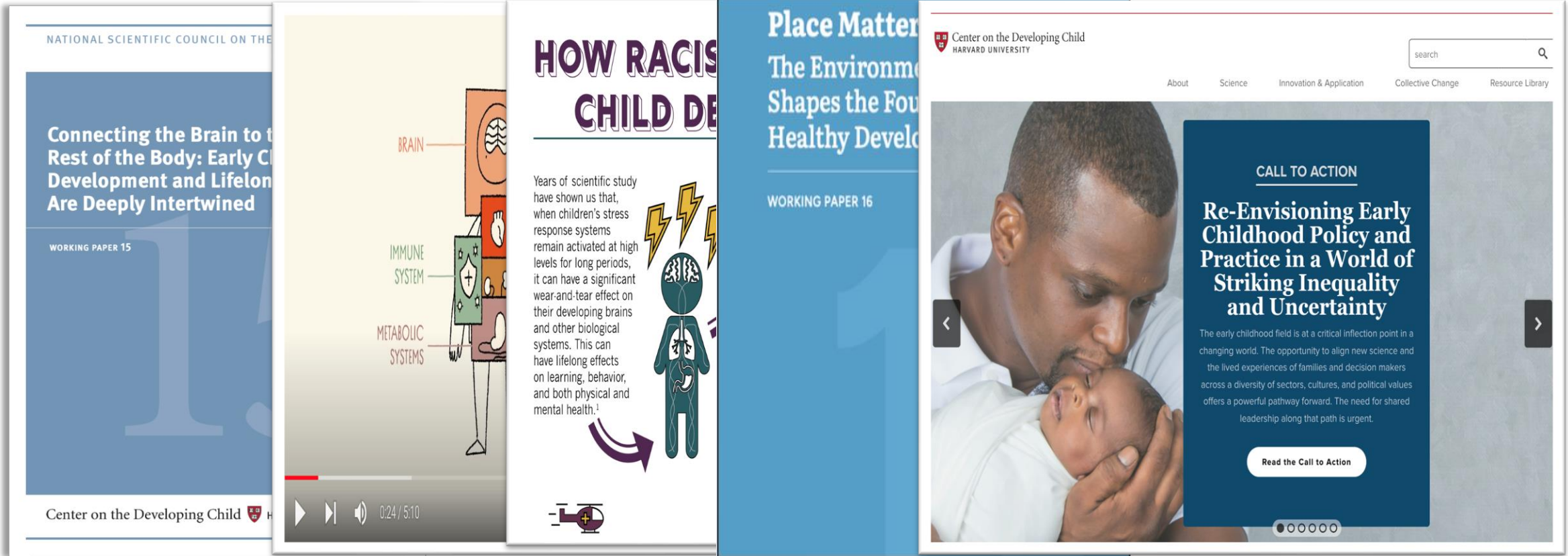
**Take-Home Message:** Policies that support families and reduce hardships & trauma **during pregnancy and the first 2-3 years after birth** will generate significant savings in health care costs.

Sources: Waters, Graf (Milken Institute, 2018); Greenberg et al. (2015)

### 3 Science-Informed Principles to Increase the Impacts of Current Policies and Programs

by assuring implementation of evidence-based practices by personnel whose skills match the challenges they are expected to address.





[www.developingchild.harvard.edu](http://www.developingchild.harvard.edu)







## **Prenatal-to-3 Networking Reception**

Aug. 15 from 5:30-7:30 p.m.  
JW Marriott | Room 306

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