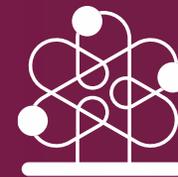


NCIT Capacity-Building Hub

The Influence of Prenatal to Age 3: Utilizing a Multi-Sectoral Approach to Achieve Positive Maternal and Child Health Outcomes

September 3, 2019

NCIT Capacity-Building Hub



National
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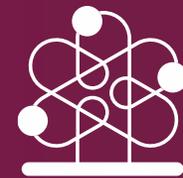
Key Takeaways:

- ✓ Why the prenatal and postpartum periods are critical phases of development that help children reach their greatest potential.
- ✓ How to build responsive prenatal, postpartum, and pediatric systems that ensure ongoing access, quality, and coordination.
- ✓ Which existing federal and state initiatives can be leveraged to increase and promote positive maternal and child health outcomes.
- ✓ How to design early care and education environments that promote positive health outcomes.



Today's Featured Presenters

NCIT Capacity-Building Hub



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for Infants
& Toddlers™



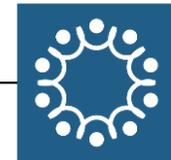
CAPACITY-BUILDING HUB

The Influence of Prenatal to Age 3: Utilizing
a Multisectoral Approach to Achieve Positive
Maternal and Child Health Outcomes



**Center for the
Study of
Social Policy**

Ideas into Action



David W. Willis, MD, FAAP

Senior Fellow

Why the prenatal and postpartum periods are critical phases of development that help children reach their greatest potential?

The Core Story of Child Development

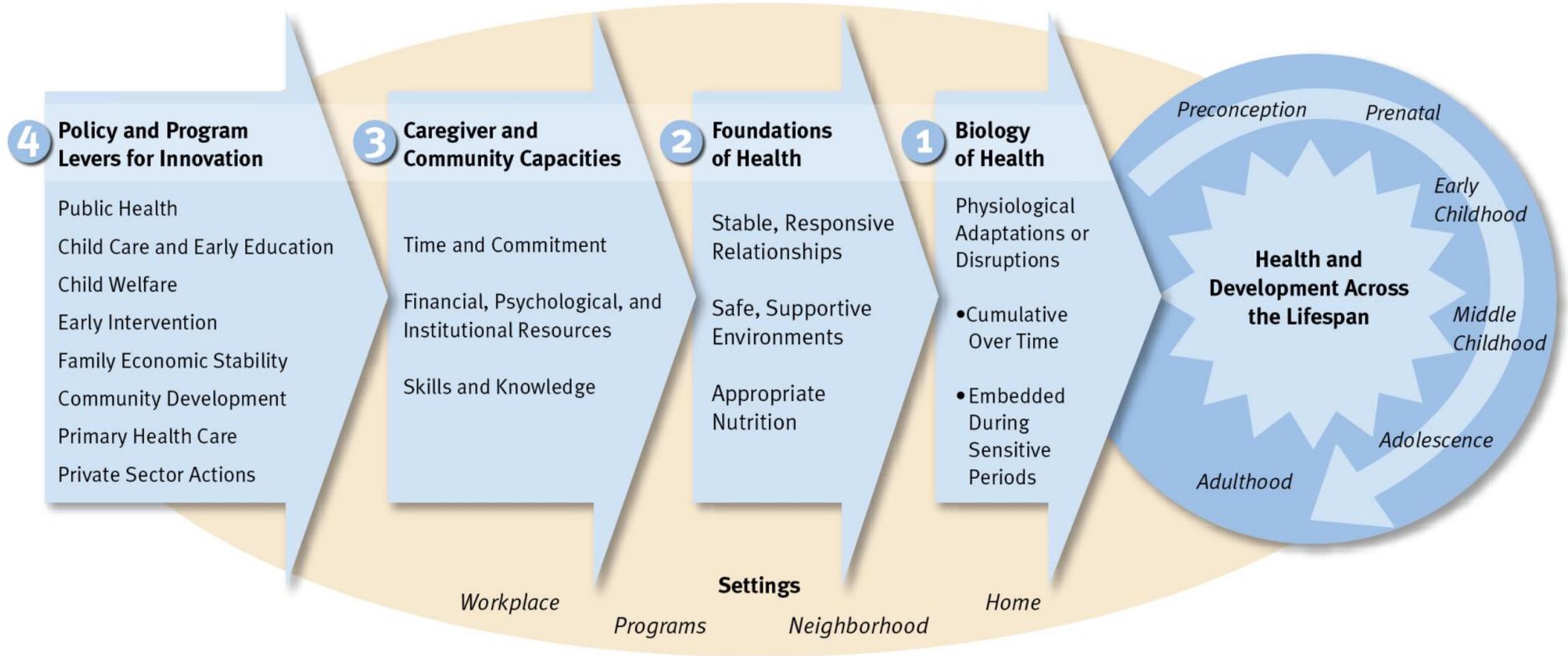


- Early experiences in life build “brain architecture”
- Children develop in an **environment of relationships**
- Genes and environments interact to shape the architecture of the brain
- Cognitive, emotional and social capacities are inextricably intertwined
- “Toxic stress” and adverse experiences derail healthy child development
- Brain plasticity and the ability to change behavior decrease over time

National Scientific Council on the Developing Child, 2015

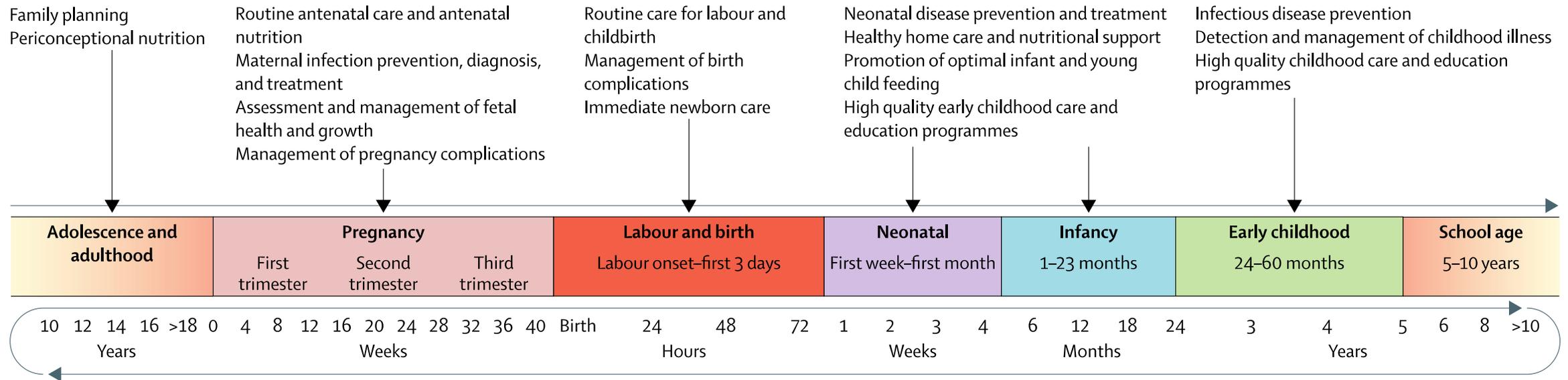
Brains are built from the bottom up. Like building a house, they need to start with a strong foundation.

Developmental Life Course Model



Harvard Center For the Developing Child, Jack Shonkoff 2008

Evidence-based interventions



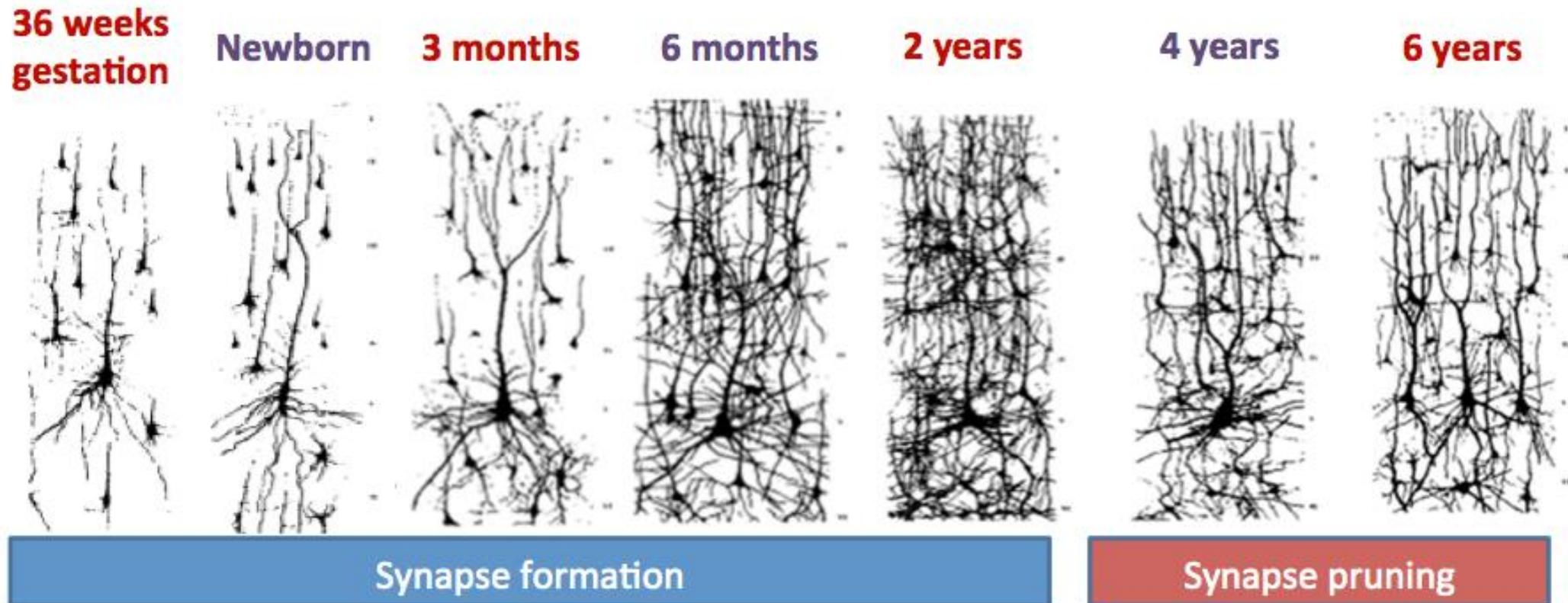
The amazing journey of prenatal human development



- A genetic blueprint in the embryo/fetus establishes the broad strokes of development
- Environment modifies this blueprint during critical periods of development

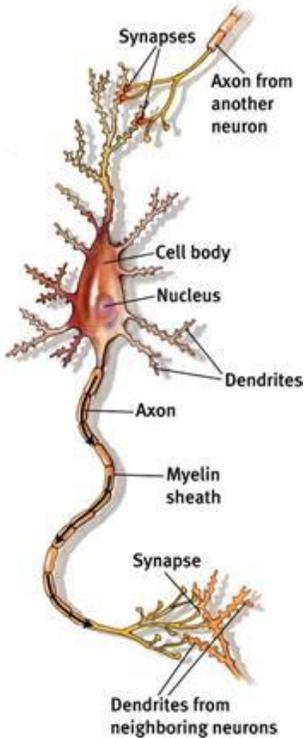


The experience-expectant, experience-dependent human brain



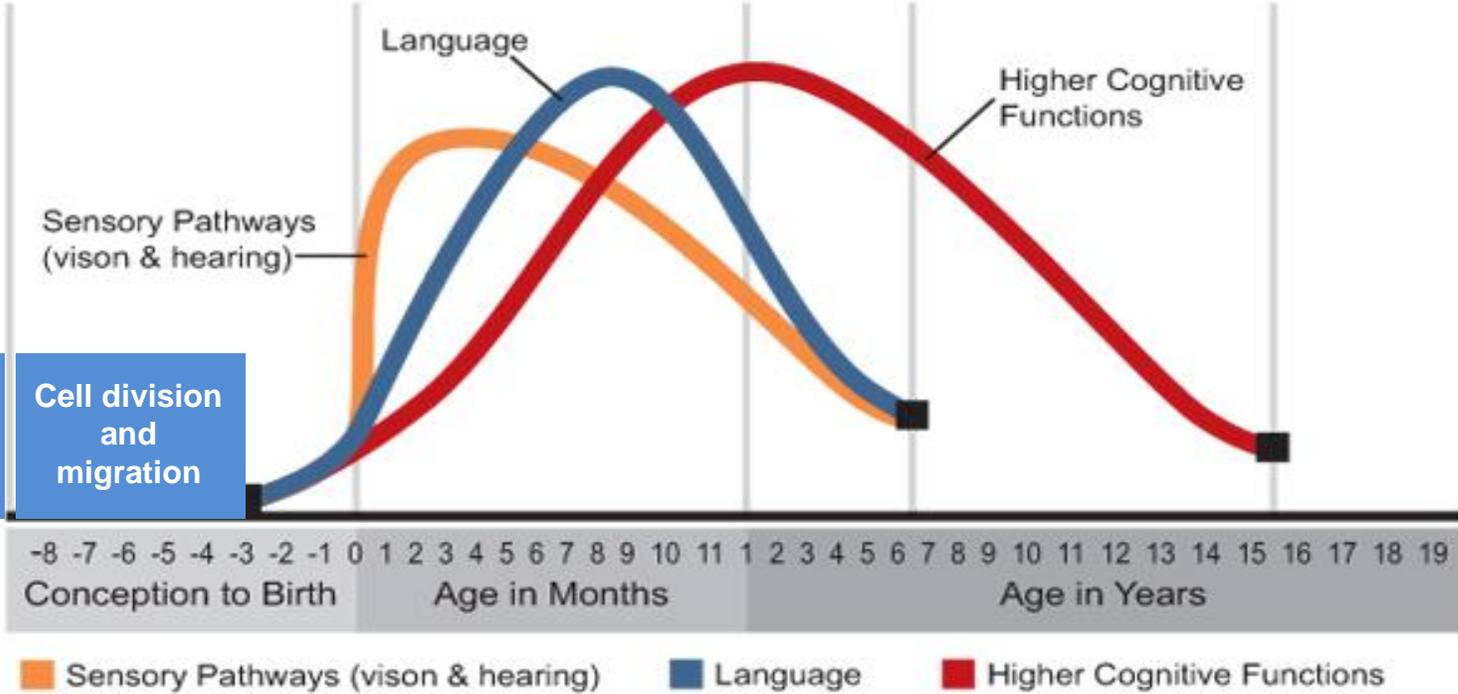
<http://america.pink.com>

Sensitive periods and the developing brain

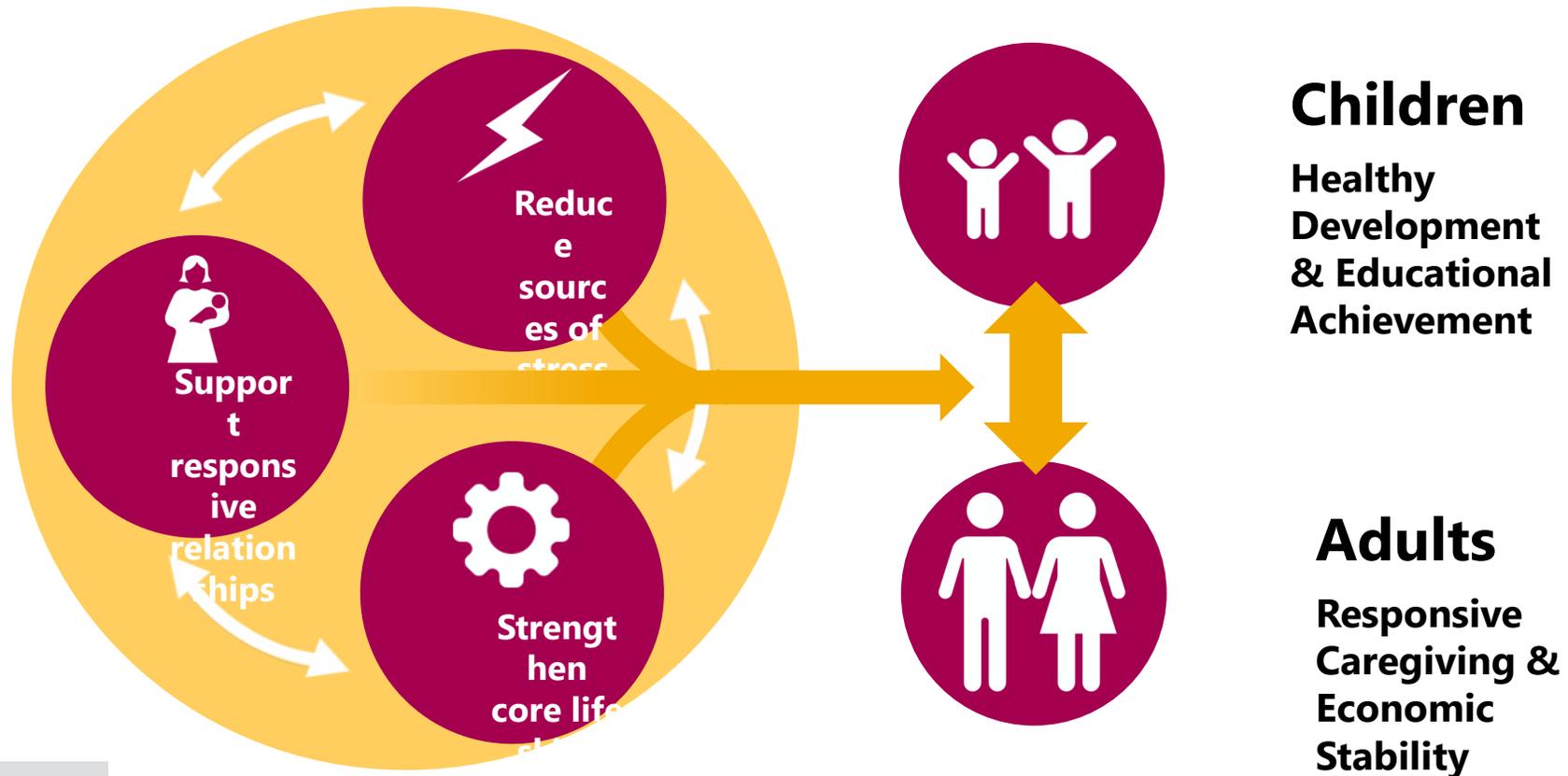


Human Brain Development

Synapse formation dependent on early experiences



The science of infant brain development

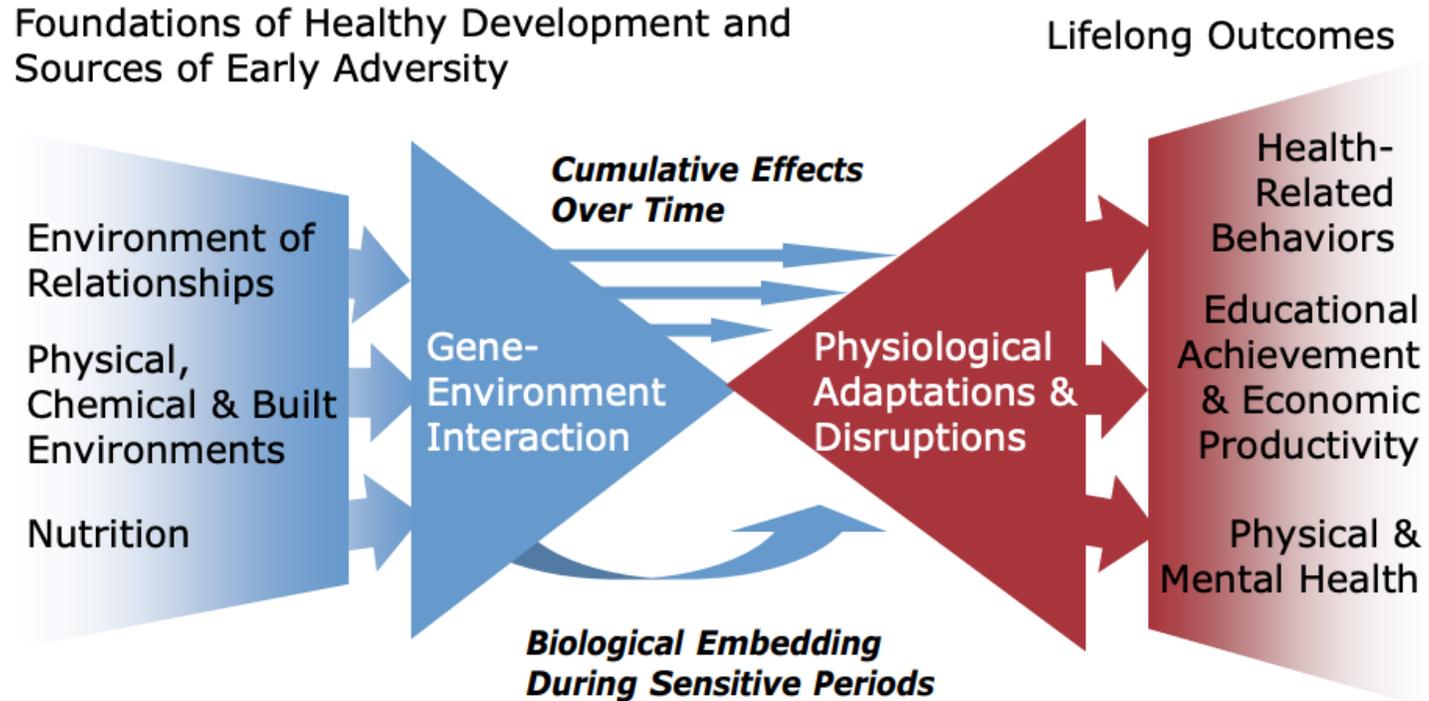


 Center on the Developing Child
HARVARD UNIVERSITY

www.developingchild.harvard.edu

How Early Experience Gets Into the Body

A Biodevelopmental Framework

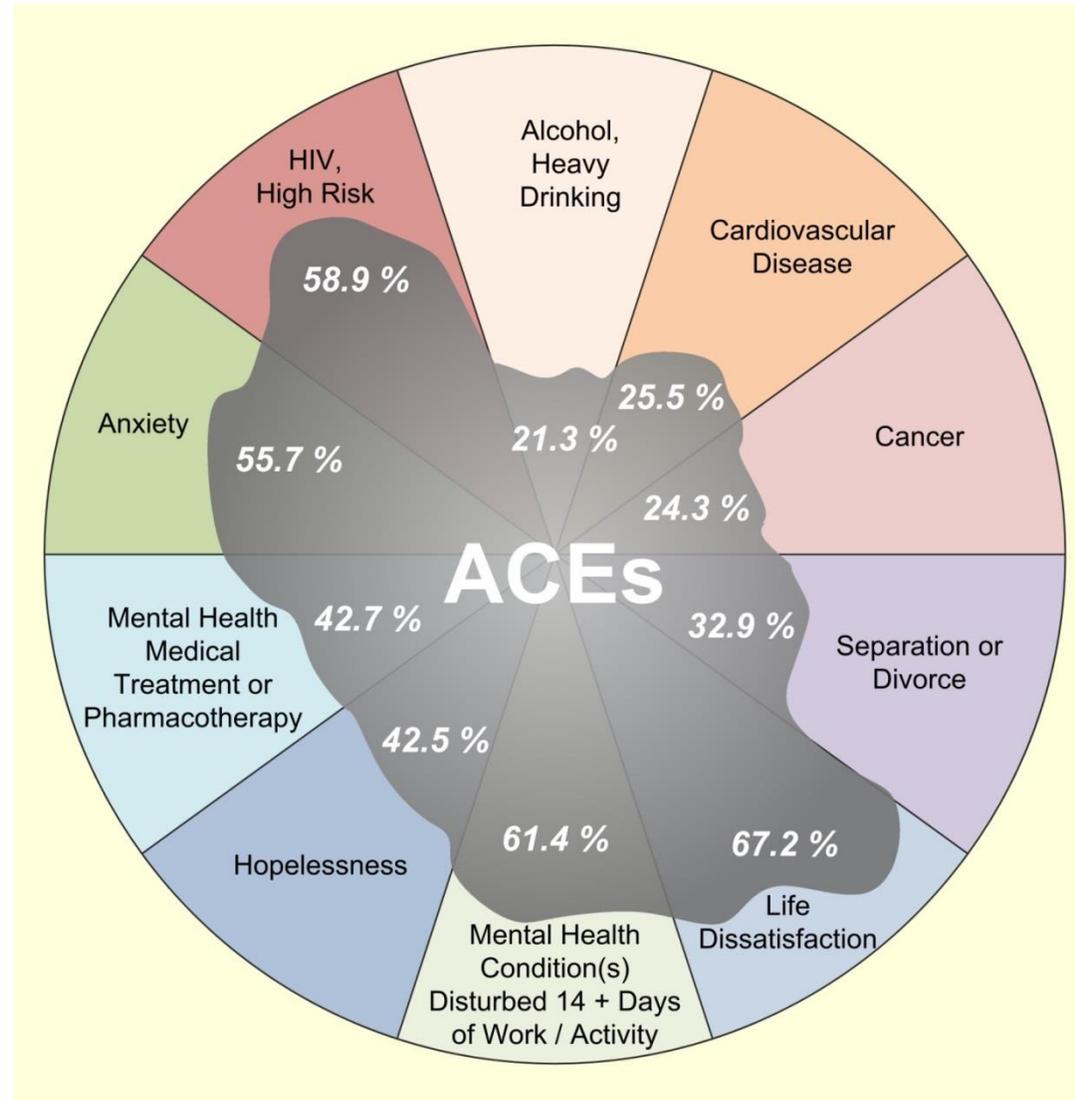


Center on the Developing Child  HARVARD UNIVERSITY

POPULATION ATTRIBUTABLE RISK

A large portion of many health, safety and prosperity conditions is attributable to Adverse Childhood Experience.

ACE reduction reliably predicts a decrease in all of these conditions simultaneously.

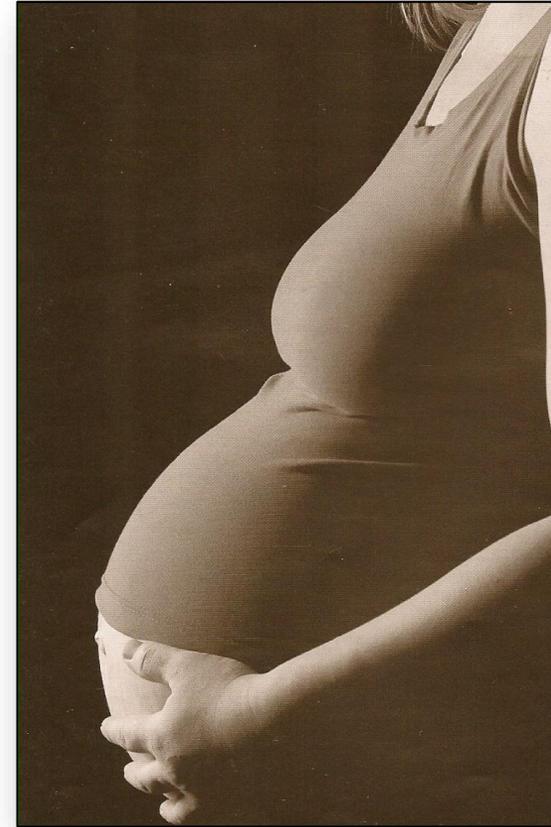


Source: Family Policy Council, 2012

Prenatal and Preconception Trauma

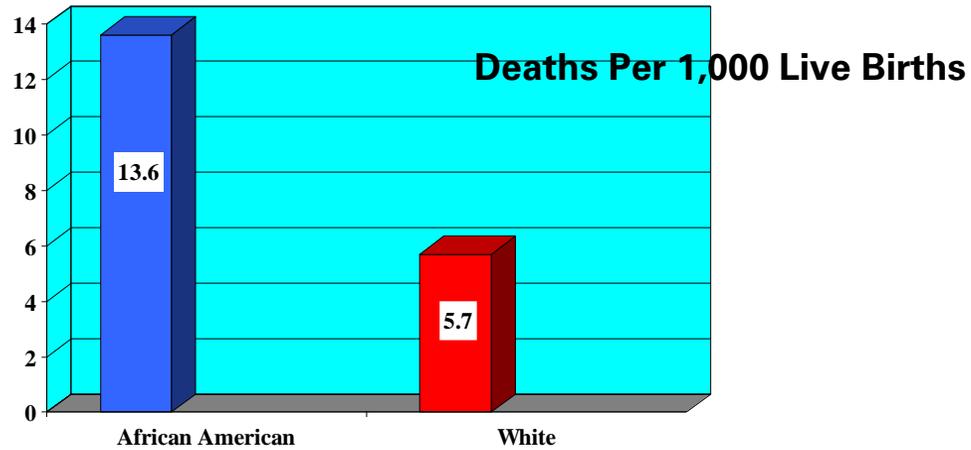


Birth Outcomes and Temperament Impacts

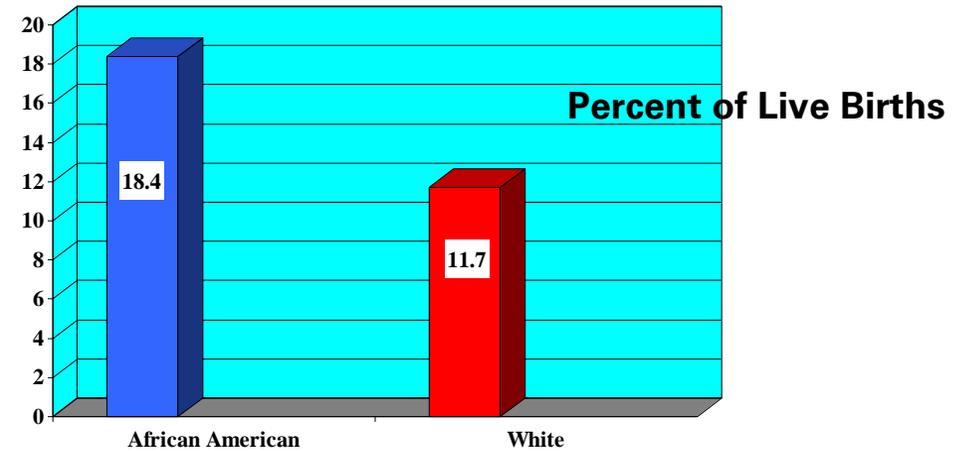


Racial & Ethnic Disparities

Infant Mortality

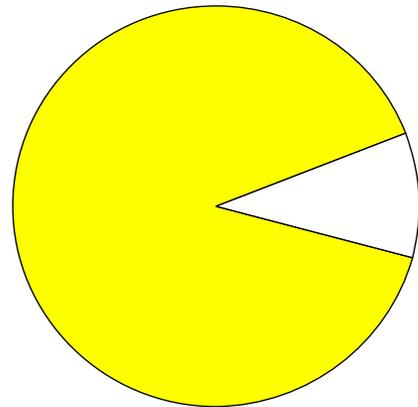


Preterm Births < 37 Weeks



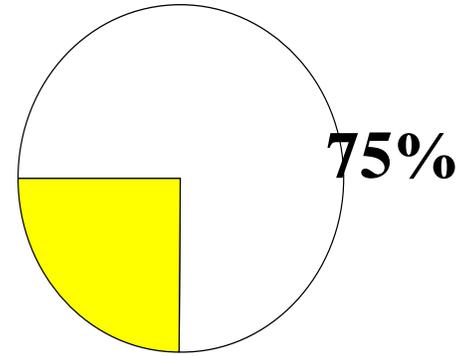
NCHS 2007

Sequelae of Preterm Birth

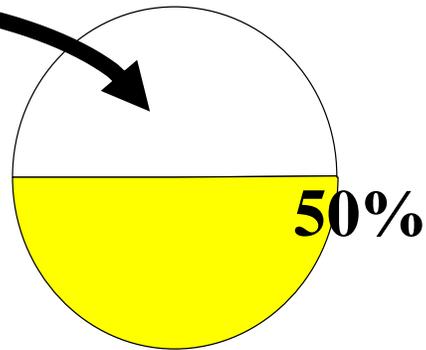
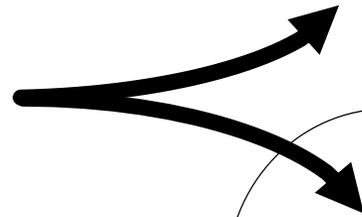


- Term Births
- Preterm Birth

12%



**Perinatal
Mortality**



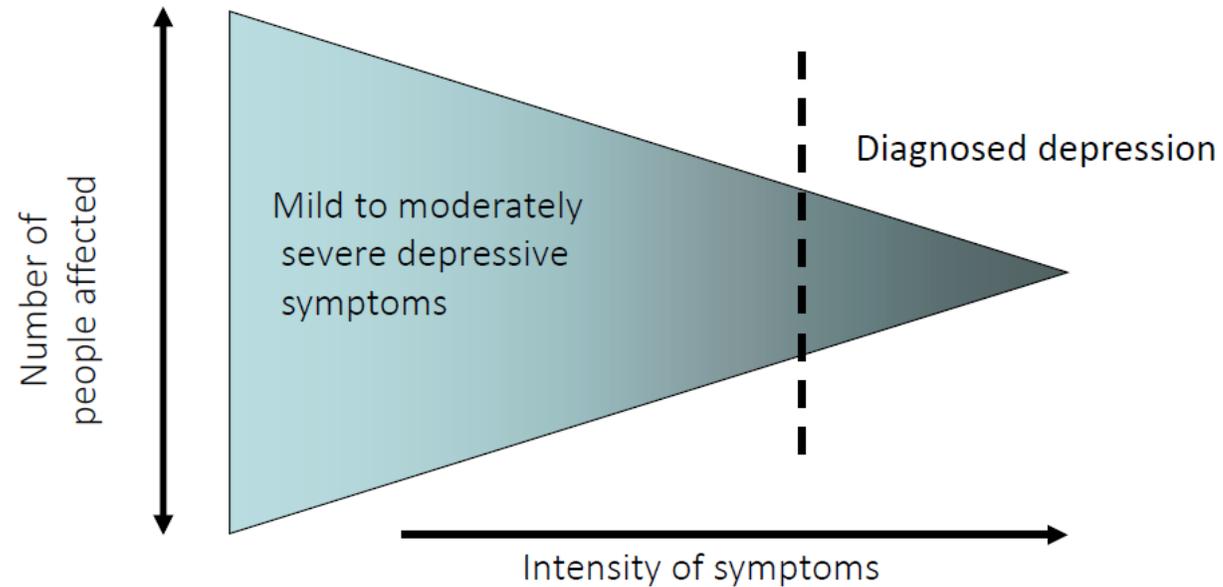
**Neurologic
Disabilities**

Young Children Not Succeeding in School

(%) Not Succeeding	<u>High Risk Group</u>
53%	Abused, Neglected, or in Foster care
52%	Very Low Birthweight (under 1500 grams)
48%	Lower Educated Mother (under 12 grades)
45%	TANF
43%	LBW (1500 - 2000 grams)
43%	Teen Mother (under 18)
42%	Food Stamps
37%	Mother (age 18 - 20)
36%	LBW (2000 - 2500 grams)
<u>Low Risk Group</u>	
16%	Higher Educated Mother (more than HS)

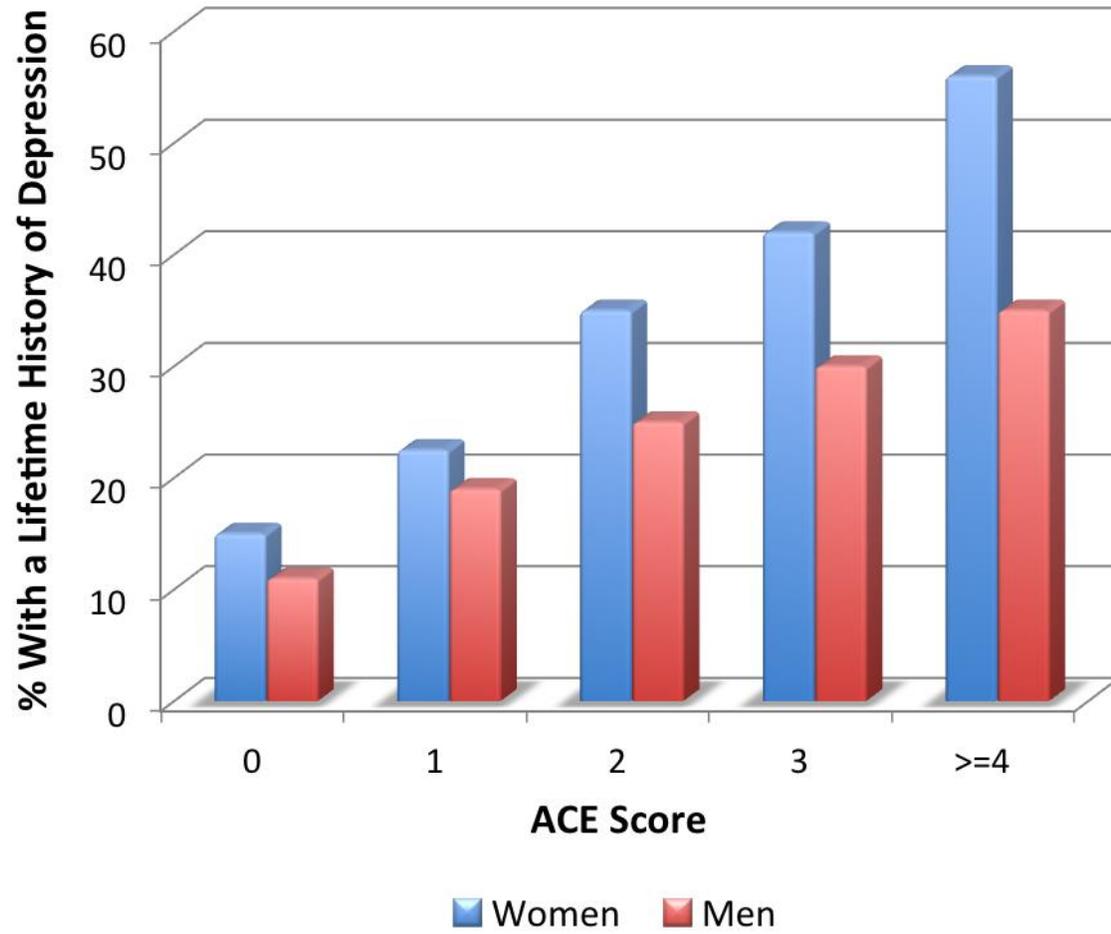
Source: ORS Data Warehouse files from DHEC Vital Records and DSS linked to SDE PACT data.

Major Depression Is Only Part of the Picture



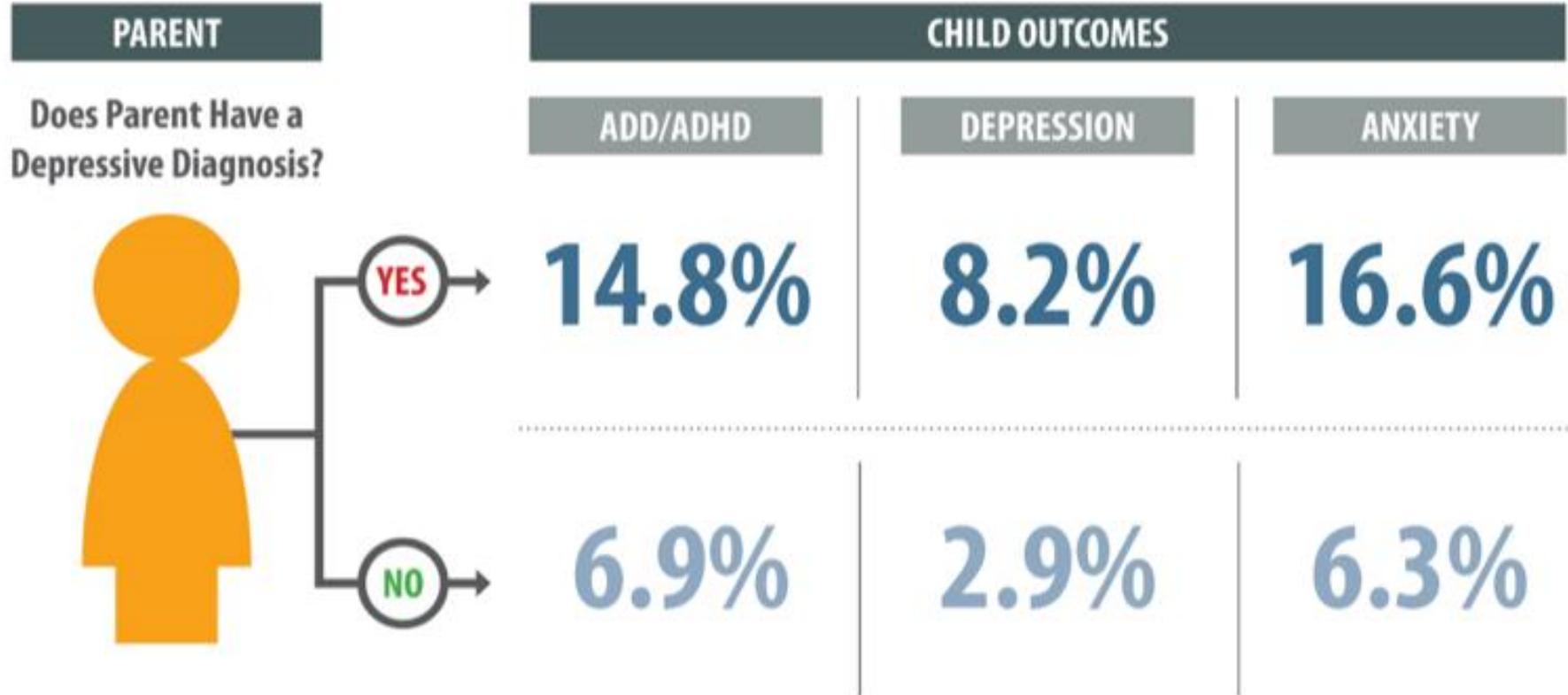
Beeber, L. S., & Cohen, R. C. (2011). Maternal Depression. In S. J. Summers & R. C. Cohen (Eds.), *Understanding Early Childhood Mental Health: A Practical Guide for Professionals*. Baltimore, MD: Brookes Publishing. Printed with permission from Dr. Beeber.

Adverse Childhood Experiences Underlie Chronic Depression



<http://acestoohigh.com/got-your-ace-score/>

Parent Mental Health is a Determinant of Child's Mental Health



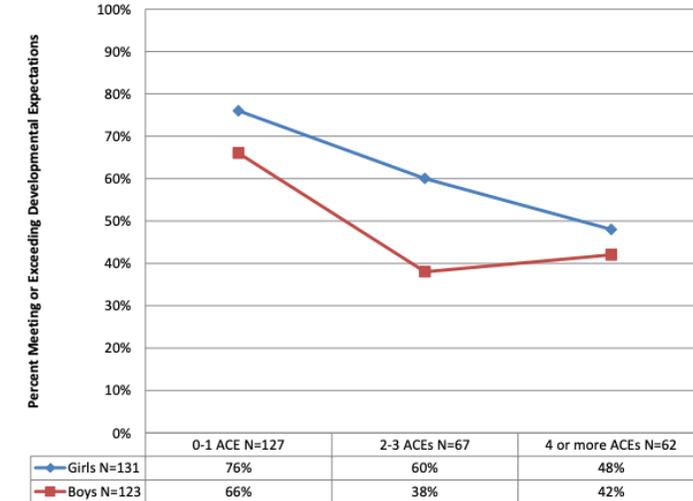
ACE's in Spokane Head Start

- Head Start Children (N=50)
 - 60% had violence exposures < 4 yrs.
 - Mean ACE >3
 - Mean ACE of their Parents is >5
 - 2/3rs of children with Positive ACE screen had one report of social-emotional development concerns (by teacher and parent DECA)

Parents' ACEs	Two or more ACEs in Children (57% of children)	Four or more ACEs in Children (29% of children)
0-1 ACEs (25% of parents)	41%	16%
2-4 ACEs (35% of parents)	54%	25%
5 or more ACEs (40% of parents)	69%	40%

Blodgett, C., 2014.

ACE Exposure and Social Emotional Development in 3-4 Year Old Boys and Girls N=224



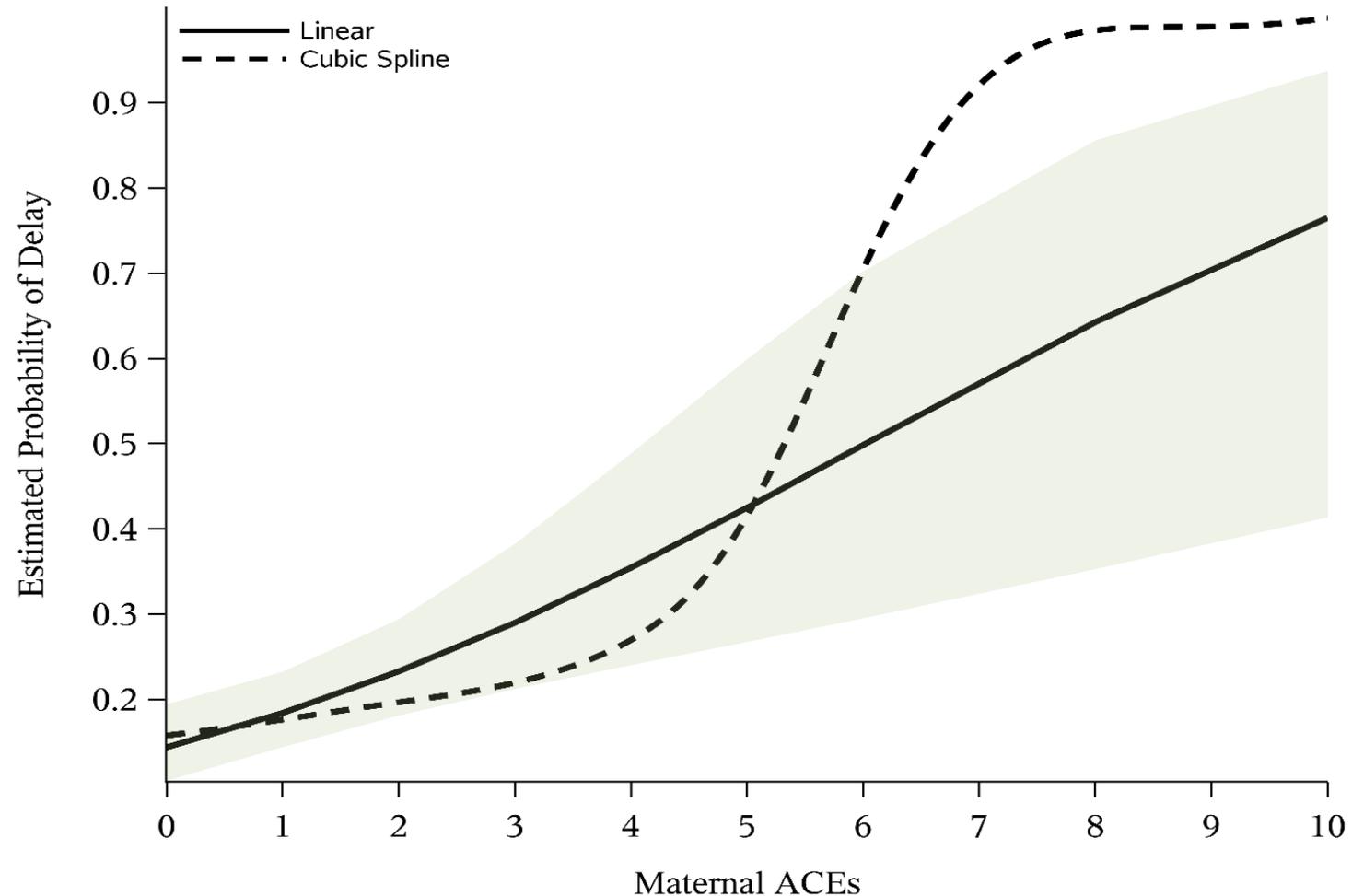
Odds for Academic and Health Problems with Increasing ACEs in Spokane Children

	Academic Failure	Severe Attendance Problems	Severe School Behavior Concerns	Frequent Reported Poor Health
Three or More ACEs N=248	3	5	6	4
Two ACEs N=213	2.5	2.5	4	2.5
One ACE N=476	1.5	2	2.5	2
No Known ACEs =1,164	1.0	1.0	1.0	1.0

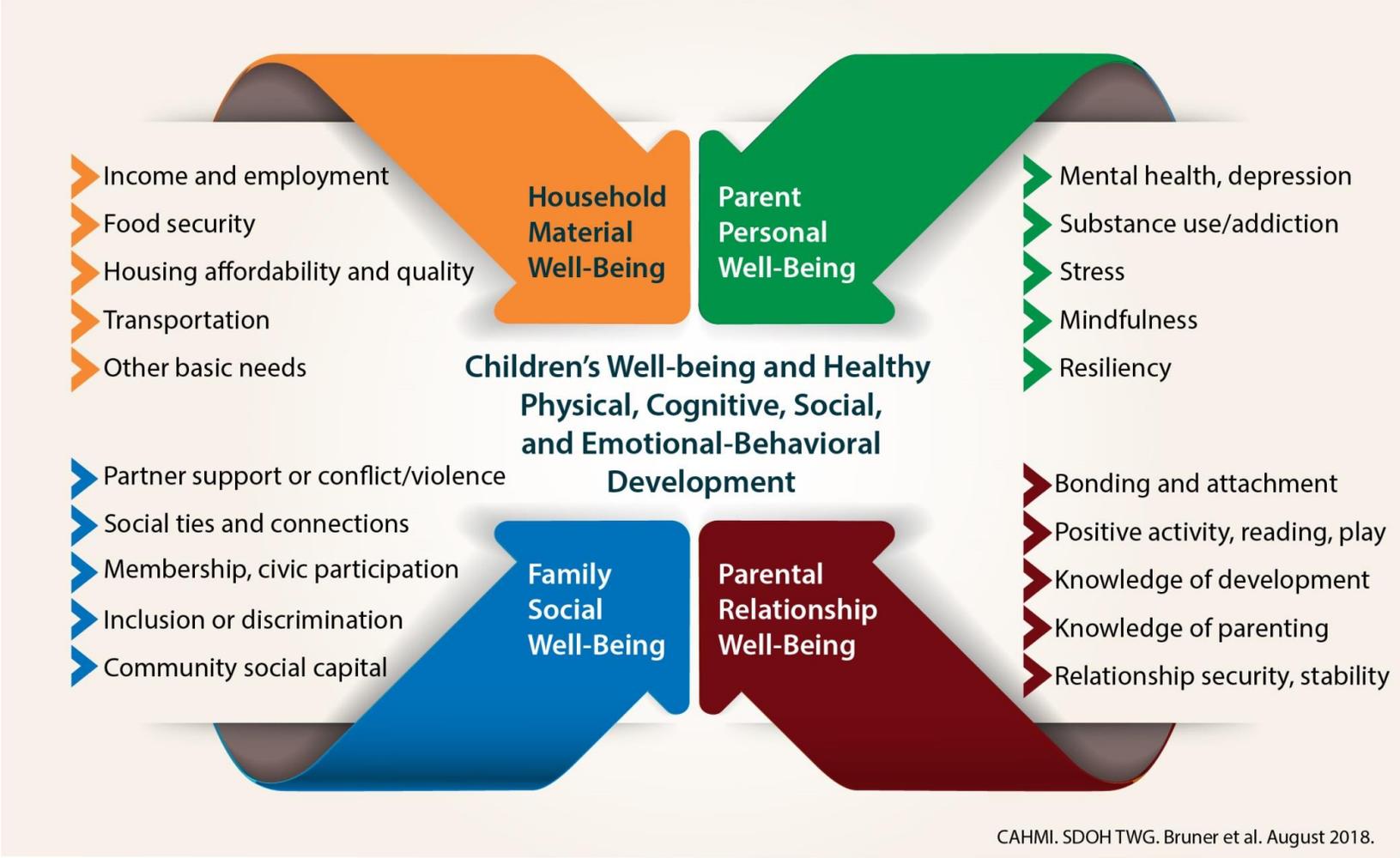
Copyright WSU 2012 Information may be used with attribution

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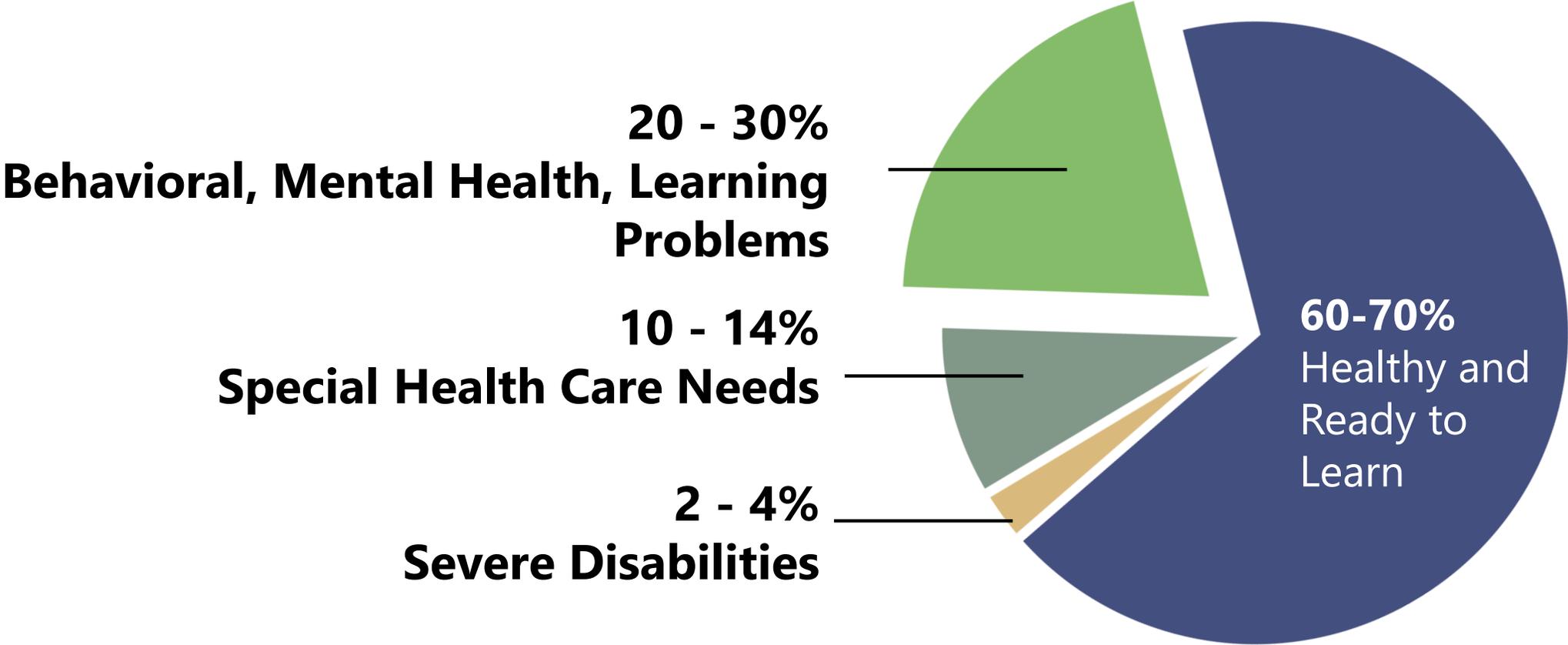
Dose response relationship between Maternal ACE and risk for suspected developmental delay



Ecology – Determinants of Child Health

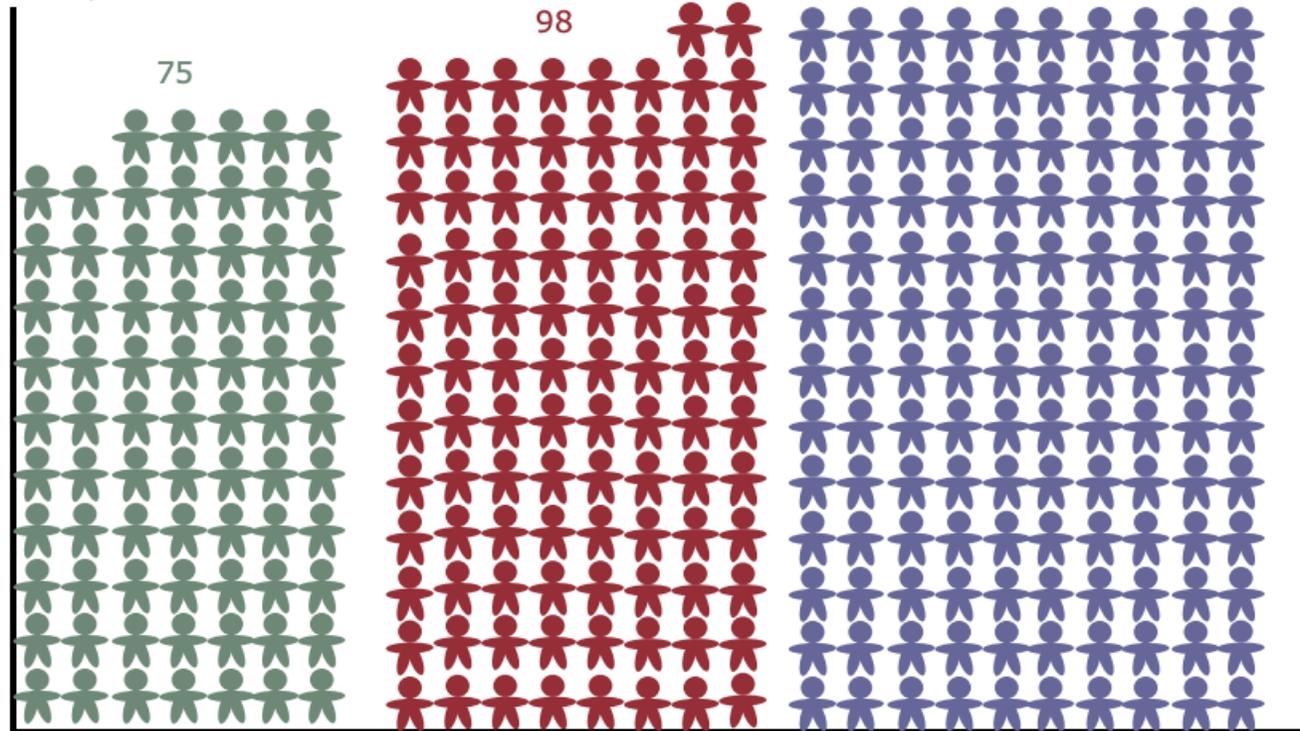


Population Health: Young Children at Risk



Sources of Toxic Stress in Young Children

U.S. Children Ages 2-5
(per 1,000)



Maltreatment

Parental Substance Abuse

Postpartum Depression

Source: Finkelhor et al. (2005)

Source: SAMHSA (2002)

Source: O'Hara & Swain (1996)

High Value / High Performing Medical Homes

Well-Child Visits

- Comprehensive well child visits as required under EPSDT.
- Adherence to AAP Bright Futures scope and schedule.
- Screening for physical, developmental, social-emotional-behavioral health, maternal depression and other social determinants of health.
- Anticipatory guidance and parent education, as required in EPSDT and Bright Futures.
- Family engagement, focused on two-generation approaches to ensuring child health
- Other primary care practice augmentations (e.g., Reach Out and Read).

Care Coordination / Case Management

- Individualized, with intensity commensurate with need.
- Routine care coordination for all as part of medical home.
- Intensive care coordination/case management for those with higher needs identified.
- Structured, family-focused approach to assess and respond to medical and non-medical health-related needs.
- Linkages to community resources, with active identification and engagement of those resources.

Other Services

- Child/family support programs, including those designed to be collocated in primary care (e.g., Healthy Steps, Project DULCE).
- Integrated behavioral health in primary care setting.
- Referrals to and integration with other services such as home visiting, family support, early intervention, early childhood mental health, and other programs.

The Ascendance of Early Relational Health (ERH)

Relational health is defined as the capacity for and ongoing engagement in growth-fostering, empathetic and empowering interpersonal interactions.



Early Relational Health: Positive, nurturing and stimulating early relationships build the foundations for a lifetime of relational health, along with its associated impacts on physical health, well-being and resilience

Bio-behavioral synchrony and dyadic neurodevelopment

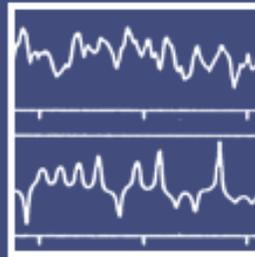
Bio-behavioral synchrony in human attachments



Behavioral Synchrony

Synchronized behavior in gaze, affect, vocal, and touch

Mother-specific
Father-specific



Heart Rate Coupling

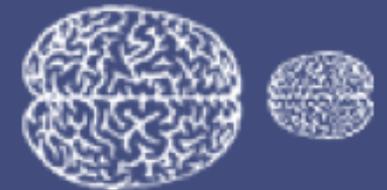
Synchronized HR during synchronized interactions



Endocrine Fit

Coordinated OT response following contact

Coordinated cortisol response to stress



Brain to Brain Synchrony

Coordinated brain oscillations in alpha and gamma rhythms

Feldman, Ruth., The Neurobiology of Human Attachments, Trends in Cognitive Science, Feb 2017.

Feldman, Ruth., The Neurobiology of Human Attachments, Trends in Cognitive Science, Feb 2017.

www.CSSP.org

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Early Relational Health in Action

- Reach Out and Read (ROR)
- Promoting First Relationships in Pediatrics (PFR)
- Triple P Positive Parenting Program
- Video Interaction Project (VIP)
- Early Relational Health Screen (ERHS) and video feedback
- Welch Emotional Connection Scale (WECS)
- Filming Interactions to Nurture Development (FIND)
- Evidence-based home visiting
- Healthy Steps and DULCE



MIECHV Program

A Comprehensive Early Childhood System



Results that a Comprehensive Early Childhood System Should Deliver:

Early Learning and Development: Nurturing relationships, environments, and enriching experiences that foster learning and development.

Health: Comprehensive services that promote children's physical, developmental, and mental health.

Family Leadership and Support: Resources, experiences, and relationships that strengthen families, engage them as leaders, and enhance their capacity to support children's well-being.

Source: Build Initiative, The Early Childhood Systems Working Group (www.buildinitiative.org)

For definitions of terms commonly used in the toolkit, please refer to the glossary on page 8.



For more information:

David W. Willis, MD FAAP

Center for the Study of Social Policy

david.willis@cssp.org

DC | HEALTH

Promoting Maternal and Child Health through Collaboration

Djinge Lindsay, MD, MPH
Senior Medical Advisor
Community Health Administration

COMMUNITY HEALTH ADMINISTRATION

To promote healthy behaviors and healthy environments in order to improve health outcomes and reduce disparities in the leading causes of death and disease in the District.

PUBLIC HEALTH 3.0:
CHIEF HEALTH STRATEGIST

- Provide strategic direction
- Convene and guide strategic partnerships
- Build capacity within community

THE DISTRICT STRATEGY TO IMPROVE PERINATAL HEALTH OUTCOMES



EVERY TEENAGE GIRL AND WOMAN in DC is in control of her reproductive health.



EVERY PREGNANT WOMAN receives patient-centered, high quality prenatal care beginning in the 1st trimester.



EVERY HEALTHCARE PROVIDER has the tools and resources they need to provide quality care and manage complex social needs of women and infants.



EVERY HEALTHCARE FACILITY providing maternal and infant care has the tools and resources to practice evidence based health care and to document QI/QA activities.



EVERY NEWBORN receives high-quality neonatal care in the hospital and outpatient setting.



EVERY PARENT has the life skills and resources needed to nurture and provide for their family.

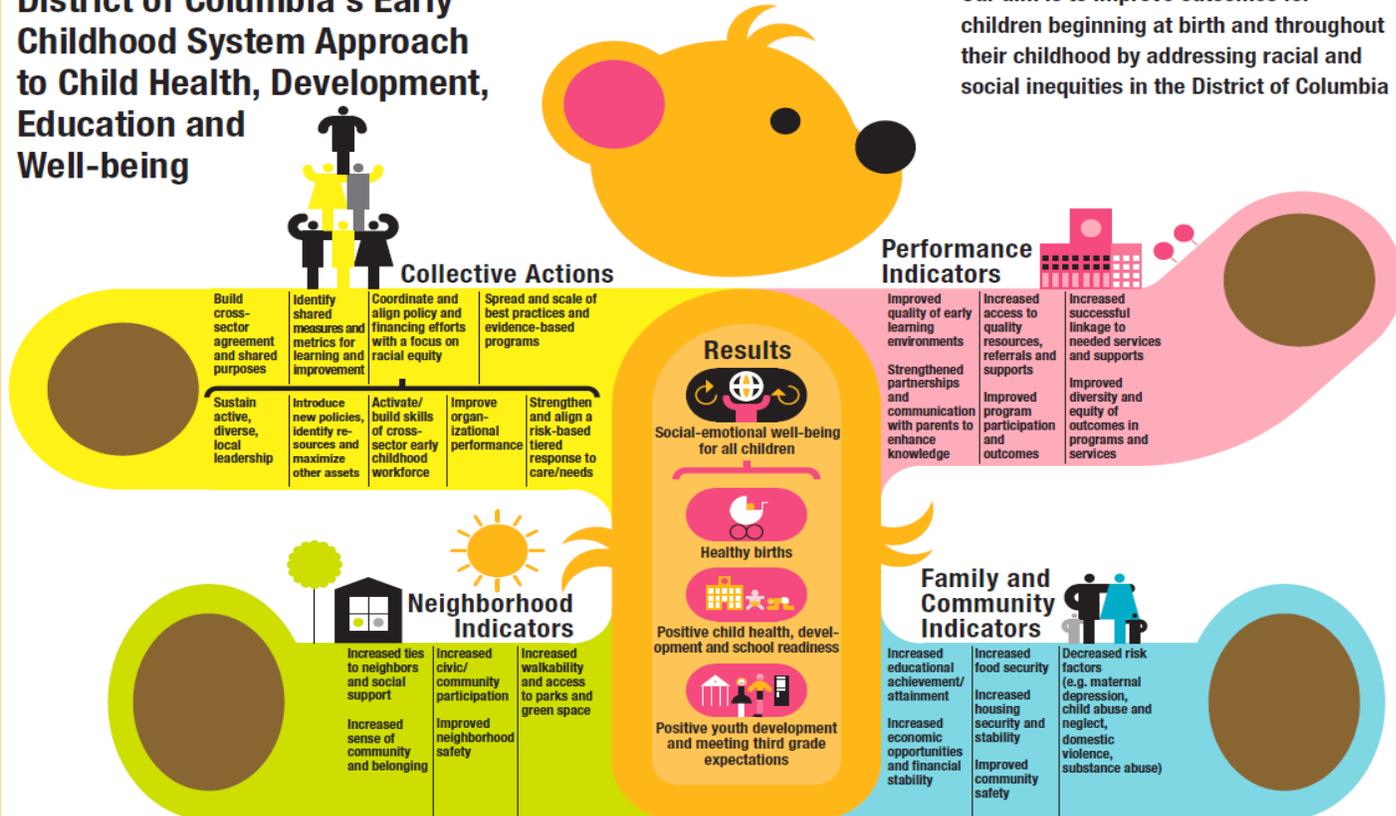


EVERY INFANT, MOM, AND DAD has a safe and healthy environment to thrive and receive the support they need to promote early childhood development and learning.

DISTRICT OF COLUMBIA'S EARLY CHILDHOOD SYSTEM APPROACH TO CHILD HEALTH, DEVELOPMENT, EDUCATION AND WELL-BEING

District of Columbia's Early Childhood System Approach to Child Health, Development, Education and Well-being

Our aim is to improve outcomes for children beginning at birth and throughout their childhood by addressing racial and social inequities in the District of Columbia



We want to acknowledge the State Early Childhood Development Coordinating Council for its leadership and vision toward an early childhood system approach and to the Quality Improvement Network Interagency Steering Committee for its commitment and engagement in the design details and content. We also acknowledge our partners at the Early Childhood Innovation Network, Raise DC and other early childhood stakeholders (e.g., providers, parents, local education agencies, advocacy groups, etc.) for their valuable contributions and feedback along the way. Finally, we are grateful to the UCLA Center for Healthier Children, Families and Communities and the national BUILD Initiative for providing us excellent technical assistance, critical feedback and guidance throughout the development and design process.



FEDERAL INVESTMENTS



DC Health

- Title V Maternal and Child Health Services Block Grant Program
- Healthy Start
- Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV)



DC Office of the State Superintendent of Education

- Preschool Development Grant (PDG)
- Early Head Start - Child Care Partnerships (Quality Improvement Network)



DC Child and Family Services Agency

- Families First
- Community-Based Child Abuse Prevention (CBCAP) Grants

LOCAL LEGISLATION AND INVESTMENT

Local Budget Items

- Preterm Birth Reduction (17P) Pilot
- Home Visiting Funds
- Promoting engagement with medical homes
- School Health Programs

Birth-to-Three for All DC Act of 2018

- Healthy Steps
- Healthy Futures - *Early Childhood Mental Health Consultation*
- Lactation Certification Preparatory Program
- Expands Early Head Start for homeless and immigrant families

EVERY COMMUNITY UNDERSTANDS ITS HEALTH RISKS AND ROLE IN IMPROVING PERINATAL HEALTH OUTCOMES



EVERY TEENAGE GIRL AND WOMAN
in DC is in control of her reproductive health.



EVERY PREGNANT WOMAN
receives patient-centered, high quality prenatal care beginning in the 1st trimester.



EVERY HEALTHCARE PROVIDER
has the tools and resources they need to provide quality care and manage complex social needs of women and infants.



EVERY HEALTHCARE FACILITY
providing maternal and infant care has the tools and resources to practice evidence based health care and to document QI/QA activities.



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EVERY PARENT
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EVERY INFANT, MOM, AND DAD
has a safe and healthy environment to thrive and receive the support they need to promote early childhood development and learning.

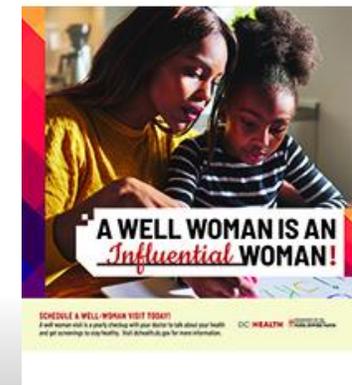
IMPROVING PRECONCEPTION HEALTH



EVERY TEENAGE
GIRL AND WOMAN
in DC is in control of her
reproductive health.

- One Key Question[®]
 - SBHCs, Healthy Start, MIECHV
 - Community health centers
- School Health Programs
 - School Health Services (Nursing)
 - School Based Health Centers
- Well Woman Campaign
- Teen Pregnancy Prevention
 - Positive Youth Development

Well-Woman Visits



ASSURING HIGH-QUALITY HEALTH SERVICES



EVERY PREGNANT WOMAN

receives patient-centered, high quality prenatal care beginning in the 1st trimester.



EVERY HEALTHCARE PROVIDER

has the tools and resources they need to provide quality care and manage complex social needs of women and infants.



EVERY HEALTHCARE FACILITY

providing maternal and infant care has the tools and resources to practice evidence based health care and to document QI/QA activities.



EVERY NEWBORN

receives high-quality neonatal care in the hospital and outpatient setting.

- Preterm Birth Reduction Pilot
- Healthy Steps
 - Integrated into Place Based Initiatives
- Newborn Screening
 - Hearing, Metabolic, Hep B, HIV
- Care Transformation (CaT) Initiative
 - Leverage work of federally funded Primary Care Office
 - Local funds support QI for patient experience and clinical measures

STRENGTHENING FAMILIES



EVERY PARENT

has the life skills and resources needed to nurture and provide for their family.

- Help Me Grow DC
- Perinatal Support Programs
 - MIECHV (EBHV)
 - Healthy Start (Doula/CHW)
 - Local Home Visiting (Promising Practices)

PROMOTING HEALTHY ENVIRONMENTS



EVERY INFANT,
MOM, AND DAD

has a safe and healthy environment to thrive and receive the support they need to promote early childhood development and learning.

- Place Based Initiatives
 - Smart From the Start
 - Neighborhood Family Champion
- Youth Advisory Council
 - Violence prevention strategies



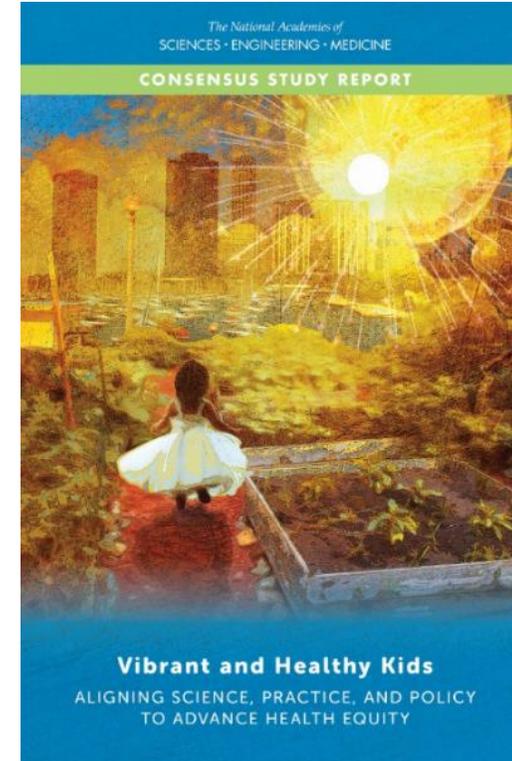
MAYOR MURIEL BOWSER'S MATERNAL & INFANT HEALTH SUMMIT



New Report from the National Academies

Vibrant and Healthy Kids: Aligning Science, Practice, and Policy

<http://www.nationalacademies.org/vibranthealthykids>



Committee Members

Jennifer E. DeVoe (Chair)*

Oregon Health & Science University

Cynthia García Coll

University of Puerto Rico

Elizabeth E. Davis*

University of Minnesota

Nadine Burke Harris*

Surgeon General, State of California

Iheoma U. Irukaa

*HighScope Educational Research
Foundation*

Pat R. Levitt*

*Children's Hospital Los Angeles; Keck
School of Medicine of USC*

Michael C. Lu

The George Washington University

Suniya S. Luthar

Arizona State University

Amy Rohling McGee

Health Policy Institute of Ohio

Myra Parker

University of Washington

James M. Perrin

*Harvard Medical School; Mass General
Hospital for Children*

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University of Maryland, College Park

Albert Wat*

Alliance for Early Success

Bill J. Wright

*Providence Health System Center for
Outcomes Research and Education*

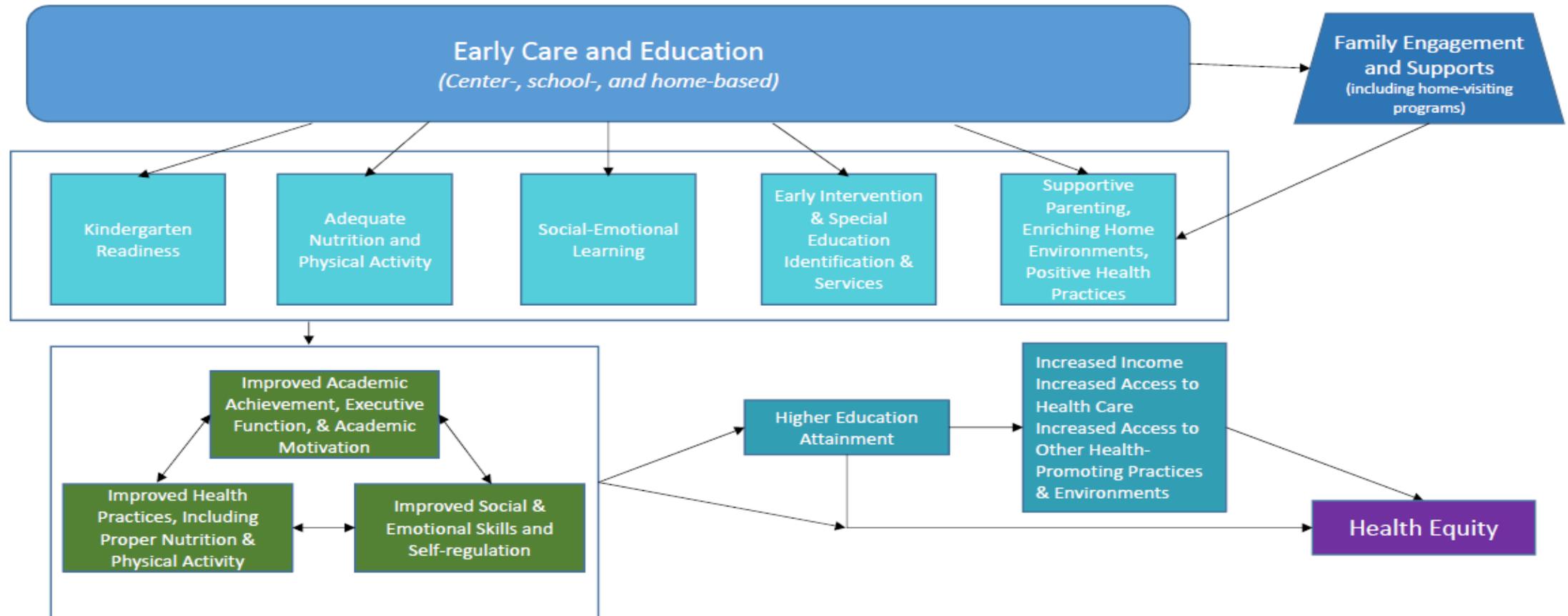
Statement of Task

1. Provide a brief overview of early life stressors that affect prenatal through early childhood development and health;
2. Identify promising models and opportunities for translation of the science to action;
3. Identify outcome measures needed to enable analyses based on the biological dynamics of the social determinants of health;
4. Develop a roadmap to apply the science to tailored interventions (i.e., policies, programs, or system changes) based on biological, social, environmental, economic, and cultural needs; and
5. Provide recommendations in these areas, including how systems can better align to advance health equity.

The Report in Brief

- **Lessons from the science of early development** are clear and actionable. *Chapters 1 & 2*
- Over time, **biological psychological and socio-behavioral development interact** to shape the way health develops over the life course. *Chapter 2*
- **Biology and environment work together** to affect children's growth and development. *Chapters 2 & 3*
- Ensuring **the well-being of caregivers** by supporting and caring for them is critical for healthy child development. *Chapter 4*
- **Preconception, prenatal, postpartum, and pediatric care** needs to be reconceptualized to address the root causes of health inequities and meet the developing needs of children & families. *Chapter 5*
- Families need adequate resources available for **meeting basic needs**, especially when children are young. *Chapter 6*
- **Early care and education can be a platform for delivery or supporting services and interventions to advance health equity.** *Chapter 7*
- To advance health equity and meet the developmental needs of children, **a systems approach, including collaboration and alignment across sectors**, is needed. *Chapter 8*

Early Care and Education and Health



ECE *can* be a platform for health promotion and health equity . . . *if* . . .

- There's intentional inclusion of health-related goals, standards, and supports
 - Provision of services or referrals
 - Evidence-based social-emotional learning curriculum or intervention, with implementation supports
 - Well-trained and competent early childhood educators – culturally-responsive, trauma-informed, mental health, etc.
 - Well-supported early childhood educators – working conditions, compensation, etc.
 - Evidence-based family engagement
- PLUS, adequate resources to support above elements
- PLUS, adequate resources to reach eligible children

ECE Recommendations

Allocation of Adequate Resources to Support ECE Programs and Educators

Recommendation 7-1: The committee recommends that ECE systems and programs, including home visiting, adopt a comprehensive approach to school readiness. This approach should explicitly incorporate health promotion and health equity as core goals. Implementing this approach would require the following actions:

- Federal, state, local, tribal, and territorial governments and other public agencies (e.g., school districts, city governments, public-private partnerships) that have decision-making power over ECE programs should establish program standards and accountability systems, such as a quality rating and improvement system, linked with better school readiness and health outcomes and provide adequate funding and resources to implement and sustain these standards effectively.

ECE Recommendations

Allocation of Adequate Resources to Support ECE Programs and Educators

- The Office of Child Care and the Office of Head Start at the federal level, along with state, local, tribal, and territorial early care and other education agencies, should assess the full cost of implementing standards that promote health outcomes and equity as described above, including supporting educators' own health and well-being, and work with Congress to align funding levels of the major federal ECE programs—child care subsidy and Head Start—accordingly.
- Health and human service entities, the federal Early Learning Interagency Policy Board, state Early Childhood Advisory Councils, and federal, state, local, tribal, and territorial agencies that oversee home visiting and ECE programs should ensure greater programmatic coordination and policy alignment to ensure effective allocation of resources.

ECE Recommendations

Allocation of Adequate Resources to Support ECE Programs and Educators

- The Office of Planning & Research, and Evaluation in the Administration for Children and Families along with the U.S. Department of Education, should examine the feasibility and seek resources to conduct (a) an implementation study to examine the design and implementation of this comprehensive ECE approach that incorporates health standards and (b) an outcomes study that examines the impact on children's school readiness and achievement, and health outcomes, with particular attention to eliminating disparities and gaps prior to school entry.

ECE Recommendations

Health-Focused Competencies of the ECE Workforce

Recommendation 7-2: Building off the 2015 Institute of Medicine and National Research Council report Transforming the Workforce for Children Birth Through Age 8, the committee recommends that degree granting institutions, professional preparation programs, and providers of ongoing professional learning opportunities develop or strengthen coursework or practicums that focus on competencies of educators, principals, and early care and education program directors that are critical to children's health, school readiness, and life success.

ECE Recommendations

Access and Affordability to ECE Programs

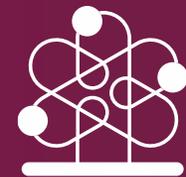
Recommendation 7-3: Federal, state, local, tribal, and territorial policy makers should work with the U.S. Department of Health and Human Services (HHS), the Office of Head Start, and Office of Child Care develop and implement a plan to:

- a. improve the quality of early care and education (ECE) programs by adopting the health-promoting standards discussed in Recommendation 7-1, such as building on the performance standards of Early Head Start and Head Start, and
- b. within 10 years, expand access to such comprehensive, high-quality, and affordable ECE programs across multiple settings to all eligible children. Disproportionately underserved populations should be prioritized.

The Secretary of HHS should conduct a process evaluation to inform the expansion effort, and, once implemented, conduct rigorous and comparative outcomes studies to ensure that the expansion is having the intended impacts on children and families, with particular attention on what group(s) may be benefitting.

Audience Question and Answer

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