TTAC

NYC Early Childhood Mental Health

Training and Technical Assistance Center

Promoting 2-Generation Health during Infancy and the Perinatal Period: Synthesizing Clinical, Research, and Policy Perspectives

June 10,2024

TTAC
NYC Early Childhood Mental Health
Training and Technical Assistance Center

A Collaboration Between

NEW YORK CENTER FOR CHILD DEVELOPMENT

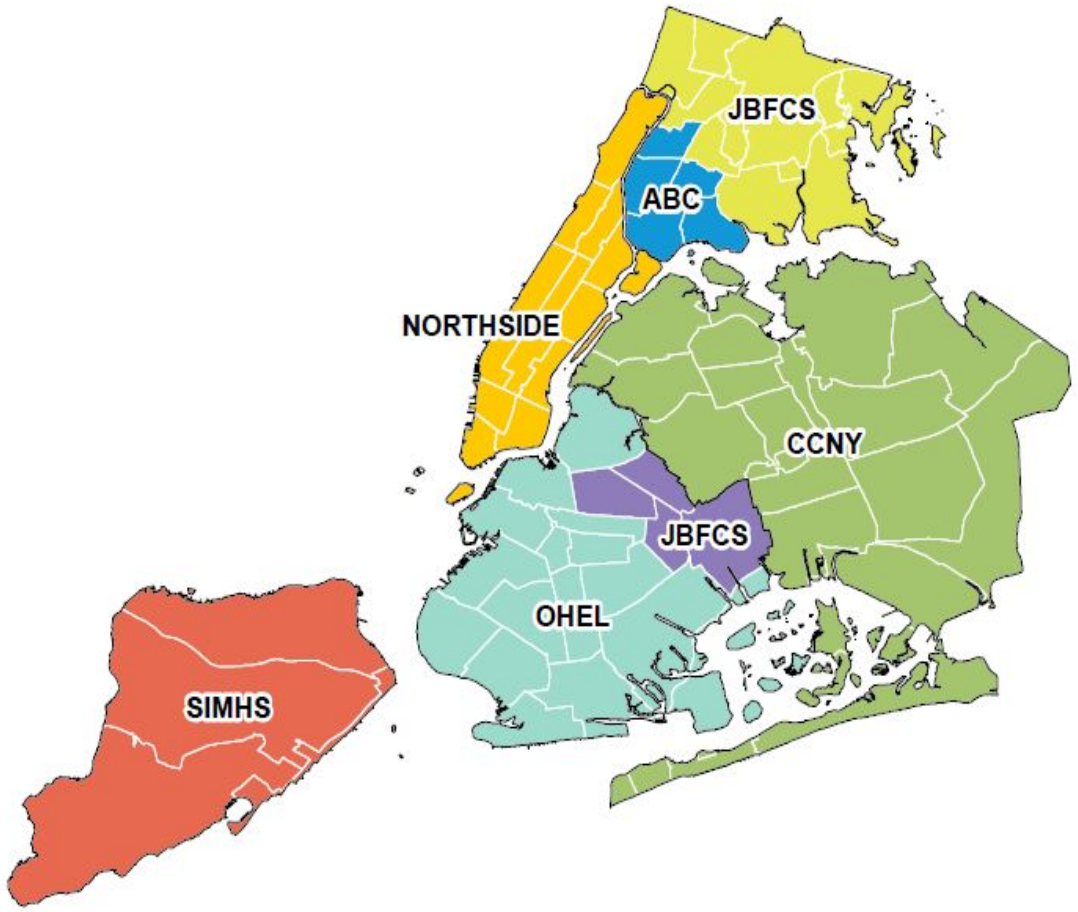
McSILVER INSTITUTE FOR POVERTY POLICY AND RESEARCH NEW YORK UNIVERSITY

NYC Health

Welcome Remarks:

Marnie Davidoff
Assistant Commissioner
Bureau of Children, Youth & Families
NYC Department of Health and Mental Hygiene

Overview of the ECMH Network



The NYC Early Childhood Mental Health Network is funded by the NYC Department of Health and Mental Hygiene and, since 2016, has built the capacity of outpatient clinics to address the mental health needs of children birth to five, their siblings, and their parents/caregivers in all five boroughs. Also within the ECMH Network is a citywide training and technical assistance center.

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TTAC: Who We Are

The New York City Early Childhood Mental Health Training and Technical Assistance Center (TTAC), is funded by the NYC Department of Health and Mental Hygiene (DOHMH)

TTAC is a partnership between the New York Center for Child Development (NYCCD) and the McSilver Institute on Poverty Policy and Research

- **New York Center for Child Development** is a major provider of early childhood mental health services in New York with expertise in informing policy and supporting the field of Early Childhood Mental Health through training and direct practice

- **NYU McSilver Institute for Poverty Policy and Research** houses the Community and Managed Care Technical Assistance Centers (CTAC & MCTAC), Peer TAC, and the Center for Workforce Excellence (CWE). These TA centers offer offer clinic, business, and system transformation supports statewide to all behavioral healthcare providers across NYS.

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NYC Health

Goals of TTAC

- TTAC is tasked with building capacity and competencies of mental health professionals and early childhood professionals in family serving systems to identify and address the social-emotional needs of young children and their families.
    - Healthy social emotional development for infants and toddlers is dependent on the quality and consistency of their relationships with parents and caregivers.
    - To address the mental health needs of infants and young children we need to support the health and mental health of the caregivers

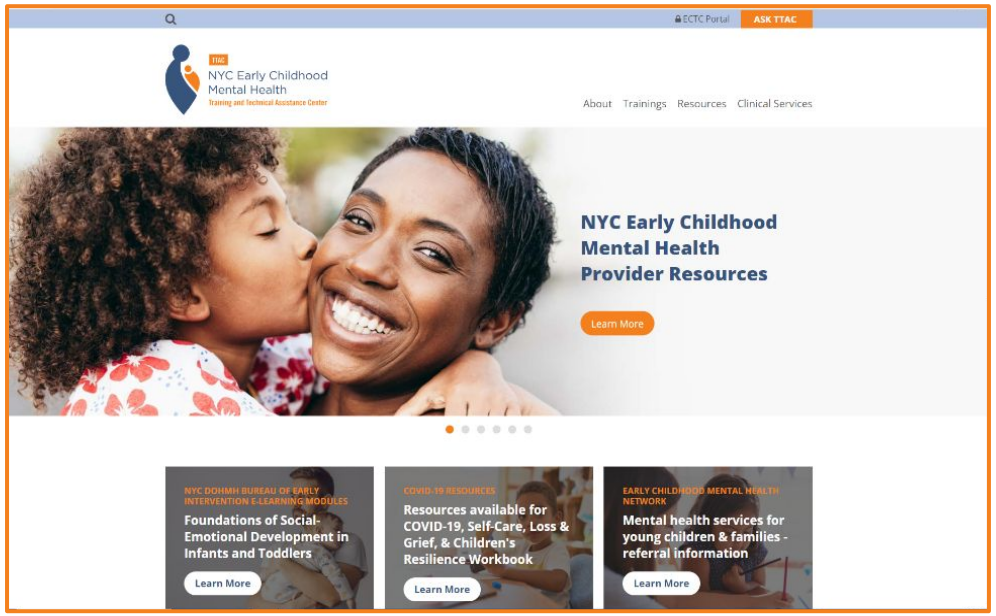
Integrating PMH into the ECMH Network

- In July 2023, DOHMH received funding to expand our perinatal mental health services
- Partnering with home visitors, doulas, nurses, social workers, community health workers, and action center staff
- Main components:
  - Service Expansion in the ECMH Network
  - Workforce Development through TTAC

Training for Early Childhood Professionals Across Child Serving Systems

- Have trained over **14,341** professionals as of March 2024.

- Developed a website where we have archived all our trainings with both the power-points and recordings



www.ttacny.org

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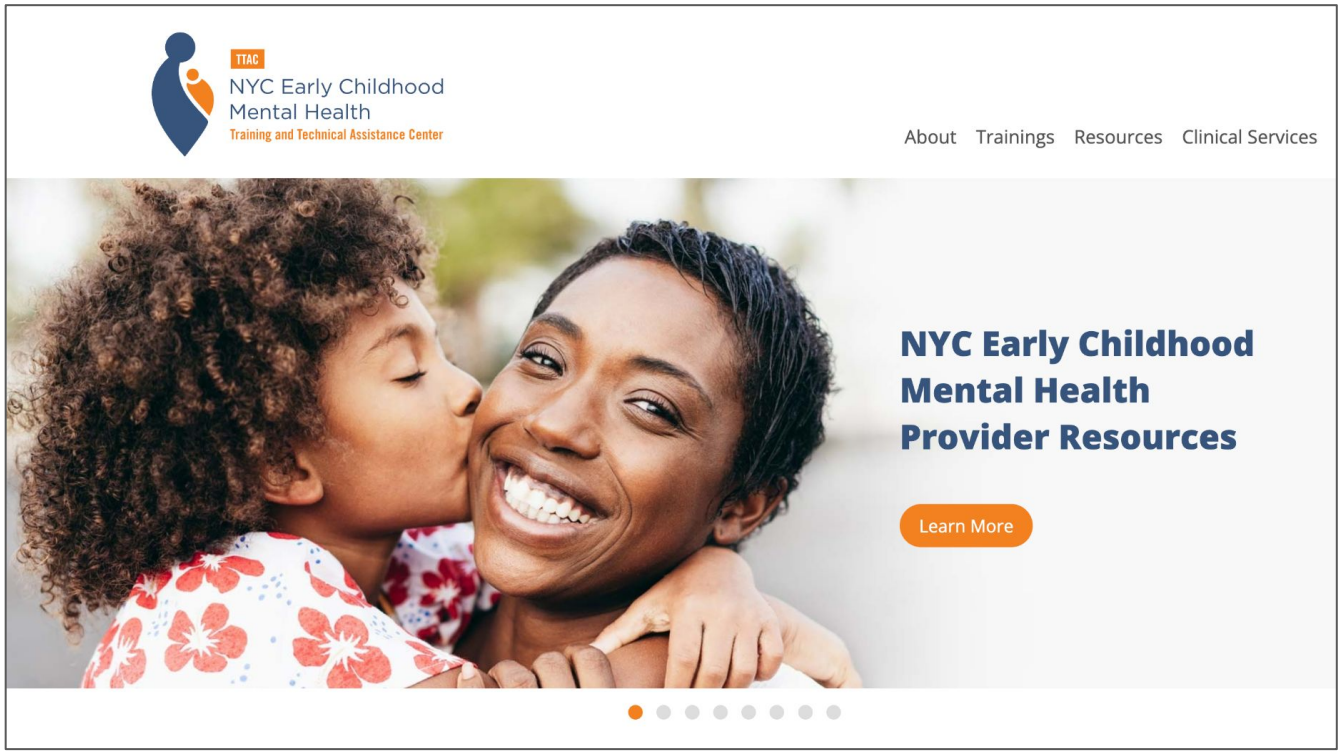
NYC Health

TTAC Website



Explore all the provider resources at ttacny.org

A Selection of Features:

- Seamlessly filter, toggle and search through upcoming and archived content, trainings and resources
- View videos, slides, and presenter information on the same training page
- Contact the TTAC team by clicking on Ask TTAC and filling out our Contact Us form
- And more!

Have questions or need assistance? Please contact us at **ttac.info@nyu.edu** and we'll be happy to assist you

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NYC Early Childhood
Mental Health
Training and Technical Assistance Center

NEW YORK CENTER FOR CHILD DEVELOPMENT

McSILVER INSTITUTE
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NEW YORK UNIVERSITY

Today’s Objectives

To explore cutting-edge research on the critical role of perinatal and parental mental health in fostering resilience and social-emotional well-being in infants and young children.

- **The Science of Strong Bonds:**
  - Learn how secure parent-child relationships lay the foundation for lifelong emotional health.
  - Gain insights into the impact of parental emotional resilience on child development.
  - Discover how perinatal mood and anxiety disorders (PMADs) can affect both parents and infants.

- **For All Who Support Families:**
  - Equip yourself with the latest therapeutic approaches for supporting expectant and new parents.
  - Explore innovative programs designed for pregnant individuals, parents, and parent-infant dyads.
  - Understand how to promote equity and address the disparities in opportunities and outcomes due to structural racism and discrimination

Explore how to translate research and best practices into effective policy changes

Today's conference will highlight four national experts.

- **Catherine Monk, PhD** - The Perinatal Period: Leveraging Neuroscience for 2-Gen Impact
- **Gloria Castro, PsyD** - Parental Mental Health during Pregnancy and Postnatal Period: The Impact on Attachment and Attunement
- **Obianuju "Uju" Berry, MD, MPH** - Intimate Partner Violence During the Perinatal Period: Meeting Our Families Where They Are
- **Cynthia Osborne, PhD** - Policy Issues to Support Infants, Toddlers and Caregivers During the Perinatal Period

The day will end with a panel of our four keynote speakers facilitated by TTAC's Clinical Co-DIrectors **Dr. Gil Foley and Dr. Susan Chinitz**

The Perinatal Period:

Leveraging Neuroscience for 2-Gen Impact

Catherine Monk, Ph.D.
Diana Vagelos, Professor of Women's Mental Health
Columbia University
Vagelos College of Physicians and Surgeons
New York, NY
2023 Aspen Ascend Fellow

COLUMBIA | OBSTETRICS AND GYNECOLOGY


Good Morning!

Overview

- Women's* mental health
- DOHaD and prenatal programming
- Interventions for 2 Gen Impact

Mental Health Conditions are Overall More Common in Women

Nearly 50% of US adult population develop at least one mental health disorder in their lifetime, women at higher risk

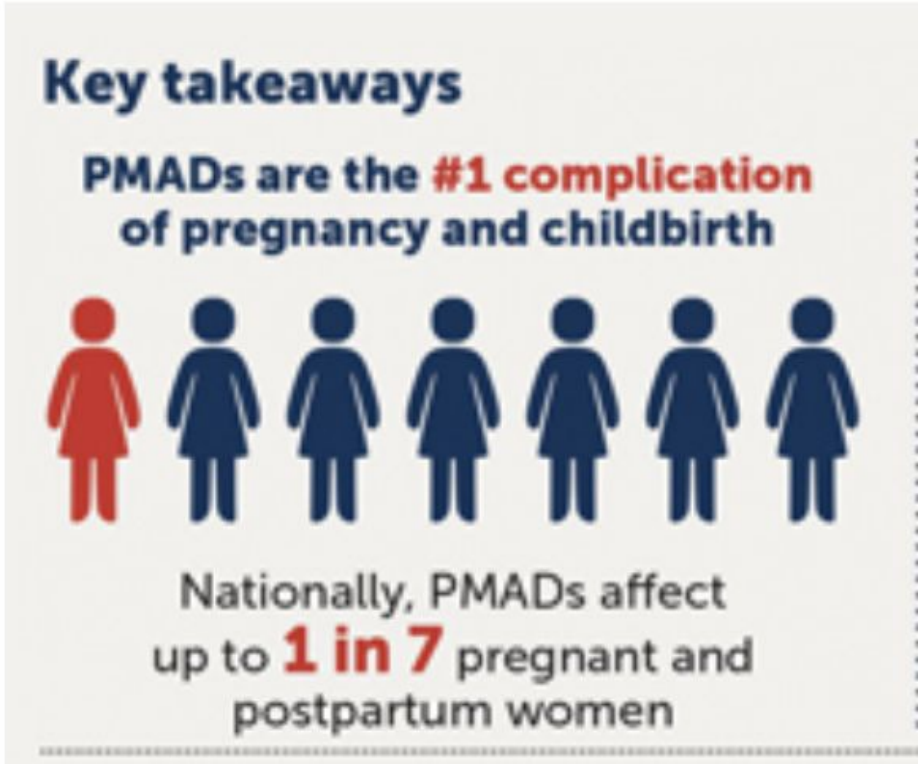
Major Depressive Disorder (MDD)

Anxiety Disorder

Perinatal Mood and Anxiety Disorders (PMADs) **Are Real**

Mathematica
Progress Together

PMAD = Perinatal Mood and Anxiety Disorders



https://www.mathematica.org/news/new-study-uncovers-the-heavy-financial-toll-of-untreated-maternal-mental-health-conditions

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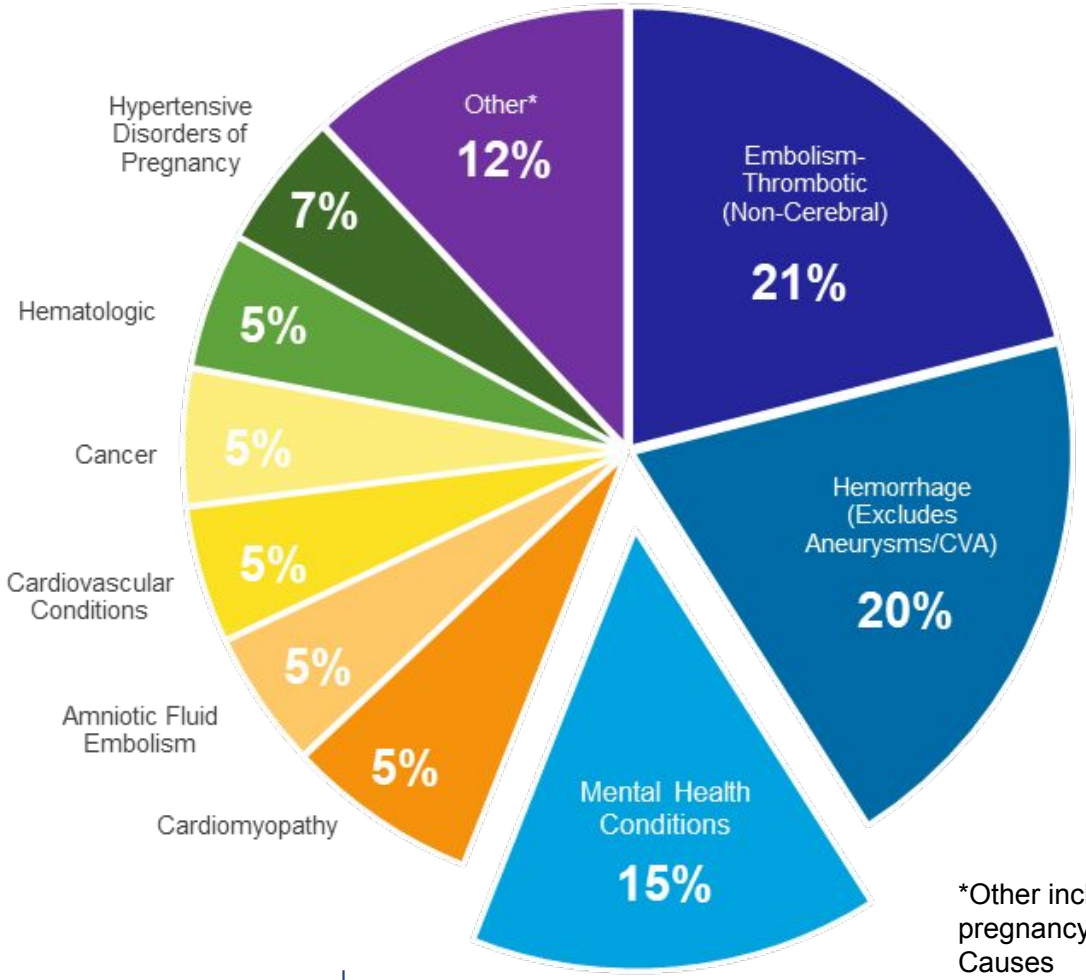
Leading Causes of Pregnancy-Related Deaths

2018 New York State Maternal Mortality Review, n=41



- Mental health conditions account for 15% of pregnancy-related deaths
- Deaths related to mental health conditions are **100% avoidable**

*Other includes Cerebrovascular Accident not secondary to Hypertensive Disorders of pregnancy, GI Disorders, Infection, Metabolic/Endocrine Disorders, and Unknown Causes

Source: NYS Maternal Mortality Review, 2018

What Contributes to Higher Rates of Mental Health Conditions in Women?

Social Science & Medicine
Volume 149, January 2016, Pages 1-8

Unequal depression for equal work? How the wage gap explains gendered disparities in mood disorders

Jonathan Platt, Seth Prins, Lisa Bates, Katherine Keyes

Stressors and trauma experiences women face:

- Disproportionate burden of the care economy
- Greater emotional stress balancing paid and unpaid labor
- More workplace discrimination
- Higher rates of childhood abuse and neglect
- Higher rates of sexual and intimate partner violence
- **And biological changes in puberty, pregnancy, menopause**

What Contributes to Higher Rates of Mental Health Conditions in Women?

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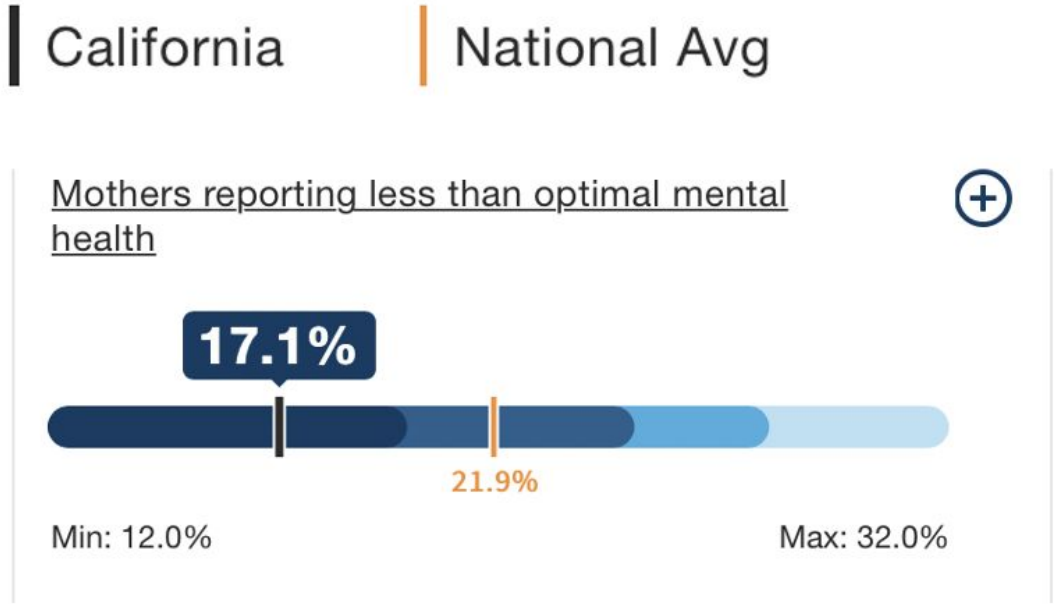

ZERO TO THREE
Early connections last a lifetime

think babies
Make their potential our priority.

STATE OF BABIES YEARBOOK 2022

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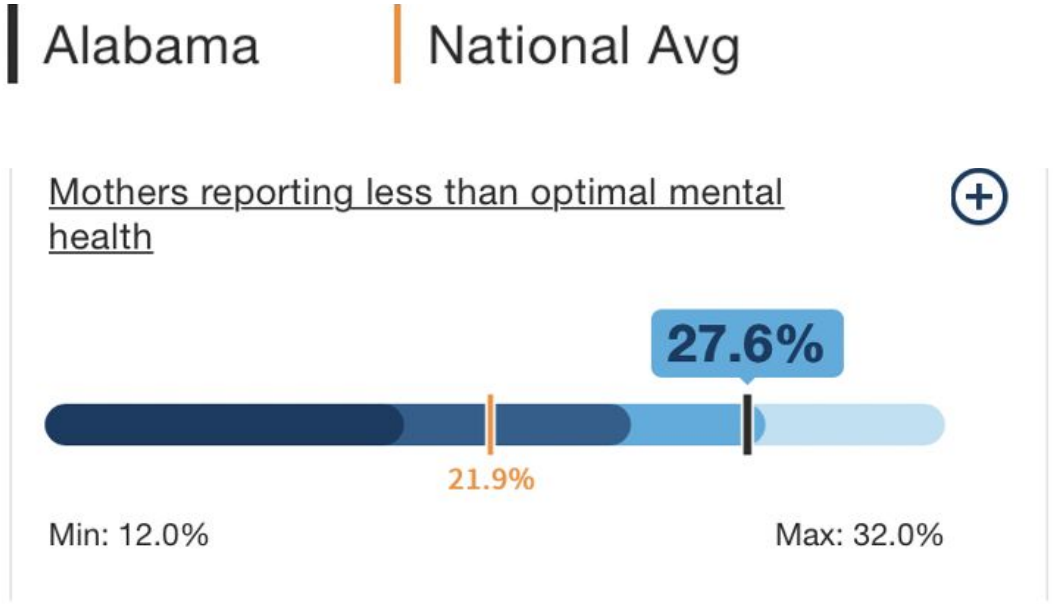
What Contributes to Higher Rates of Mental Health Conditions in Women?



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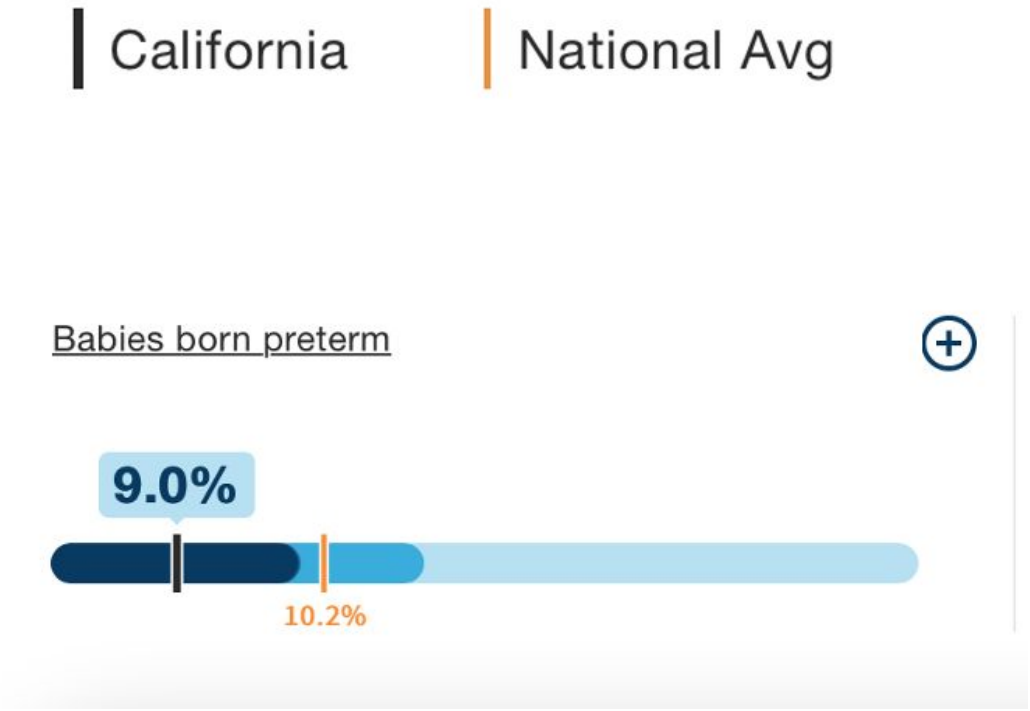

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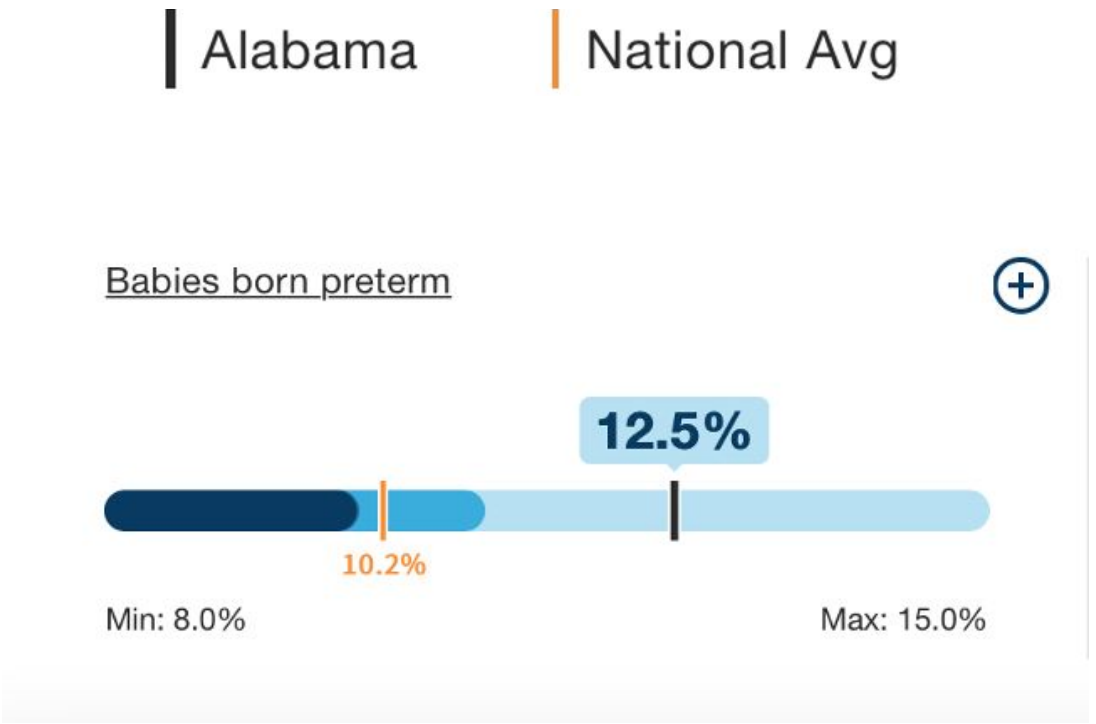

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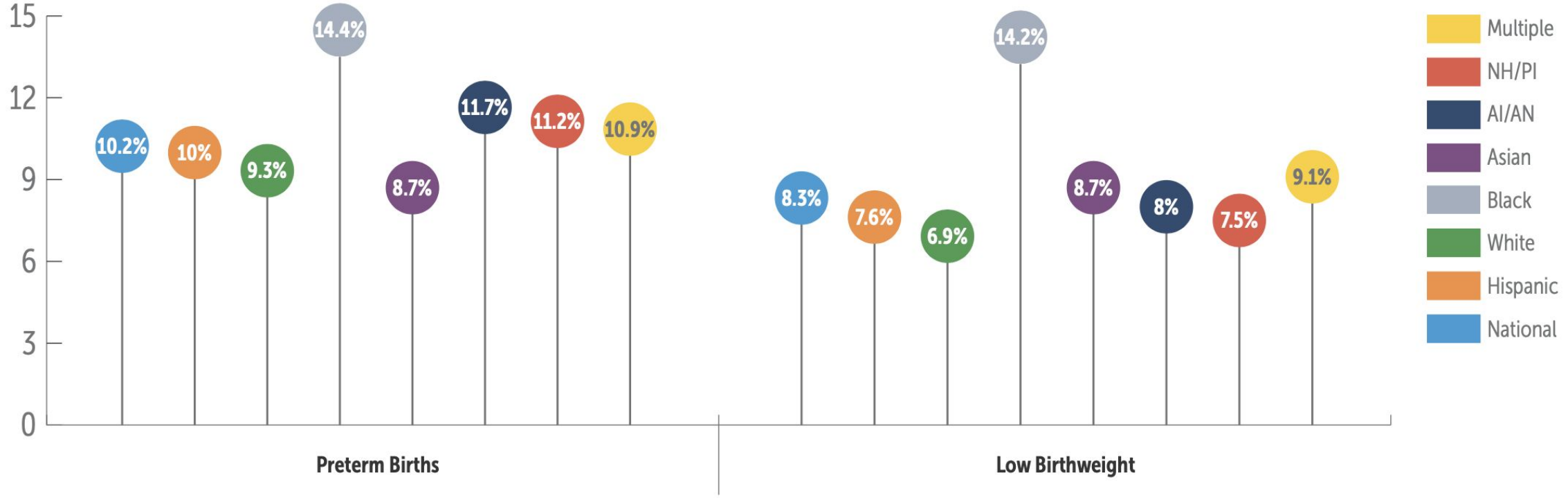
NEGATIVE BIRTH OUTCOMES BY RACE AND ETHNICITY Figure 6.



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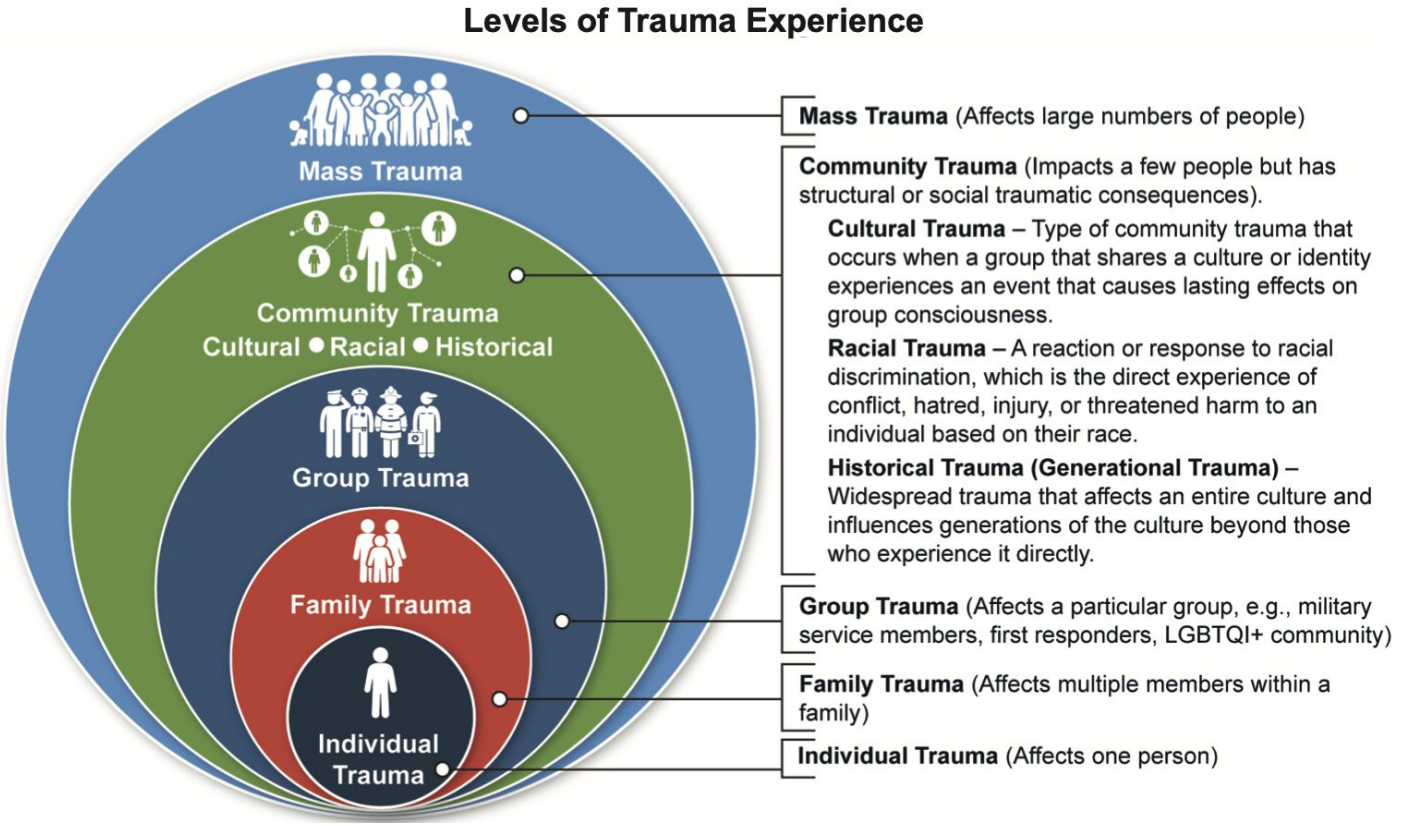
What Contributes to Higher Rates of Mental Health Conditions in Women?

Trauma



SAMHSA
Substance Abuse and Mental Health Services Administration

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What Contributes to Higher Rates of Mental Health Conditions in Women?

Impact of Trauma on Individuals

Emotional	Behavioral	Physical	Developmental	Cognitive	Interpersonal	Spiritual
• Difficulty regulating emotions • Emotional numbness • Depression and anxiety • Post traumatic stress disorder	• Substance use • Self-destructive behaviors • Avoidance of situations, people, and places	• Physical symptoms resulting from emotional distress, including headaches, high blood presssure, and fatigue • Hyperarousal resulting in muscle tension and insomnia	• Impact varies by age group • Children and elderly at greatest risk • Changes occur in brain development	• Impaired short-term memory • Decreased focus or concentration • Feeling alienated or ashamed • Dissociation, depersonalization, and derealization • Flashbacks or re-experiences of the event	• Withdrawal from family, friends, community • Difficulty trusting others	• Depression and loneliness can lead to feelings of abandonment and loss of faith • Over time can experience increased appreciation of life or enhanced spiritual well-being

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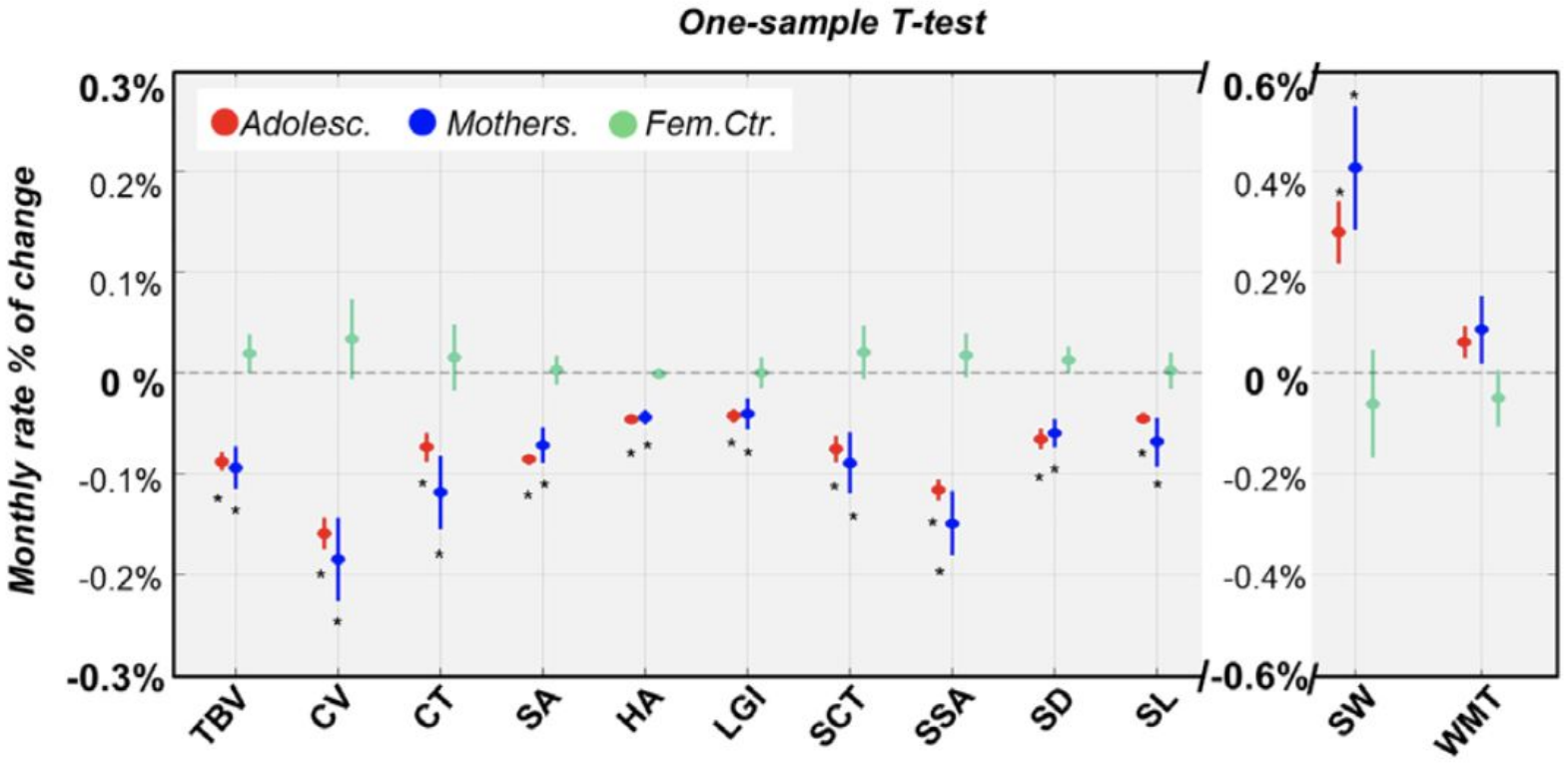
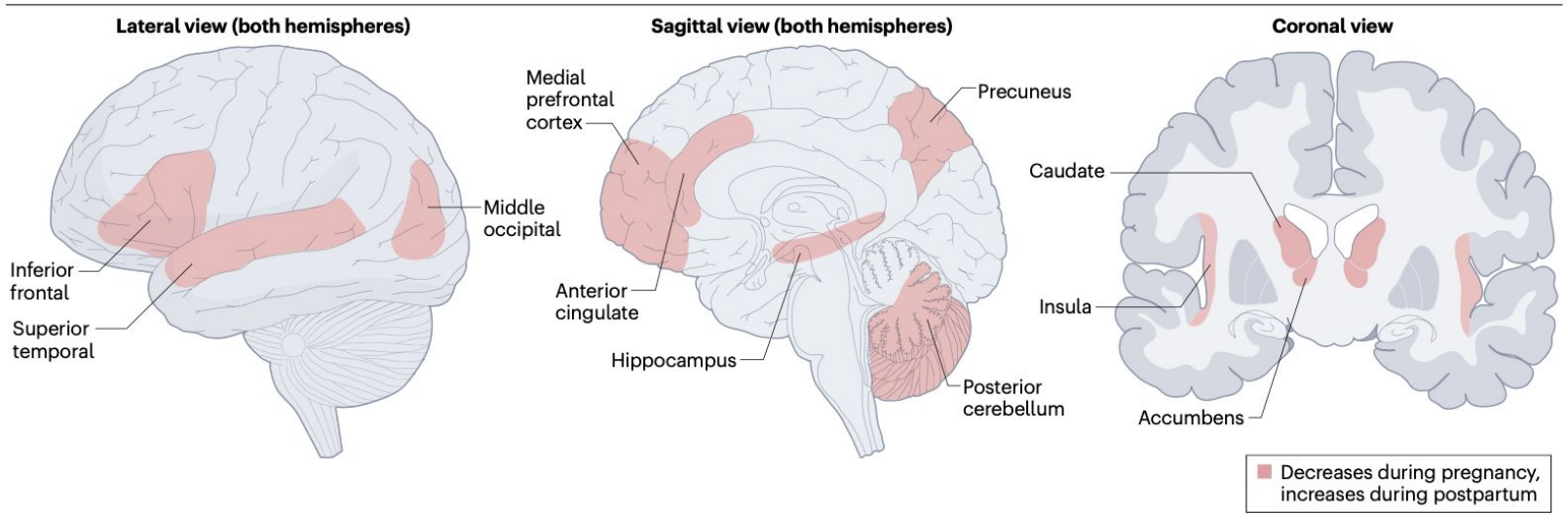
PMADs Are Real: Normative Changes in the Brain during the Transition to Motherhood



CT= cortical thickness; SA=surface area

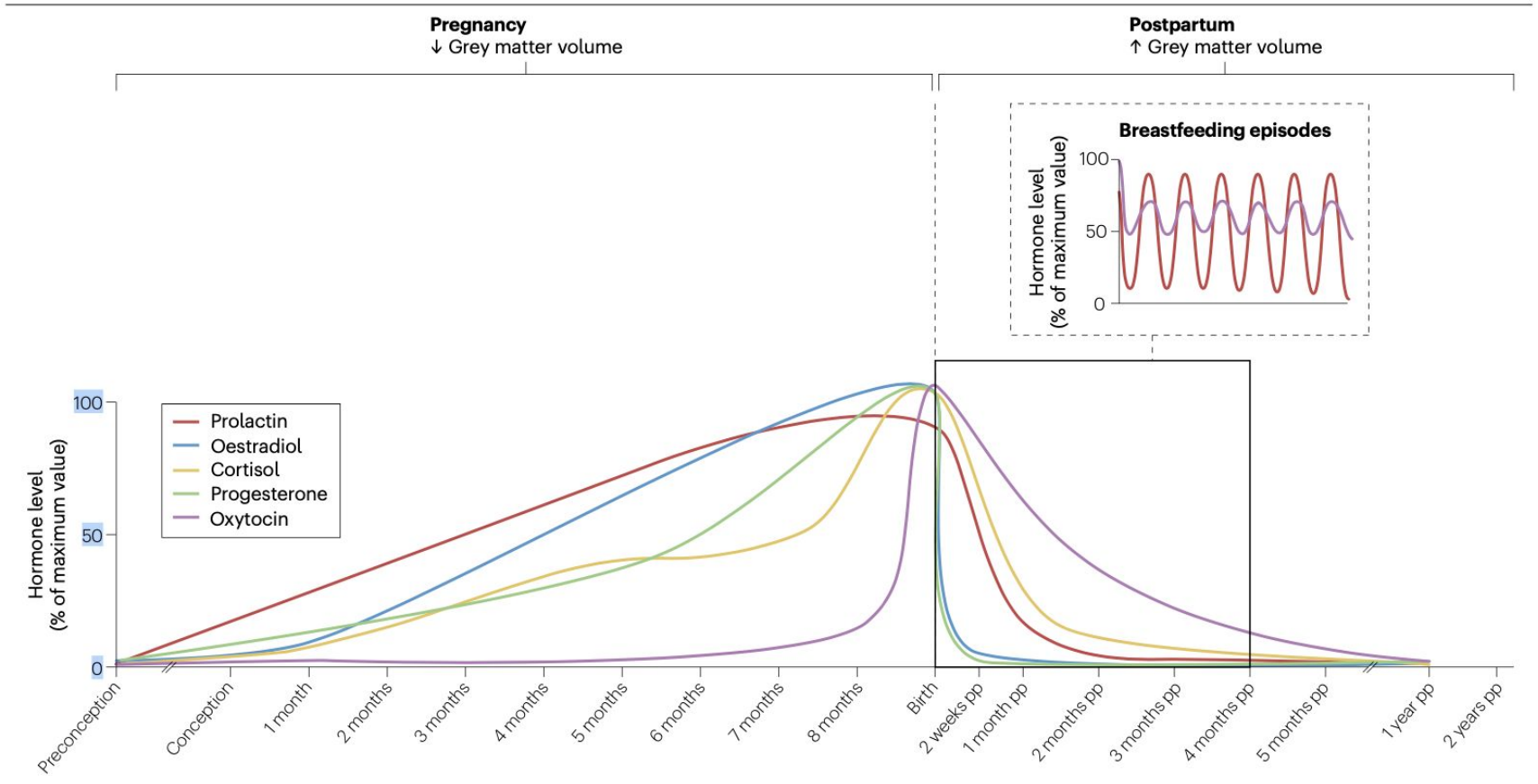
(Carmona et al., 2019)

PMADs Are Real: Normative Changes in the Brain during the Transition to Motherhood



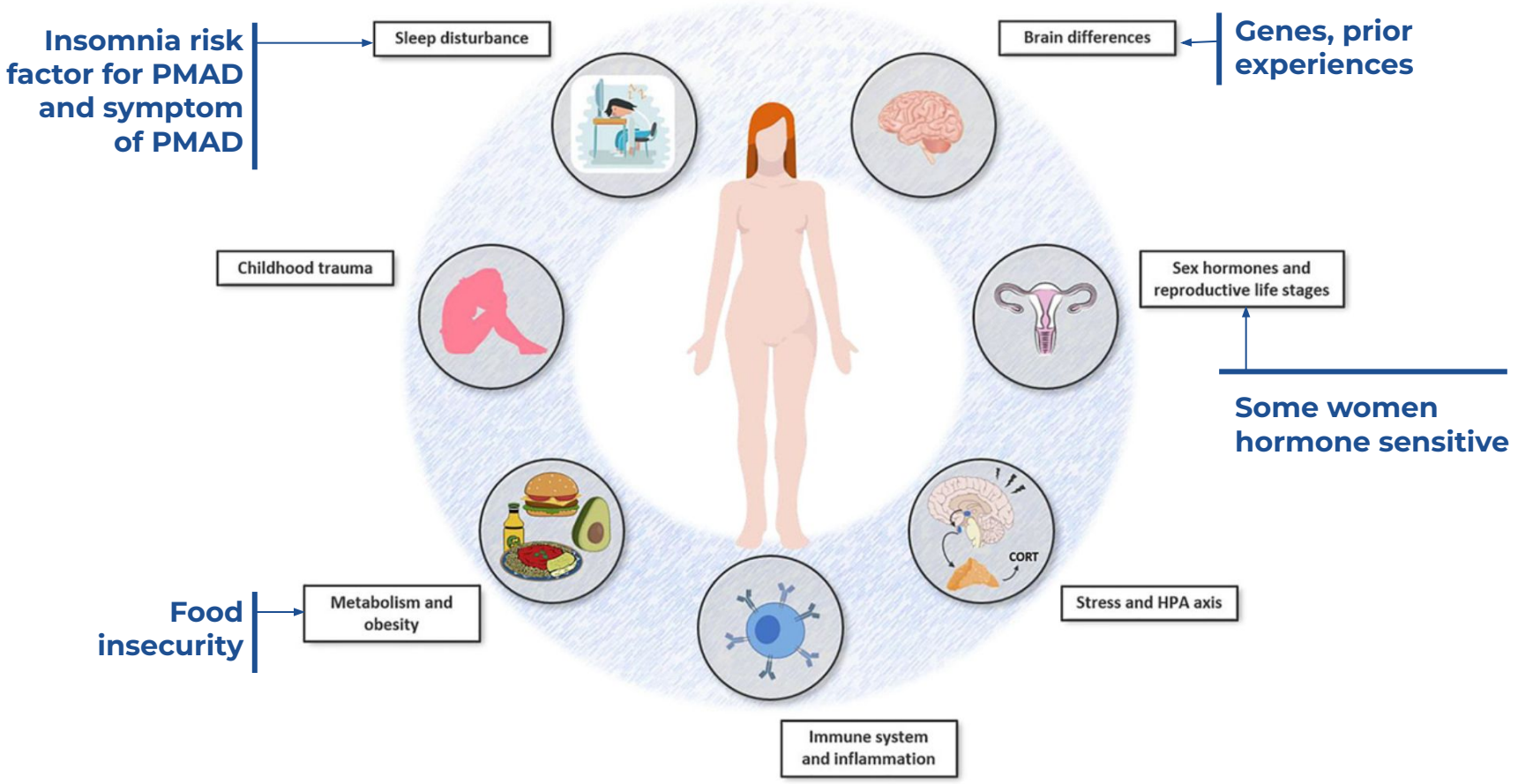
(Servin-Barthet et al., 2023)

PMADs Are Real: Normative Changes in Hormones during the Transition to Motherhood



(Servin-Barthet et al., 2023)

PMADs Are Real: Biological and psychological factors



(Grazia Di Benedetto et al., 2024)

The Perinatal Period = Time of Significant Brain and Hormone Changes in the Context of Life Circumstances

A Time of Vulnerability — Also of Opportunity

> “We are not going to forget about the baby while we take care of the mother.”
>
> Ramesh ‘Channi’ Kumar, Professor of Perinatal Psychiatry at the Institute of Psychiatry, King's College London

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"The womb is an influential first home."

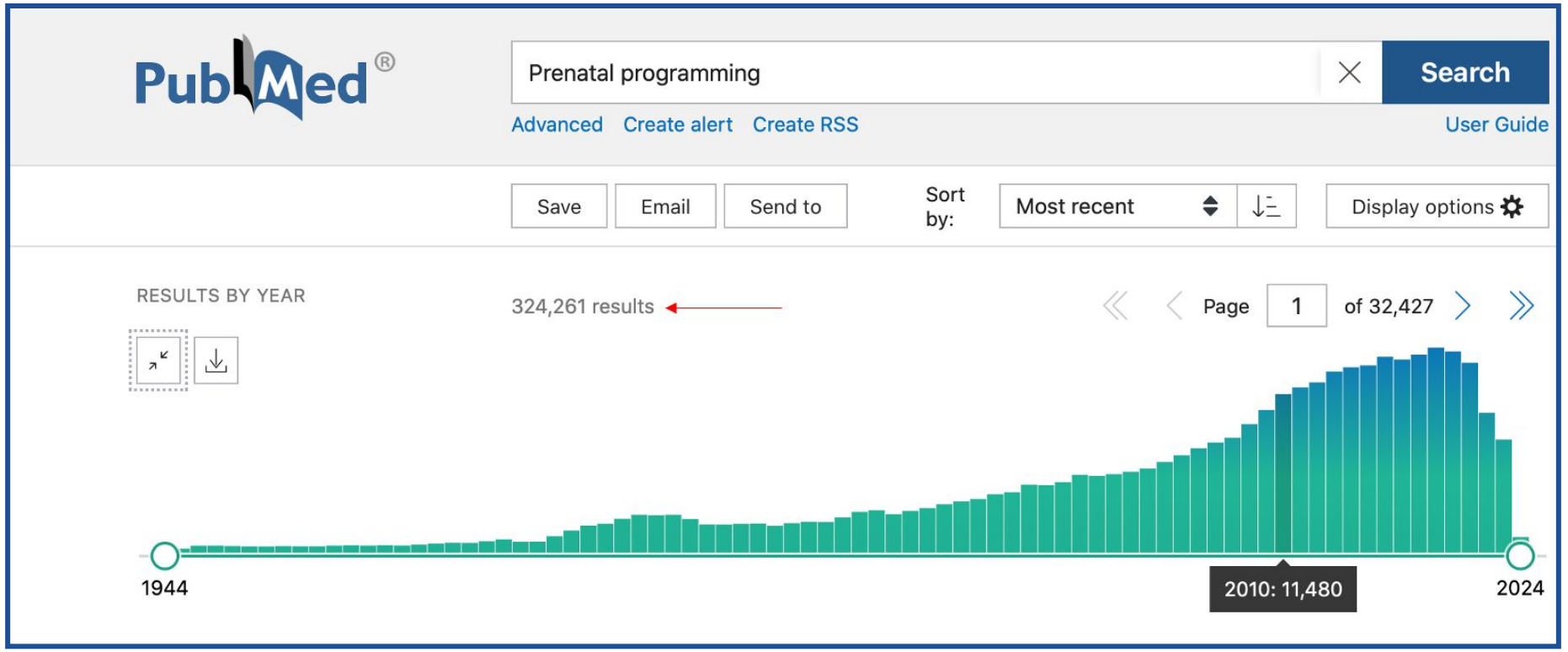
- David Barker,

PHYSICIAN AND EPIDEMIOLOGIST, 1938-2013

Developmental Origins of Health and Disease (DOHaD)

AKA, Prenatal Programming

Prenatal Programming Publications



Conceptual Model: Adaptation

The Wellcome Foundation Lecture, 1994. The fetal origins of adult disease

D. J. P. BARKER

MRC Environmental Epidemiology Unit, University of Southampton, Southampton General Hospital, Southampton, SO16 6YD, U.K.

SUMMARY

Recent findings suggest that many human fetuses have to adapt to a limited supply of nutrients and in doing so they permanently change their physiology and metabolism. These 'programmed' changes may be the origins of a number of diseases in later life, including coronary heart disease and the related disorders: stroke, diabetes and hypertension.

Proceedings Bio Sci (1995)

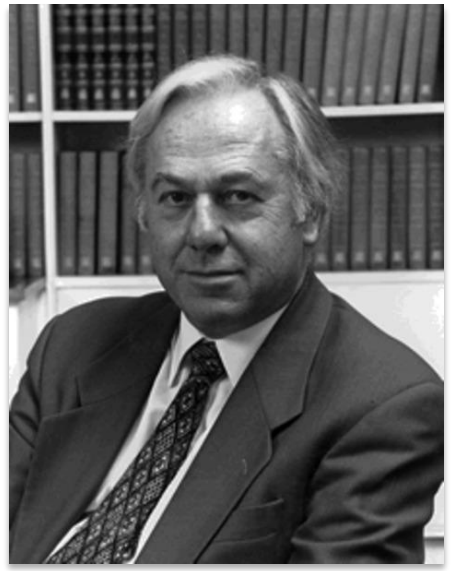
Public Health Nutrition: 4(2B), 611–624

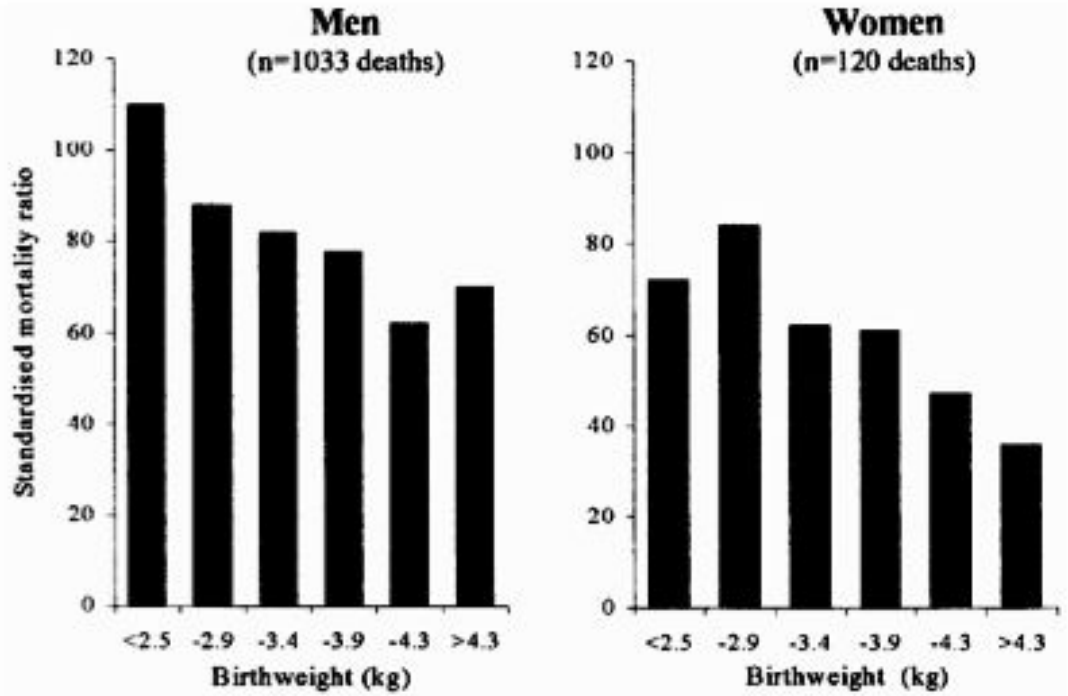
DOI: 10.1079/P

Fetal programming and adult health

Keith M Godfrey* and David JP Barker

MRC Environmental Epidemiology Unit, University of Southampton, Southampton General Hospital, Southampton, SO16 6YD, UK





Birthweight considered, in part, a consequence of fetal exposure to inadequate maternal nutrition

Fig. 1 Coronary heart disease death rates, expressed as standardized mortality ratios, in 10141 men and 5585 women born in Hertfordshire, UK according to birthweight[6]

Conceptual Model: Adaptation and an Evolutionary Perspective

- Prenatal maternal experiences are exposures that ‘forecast’ the postnatal environment
- Fetus responds with adaptations
- Improve fitness to a later stage in development

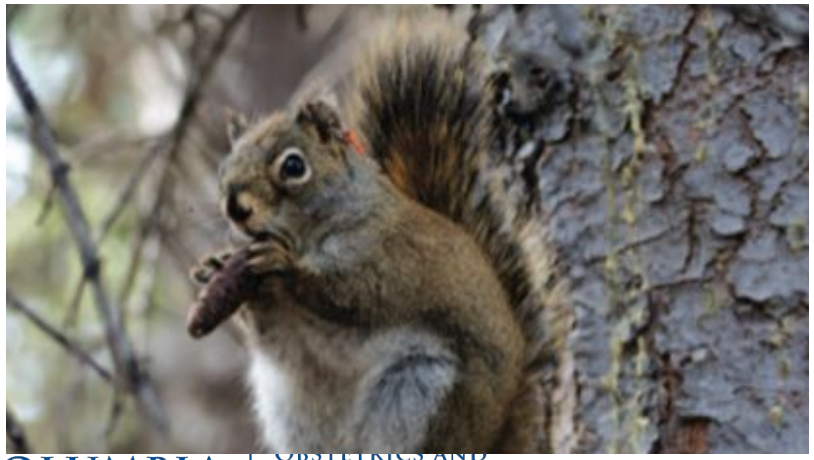
Health outcomes may result, in part, from the match between the prenatal and postnatal environments

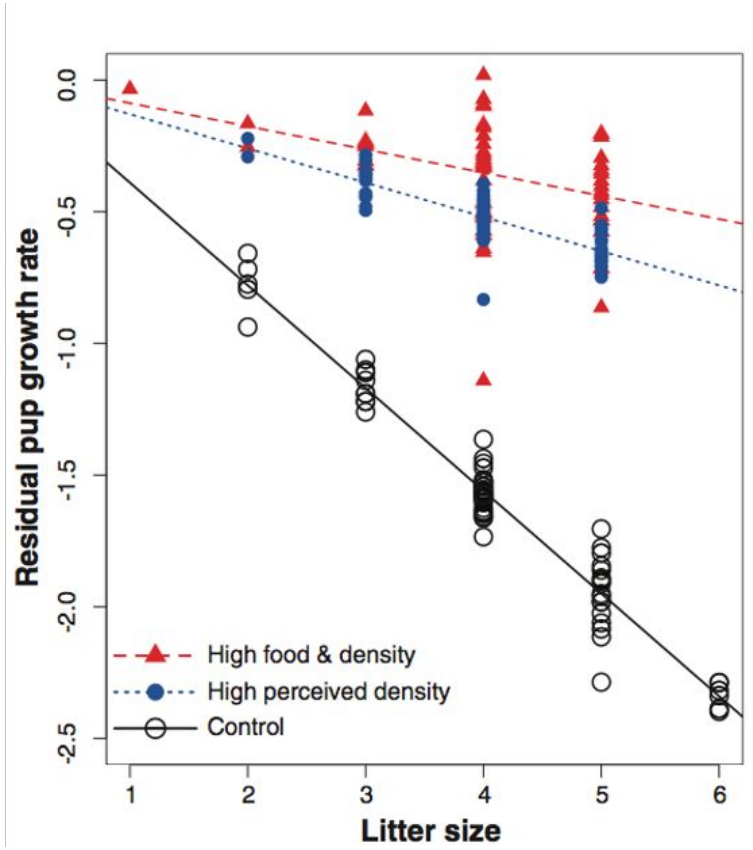
(Glover, 2011, Pike, 2005)

Conceptual Model: Adaptation and an Evolutionary Perspective

Density Triggers Maternal Hormones That Increase Adaptive Offspring Growth in a Wild Mammal

Ben Dantzer,[1*†] Amy E. M. Newman,[2] Rudy Boonstra,[3] Rupert Palme,[4] Stan Boutin,[5] Murray M. Humphries,[6] Andrew G. McAdam[1,2]





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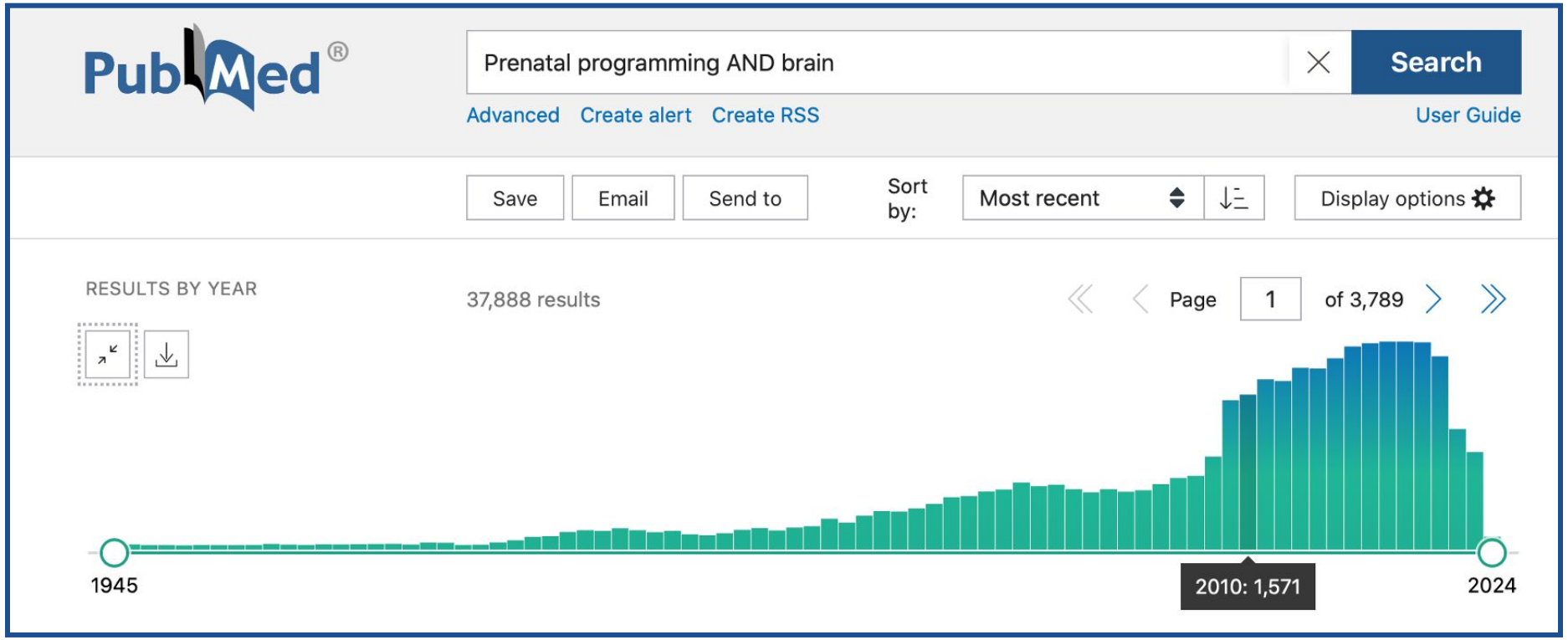
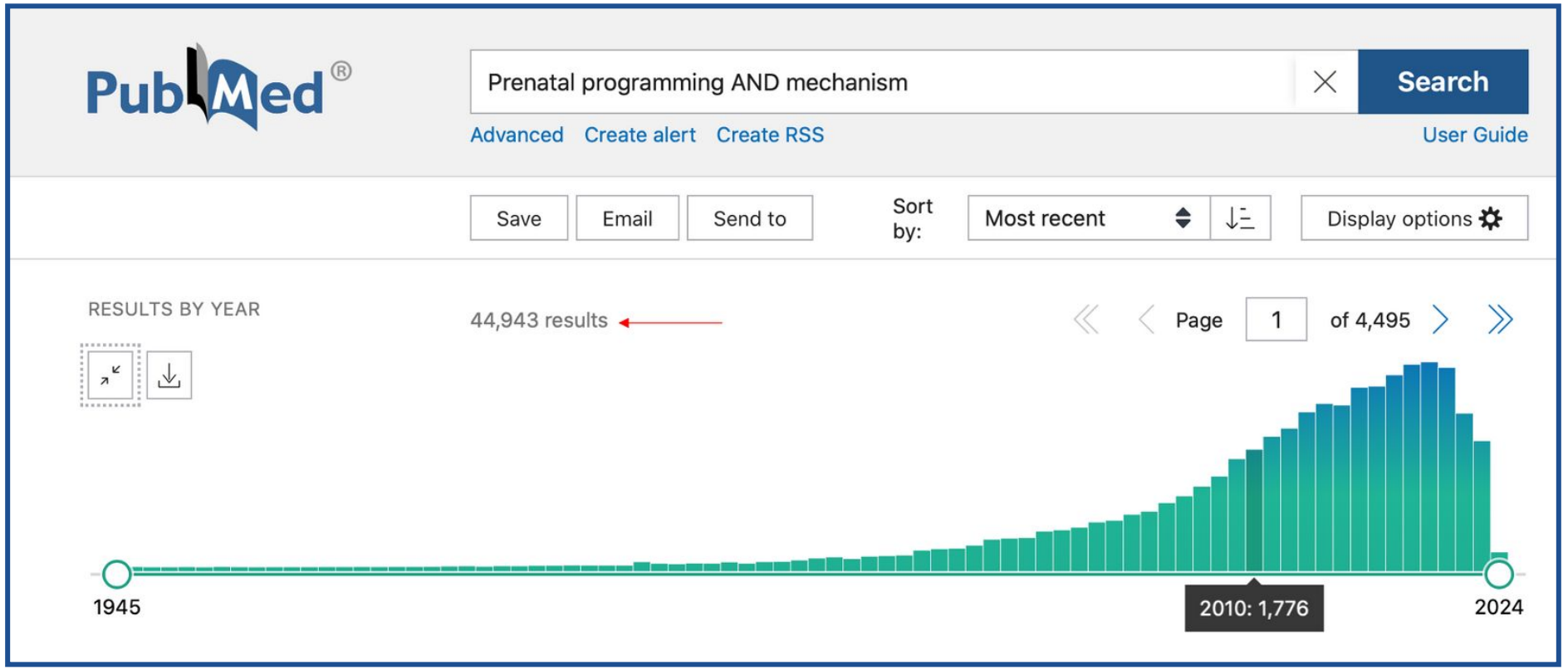
Neurodevelopment and Mental Health Outcomes

Prenatal Programming and Neuroscience



Prenatal Programming and Biological Psychiatry



Conceptual Model: Teratogenic versus Adaptation

Early life stress, prenatal secondhand smoke exposure, and the development of internalizing symptoms across childhood

Mariah DeSerisy[1,2*], Jacob W. Cohen[2,3], Jordan D. Dworkin[2,3], Jeanette A. Stingone[1], Bruce Ramphal[4], Julie B. Herbstman[5,6], David Pagliaccio[2,3] and Amy E. Margolis[2,3]

ELSEVIER

Psychoneuroendocrinology

Volume 117, July 2020, 104697

Disaster-related prenatal maternal stress predicts HPA reactivity and psychopathology in adolescent offspring: Project Ice Storm

Erin Yong Ping [a], David P. Laplante [b], Guillaume Elgbeili [b], Sherri Lee Jones [b c], Alain Brunet [b c], Suzanne King [b c]

Development and Psychopathology **26** (2014), 393–403

doi:10.1017/S0954579414000029

The persisting effect of maternal mood in pregnancy on childhood psychopathology

KIERAN J. O'DONNELL,[a] VIVETTE GLOVER,[b] EDWARD D. BARKER,[c] AND THOMAS G. O'CONNOR[d]
[a]*McGill University;* [b]*Imperial College London;* [c]*Birkbeck University; and* [d]*University of Rochester Medical Center*

Abstract

Developmental or fetal programming has emerged as a major model for understanding the early and persisting effects of prenatal exposures on the health and development of the child and adult. We leverage the power of a 14-year prospective study to examine the persisting effects of prenatal anxiety, a key candidate in the developmental programming model, on symptoms of behavioral and emotional problems across five occasions of measurement from age 4 to 13 years. The study is based on the Avon Longitudinal Study of Parents and Children cohort, a prospective, longitudinal study of a large community sample in the west of England (n = 7,944). Potential confounders included psychosocial and obstetric risk, postnatal maternal mood, paternal pre- and postnatal mood, and parenting. Results indicated that maternal prenatal anxiety predicted persistently higher behavioral and emotional symptoms across childhood with no diminishment of effect into adolescence. Elevated prenatal anxiety (top 15%) was associated with a twofold increase in risk of a probable child mental disorder, 12.31% compared with 6.83%, after allowing for confounders. Results were similar with prenatal depression. These analyses provide some of the strongest evidence to date that prenatal maternal mood has a direct and persisting effect on her child's psychiatric symptoms and support an in utero programming hypothesis.

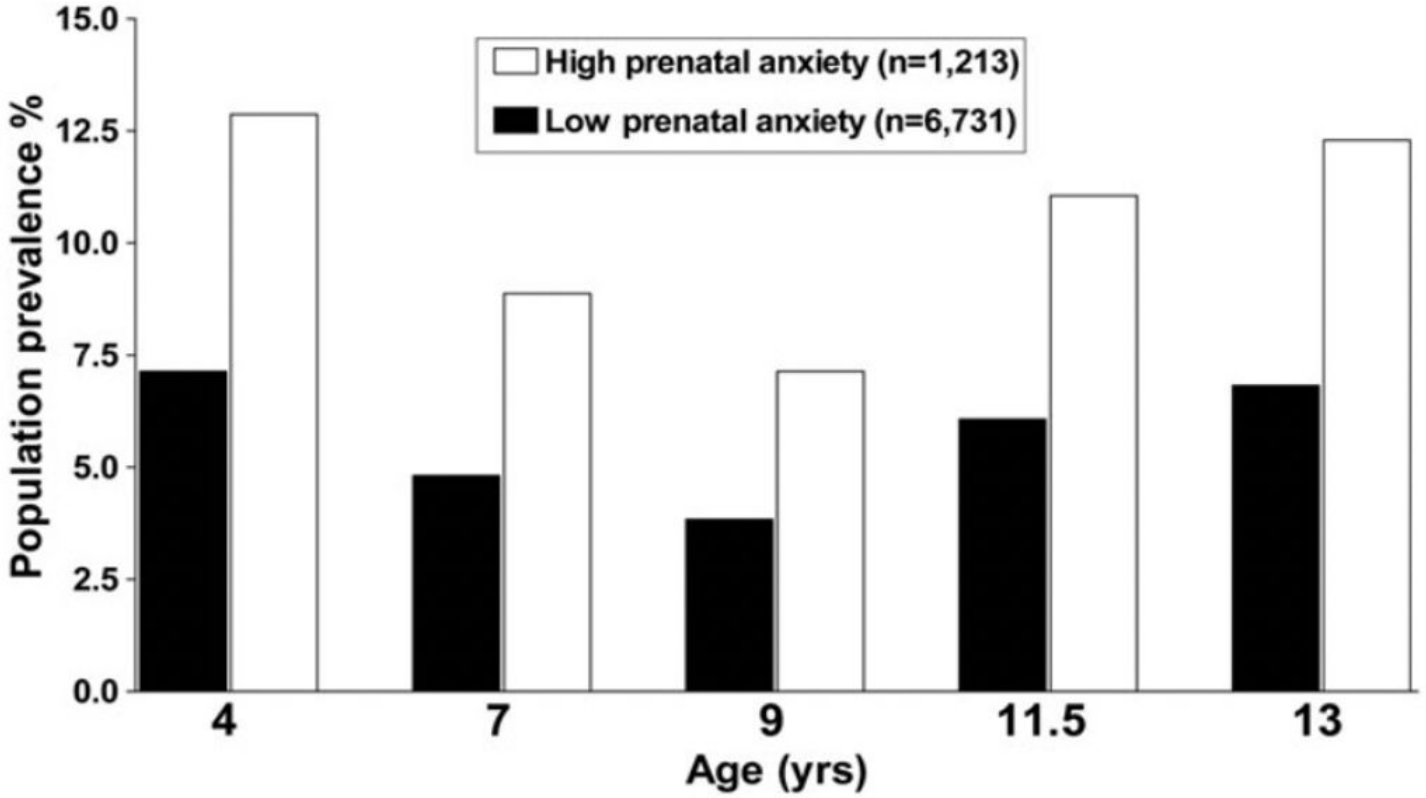
Developmental or adaptive programming, including in the fetal period, has emerged as a major model for understanding the developmental origins of health outcomes. The model proposes that in utero exposures instigate an adaptive response in the organism that is carried forward in development with persisting effects on behavior and biology. Much of this work focuses on poor nutrition or an index of poor growth (e.g., low birth weight) as the causal factor, although other and additional sources of stress with causal effects may be operating (Barker, 1999; Gluckman & Hanson, 2004; Painter, Roseboom, & Bleker, 2005; Wadhwa, Buss, Entringer, & Swanson, 2009). Evidence for the model as applied to cardiovascular and metabolic outcomes is substantial, derives from numerous large-scale investigations in diverse settings, and has spawned an influential line of study because of its potential to influence health and development of populations in developed and developing countries (Gillman et al., 2007).

We are extremely grateful to all of the families who took part in this study; the midwives for their help in recruiting them; and the whole Avon Longitudinal Study of Parents and Children team, which includes interviewers, computer and laboratory technicians, clerical workers, research scientists, volunteers, managers, receptionists, and nurses. The UK Medical Research Council, the Wellcome Trust, and the University of Bristol currently provide core support for the Avon Longitudinal Study of Parents and Children. This particular project was funded in part by NIH Grant R01 MH073842.

Address correspondence and reprint requests to: Thomas G. O'Connor, Department of Psychiatry, Wynne Center for Family Research, University of Rochester Medical Center, 300 Crittenden Boulevard, Rochester, NY 14642; E-mail: Tom_OConnor@URMC.Rochester.edu.

Building on the fetal programming model for somatic health, several research groups are seeking to translate the model for psychological and neuroscience outcomes. These studies focus on maternal prenatal anxiety or stress as a putative causal agent initiating a developmental programming response. The focus on prenatal anxiety or stress follows from decades of experimental animal studies linking prenatal stress to sizable and lasting effects on offspring fear, neurogenesis, immunity, and stress physiology, among other outcomes (Coe et al., 2003; Maccari et al., 2003). A number of observational studies in humans show that prenatal anxiety or stress in the mother is associated with behavioral outcomes in children (Bergman, Sarkar, O'Connor, Modi, & Glover, 2007; Buitelaar, Huizink, Mulder, de Medina, & Visser, 2003; Davis, Glynn, Waffarn, & Sandman, 2011; O'Connor, Heron, Golding, & Glover, 2003; Robinson et al., 2011; van den Bergh et al., 2006). These results raise important conceptual challenges for studies of developmental models of psychopathology that, with a few exceptions (Fisher et al., 2011; Liu, Portnoy, & Raine, 2012), tend to consider neither prenatal exposures nor programming effects. Furthermore, the hypothesis that there are prenatal programming effects for psychopathology has sizable implications for intervention, and particularly the timing of early interventions. Interventions starting in early infancy to promote the mother–infant relationship and the quality of parenting (Allen, 2011; Melhuish, Belsky, Leyland, & Barnes, 2008) are grounded in research linking the quality of the early postnatal rearing environment and the behavioral, emotional, and cognitive development of the child (Murray et al., 2011; Nelson et al., 2007; Ramchandani

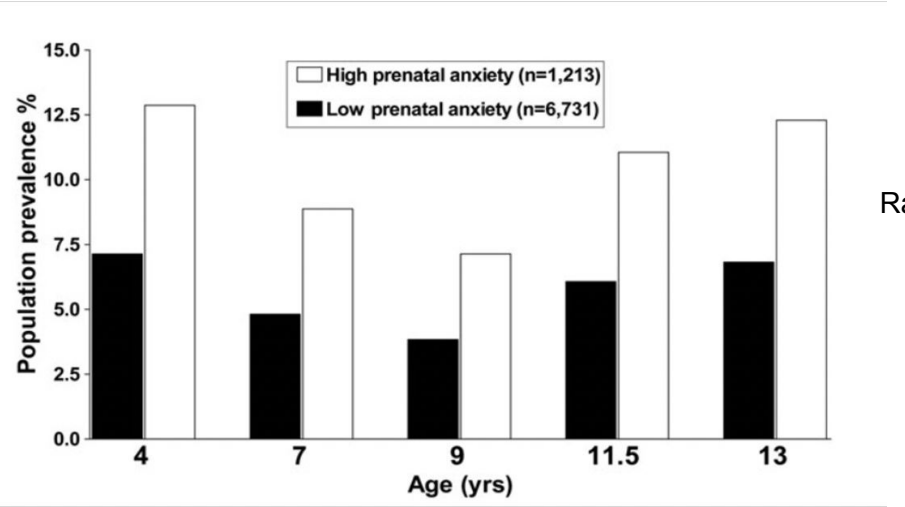
Maternal Anxiety:
Child 2x Increase Mental Health Disorders



Rates of ADHD, Anxiety
N=7,944

*comparable results with depression

Observer-Based Outcomes



Rates of ADHD, Anxiety
N=7,944

NEW RESEARCH

Check for updates

Associations of Maternal Prenatal Stress and Depressive Symptoms With Childhood Neurobehavioral Outcomes in the ECHO Cohort of the NICHD Fetal Growth Studies: Fetal Growth Velocity as a Potential Mediator

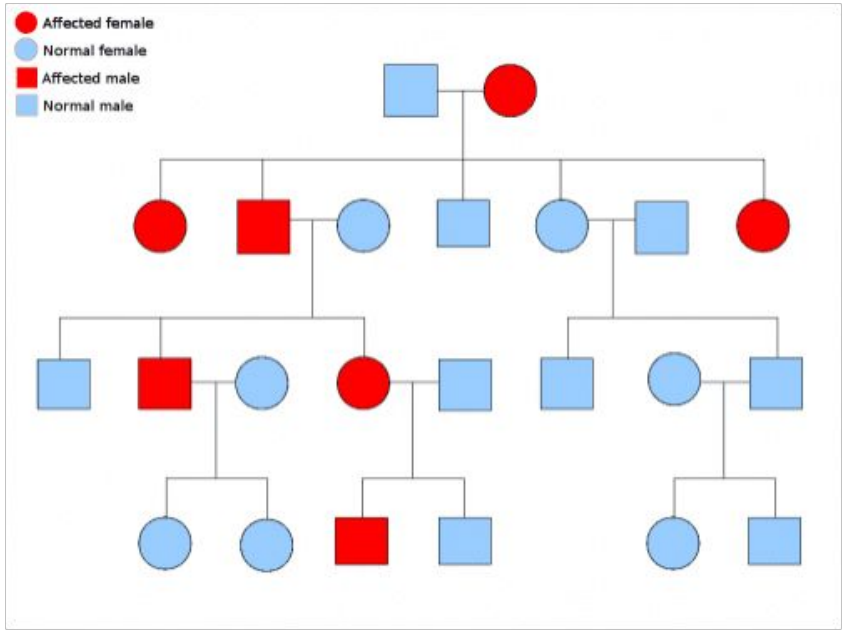
Vanessa Babineau, PhD, Yaneve N. Fonge, MD, Emily S. Miller, MD, MPH, William A. Grobman, MD, MBA, Pamela L. Ferguson, PhD, Kelly J. Hunt, PhD, John E. Vena, PhD, Roger B. Newman, MD, Constance Guille, MD, MSCR, Alan T.N. Tita, MD, PhD, Paula C. Chandler-Laney, PhD, Seonjoo Lee, PhD, Tianshu Feng, MS, Pamela Scorza, ScD, MPH, Lea Takács, PhD, Ronald J. Wapner, MD, Kristy T. Palomares, MD, PhD, Daniel W. Skupski, MD, Michael P. Nageotte, MD, Anthony C. Sciscione, DO, Stephen Gilman, ScD, Catherine Monk, PhD

J Am Acad Child Adolesc Psychiatry 2022;61(9):1155-1167.

Reporter Bias: Maternal report for her mood and child outcomes

NIH Toolbox: lower levels of inhibitory control, sustained attention in males

Shared Genes of Risk



Prenatal programming reflects genetic inheritance

Offspring of prenatally stressed dams versus controls show:

- enhanced neuroendocrine responses to challenge
- increased levels of anxiety
- depressive-like behaviors
- cognitive impairments

Maccari, S. et al., 2014

Shared Genes of Risk

NEW RESEARCH

Independent Prediction of Child Psychiatric Symptoms by Maternal Mental Health and Child Polygenic Risk Scores

Lawrence M. Chen, BSc, Irina Pokhvisneva, MSc, Marius Lahti-Pulkkinen, PhD, Tuomas Kvist, MSc, Jessie R. Baldwin, PhD, Carine Parent, PhD, Patricia P. Silveira, MD, PhD, Jari Lahti, PhD, Katri Räikkönen, PhD, Vivette Glover, PhD, Thomas G. O'Connor, PhD, Michael J. Meaney, PhD, Kieran J. O'Donnell, PhD

Journal of the American Academy of Child & Adolescent Psychiatry
Volume ■ / Number ■ / ■ 2023

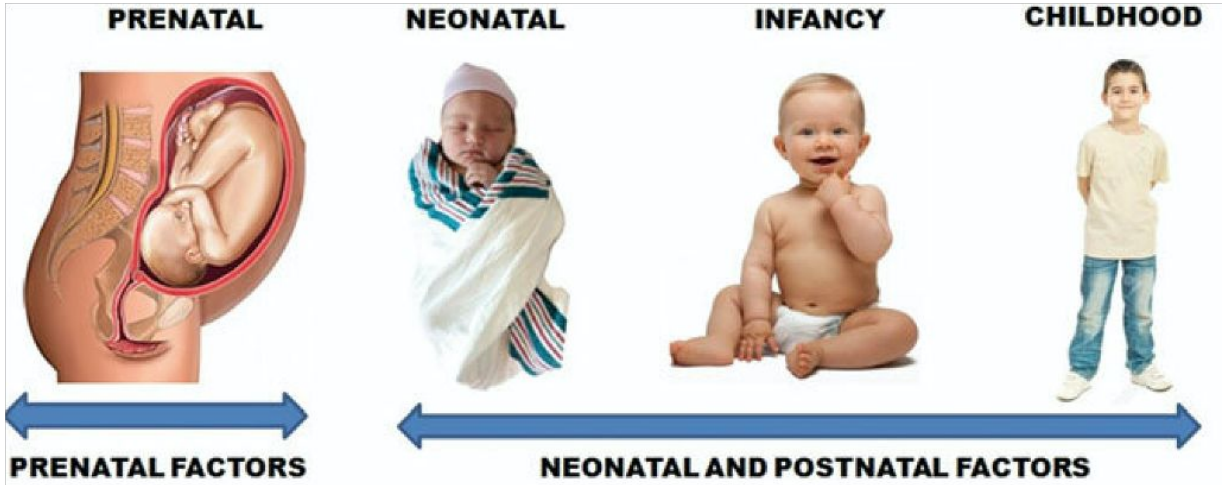
EDITORIAL

Editorial: In Utero Exposure to Maternal Affective Symptoms: Prenatal Programming of Child Psychopathology Is Independent of Shared Genes of Risk

Catherine Monk, PhD

COLUMBIA | OBSTETRICS AND GYNECOLOGY

Prior to Postnatal Influences



Sudhakar et al.

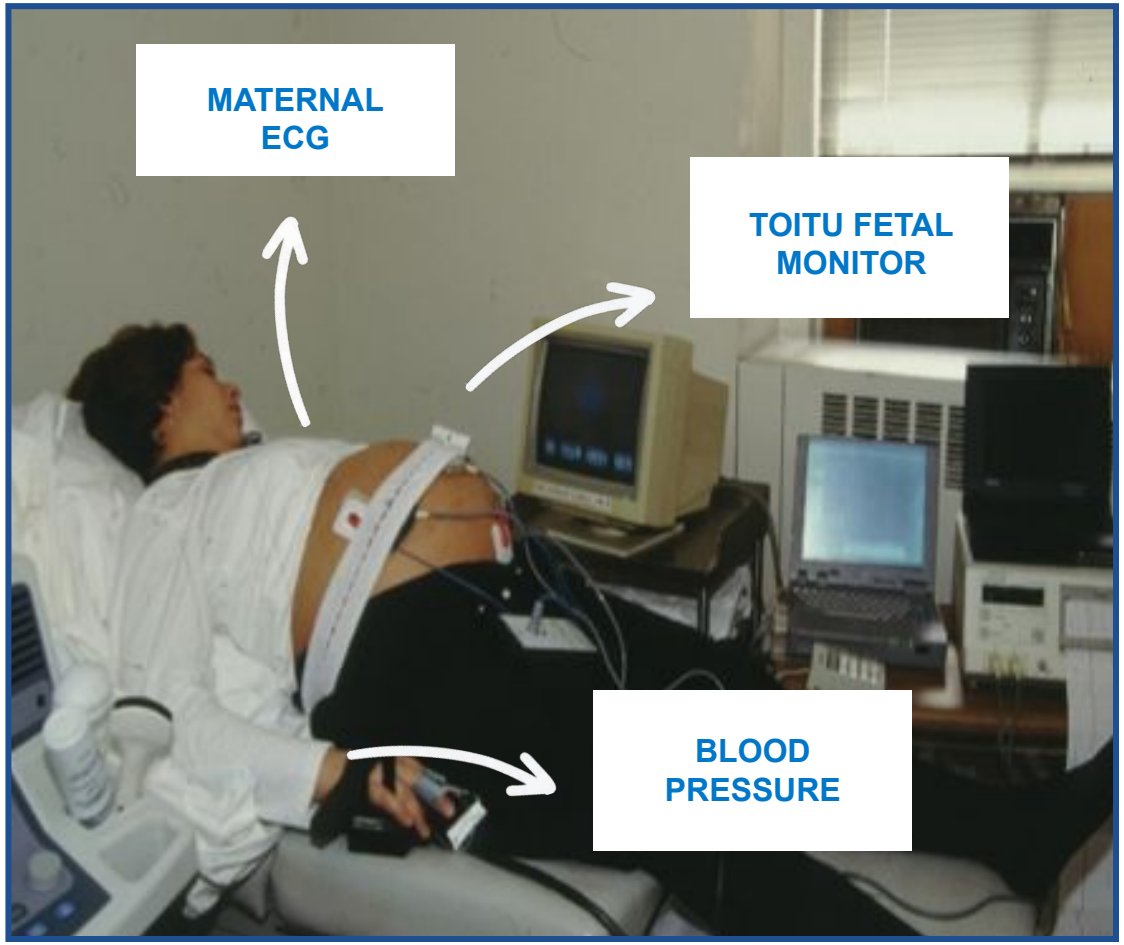
Is there an impact of maternal prenatal distress on child outcomes?

OR

Is prenatal distress merely a marker for the postnatal environment, which exerts effects?

Prior to Postnatal Influences

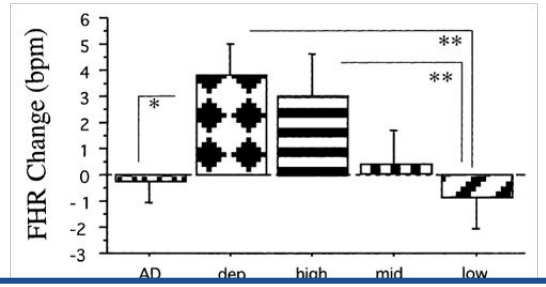
- Fetal ANS:
  - maintains body homeostasis, is a key effector of the stress response system
    - HR reactivity
    - HRV: parasympathetic control of HR
    - Higher levels associated with better emotion regulation
    - HR + movement coupling/CNS
- Newborn/fetal MRI



Fetal Heart Rate Reactivity Differs by Women's Psychiatric Status: An Early Marker for Developmental Risk?

CATHERINE MONK, PH.D., RICHARD P. SLOAN, PH.D., MICHAEL M. MYERS, PH.D., LAUREN ELLMAN, B.A., ELIZABETH WERNER, B.A., JIYEON JEON, B.A., FELICE TAGER, PH.D., AND WILLIAM P. FIFER, PH.D.

J. AM. ACAD. CHILD ADOLESC. PSYCHIATRY, 43:3, MARCH 2004



Neuroreport. 2021 Oct 6;32(14):1170-1174. doi: 10.1097/WNR.0000000000001711.

Maternal corticosteroids and depression during gestation and decreased fetal heart rate variability

Sharon K Hunter [1], Robert Freedman [1], Amanda J Law [1 2 3], Uwe Christians [4], Jacob B W Holzman [1 5], Zachary Johnson [1], M Camille Hoffman [1 6]

Affiliations + expand

PMID: 34284445 DOI: 10.1097/WNR.0000000000001711

Elizabeth A. Werner
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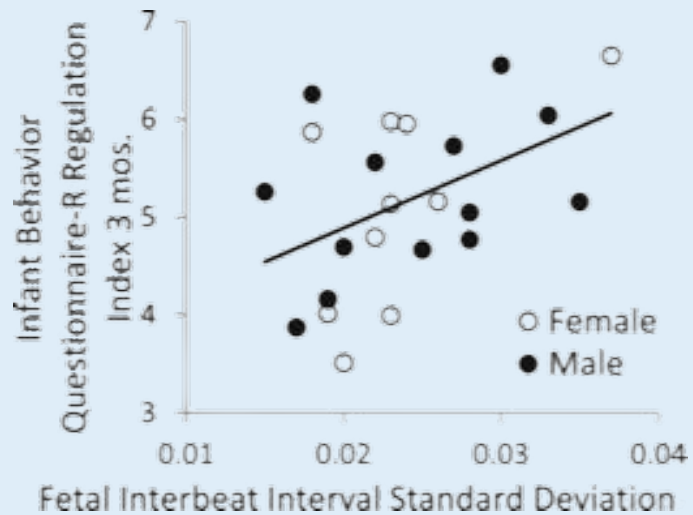
Prenatal Predictors of Infant Temperament

ABSTRACT: Emerging data suggest that prenatal factors influence children's temperament. In 50 dyads, we examined fetal heart rate (FHR) activity and women's antenatal psychiatric illness as predictors of infant temperament at 4 months (response to novelty and the Infant Behavior Checklist). FHR change during maternal challenge was positively associated with observed infant motor reactivity to novelty ($p = .02$). The odds of being classified as high versus low motor among fetuses who had an increase in FHR during maternal stress was 11 times those who had a decrease in FHR ($p = .0006$). Antenatal psychiatric diagnosis was

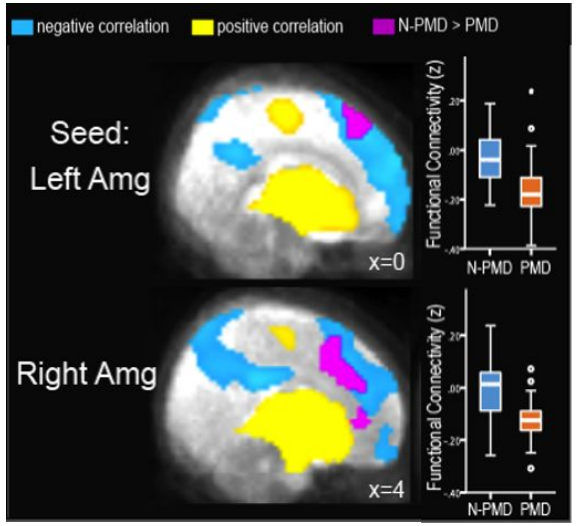


Citation: Transl Psychiatry (2016) **6**, e935; doi:10.1038/tp.2016.146
www.nature.com/tp

ORIGINAL ARTICLE

Alterations in amygdala–prefrontal circuits in infants exposed to prenatal maternal depression

J Posner[1,2,5], J Cha[1,2,5], AK Roy[3], BS Peterson[4], R Bansal[4], HC Gustafsson[1], E Raffanello[2], J Gingrich[1,2] and C Monk[1,2]

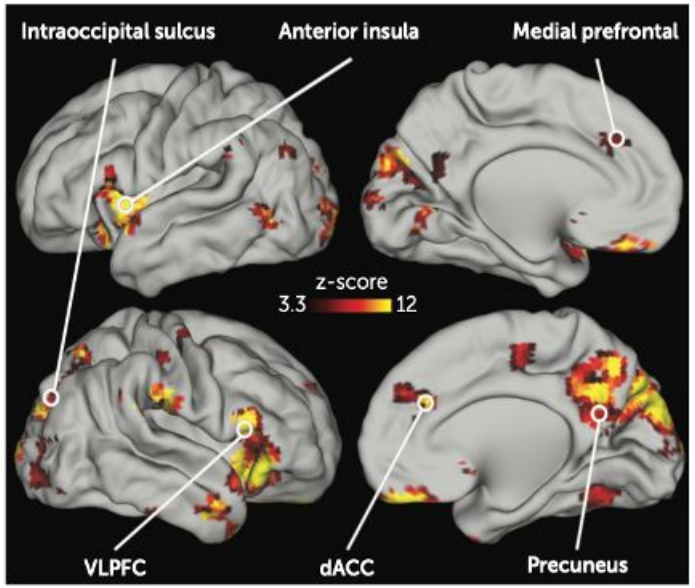


Neonatal Brain Response to Deviant Auditory Stimuli and Relation to Maternal Trait Anxiety

Chad M. Sylvester, M.D., Ph.D., Michael J. Myers, B.A., Michael T. Perino, Ph.D., Sydney Kaplan, B.S., Jeanette K. Kenley, B.S., Tara A. Smyser, M.S., Barbara B. Warner, M.D., Deanna M. Barch, Ph.D., Daniel S. Pine, M.D., Joan L. Luby, M.D., Cynthia E. Rogers, M.D., Christopher D. Smyser, M.D.

Am. Journal Psychiatry, 2021

FIGURE 3. Brain areas in which neonatal neural activity following onset of deviant sounds varied depending on maternal trait anxiety[a]



Conceptual Model: Adaptation and an Evolutionary Perspective

- Prenatal maternal distress associated with greater reactivity to environment
- Evolutionary perspective
- Prenatal maternal distress exposure ‘forecasts’ an adverse (dangerous) environment
- Heightened reactivity may be adaptive: be prepared for (challenging) postnatal environment to come
- Consequences for the child:
  - Mismatch with environment?
  - ADHD
  - Anxiety

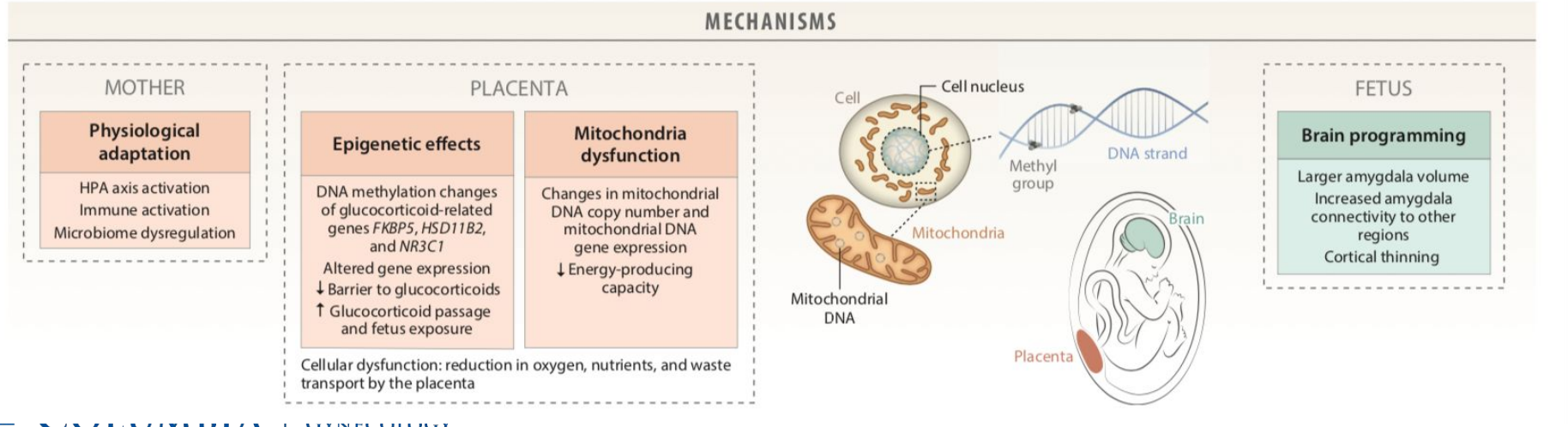
Mechanisms

Annual Review of Clinical Psychology

Prenatal Developmental Origins of Future Psychopathology: Mechanisms and Pathways

Catherine Monk,[1,2,3] Claudia Lugo-Candelas,[1,3] and Caroline Trumpff[1,3]

- Adds rigor to results based on associations
- May lead to direct biological targets for intervention

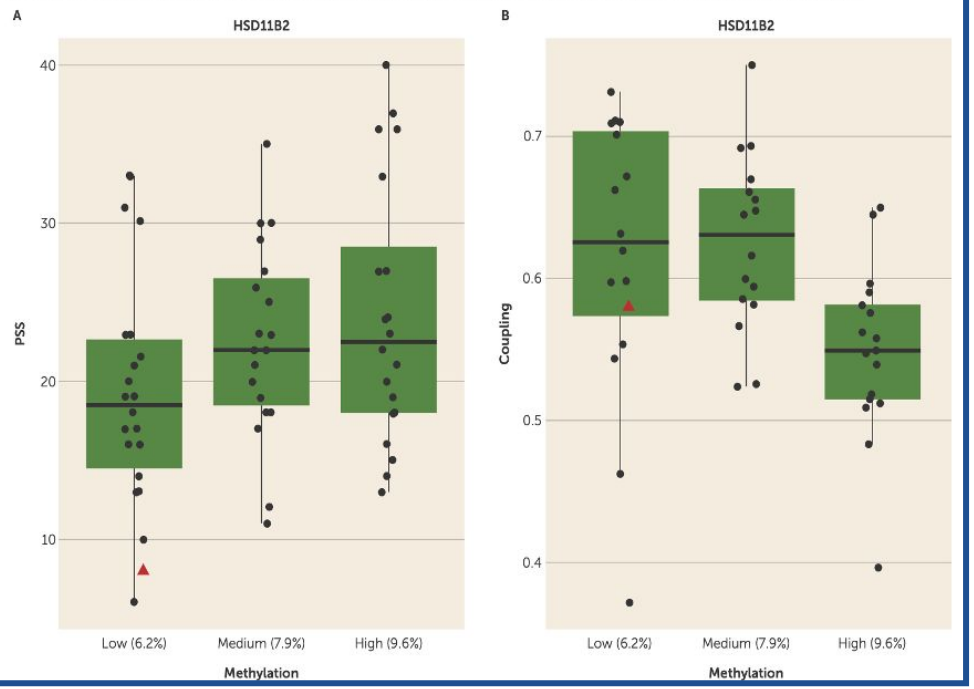


Distress During Pregnancy: Epigenetic Regulation of Placenta Glucocorticoid-Related Genes and Fetal Neurobehavior

Catherine Monk, Ph.D., Tianshu Feng, M.S., Seonjoo Lee, Ph.D., Izabela Krupska, M.A., Frances A. Champagne, Ph.D., Benjamin Tycko, M.D., Ph.D.

Am Journal Psychiatry 2016

FIGURE 2. Tertiles of *HSD11B2* Promoter Region Methylation in Relation to the Perceived Stress Scale and Fetal Coupling[a]



Translational Psychiatry www.nature.com/tp

ARTICLE OPEN

Check for updates

Prenatal exposure to maternal disadvantage-related inflammatory biomarkers: associations with neonatal white matter microstructure

Ashley F. P. Sanders[1✉], Brian Tirado[1], Nicole A. Seider[2], Regina L. Triplett[2], Rachel E. Lean[1], Jeffrey J. Neil[2], J. Philip Miller[3], Rebecca Tillman[1], Tara A. Smyser[1], Deanna M. Barch[1,4], Joan L. Luby[1], Cynthia E. Rogers[1,5], Christopher D. Smyser[2,5,6], Barbara B. Warner[5,7], Edith Chen[8,9] and Gregory E. Miller[8,9]

Higher average maternal IL-6 was associated with very low socioeconomic status (INR < 200% poverty line) and lower neonatal axial diffusivity in the uncinate

Leveraging IVF to Identify Prenatal Effects Independent of Shared Maternal-Child Genes

Distress During Pregnancy: Epigenetic Regulation of Placenta Glucocorticoid-Related Genes and Fetal Neurobehavior

Catherine Monk, Ph.D., Tianshu Feng, M.S., Seonjoo Lee, Ph.D., Izabela Krupska, M.A., Frances A. Champagne, Ph.D., Benjamin Tycko, M.D., Ph.D.

Am Journal Psychiatry 2016

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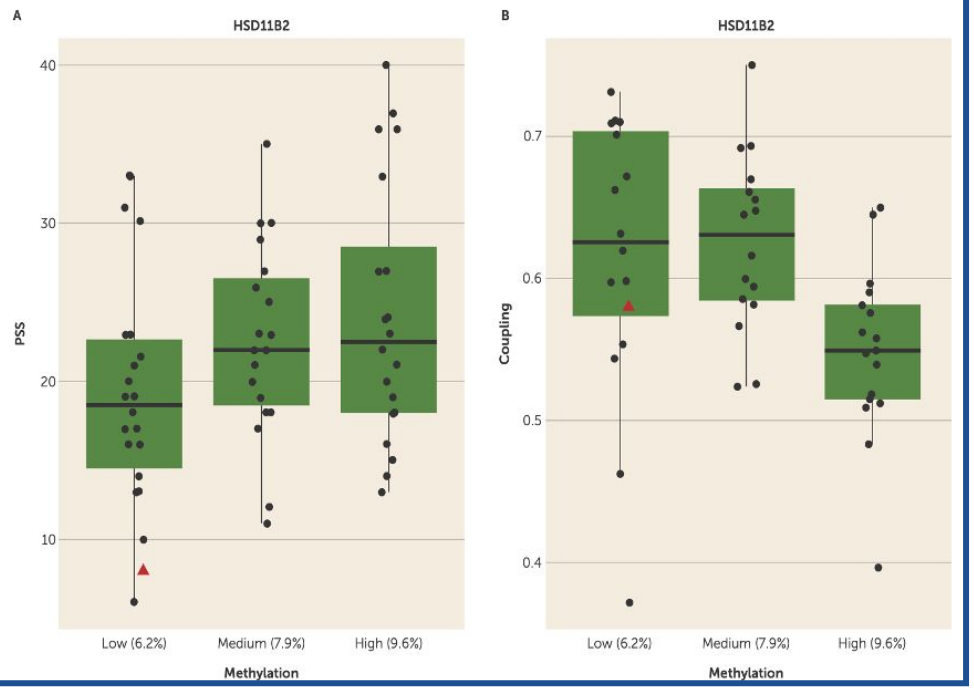
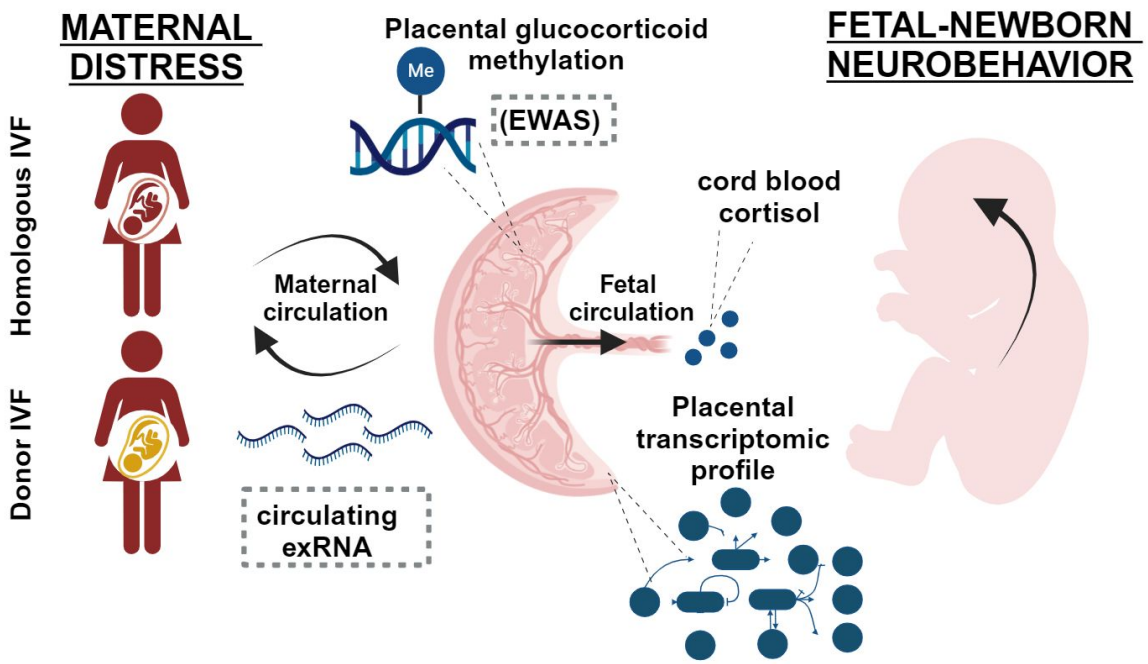
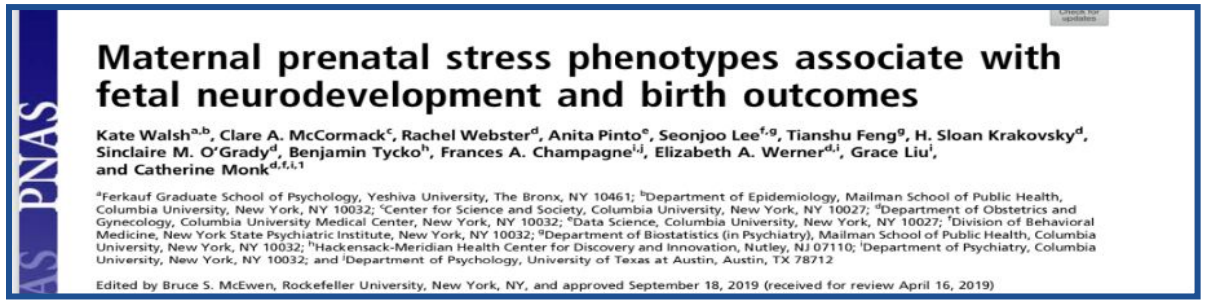




On the Horizon: Stress Assessment



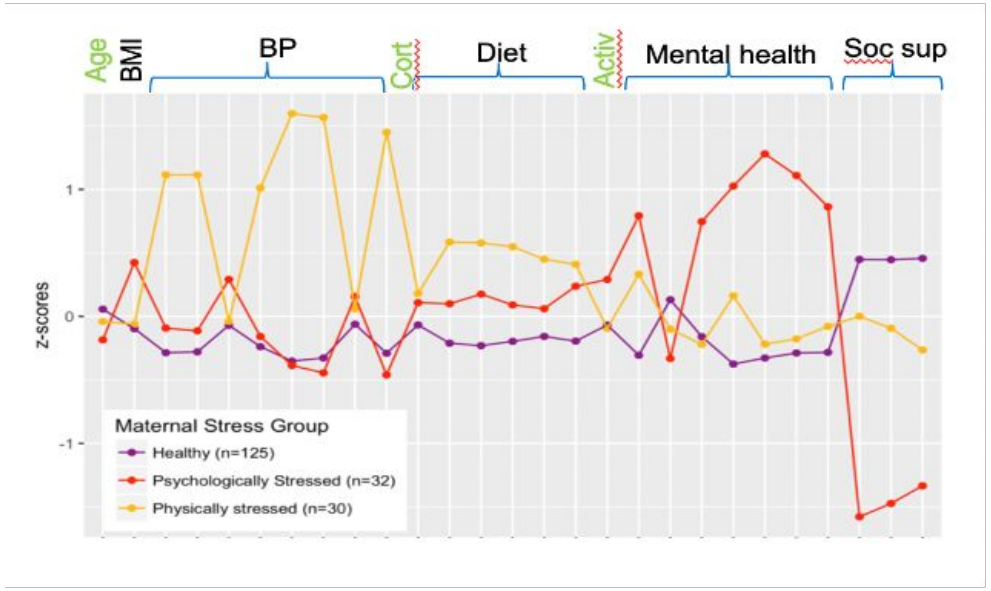
PNAS

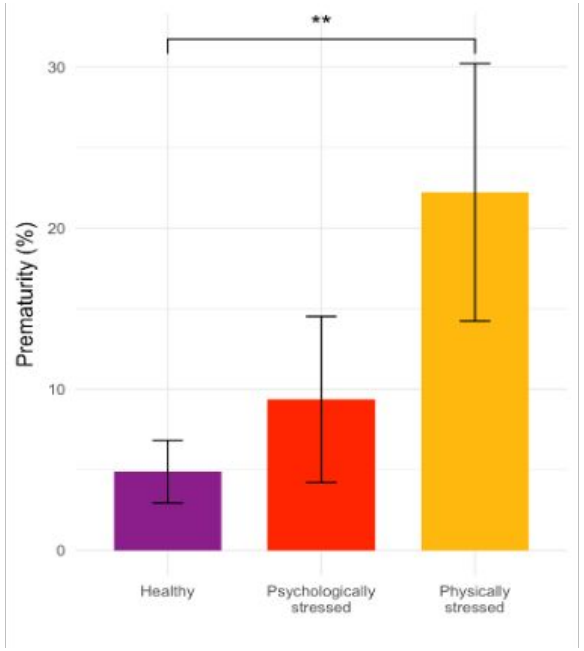
Maternal prenatal stress phenotypes associate with fetal neurodevelopment and birth outcomes

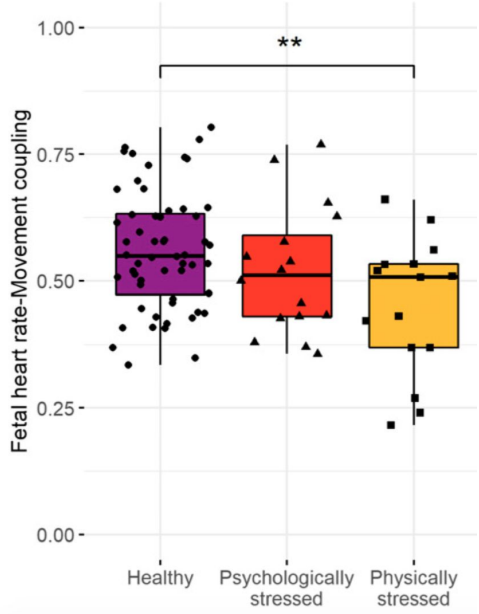
Kate Walsh[a,b], Clare A. McCormack[c], Rachel Webster[d], Anita Pinto[e], Seonjoo Lee[f,g], Tianshu Feng[g], H. Sloan Krakovsky[d], Sinclaire M. O'Grady[d], Benjamin Tycko[h], Frances A. Champagne[i,j], Elizabeth A. Werner[d,i], Grace Liu[i], and Catherine Monk[d,f,i,1]

[a]Ferkauf Graduate School of Psychology, Yeshiva University, The Bronx, NY 10461; [b]Department of Epidemiology, Mailman School of Public Health, Columbia University, New York, NY 10032; [c]Center for Science and Society, Columbia University, New York, NY 10027; [d]Department of Obstetrics and Gynecology, Columbia University Medical Center, New York, NY 10032; [e]Data Science, Columbia University, New York, NY 10027; [f]Division of Behavioral Medicine, New York State Psychiatric Institute, New York, NY 10032; [g]Department of Biostatistics (in Psychiatry), Mailman School of Public Health, Columbia University, New York, NY 10032; [h]Hackensack-Meridian Health Center for Discovery and Innovation, Nutley, NJ 07110; [i]Department of Psychiatry, Columbia University, New York, NY 10032; and [j]Department of Psychology, University of Texas at Austin, Austin, TX 78712

Edited by Bruce S. McEwen, Rockefeller University, New York, NY, and approved September 18, 2019 (received for review April 16, 2019)







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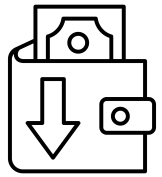
PMADs
Have 2
Gen Impact

SDoH: Women in the Psychologically Stressed Group vs Other Two Groups

more likely to be Latina

fewer years of education



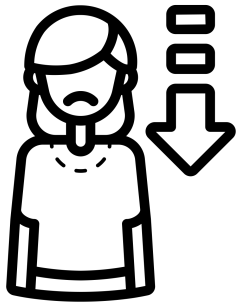
lower household income

more public assistance

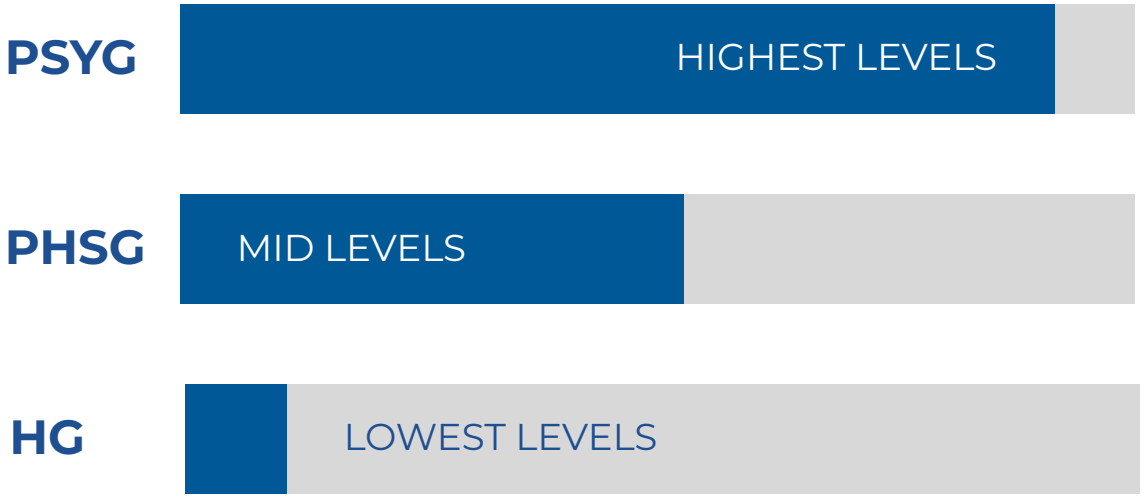
higher levels of emotional abuse and physical neglect

PMADs
Have 2
Gen Impact

Trauma: Women Differed by Stress Groups



Childhood Emotional Neglect



Practical Implications

- Maternal mental health matters for 2 generations

- Parenting begins before birth

- Oxygen mask on plane metaphor is useful; for your baby to be healthy, you need to be healthy

Don't blame the mothers

Careless discussion of epigenetic research on how early life affects health across generations could harm women, warn **Sarah S. Richardson** and colleagues.

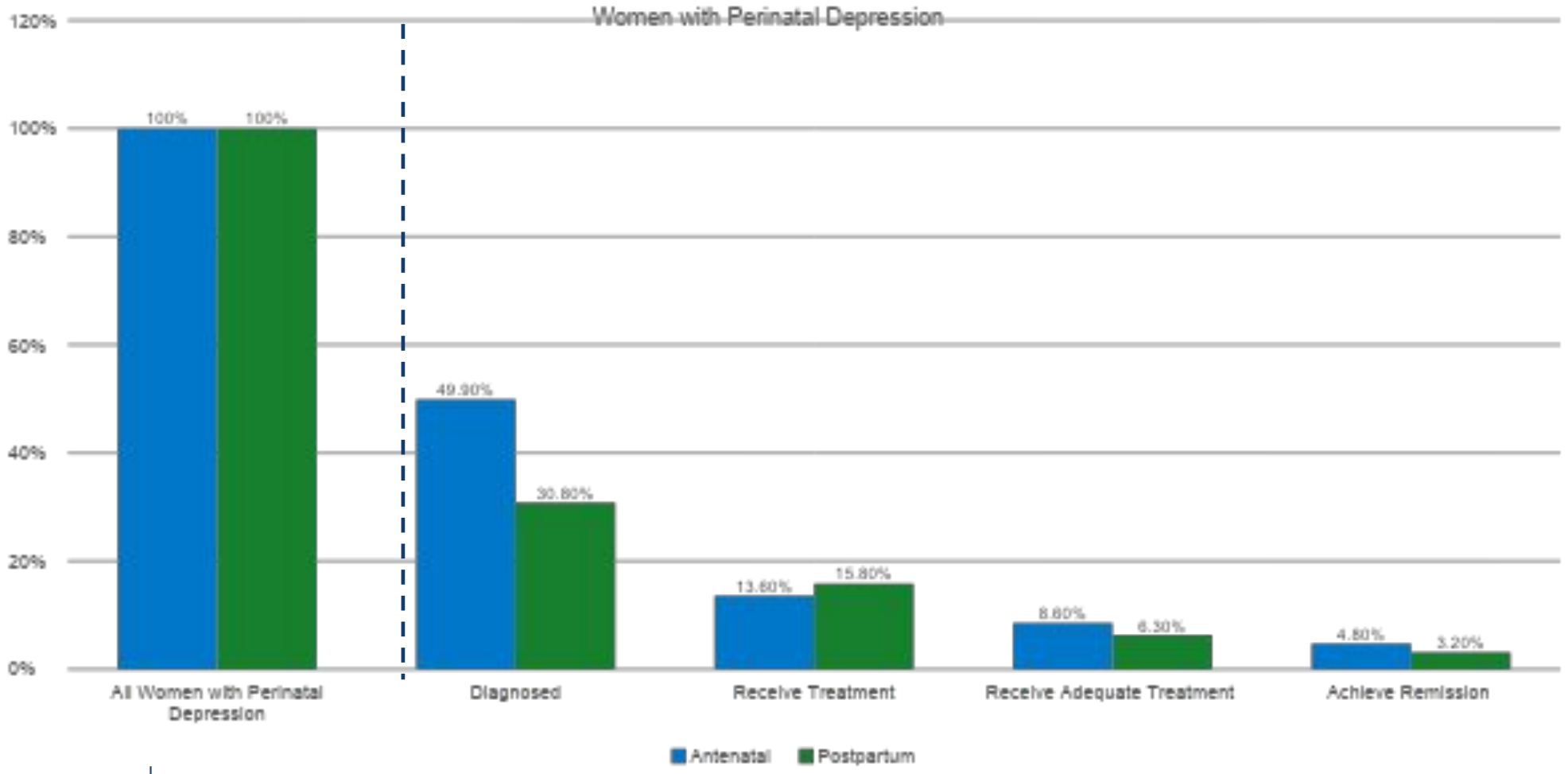
The Perinatal Period = Time of Significant Brain Changes Across Two Generations

A Time of Vulnerability — Also of Opportunity

Biggest Impediment to Recovery from PMADs is **Access to Treatment**

Perinatal Depression: Treatment Inadequacies Across Course of Care

Very few women with depression receive adequate treatment and achieve remission



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NewYork-Presbyterian

Source: Cox, E. Q., et al. (2016). "The Perinatal Depression Treatment Cascade: Baby Steps Toward Improving Outcomes." J Clin Psychiatry **77**(9): 1189-1200.

WOMEN'S MENTAL HEALTH @OB/GYN

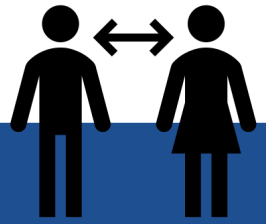
COLUMBIA | OBSTETRICS AND GYNECOLOGY

Women's Mental Health @Ob/Gyn: Program Overview

Mental health care offered across ColumbiaDoctors ObGyn Clinical Services

- Direct access to a mental health care provider
- Accept most commercial insurances and managed Medicaid plans
- Early identification and prevention of mental health conditions in addition to treating existing ones
- Treat women across the life course
- Multidisciplinary team

Women's Mental Health @Ob/Gyn Program Design



Referrals

Provider Concern

Patient Request

Routine depression screening

- According to ACOG guidelines using the Patient Health Questionnaire (PHQ-9 for depression)

Treatment options

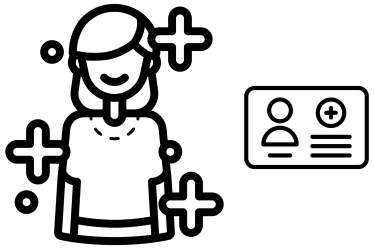
- Psychotherapy
- Psychopharmacology
- Support groups (e.g., Parents to be of color; fertility; endometriosis)

Treatment duration

- Up to 6 months postpartum psychotherapy
- Short-term, approximately 15 psychotherapy sessions outside of perinatal period
- Psychopharmacology ongoing
- Patients return: another episode, pregnancy, life stress

Referrals to Women's Mental Health

during a nearly three-year period (February 2020-December 2022)



2,015

patients referred who were using their health insurance for Ob/Gyn care

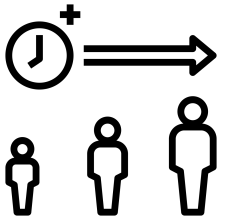
Average age was

36 years old

M= 36 years old

SD= 9

Range= 17 to 86



COLUMBIA | OBSTETRICS AND GYNECOLOGY

Referrals to Women's Mental Health

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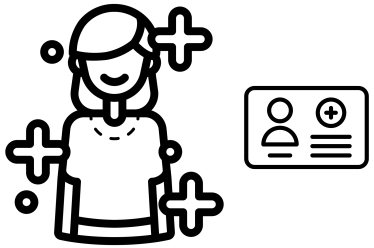
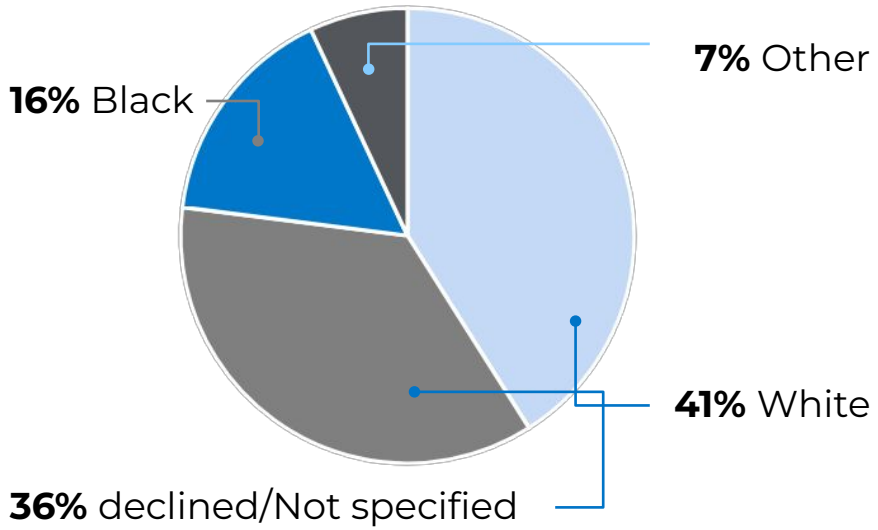


2,015

patients referred who were using their health insurance for Ob/Gyn care

RACE AND ETHNICITY



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Referrals to Women's Mental Health

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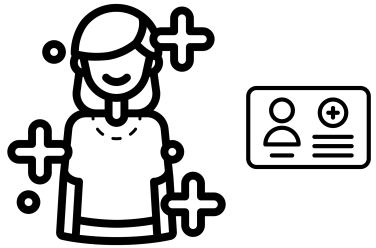

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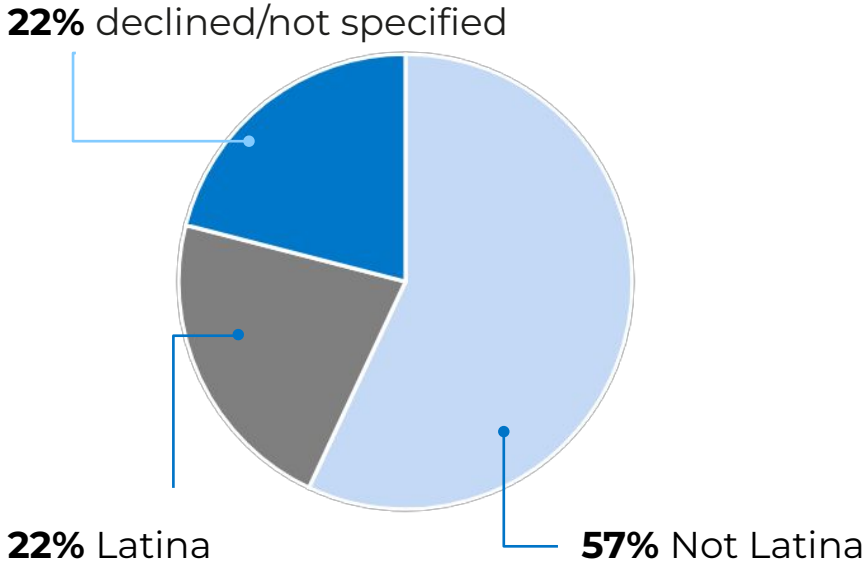

COLUMBIA | OBSTETRICS AND GYNECOLOGY

Referrals to Women's Mental Health

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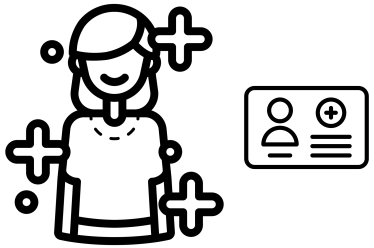
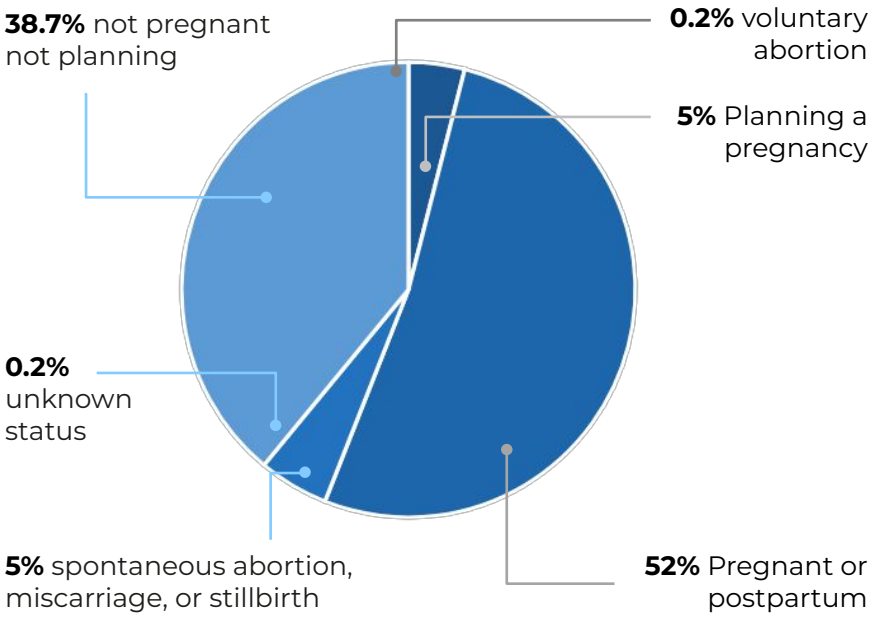


2,015

patients referred who were using their health insurance for Ob/Gyn care

PREGNANCY STATUS



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PMADs Are Treatable:

Access to Care

Women's Mental Health @Ob/Gyn: Utilization Outcomes

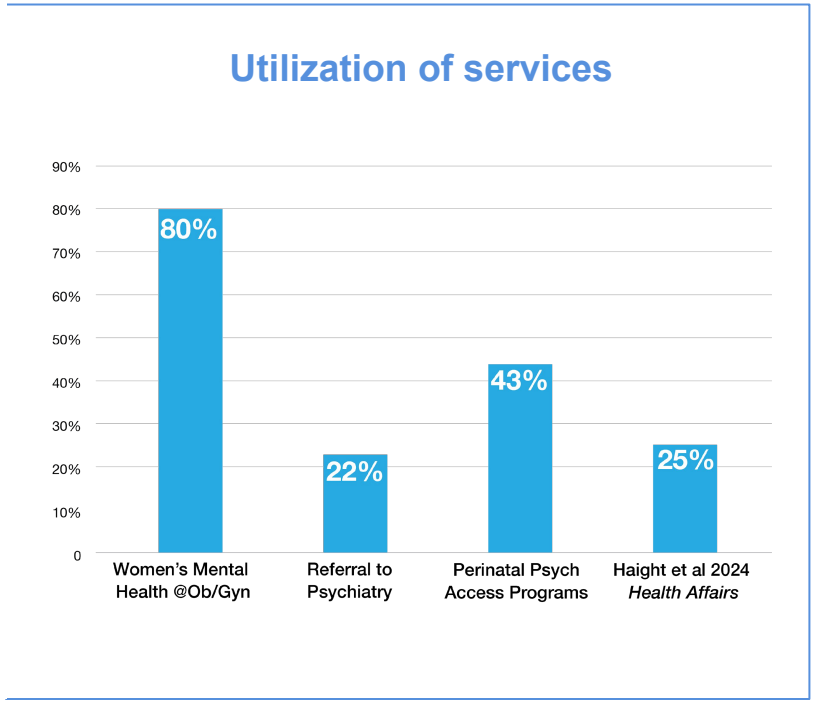
Data reflects outcomes from February 2020 to December 2023

2,015
Total Referrals

20-30
Referrals/Week

7
DAYS
Referral to First Evaluation and Visit with Mental Health Provider

23
AVERAGE VISITS



COLUMBIA | OBSTETRICS AND GYNECOLOGY

Referrals to Women's Mental Health

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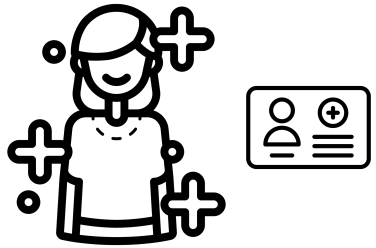


2,015

patients referred who were using their health insurance for Ob/Gyn care

TREATMENT UTILIZATION

80% engaged in treatment utilization completing one mental health

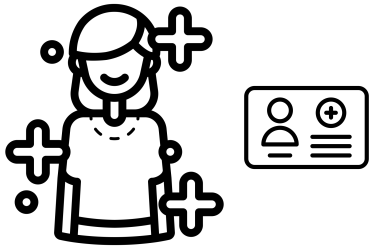
52% PRISM

43% MCPAP for Moms

COLUMBIA | OBSTETRICS AND GYNECOLOGY

Referrals to Women's Mental Health

during a nearly three-year period (February 2020-December 2022)



2,015

patients referred who were using their health insurance for Ob/Gyn care

SUSTAINED TREATMENT

35% engaged in sustained treatment with WMH @Ob/Gyn

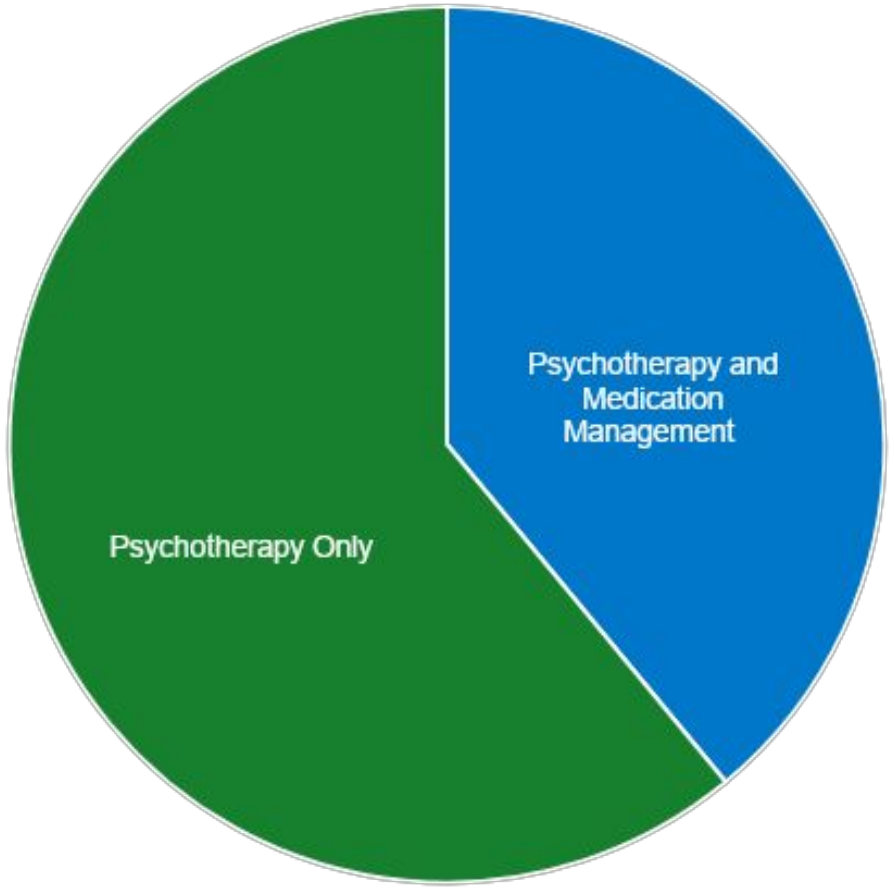
25% PRISM

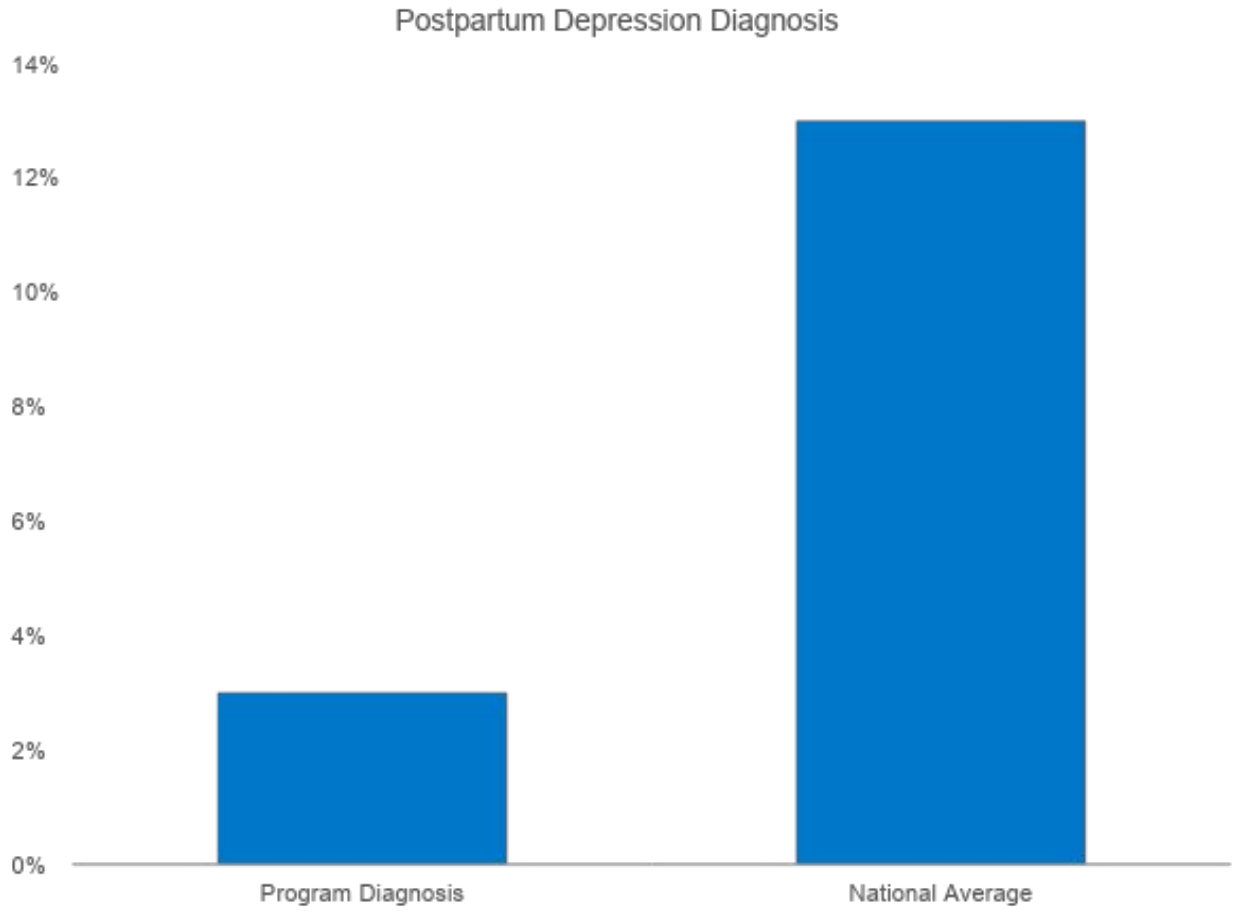
20% MCPAP for moms

COLUMBIA | OBSTETRICS AND GYNECOLOGY

Women's Mental Health @Ob/Gyn: Utilization Outcomes

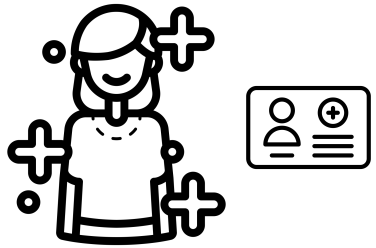
Early intervention and treatment leading to improved outcomes





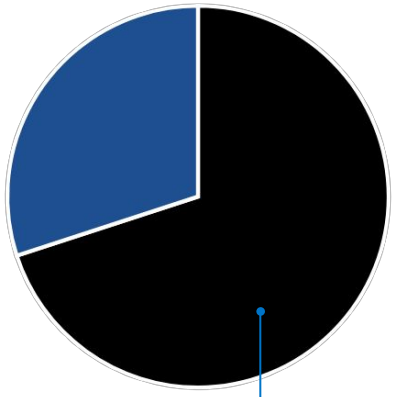
Referrals to Women's Mental Health

during a nearly three-year period (February 2020-December 2022)



2,015

patients referred who were using their health insurance for Ob/Gyn care

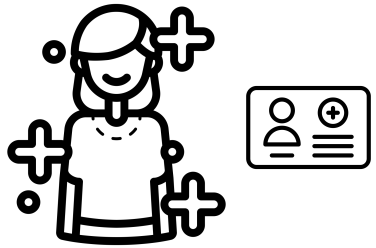


70%

had participating mental health care (mental health care NOT carved out)

Referrals to Women's Mental Health

during a nearly three-year period (February 2020-December 2022)



2,015

patients referred who were using their health insurance for Ob/Gyn care

TREATMENT UTILIZATION BY RACE AND ETHNICITY

Black and Latina patients were:

2x

less likely to engage in treatment utilization

½x

to have insurance that covered mental healthcare

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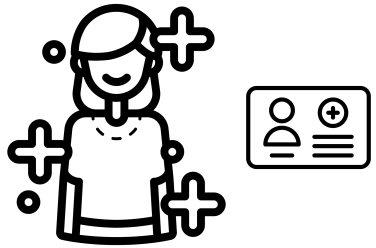
Referrals to Women's Mental Health

during a nearly three-year period (February 2020-December 2022)



2,015

patients referred who were using their health insurance for Ob/Gyn care

SYSTEMIC RACISM

Black and Latina patients were:

2x

less likely to engage in treatment utilization

½x

to have insurance that covered mental healthcare

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PMADs Are Preventable

REACH OUT STAY STRONG ESSENTIALS (ROSE)

FOR NEW MOMS

Caron Zlotnick, PhD, Brown University

MOTHERS & BABIES

Ricardo Munoz, PhD

Darius Tandon, PhD

Northwestern University

PMADs Are Preventable

PREPP

PRACTICAL RESOURCES FOR EFFECTIVE POSTPARTUM PARENTING

A Mother-Infant Dyadic Treatment to Prevent Postpartum Depression

Dr. Elizabeth Werner

PMADs Are Preventable

Billing:
CPT Code 90834

ICD-10 Adjustment Disorder with anxiety and/or depression

Preventing maternal mental health disorders in the context of poverty: pilot efficacy of a dyadic intervention

Pamela Scorza, ScD; Catherine Monk, PhD; Seonjoo Lee, PhD; Tianshu Feng, PhD; Obianuju O. Berry, MD, PhD; Elizabeth Werner, PhD

PREPP

PRACTICAL RESOURCES FOR EFFECTIVE POSTPARTUM PARENTING

A Mother-Infant Dyadic Treatment to Prevent Postpartum Depression

Dr. Elizabeth Werner

PREPP Treatment Protocol

Brief (5 sessions)

- 28-32 gestational weeks – 6 week postpartum

For those at risk of developing PPD

- Stress, depressive symptoms; experiencing poverty

Rationale for beginning in pregnancy with parenting foci

- Identification with the parenting role, and a 'primary preoccupation' with the baby begins in pregnancy —leverage this relationship for PPD prevention efficacy (Monk et al., 2022)

Rationale for dyadic focus

- Mother and infant affect each other
  - Lack of sleep is a risk factor for PPD (Leistikow, N et al., 2022)
  - Greater infant fuss/cry/sleep behavior is associated with PPD (Cutrona et al., 1986, Murray et al., 1996, Miller et al., 1993)
  - Behavioral techniques are effective in improving infant fuss/cry and sleep behavior (Hiscock et al, 2008, 2014)
  - Confidence in parenting role protective factor in PPD (Gross et al., 1994)

PREPP Conceptual Model

Two unique features

- Begins in pregnancy
- Dyadic approach

An intervention based on the conceptualization of postpartum depression as a potential disorder of the dyad, and one that can be approached through preventative psychological and behavioral changes in the mother that affect her and the child — even before birth

Optimize infant's behavioral regulation

Improve women's sleep, lessen distress

Build self– efficacy/ competence in parenting, foster positive infant attributions, and maternal sensitivity

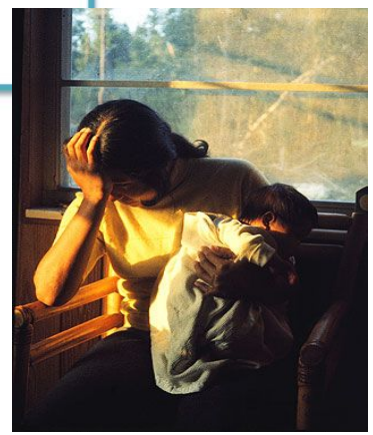
Behavioral skills

Aid newborn sleep

- Day/night cues
- Focal feed

Comforting techniques

- Swaddling
- Carrying independent of crying



Sleep skills & mindfulness & self-reflection; Psychoeducation & cognitive support

GOU

Efficacy Data

Arch Womens Ment Health
DOI 10.1007/s00737-015-0549-5

ORIGINAL ARTICLE

PREPP: postpartum depression prevention through the mother–infant dyad

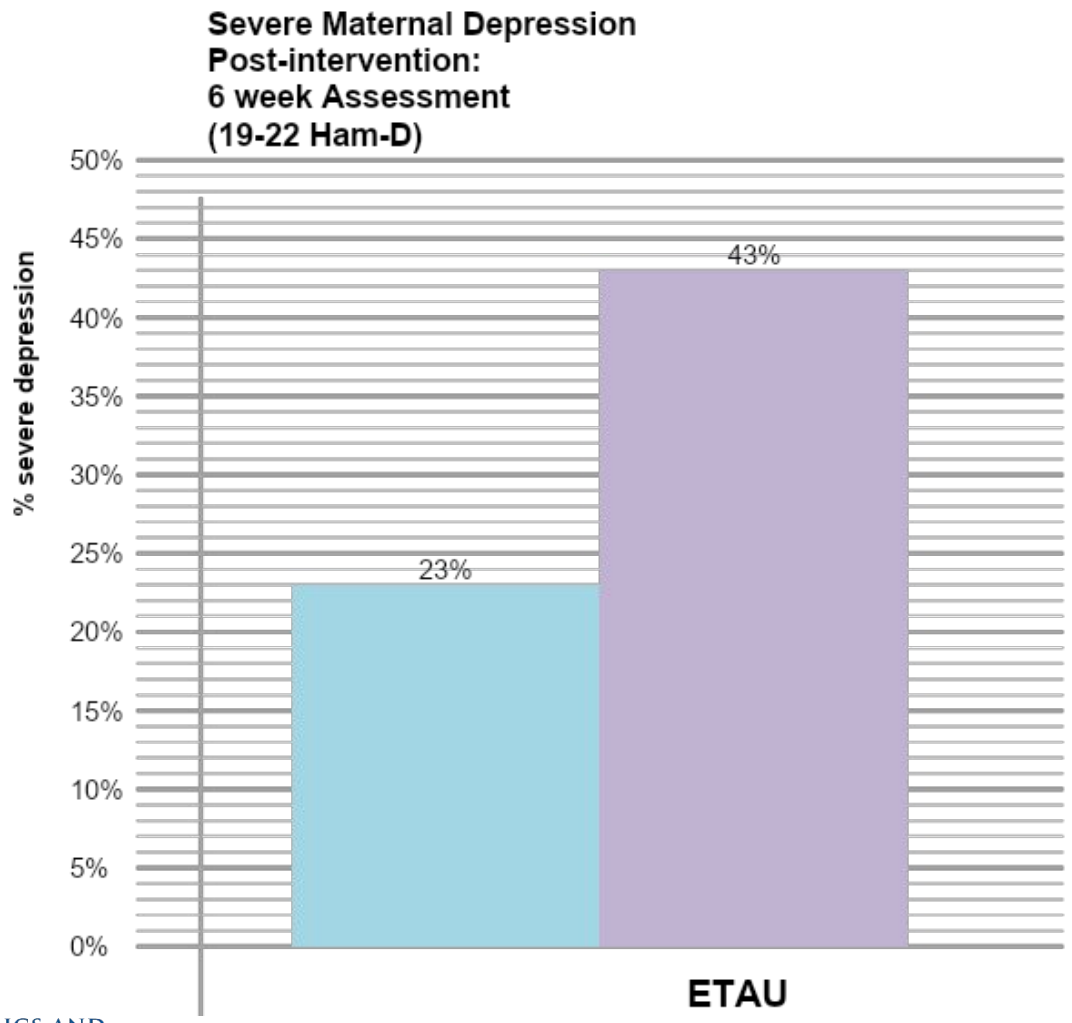
Elizabeth A. Werner[1] · Hanna C. Gustafsson[1] · Seonjoo Lee[3,4] · Tianshu Feng[3] · Nan Jiang[1] · Preeya Desai[1] · Catherine Monk[1,2]

Archives of Women's Mental Health, 2016

Efficacy Data

- 58% Latinx, 19% Black
- Age: 18-45 yrs old, average=30
- At risk for PPD based on Predictive Index of PPD (Cooper, 1996)
- Baseline mild to moderate depression symptoms
  - average of 16.11 on the HRSD, max 54, 14-17 mild to moderate
- Adherence: 100% completed PREPP intervention

PREPP Reduced Rate of Severe PPD



ETAU= Enhanced Treatment as Usual

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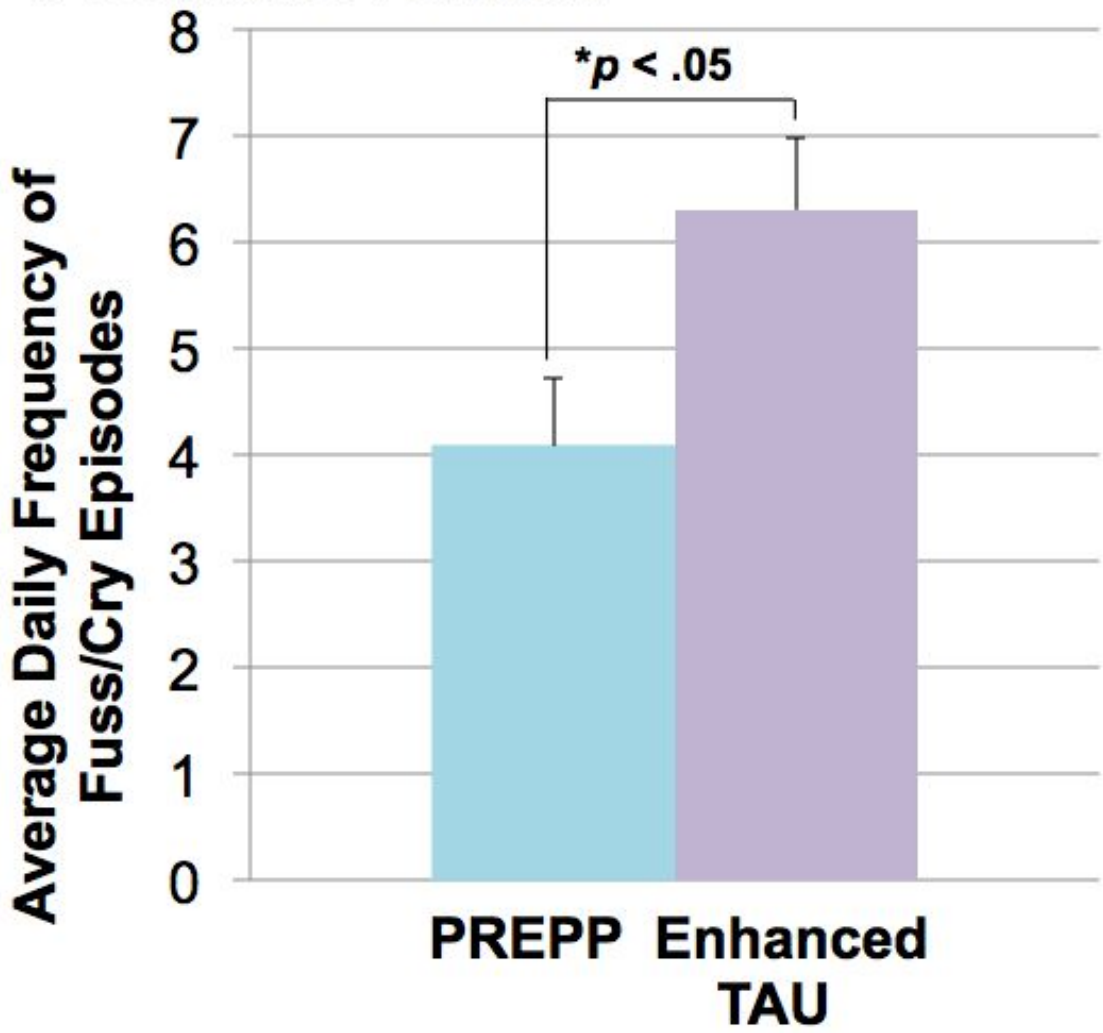
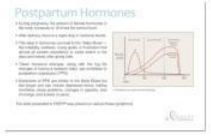
PREPP Associated with Less Infant/Fuss Cry Behavior at 6 weeks Old



COLUMBIA | OBSTETRIC GYNECOLO

Informational Pamphlet



PREPP

PRACTICAL RESOURCES FOR EFFECTIVE POSTPARTUM PARENTING

COLUMBIA UNIVERSITY MEDICAL CENTER
CATHERINE MONK, PHD
COLUMBIA UNIVERSITY PSYCHIATRY

Catherine Monk, PhD; Elizabeth Werner, PhD; Maia Miller, PhD;

email: ew150@cumc.columbia.edu | tel: 646.774.8945

Welcome to PREPP!

This is a program to help you with the challenges of being a mom to a newborn baby. Every mother can have times when she feels very stressed.

This can be even more true if you felt overwhelmed during your pregnancy. This program will teach you skills that you can use to cope with these difficult moments and to care for your newborn baby.

Challenges of Being a Mom to a Newborn

All mothers, even mothers who already have children, have moments when parenting a newborn feels frustrating and overwhelming.

These moments may include:

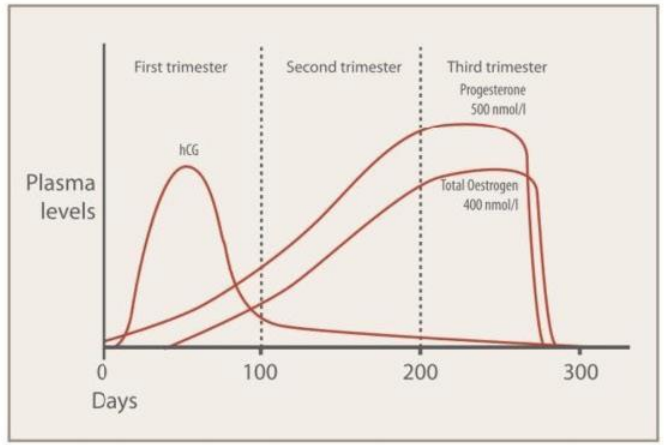
- When your baby cries more than you expected
- When your baby is crying and won't stop, even though you've tried everything
- When you are tired and feel guilty for not having the energy to care for your baby
- When caring for your baby seems harder and less enjoyable than you thought it would be

Common responses that mothers have in these moments:

- Feeling like a bad parent or that you are doing something wrong
- Feeling angry at yourself, and sometimes at your baby
- Feeling like things will never get better
- Feeling like you are not ready to care for your newborn

Postpartum Hormones

- During pregnancy, the amount of female hormones in the body increases to 10 times the normal level.
- After delivery, there is a rapid drop in hormone levels.
- This drop in hormones can lead to the "Baby Blues"—the irritability, sadness, crying spells, or frustration that almost all women experience to some extent in the days and weeks after giving birth.
- These hormonal changes, along with the big life changes of having a newborn baby, can contribute to postpartum depression (PPD).
- Symptoms of PPD are similar to the Baby Blues but last longer and can include depressed mood, feeling worthless, sleep problems, changes in appetite, loss of energy, and anxiety or panic.



© Fleshandbones.com Davies et al: Human Physiology

The skills presented in PREPP may prevent or reduce these symptoms.

Crying

All babies cry. You may be surprised by how much time your baby spends crying.

- At about 2 weeks of age, babies start to cry more each week.
- By 2 months of age, babies usually cry more than at any other time. This is sometimes referred to as the **Period of PURPLE Crying®**. For more information, please go to *www.purplecrying.info.*
- As babies become older than 2 months, they begin to cry less with each week.
- Babies still can be normal and healthy even if they cry 5 hours a day.

All of this crying can be overwhelming, but remember: this period of your baby's life will not last forever!

PREPP Skills: Comforting Measures

When your baby is crying, there are things that you can do to try to help comfort your baby:

- Check to see if your baby is hungry, tired, or has a wet diaper.
- Rock or dance with your baby.
- Go for a walk in the stroller or a ride in a car.
- Sing or talk to your baby.
- Hold your baby close to you with skin-to-skin contact or in a carrier.

Remember, you can always check with your doctor to see if there is something wrong that is causing your baby to cry.

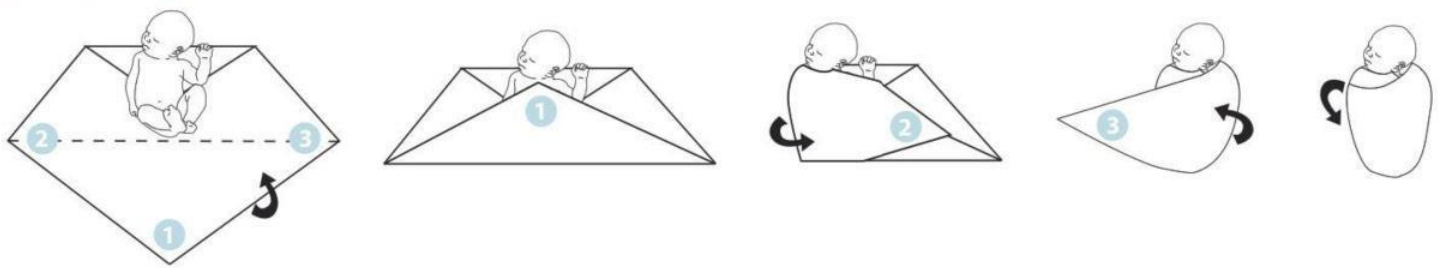
PREPP Skills: Swaddling

Swaddling involves carefully and tightly wrapping an infant in a blanket or other piece of fabric. It has been used for hundreds of years to calm babies.

Swaddling can help by:

- Making it easier for your baby to fall asleep
- Lengthening the periods of time your baby stays asleep
- Reducing the number of times your baby wakes up
- Increasing the chances that if your baby does wake up, he or she will be able to fall back asleep on his or her own

Swaddling Method:



You should feel comfortable and take care when swaddling. Try to only use swaddling at nighttime or when you put your baby to bed.

- Remember that for sleeping, "back is best". This is true even if you don't swaddle. Make sure to use a very light blanket to swaddle in hot weather so that your baby does not get too hot. If you have any questions about swaddling, please speak with your doctor or with your PREPP counselor.

PREPP Skills: Carrying

Benefits of using an infant carrier:

- Leaves your hands free to do other things (including taking care of your other children)
- Makes the baby happier
- Provides a chance for your baby to feel close to you and for you to feel close to your baby
- Reduces crying and fussiness in babies

When using a baby carrier remember:

"T.I.C.K.S."

Safety tips for using a baby carrier—"T.I.C.K.S.":

Tight—Make sure the carrier is fastened tightly around your baby, with no loose fabric.

In view at all times—You should be able to see your baby's face at all times by looking down. There should not be any fabric covering your baby's face.

Close enough to kiss—Keep your baby's head as close to your chin as is comfortable. You should be able to kiss your baby's forehead by tipping your head forward.

Keep chin off the chest—Make sure that there is always at least a finger width of space between your baby's chin and chest.

Supported back—Your baby should be held close to you, with the baby's back supported by the carrier and his or her tummy and chest against you. If the carrier is too loose, the baby's back will slump, which can cause breathing problems.

PREPP Skills: Day and Night Cues

Almost all newborns need help getting onto our day and night schedule. These tools can help them learn that daytime is for active play and nighttime is for sleeping.

During the day:

- Interact with your baby as much as possible.
- Open the curtains or shades and play lively music.
- Don't minimize background noise, like the phone or the TV.

At night:

- Keep your baby's room quiet and dark.
- Instead of playing with your baby when he or she wakes up, focus on his or her needs, such as feeding or a diaper change.
- Make nighttime interactions with your baby as brief as possible. Avoid turning on the lights during feedings and diaper changes (a nightlight is useful for this). Keep your voice soft and low.
- Swaddle your baby.

PREPP Skills: Feeding to Help Your Baby Sleep

Making some changes to the way you feed your baby at night can help your baby get onto your sleep schedule and learn to sleep through the night.

Focal Feeding:

- Feed your baby between 10pm and midnight, even if it requires waking him or her.
- The idea is to make sure that your baby is full when you put him or her down for the night.

Lengthening the time between feeding at night:

- When your baby wakes up at night, try to delay feeding him or her for a few moments. You can calmly rest your hand on your baby's belly or change the diaper to add a short delay.
- This does *not* involve leaving the baby to cry for a long time or playing with him or her.

Start using these tools 2 to 3 weeks after your baby is born, and only if your baby is healthy and gaining the right amount of weight.

PREPP Skills: Mindfulness

- Sometimes you will use all of the PREPP skills and your baby will still cry or have a lot of trouble going to sleep. Sometimes being a mom to a newborn can be so stressful! If you feel like you are becoming overwhelmed, it is okay to place your baby is a safe place (e.g., the crib) and take a moment for yourself away from your baby.
- Using mindfulness exercises at these times can be really helpful. Mindfulness is learning a new way to handle your thoughts and feelings. These exercises can help you feel less overwhelmed by upsetting thoughts and remind you that a difficult experience is only temporary.

Exercise 1: Progressive Muscle Relaxation

Close your eyes. Turn your focus to your breathing. Breathe normally. If you notice your mind wander to anything other than your breath, notice where your mind goes and then bring it back to your breath.

Then turn your focus to your tension or stress that you are holding in your body. Each time you breathe in tighten a specific muscle in your body and with each exhale, focus on releasing tension from that part of your body. Start by tightening and releasing tension in your head and neck and work your way down to your toes.

Exercise 2: Mindful Walk (can be done with your baby in carrier or in a stroller)

Take a walk in your neighborhood or in a favorite spot.

Notice your breathing, your body, and how the air feels against your skin. Notice smells and what you see.

When your mind wanders (and it will), gently guide it back to noticing the outside world. Stay present in the moment and in touch with what you are smelling, seeing, and feeling.

Hospital Packing List

FOR YOU

- ☐ comfortable socks
- ☐ slippers
- ☐ toiletries
- ☐ 1–2 pairs of pajamas
- ☐ bathrobe
- ☐ a nursing bra
- ☐ nursing pads
- ☐ 3–4 pairs underwear
- ☐ maternity outfit to wear home (you'll still be swollen)
- ☐ toiletries (e.g., toothbrush, toothpaste, hairbrush, shampoo, soap, lotion, etc.)
- ☐ eyeglasses and/or contact solution
- ☐ prescription medications you are taking
- ☐ an iPod, or music device, and charger
- ☐ cell phone and charger
- ☐ camera with charger and extra batteries
- ☐ magazine or book
- ☐ snacks
- ☐ health insurance forms
- ☐ pre-registration forms from the hospital
- ☐ personal identification
- ☐ this pamphlet!
- ☐

FOR YOUR BABY

- ☐ infant car seat
- ☐ going-home outfit
- ☐ baby hat
- ☐ mittens to keep your baby from scratching his or her face
- ☐ blankets and outerwear for the trip home (if cold weather)

CONTACT INFORMATION:

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cem31@cumc.columbia.edu I 646.774.8941

Elizabeth Werner, PhD:
ew150@cumc.columbia.edu I 646-774.8945

PREPP

PRACTICAL RESOURCES FOR EFFECTIVE POSTPARTUM PARENTING

designed by amy oh

References for research studies on the skills presented in PREPP can be furnished by PREPP developers.

	PREPP Session	Components
Session 1	28-32 weeks gestation In clinic or virtual 45-60 minutes	Harnessing a dyadic focus Establish alliance Self-reflection practice Sleep skills and mindfulness Distributed Materials: Prepp App/Mindfulness Audio File
Session 2	34-39 weeks gestation In clinic or virtual 45-60 minutes	Psychoeducation Infant caregiving techniques Review prior skills Distributed materials: PREPP pamphlet
Session 3	18-72 hours post delivery Virtual 15-20 minutes	Review PREPP pamphlet Practice techniques: -Swaddling -Carrying -Mindfulness
Session 4	2-3 weeks postpartum Virtual 15-30 minutes	Check in about mother & infant well-being Assess use of techniques Discuss challenges of newborn car
Session 5	6 weeks postpartum In clinic or virtual 45-60 minutes	Practice self-reflection Assess use of techniques Review techniques where necessary

Trainings are:

- Straightforward
- Tailored to the intended clinical population
- Customized to the trainee's experience & previous training
- Can be 100% virtual

Requires ~8 training hours and a 1 hour certification assessment.

Our previous trainees have come from a variety of clinical backgrounds.

Clinical Psychologists
Psychiatrists
Occupational Therapists
Social Workers
Case Managers
Community Health Workers
Nurse Practitioners
NP Students
Social Work Student
Masters Psychologist

The Perinatal Care Ecosystem

Expert Review

The transition to parenthood in obstetrics: enhancing prenatal care for 2-generation impact

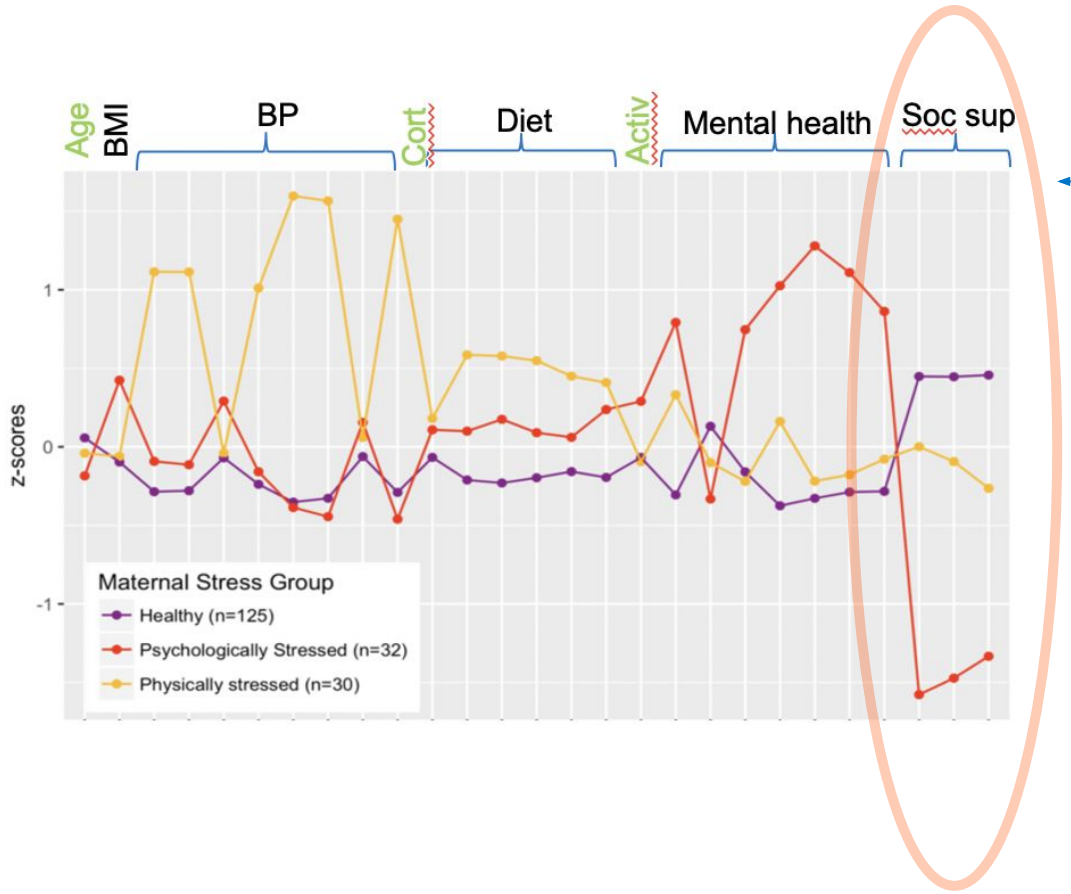
Catherine Monk, PhD; Sona Dimidjian, PhD; Ellen Galinsky, MS; Kimberly D. Gregory, MD, MPH; M. Camille Hoffman, MD, MSc; Elizabeth A. Howell, MD, MPP; Emily S. Miller, MD, MPH; Cynthia Osborne, PhD, MPP; Cynthia E. Rogers, MD; Darby E. Saxbe, PhD; Mary E. D'Alton, MD

American Journal of Obstetrics & Gynecology – Maternal Fetal Medicine; August, 2022

Women's Mental Health @Ob/Gyn: Center for the Transition to Parenthood

- First ever research-to-practice center enhancing perinatal care ecosystem for 2 Generation impact
- Ob care as a touchpoint for public health intervention
  - Promote family well-being from the start
  - Whole-person approach
  - The psychological birth of parents that affect the child
- Support Obs supporting patients, support patients
  - Community collaborators
  - Doulas
  - CenterPregnancy (group perinatal care)
  - Evidenced-based materials available in multiple formats (TikTok, X, handouts, MyCare)
  - Website: clearinghouse for resources (e.g., Black Birthing Joy)
  - Demonstration projects, scale up

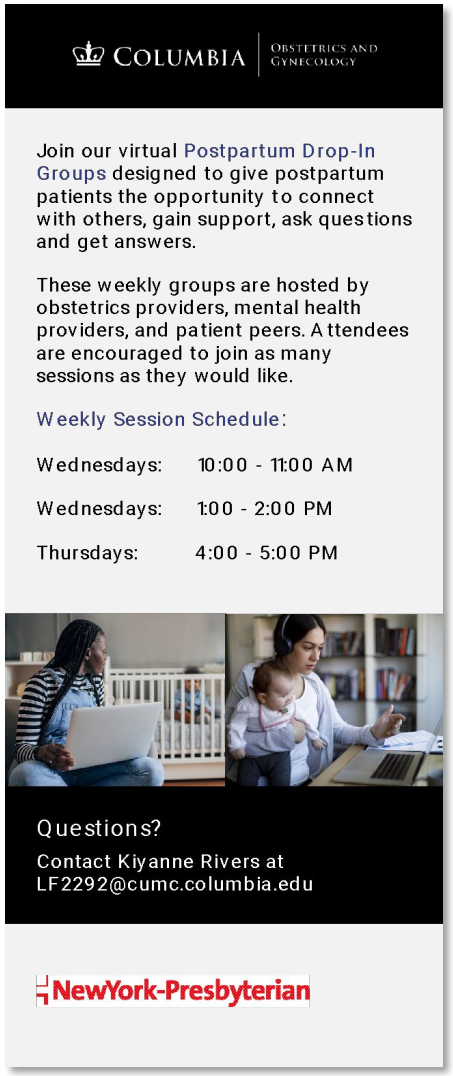
PMADs Are Preventable: Social Support

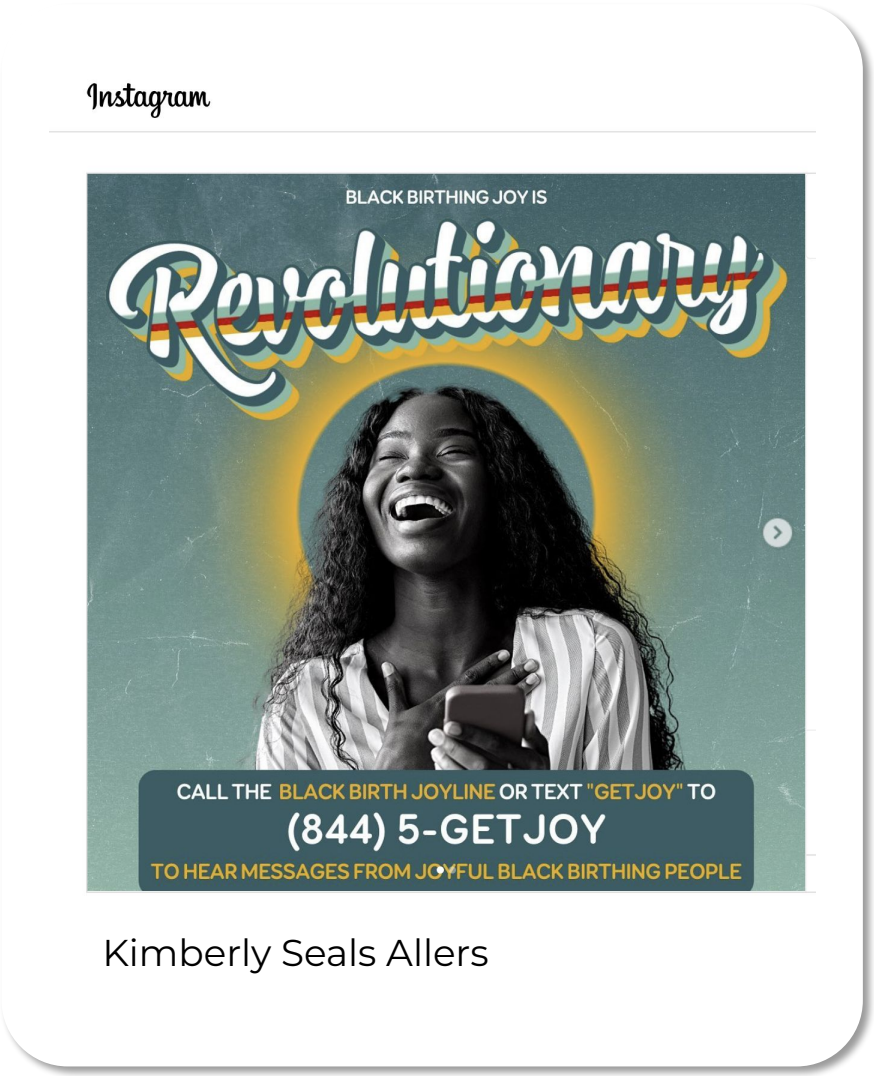


Role of relationships and communities and interventions that build on these strengths to improve maternal and child health

PMADs Are Preventable: Social Support

PMADs Are Preventable: Social Support and Community Expertise





Kimberly Seals Allers



THANK YOU



PMADs
Have 2
Gen Impact

DOI: 10.1111/bdi.13207

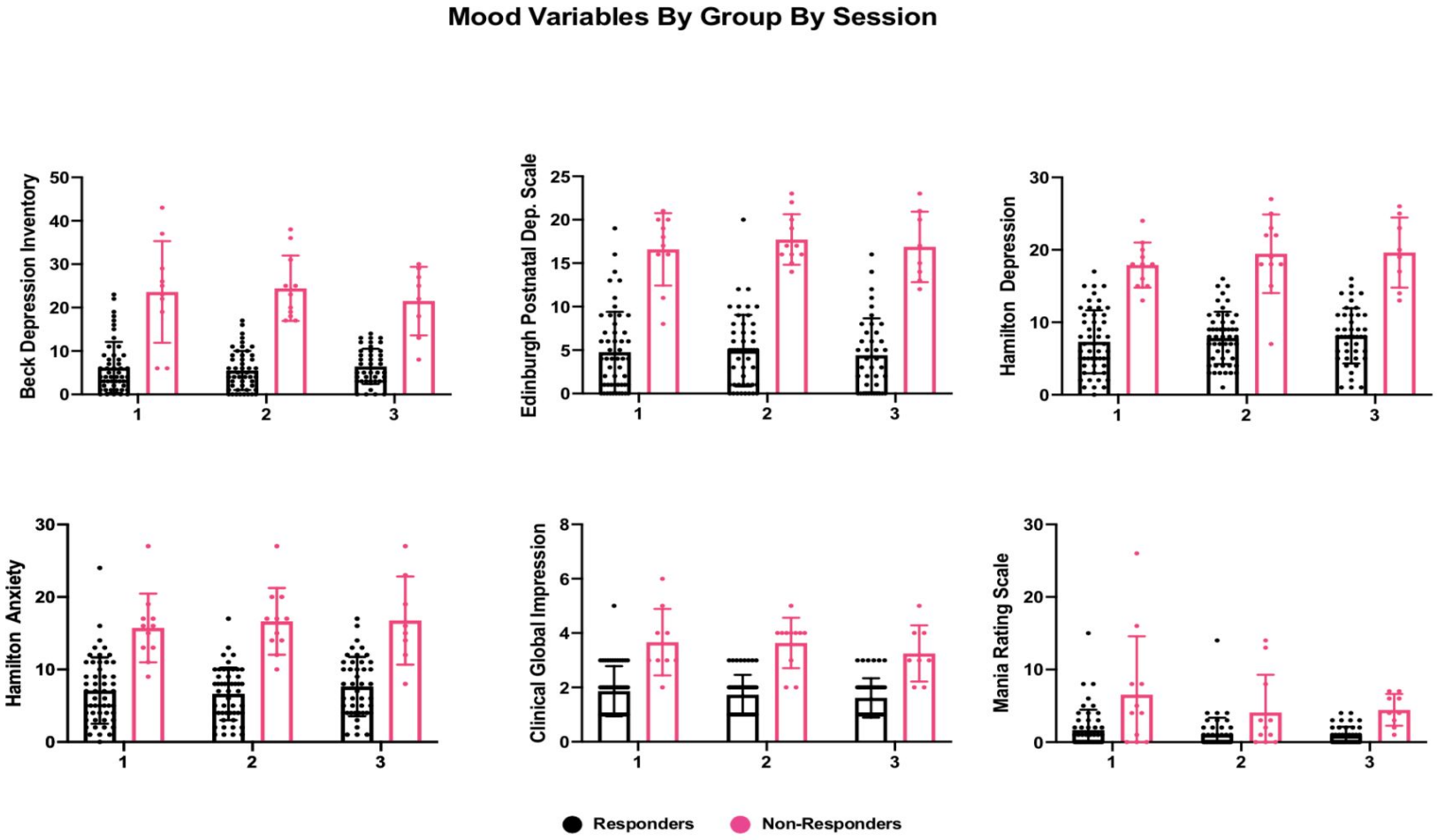
ORIGINAL ARTICLE

Pregnant women with bipolar disorder who have a history of childhood maltreatment: Intergenerational effects of trauma on fetal neurodevelopment and birth outcomes

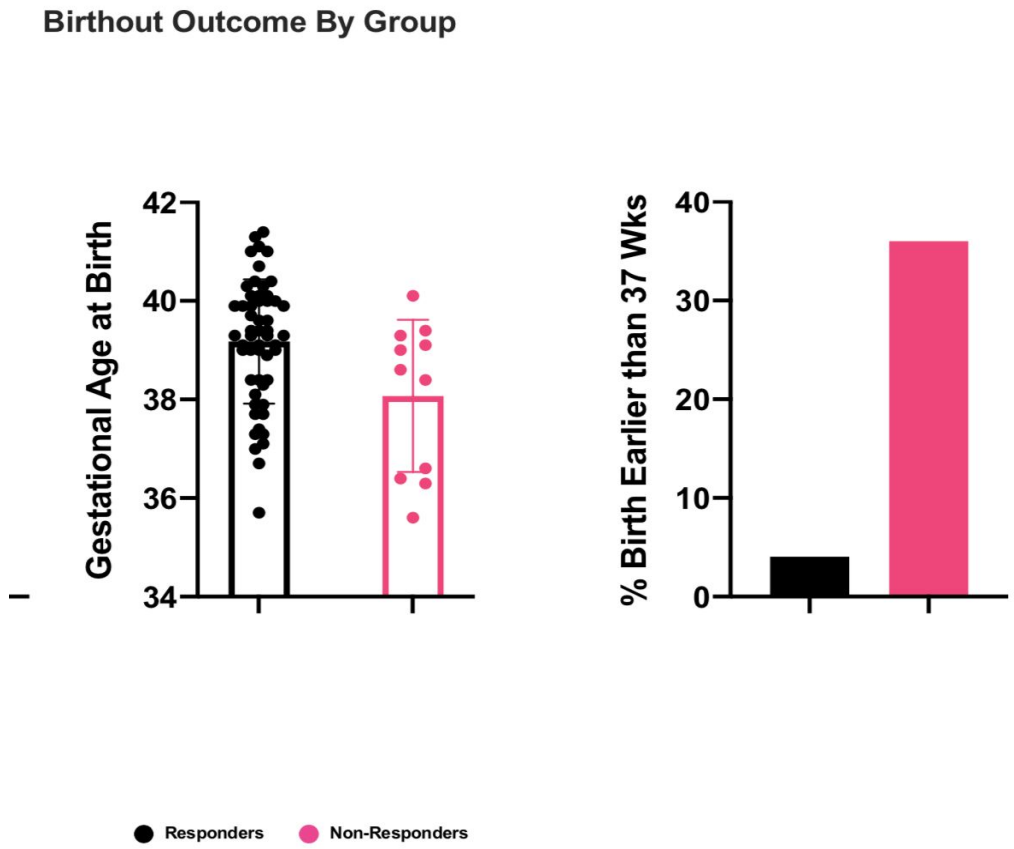
Vanessa Babineau[1] | Clare A. McCormack[2] | Tianshu Feng[3] | Seonjoo Lee[4,5] | Obianuju Berry[6] | Bettina T. Knight[7] | Jeffrey D. Newport[8] | Zachary N. Stowe[9] | Catherine Monk[10]

Bipolar Disorders. 2022;00:1–12.

PMADs
Have 2
Gen Impact

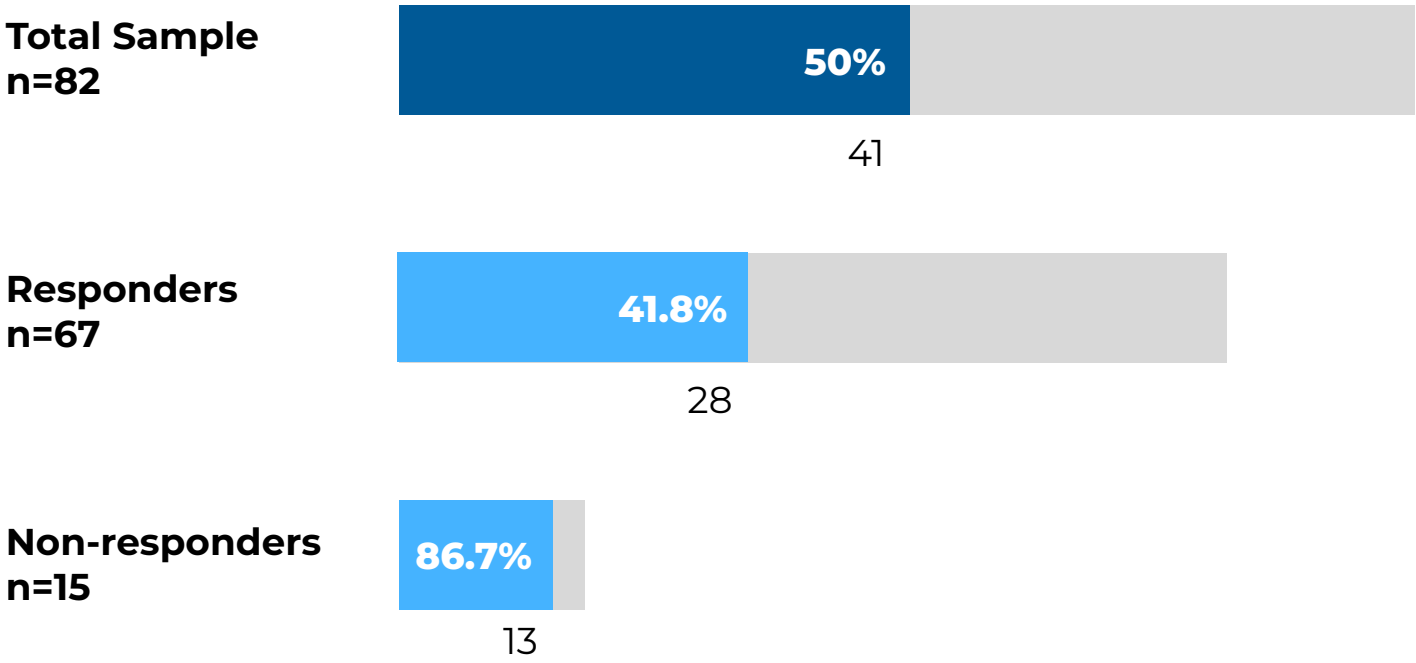


PMADs
Have 2
Gen Impact



PMADs
Have 2
Gen Impact

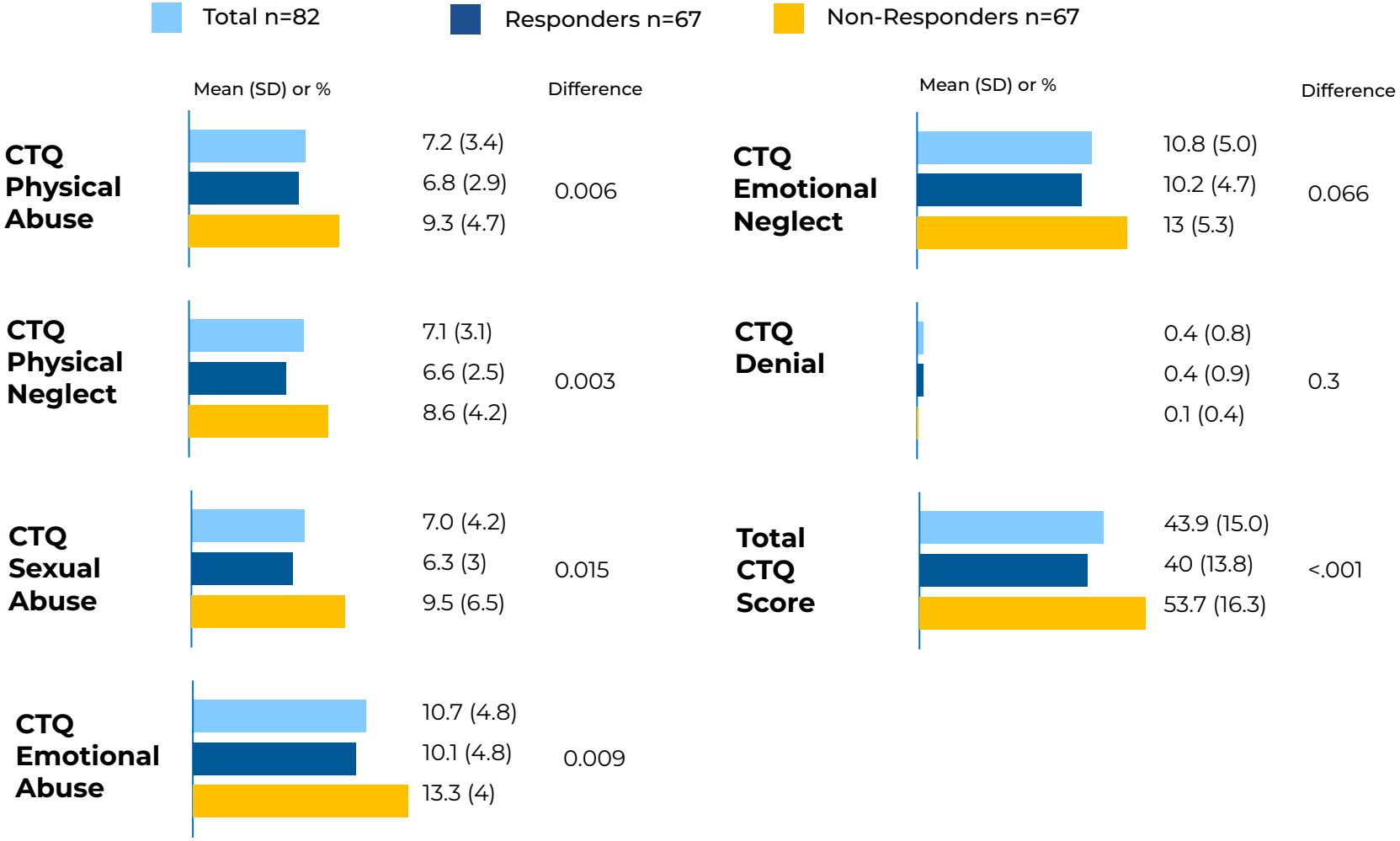
Trauma: Groups Differed by Childhood Maltreatment



COLUMBIA | OBSTETRICS AND GYNECOLOGY

PMADs Have 2 Gen Impact

Trauma: Groups Differed by Childhood Maltreatment



Parental Mental Health During the Perinatal Period
Impact on Attunement and Attachment

Gloria Castro Larrazábal
New York
June 10, 2024

TTAC Annual Spring Conference

Promoting 2-Generation Health during Infancy and the Perinatal Period: Synthesizing Clinical, Research and Policy Perspectives

PERINATAL ChildParent Psychotherapy

Learning Objectives

- Attendees will describe the difference between Imaginary Baby, Symbolic Baby, and Real Baby.
- Participants will be able to identify at least three risk factors of untreated maternal/paternal mental health during the perinatal period.
- Attendees will be able to list three values of intervening during the perinatal period.

The transition from Pregnancy to Parenthood

- **New parents hope:**

  - to be good parents, to love, to provide, to teach, to protect, and to ensure their child's safety and security

  - for a happy, healthy, and a successful child

  - a child with more opportunities than they themselves had

  - for a meaningful and a deep connection that will enrich their lives

- They are full of **courage**

- The more **vulnerable parents** their **hope and courage** are **challenged**

- Parents who:
  - suffered assaults and adversities as children (Lieberman et al., 2015)
  - grew up in families struggling with addiction and mental illness
  - grew with a range of chronic, and toxic stressors (Shonkoff et al., 2012) such as severe poverty, overt and systemic racism, cultural oppression, and health, social, educational, and economic disparities
  - building safe and loving relationships can be difficult

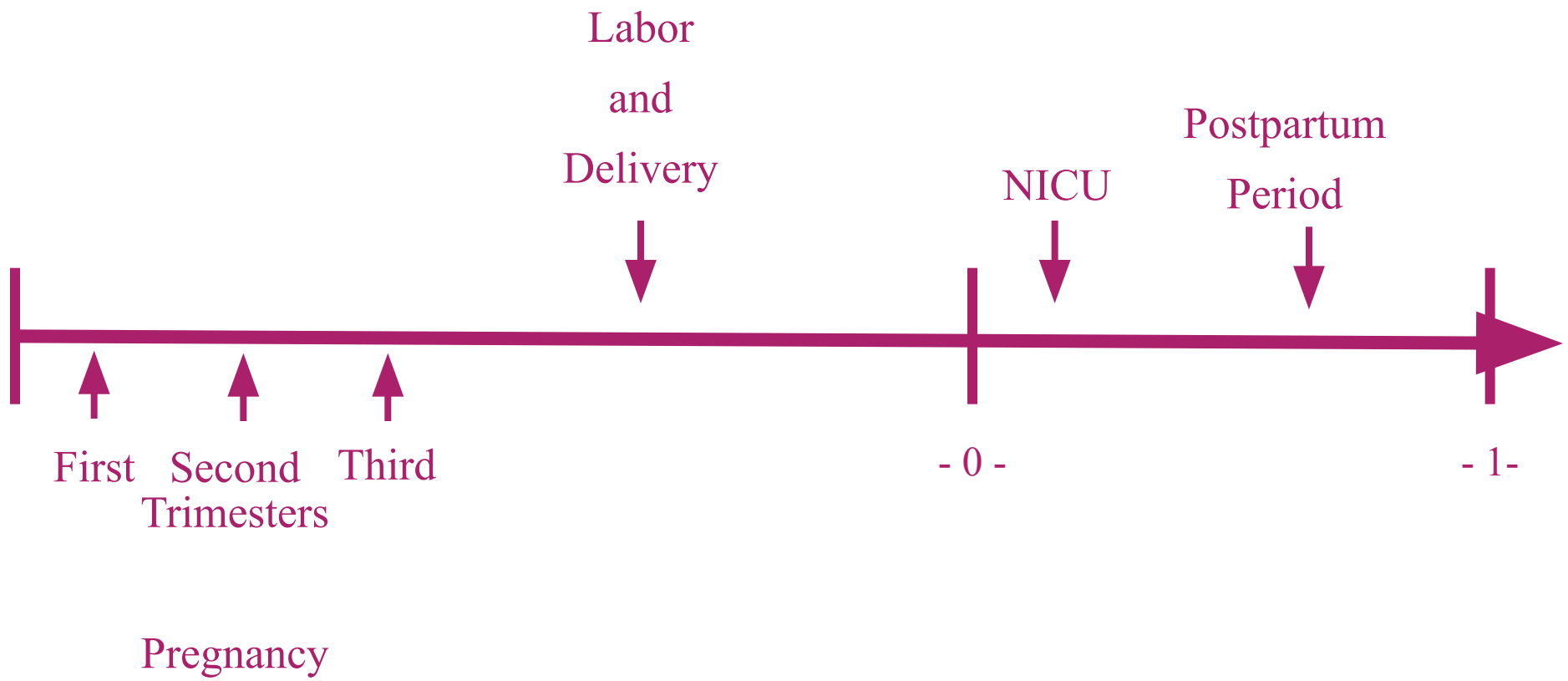
Beginning Prenatally

- ***Preventing*** later difficulties and ***promoting*** a range of health outcomes and improve mental health
- The more time spent ***making room for the baby*** – emotionally, physically, and relationally – the better (Lieberman, et al., 2020)
- Enhancing parents' capacities to ***see*** and ***hear*** their babies. These capacities are essential to positive attachment, health, and mental health outcomes that are often challenged by their structural and personal stressors in their lives

“ The story of a human being does not start at five years or two, or at six months, but starts at birth – and before birth if you like ”

Winnicott, 1964, 1987

Perinatal Mental Health Psychotherapy
Outpatient and Inpatient



Perinatal Period

- Pregnancy and the first 12 months postpartum
- It is a vulnerable time to experience new traumatic experiences (Grekin & Ohara, 2014) such as:
  - Life-threatening pregnancies complications
  - Traumatic birth experiences
- It can be extremely stressful or retraumatizing for individuals with a past trauma histories, especially for those with a prior reproductive or interpersonal trauma history (Seng et al., 2010; Banyard et al., 2001)

The U.S. is the only wealthy country in the world where maternal deaths are on the rise.

The most recent reports indicate that 60% of these deaths are preventable.

Preventable maternal mortality is both a form and a symptom of discrimination against *women, and it deprives women of their right to live a healthy life on a basis of equality with men.

CENTER *for*
REPRODUCTIVE
RIGHTS

NYC 2008-2012

Severe Maternal Morbidity increased by more than 28%

Black women were most affected, with SMM rates 3x that of white women

Puerto Rican women and other Latinas also had higher rates

Rates were highest among women living **in high poverty neighborhoods**

Perinatal Mental Health

- To integrate reproductive social justice in mental health services
- To address psychological challenges and social disparities
- To integrate culturally attuned, family-oriented services that can repair and prevent the intergenerational transmission of trauma
- To collaborate between mental health services and primary care

Shift from Reproductive Justice to Reproductive Health

Maternal Health Outcomes are Indicators of Broader Challenges

- Maternal mortality is both a form and a symptom of discrimination.
- Reproductive rights violations are informed by and reinforce discriminatory stereotypes, practices, and ideologies, perpetuating discrimination against already marginalized groups.
- Ensuring safe and respectful care during the perinatal period is a critical piece of the pathway towards racial and gender equity.

Maternal Mental Health: Social Justice Disparities

- Individual
- Health Care Provider
- The system of Care

Reproductive Justice Core Principles:

- the right *not* to have a child;
- the right to *have* a child; and
- the right to *parent* children in safe and healthy environments."
- In addition: "reproductive justice demands sexual autonomy and gender freedom for every human being."

Ross and Solinger (2017)

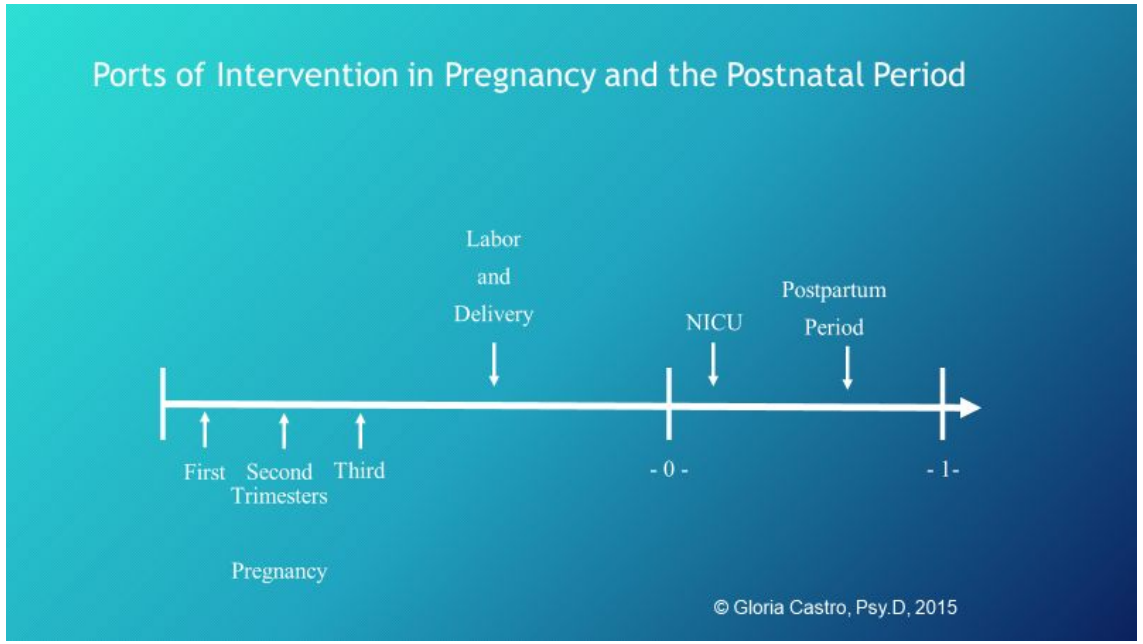
Reproductive Oppression

- It is the result of the intersections of multiple oppressions:
  - Age
  - Class
  - Race
  - Religion
  - Sexual orientation

Why Treatment in Pregnancy Matters: A Developmental Psychopathology Perspective

- **Personal stresses**
  - -- Physiological processes
  - -- Psychological transformations
  - -- Changes in intimate partner relationships
  - -- Nature of risk and protective factors
- **Sociological realities**
  - -- Maternal mortality in the U. S. doubled in last 30 years
  - -- Disproportionate increase in Under-Represented Minorities (URM) groups
  - -- Exponentially higher mortality rate in Black mothers and Black babies

What is the value of interventions during the perinatal period?



- Interventions begin in pregnancy and continue after the baby's birth
- Promote maternal and infant health and well-being
- Address psychological challenges and social disparities
- Enhance maternal reflective functioning
- Promote secure attachment

Impact of Maternal Risk Factors on Babies

- "Fetal Programming"

  Prenatal maternal stress is linked to alterations in fetal development

  -- Placental-fetal stress physiology

  -- Newborn brain structure

  -- Respiratory Sinus Arrhythmia (RSA), marker of self-regulation

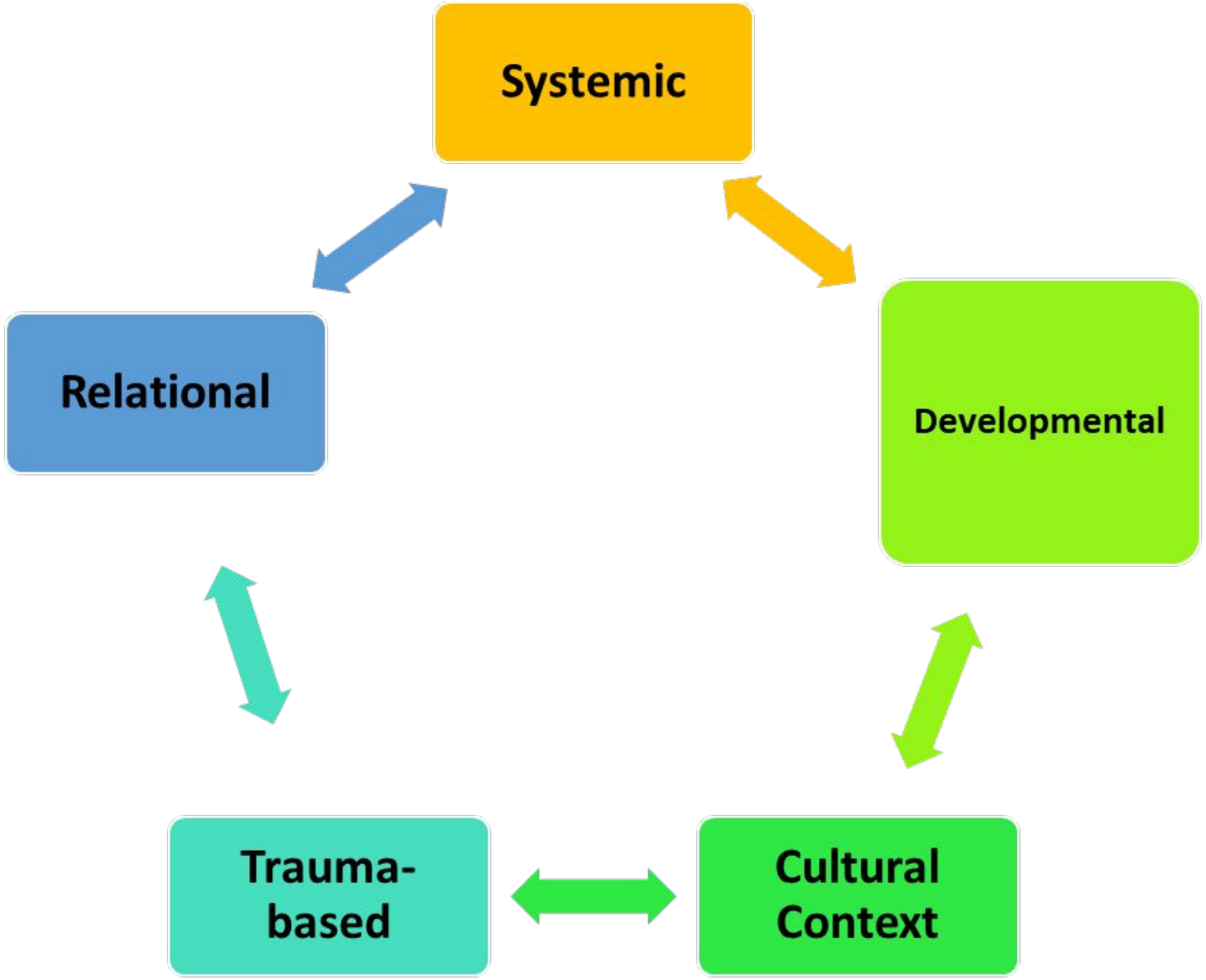
  -- Long-term risk for psychiatric conditions
- Impact of unplanned/unwanted pregnancy and IPV on infant outcomes

Perinatal Mental Health

- Infant Parent Psychotherapy
- Perinatal Mental Health Consultation
- Perinatal Child-Parent Psychotherapy

Perinatal Mental Health

Perinatal Child Parent Psychotherapy



Perinatal Mental Health

- Underserved and poor resourced neighborhoods in San Francisco
- Develop more intensive, comprehensive services than those available at the time
- Infant-Parent Program and Child Trauma Research Program developed broad and deep levels of support, bringing together health and mental health care, relationships support, nondidactic developmental guidance, and concrete assistance in a single intervention

Perinatal Mental Health

- The need to provide health and mental health services in an integrated way to address their:
  - vulnerabilities and support their strengths
  - extreme health disparities
  - long history of trauma, adversity, and toxic stress exposure

- Health concerns and challenges in the realm of:
  - attachment
  - affect regulation
  - mental health

Perinatal Mental Health Consultation
Continuity of Care

- **Outpatient**

  - OB/GYN
  - Pediatrics

- **Inpatient**

  - Labor and Delivery
  - Post Partum
  - NICU
  - Nursery
  - ICU

Perinatal Mental Health Consultation

Continuity of Care

Perinatal Child-Parent Psychotherapy

Perinatal Period

The time frame beginning in conception through the first year after giving birth.

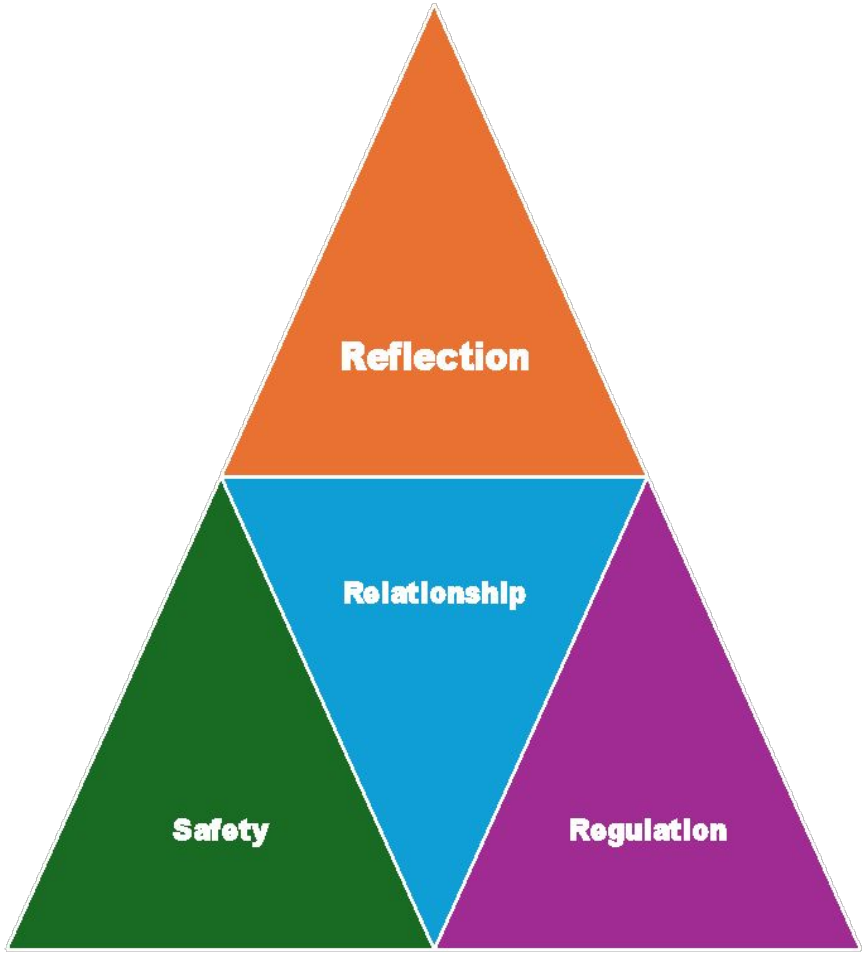
- It integrates culturally attuned, family-oriented services
- It repairs trauma and prevents its intergenerational transmission
- Promotes emotional bonding prenatally and secure attachment postnatally
- Ensures healthy infant development

Initial Clinical Goals:

- Establishing a parent's **sense of safety**
- Helping the parents become more **regulated** and less defensive
- These will take us to the development of a strong **working alliance** with trust at its core
- This will lead us to **reflection**
- Support the **pleasure** of parenting

Enhancing Attachment and Reflective Parenting

Arietta Slade et al. 2023



Perinatal Period

- High risk for new set or exacerbation of existing posttraumatic stress disorder

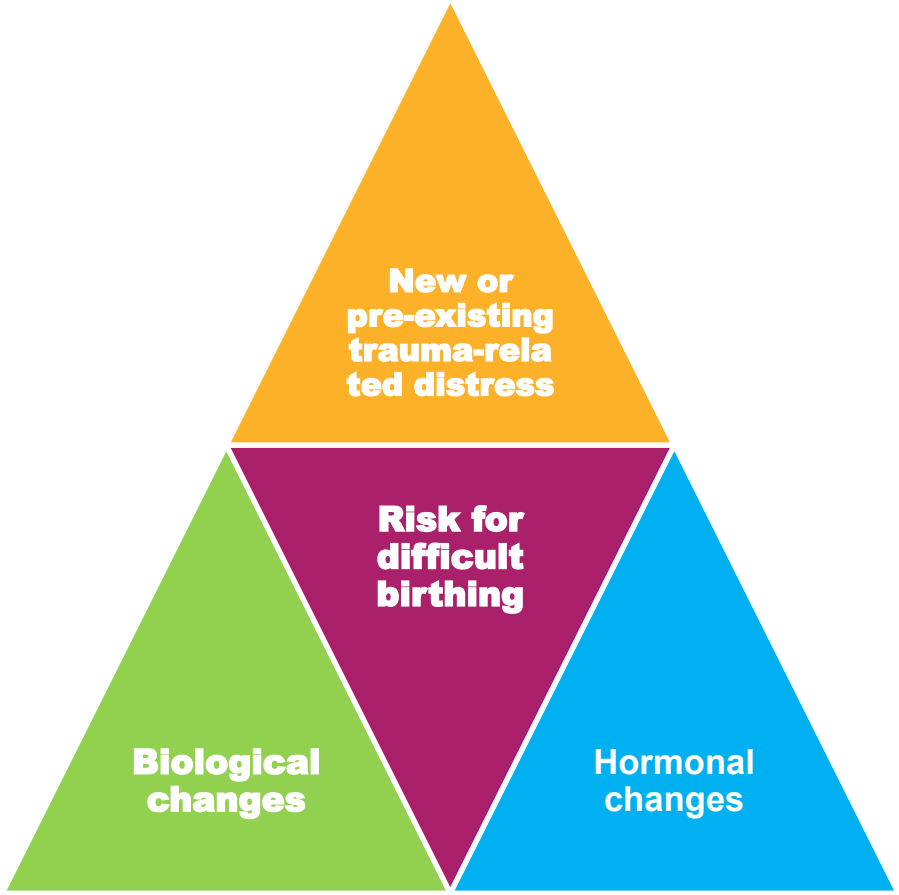
- Vulnerable time to experience new traumatic experiences:
    - Life threatening pregnancy complications
    - Traumatic birth experiences
    - Can cause significant stress and impairment

Perinatal PTSD increases the risk for:

- Poor maternal and infant outcomes:
  - Pre-eclampsia
  - Gestational diabetes
  - Preterm birth
  - Increased likelihood of maternal and infant mortality (Shaw et al., 2017)
- Maternal exposure to trauma during the perinatal period is associated with later child development delays (Moog et al., 2016; Ping et al., 2015)

Perinatal Period

Posttraumatic Stress Disorder



Traumatic Events

- **Interpersonal:**
  - Physical Assault
  - Sexual abuse

- **Reproductive Trauma:**
  - Spontaneous Abortion
  - Therapeutic Abortion
  - Perinatal Loss: IUFD
  - Fertility challenges

Screening for PTSD and Depression:

- Pregnancy: second and third trimester

- Postpartum:

  - 1 month: coincides with typical timing of postpartum checkup (4-6 weeks)

  - 3 month postpartum: they do not have care scheduled after the 4-6 period. Pediatricians can identify these women.

P-CPP after a Traumatic Birth

- Helps the mothers not only to cope with the previous loss and/or modify the effects of adverse life events, reduce the stress associated with the traumatic birth
- Promotes maternal role attainment
- Supports parents to create environments for their infants that are conductive to healthy maternal-infant interaction
- Enhance secure attachment

Parent-Infant (PI) Relationships

- The quality of P-I relationships during infancy and early childhood has lasting and significantly psychologically and biological impact on the developing child

- Preterm and traumatic birth can cause a disruption in the development of the P-I bonding

Traumatic Birth

- **Infants:**

  - Neurologically and biologically more vulnerable to their environmental exposure

  - Less interactive, less engaged, and more easily dysregulated, as a result, of parental difficulties to read their cues

  - Less positive affect

  - Less responsiveness and engagement in a dyadic interaction

- **Parents**

  - Hard time to read infant's cues

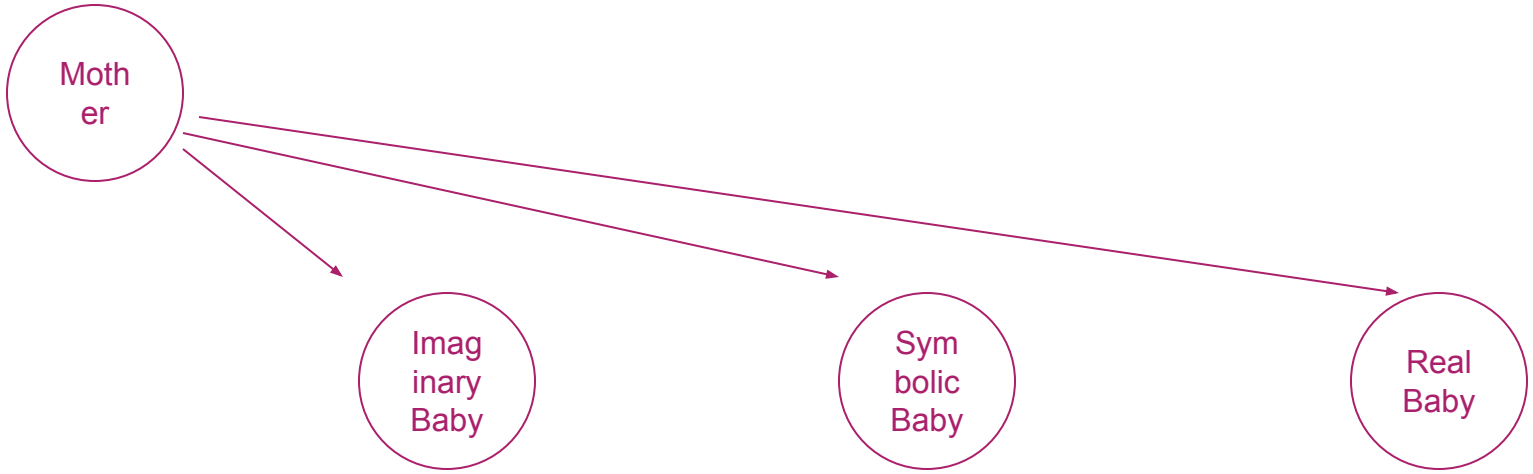
  - Hard time developing a sense of agency

  - Low sense of parental-efficacy

  - Difficulties bonding with their infant

Stages of Pregnancy

Perinatal Child-Parent Psychotherapy



Development

First Trimester

Second Trimester

Third Trimester

Explore if Pregnancy was Planned and Wished

Explore Maternal Attributions

Prepare to Meet The Real Baby

Interventions

Stages of Pregnancy

- **First trimester:** the woman is reacting to and assimilating the novel physical sensations and symptoms that are occurring. The baby is an abstraction and is experienced as an extension, or an additional part of herself (Ammaniti et al., 1992)
- **Second trimester:** with the aid of ultrasound (Piontelli, 1992) and the quickening, the woman can now feel the baby's separate and distinct reality
- **Third trimester:** she reworks her emotional experience of the baby as an "insider" or "outsider"

Creating Spaces

- A safe place to reflect
- A space to construct a narrative of their experience of pregnancy and making the transition to parenthood
- A space to speak about the unspeakable
- A space to become aware of the process of becoming a mother/father
- A space to welcome the baby

Early Interventions

Perinatal Child-Parent Psychotherapy

CLINICAL CASE

Ana, Ricardo, and Lily

Clinical Case

- Ana is a 21-year-old woman from Michoacan, Mexico, who was referred by her midwife. She is 20 weeks pregnant. Medical staff is concerned that she is not bonding with her baby
- She does not talk about her pregnancy
- She presents sad, tearful, unable to sleep, not enjoying activities that in the past she used to enjoy
- Ana reports that she is not sleeping well, and her appetite has decreased

Ana's Family History

- At age three, her father left Morelia, Michoacan and moved to US to work in the field
- Client's father visited his family in Michoacan twice a year
- Ana remembers feeling confused when her father would say good night and the following morning, her father had "disappeared"
- Her mother did not anticipate when her father was returning to California, and she had sleeping difficulties the following weeks
- Ana's brother committed suicide in Michoacan when he was 21-years-old
- Ana came to US at age 15 with her family to join his father
- She had an intrauterine fetal demise at 40 weeks of gestation

Ricardo's Family History

- His father left him behind in Morelia, Mexico, when he was a 5-year-old boy
- Ricardo's father died in California in a car accident when he was 15-years-old
- His brother had a long history of depression and committed suicide
- He became the support of his mother and sisters and came to California at age 15 to work
- After the loss of his first son, Roberto had severe physical problems on his back and shoulders that led him to disability

The Unborn Baby as a Carrier of the Past

- **Ghosts in the nursery: linking the past with the present**
- **Empathic insight-oriented interpretation to promote self-understanding**

"How difficult was for you to understand why your father disappeared when you were sleeping. You were only a little 3-year-old girl."

- **Client self-reflect:**

"Do you think that it is why I woke up so often while my baby was sleeping, to make sure my baby was not going away?"

Addressing Obstacles in Treatment: Mistrust of the Therapist and Medical Staff

- *"It is difficult to come to the hospital and meet with you?"*
- **What is the most difficult part to come to the hospital and meet with me?**
- *"It reminds me when I was pregnant last year and I used to come to the hospital, and then, my baby died before he was born."*
- **I am wondering if not coming to the hospital for your prenatal care or meet with me, it is a way to protect yourself from experiencing difficult feelings that remind you when you lost your first baby."**

Clinical Formulation as Invitation to Treatment

- Making the connection between feeling lonely, unloved, confused, and abandoned by her father, and the anticipated pain of loosing her baby.
- *“ I am afraid that my baby will die while she is sleeping!”*
- It is now that you are beginning to understand how difficult was for you when you woke up as a little girl and your father had disappeared while you were sleeping
- You had another experience during your previous pregnancy. You were concerned about not feeling the movements of your baby. You went to sleep that night and the following morning the doctor informed you that your unborn baby had died.

Core Treatment: Deepening the Foundational Work

- Back and forth between present, immediate past, and childhood loneliness, fear and rage: Seeking the emotional meaning of **specific memories** and **fears**

- *“I always had the fear that if I allowed my baby to sleep, she would disappear. I had the need to constantly checking on her to make sure she was alive. I was unable to sleep, and my baby was not getting enough sleep. At times I wanted to run away and leave her behind. I was exhausted. I am feeling very bad that I had those thoughts of leaving my baby behind”.*

- “And you did not leave her because you wanted to protect Lily from that impulse.”

Core Treatment

- **Prenatal Visits:**
  - Addressing the loss of her first child before being born
  - Supporting her to mourn the loss of her baby
  - Mourning the loss of the “imaginary baby” and coping with the “real baby” she had who died before being born
  - Welcoming the new “Real Baby” during this pregnancy
- **Postnatal Visits:**
  - Triggers while baby was sleeping
  - Addressing the triggers
  - Supporting her to retrieve affect of earlier memories

Speaking the Unspeakable: Dispelling Harmful Beliefs

- **Shame** and **self-blame** are universal responses to trauma

  "I am bad" "I made it happen" "I will cause harm"

- **Identifying** and **dispelling** pathogenic beliefs is a core strategic in successful treatment regardless of theoretical orientation

- *"It is such a relief to know that I was afraid of hurting my baby because I really want to protect her. That means that I really love her. I did not know I could feel that way."*

Making Room for Baby: Lily Joins the Family

- Matches and mismatches: Baby as individual
  - _ Mother's perception of the baby
  - _ Father's perception of the baby

- From dyad to triad
  - _ Maternal role
  - _ Paternal role

- Separate agendas:
  - _ Tolerating ambivalence
  - _ Coping with identity development

Making Room for the Real Baby

- Childbirth as a life-or-death experience
- Baby as individual: how parents describe infant and their relationship to baby
- Enlisting coping skills and external help
  _ Co-physiological regulation
  _ How the newborn and the parents are adjusting to the new family constellation

- Integrating separate agendas: Tolerating ambivalence
  "I want to run away and leave my baby behind"
  "I feel guilty because I wanted to leave her behind, and I know she needs me"
  "Dad can feed her with a bottle so I can rest"

Closing Phase

- **Recapitulating Treatment**

"I can't belief that there was a time when I was not taking care of myself and my baby during pregnancy."

- **Mindful Reflection**

"I still get tired and concerned about Lily, but I understand better where my fear is coming from."

- **Anticipating the future**

"When she begins to walk and separates from me, I will be there for her if she needs me."

Perinatal Mental Health

Theoretical Concepts to Consider

Dyadic Psychotherapy

Traumatic Experiences

Attachment

Protective Shield Shattered

- Trauma threatens the core of the attachment relationship

Maternal Reflective Functioning

- The parent's capacity to reflect upon or mentalize the child's experience
- The parent's capacity to envision or imagine, the child's thoughts, feelings, desires, and intentions *(Fonagy et al., 1995)*
- This maternal capacity is linked with a number of positive outcomes:
  - the security of the child's attachment *(Slade et al., 2005)*
  - the quality of the parent-child interaction *(Grienenberg et al., 2005)*

Internal Working Model

- Based on ongoing interactions with their caregivers, infants develop internal working models of attachment relationships, patterns of interactions include images of the self as lovable or not, and images of the attachment figure as available or unavailable to meet the child's needs (Holmes, 2001)
- Children use them to forecast the caregiver's availability and responsiveness and to develop behavioral strategies that are used to maximize closeness to the mother
- These working models of attachment are thought to guide expectations about relationships throughout life

Maternal Sensitivity

- Mother's ability to detect, interpret, and respond to their infants' emotional and physical needs, the quality of the parent-infant interactions, and patterns of attachment are important dimensions to understand.
- Sensitive parenting and high-quality parent-infant interactions are associated with:

- better neurocognitive, socioemotional, and language development, and higher academic achievement later in childhood.

Attachment

- **Secure Attachment**: The role the parents play for their infants in making them feel safe, secure, and protected is very important. The child who constantly receives sensitive, loving, and responding parenting use their parents as a safe- haven when feeling in danger and a secure base from which to explore their environment.

Ghosts In The Nursery
(Selma Fraiberg, 1989)

- The baby reminds the parents of “an aspect of the parental self that is repudiated or negated, for example a childhood memory of a rejecting parent.
- This unconscious “ghost” shapes the parent’s interaction with the baby who then got engulf in, and in distressed
- Maternal attributions to the infant

Angels in the Nursery: Strengths and Hopes

- “Angels” are those benevolent emotional experiences with primary love objects that bestow on the baby a sense of having been protected and cared for (Lieberman, et al., 2005)

- “Angels” are passed on to the next generation through the parent’s capacity to be a “good enough parent” to their own children (Winnicott, 1960,1065)

QUESTIONS AND ANSWERS

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Thank you.

Intimate Partner Violence During the Perinatal Period: Meeting Our Families Where They Are

Promoting 2-Generation Health during Infancy and the Perinatal Period: Synthesizing Clinical, Research, and Policy Perspectives

TTAC Annual Conference
Monday, June 10, 2024

Obianuju “Uju” Berry, MD, MPH

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Learning Objectives

1) Identify different types of intimate partner violence and how it impacts survivors and their families.

2) Compare and contrast strategies for engaging families with a history of IPV in traditional and non-traditional clinical settings.

3) Recognize the challenges and best practices of implementing initiatives for caregivers and young children impacted by IPV.

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Outline:

1. Intimate Partner Violence and Mental Health
2. Impact on Perinatal Mental Health
3. Context Matters: Political Determinants of Health
4. Integrated Care: “Meet them where they are at”
5. Implications for Research and Policy

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1. Intimate Partner Violence and Mental Health

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The Story of Anna

Anna is a 27-year-old divorced, remarried mother of 4 children (ages: 14, 9, 4, and 2 years) living with her husband and three youngest children. She is undocumented, unemployed, and financially supported by her second husband. She has a history of significant childhood abuse and sexual assault. She was married at 13 and after having her first child, she was trafficked to the United States, eventually escaping the situation and moved to New York City, where she met her now husband.

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Domestic Violence
Intimate Partner Violence
Domestic Terrorism
Child Abuse
Elder Abuse
Animal Maltreatment and Abuse
Gender-Based Violence
Sexual Assault
Human Trafficking

Intimate Partner Violence

“Intimate partner violence (IPV) is a serious, preventable public health problem that affects millions of Americans. Intimate partner violence includes physical violence, sexual violence, stalking and psychological aggression (including coercive tactics) by a current or former intimate partner (i.e., spouse, boyfriend/girlfriend, dating partner, or ongoing sexual partner)”

https://www.cdc.gov/violenceprevention/intimatepartnerviolence

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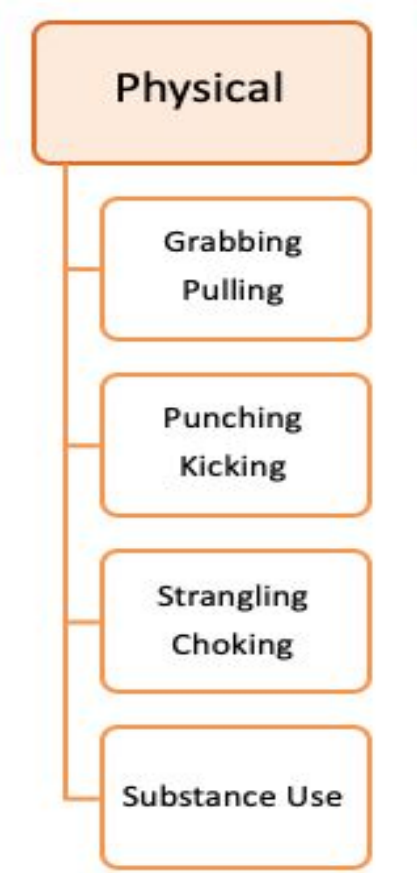
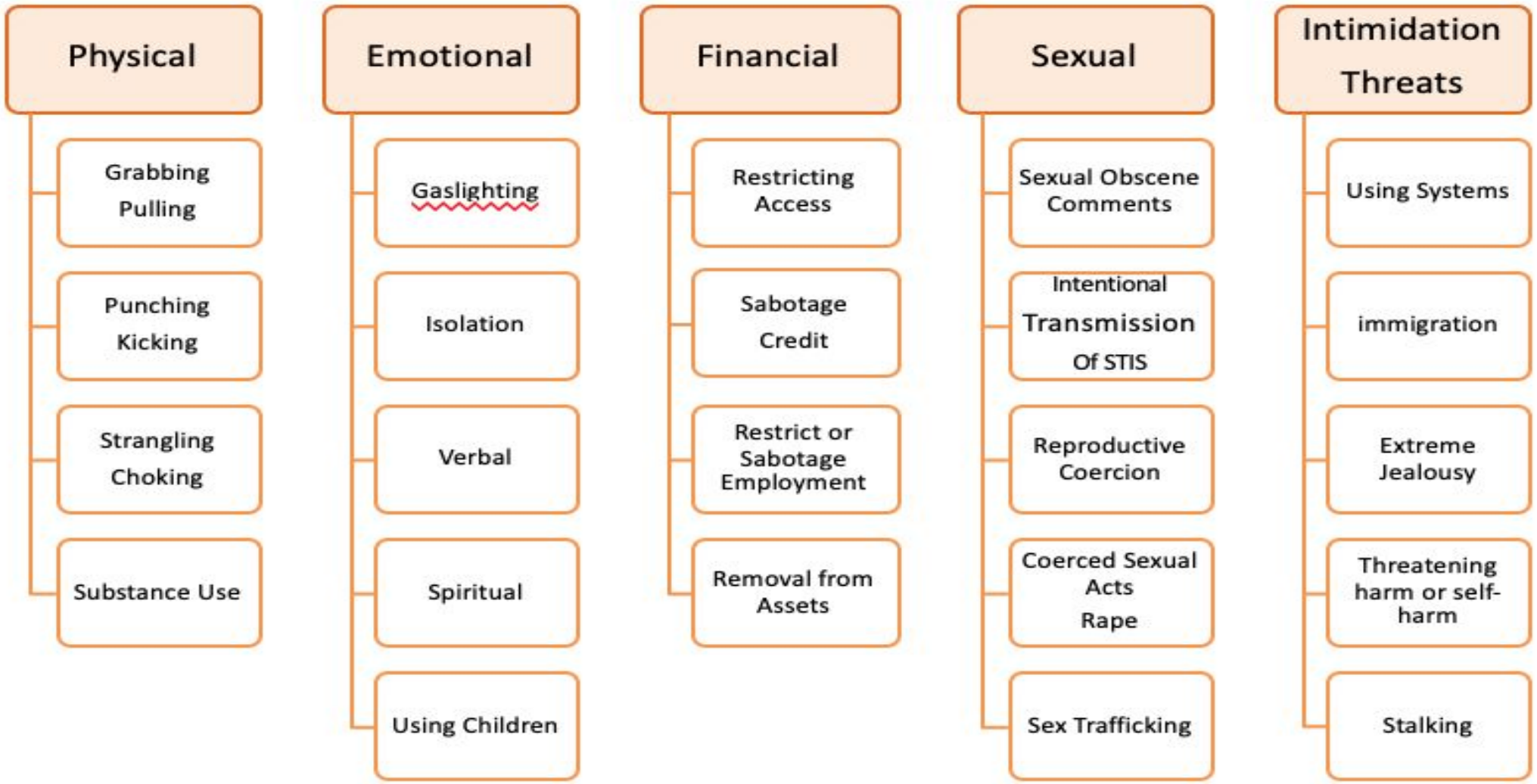
Forms of IPV


Physical
Grabbing
Pulling
Punching
Kicking
Strangling
Choking
Substance Use

Forms of IPV


Physical
Grabbing
Pulling
Punching
Kicking
Strangling
Choking
Substance Use
Emotional
Gaslighting
Isolation
Verbal
Spiritual
Using Children
Financial
Restricting Access
Sabotage Credit
Restrict or Sabotage Employment
Removal from Assets
Sexual
Sexual Obscene Comments
Intentional Transmission Of STIS
Reproductive Coercion
Coerced Sexual Acts
Rape
Sex Trafficking
Intimidation Threats
Using Systems
immigration
Extreme Jealousy
Threatening harm or self-harm
Stalking

IPV Epidemiology

- Almost **1 in 2 women** (47.3% or 59 million) and more than **2 in 5 men** (44.2%) have experienced some form of physical violence, sexual violence, and/or stalking by an intimate partner in their lifetime (Leemis et al, CDC NISVS Survey, 2022)
  - Women are also 5x more likely to be killed by a current or former partner (Stockel, Lancet, 2013)
  - Women between the ages of 18-24 are most commonly abused by an intimate partner (Truman et al, 2014) with 75% being abused before 25 yo and 25% before age 18 (Leemis et al, CDC NISVS Survey, 2022)
- **Strangulation is common**: US prevalence of 27-68% among IPV victims (Mcquown, et al. 2016)
  - **7.5x more likely of becoming a homicide victim** (Glass, et al, 2008)
- Homicide is a leading cause of **pregnancy-associated maternal mortality** (Palladino, 2011)
- **People from marginalized communities (LGBTQ, people of color, undocumented, HIV, disabilities)** experience IPV at rates equal to or higher than general population
  - IPV in **specific ways and face unique challenges** and barriers to resources (Rowther, Berry, & Fitelson, Advances in Psychiatry and Behavioral Health, 2023)
- **Comorbidity with sexual assault, human trafficking and IPV: power and control**
  - **Revictimization** is common: those who reported sexual violence pre-college were three times more likely to report sexual assault on campus (Mellins et al, 2017)

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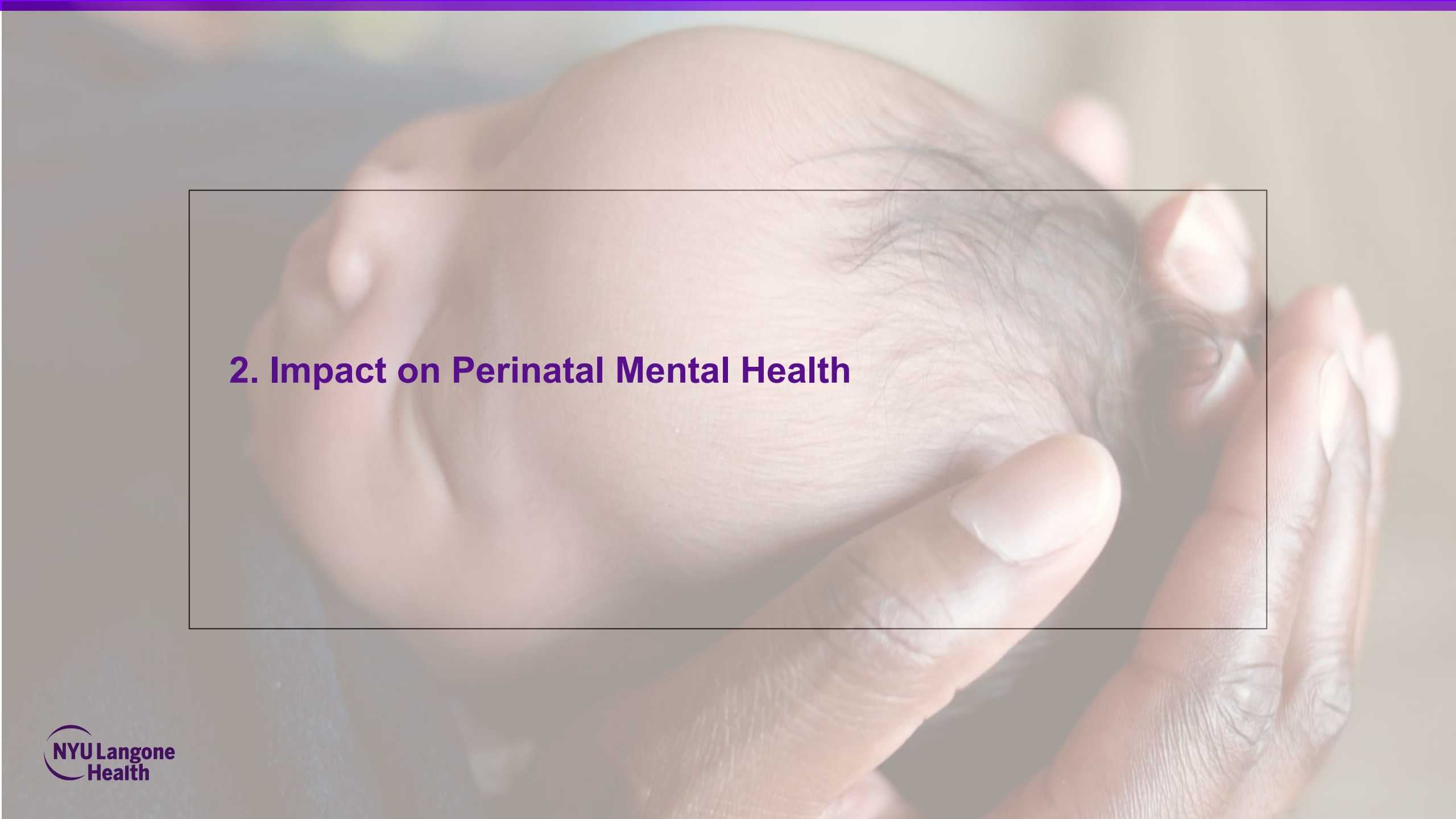

2. Impact on Perinatal Mental Health

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The Story of Anna

Anna exhibited symptoms of both major depressive disorder (MDD) and post-traumatic stress disorder (PTSD), including low self-esteem, insomnia, irritability, anger, anhedonia and sadness, as well as hyperarousal, re-experiencing symptoms, and avoidance behaviors. She expressed passive suicidal ideation but denied active ideation and had strong protective factors.

Anna was fearful of allowing her children out of her sight. At home, she kept the window shades down at all times, and her children did not engage in any extracurricular activities or play dates without her presence. The older child at home was starting to ”act out” in school, with frequent fights and falling grades, and was recommended by the school counselor for mental health evaluation.

Impact on Psychological Health of Mother

- Post Traumatic Stress Disorder (PTSD)
- Major Depression (inclusive of postpartum depression)
- Anxiety Disorders
- Substance Use Disorders
- Suicide/Self Harm
- Sleep Disorders
- Comorbidity
- Dose dependent and severity of abuse
- Lifetime prevalence among psychiatric inpatients ranged from 30% to 60% (Howard 2010)

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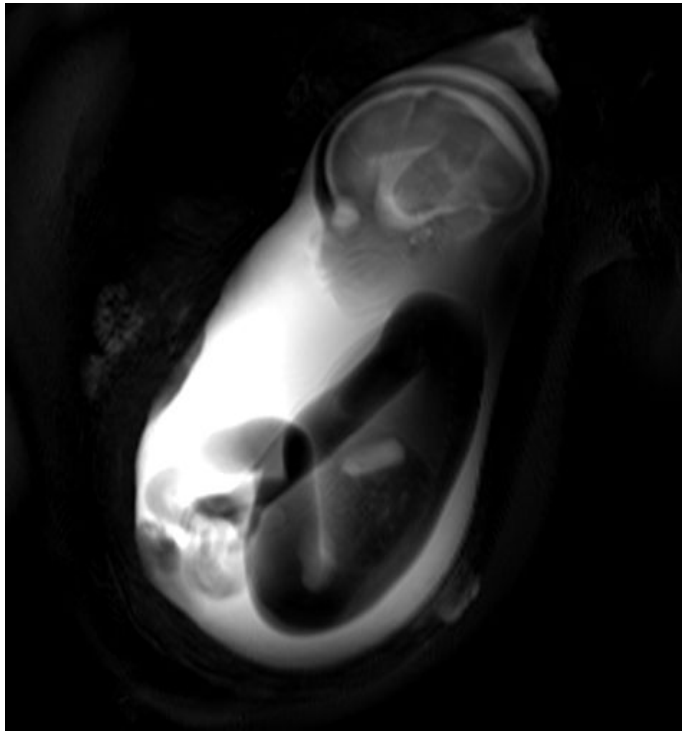
Sardinha et al, Lancet 2022; Oram et al, Lancet 2022

Impact on Health of Fetus and Baby



- Delays in prenatal care
- Low birth weight
- Premature birth
- Rupture of uterus
- Loss of baby
- Kinsella & Monk, 2009: altered stress response system in fetus. “Fetuses are conditioned by the stimuli in their prenatal environment to be better prepared for what they will encounter postnatally”

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Okuda M, Olfson M, et al. Mental health of victims of intimate partner violence: results from a National Epidemiologic Survey. *Psych Serv*. 2011; Stockl et al, The global prevalence of intimate partner homicide: a systematic review. *Lancet*. 2013; Petrosky, E., et al., *Racial and Ethnic Differences in Homicides of Adult Women and the Role of Intimate Partner Violence - United States, 2003-2014.* MMWR Morb Mortal Wkly Rep, 2017. ; Casey EA, Querma K, Masters NT, et al. Patterns of intimate partner violence and sexual risk behavior among young heterosexually active men. *J Sex Res*. 2016; Bloomberg.coml 2020

Maternal IPV and Child Outcomes

Developmental Age	Child Outcomes
Prenatal to Toddlerhood (0-2yo)	64% initially witness IPV at this age Insecure and disorganized attachment style Difficult temperament (fussy, irritable behavior and difficulty soothing, poor sleep) Behavioral functioning (odd sounds, repetitive movements) 1 yo children at least one symptom of PTSD (rated by mother using The DC 0-5 Criterion) Physical Health (asthma, cortisol dysregulation, frequent illness)
Preschool Age (3-6yo)	Delay in meeting language, fine-motor adaptive milestones by age 3 Difficulty forming secure attachments to their mothers Language delay Sadness, withdrawal, isolation Poor executive functioning skills in preschool
School Age (6-12yo)	Bullying, Poor emotional competence; developing and maintaining friendships Internalizing/Externalizing symptoms, Depression, Anxiety, PTSD Learning, testing, cognitive difficulties
Adolescence (13-18yo)	Externalizing, internalizing symptoms, PTSD, cognitive difficulties, decreased social competence Being bullied and bully perpetration Engaging in risky health behaviors and other physical health consequences (Substance abuse, gang involvement, running away) Teen dating violence

Mental Health Effects of IPV in Children/Adolescents

- Intergenerational transmission of trauma
  - Risk of becoming a perpetrator or victim
- Harm to children: both indirect and direct effects
  - 1/3 of children who witness IPV are abused themselves
  - Influence on caretaker's parenting style
- Relational PTSD
  - Maternal symptoms can act as a moderating effect, mediating effect, or compounding effect

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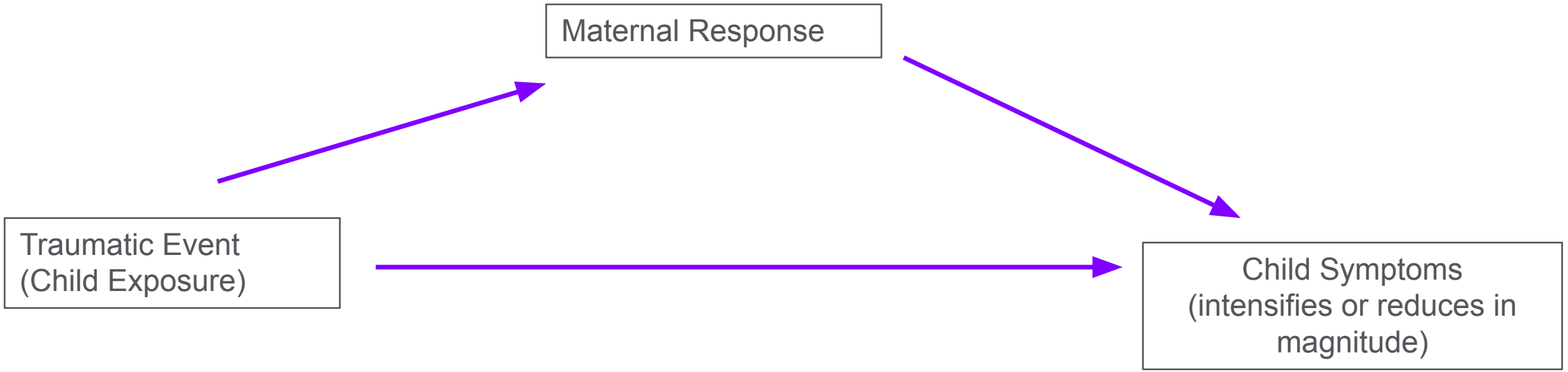
Kitzmann, Gaylord, Holt, & Kenny, 2003; Holt, Buckley, & Whelan, 2008; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003;
Graham-Bermann & Levendosky, 1998; Levendosky, Bogat, & Martinez-Torteya, 2013; Kernic, Wolf, Holt, McKnight, Huebner, & Rivara, 2003; Hamby et al, 2010; Howell et al, J Inj Violence, 2016)

Relational PTSD
Moderating Effect



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Adapted from Erica Willheim, 2024

Relational PTSD
Mediating Effect

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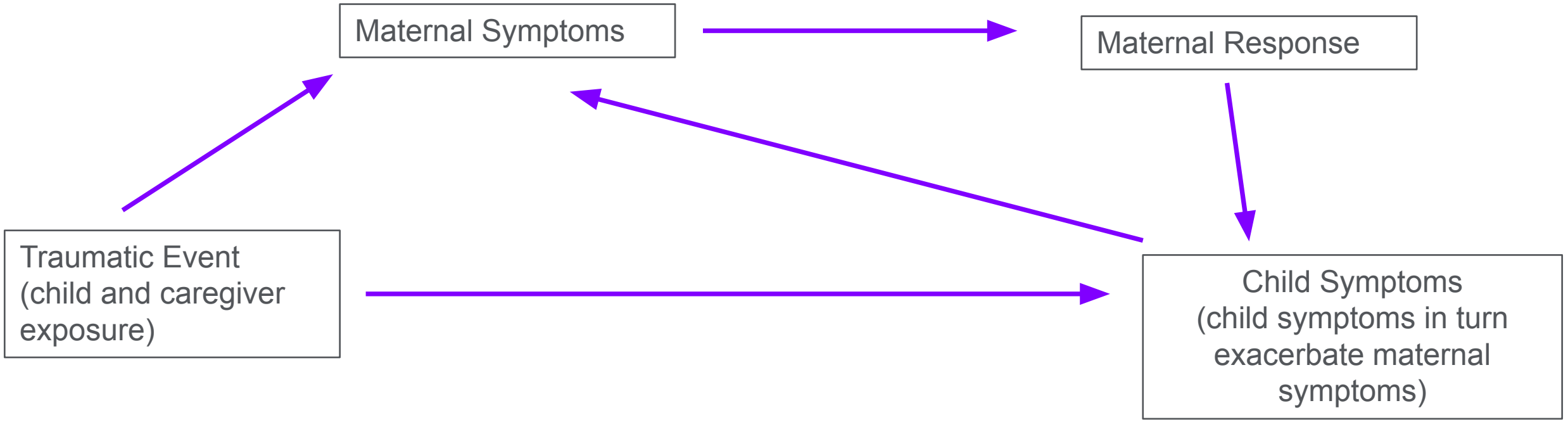
Relational PTSD Compound Effect



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Adapted from Erica Willheim, 2024

3. Context Matters: Political Determinants of Health

NYU Langone Health

The Story of Anna

Because Anna was undocumented, she had limited access to care and support from governmental agencies and hospitals. She was dependent on her husband financially and whatever money she made with odd jobs, she had to give to her husband. She did not have adequate healthcare and was found to have a history of an autoimmune disorder that was poorly treated. She also had limited access to birth control or other reproductive rights. She also faced discrimination due to speaking her primary language and even reported that her children translated often for her at events.

Current Psychiatry Reports (2021) 23: 23
https://doi.org/10.1007/s11920-021-01240-0

CHILD AND ADOLESCENT DISORDERS (TD BENTON, SECTION EDITOR)

Social Determinants of Health: the Impact of Racism on Early Childhood Mental Health

Obianuju O. Berry[1,2] · Amalia Londoño Tobón[3] · Wanjikũ F. M. Njoroge[4,5]

Accepted: 23 February 2021 / Published online: 12 March 2021

Abstract

Purpose of Review Despite increased literature on the impact of racism in the past decades, relatively few studies have focused on the effects of racism on younger children. This article reviews research from the past 5 years focusing on the impact of racism on infant and early childhood mental health and socioemotional development.

Recent Findings Longitudinal studies provide evidence that very young children are highly influenced by exposure to multiple and interconnecting levels of racism and discrimination. These forms of exposure (structural and personally mediated, which can be further divided into direct and indirect exposure) are particularly nefarious to young children's socioemotional development and have implications for adolescent and adult mental health with lasting sequelae. Furthermore, the effects of racism on parenting practices and maternal/caregiver mental health appear to indicate mechanisms through which racism affects young children.

Summary Although more studies are needed in this area, recent literature indicates that racism is a social determinant of health that adversely impacts infant and early childhood socioemotional, and behavioral development. Future studies should focus on understanding the mechanisms through which racism impacts early childhood development and health, and interventions to prevent and mitigate the effects of racism.

Keywords Social determinants of health (SDOH) · Racism · Discrimination · Early childhood mental health (ECMH) · Infant mental health (IMH) · Parenting practices

- Indirect and direct exposure to racism affects social-emotional development
- Maternal exposure to racism impacts infant and early childhood mental health
- Mediated by maternal depression
- At higher levels of maternal exposure to trauma, indirect effect of maternal experiences of racism on childhood depression

Racism and Perinatal and Early Childhood Mental Health

Current Psychiatry Reports (2021) 23: 23
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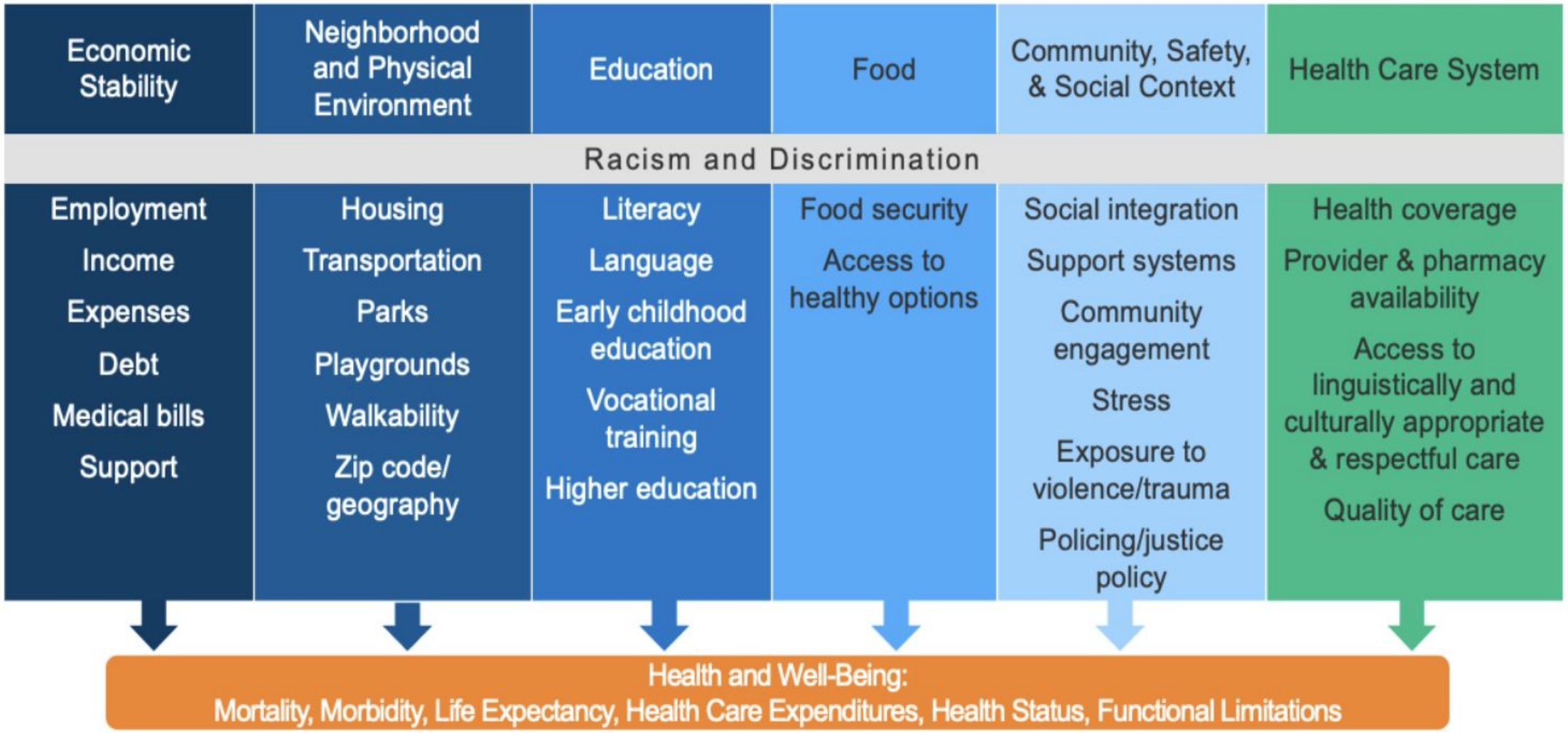
Journal of the American Academy of CHILD & ADOLESCENT PSYCHIATRY
American Academy of Child & Adolescent Psychiatry
EDITORIAL | VOLUME 61, ISSUE 3, P362-363, MARCH 2022

Check for updates

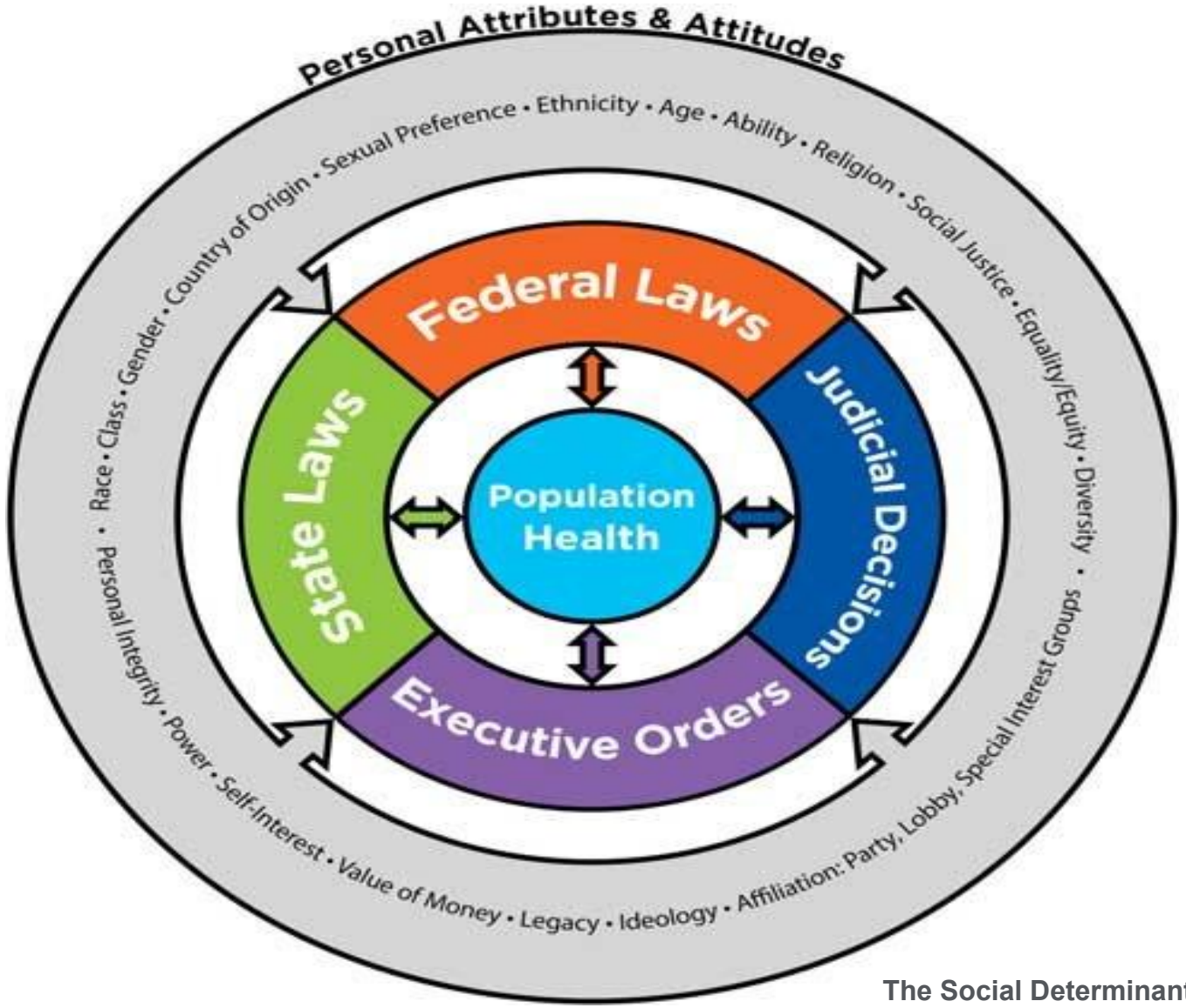
Editorial: Race-Based Traumatic Stress and Vicarious Racism Within the Parent–Child Dyad: Opportunities for Intervention

Obianuju O. Berry, MD, MPH

Health disparities are driven by social and economic inequities that are rooted in historic and ongoing racism and discrimination



Political Determinants of Health



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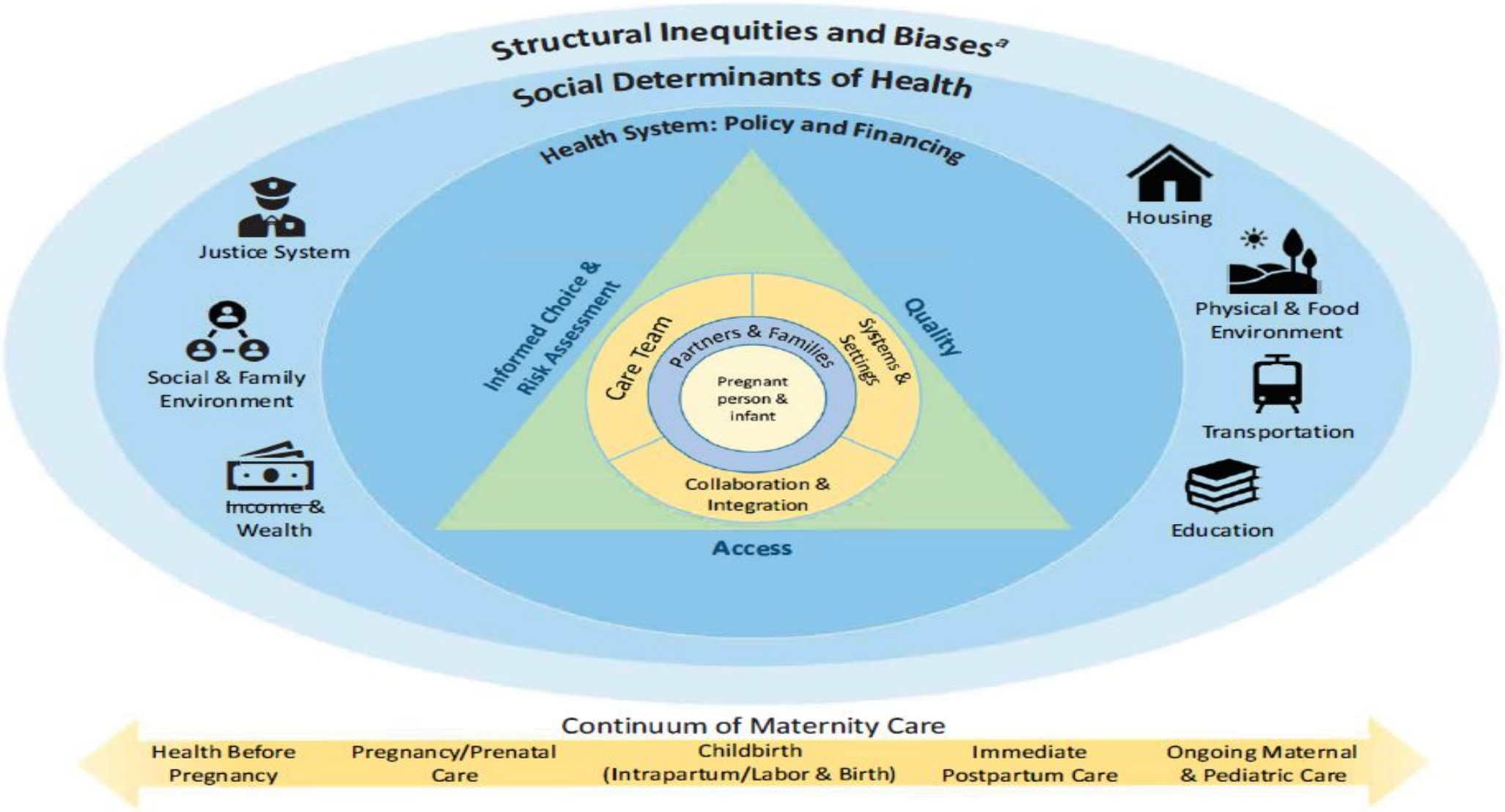
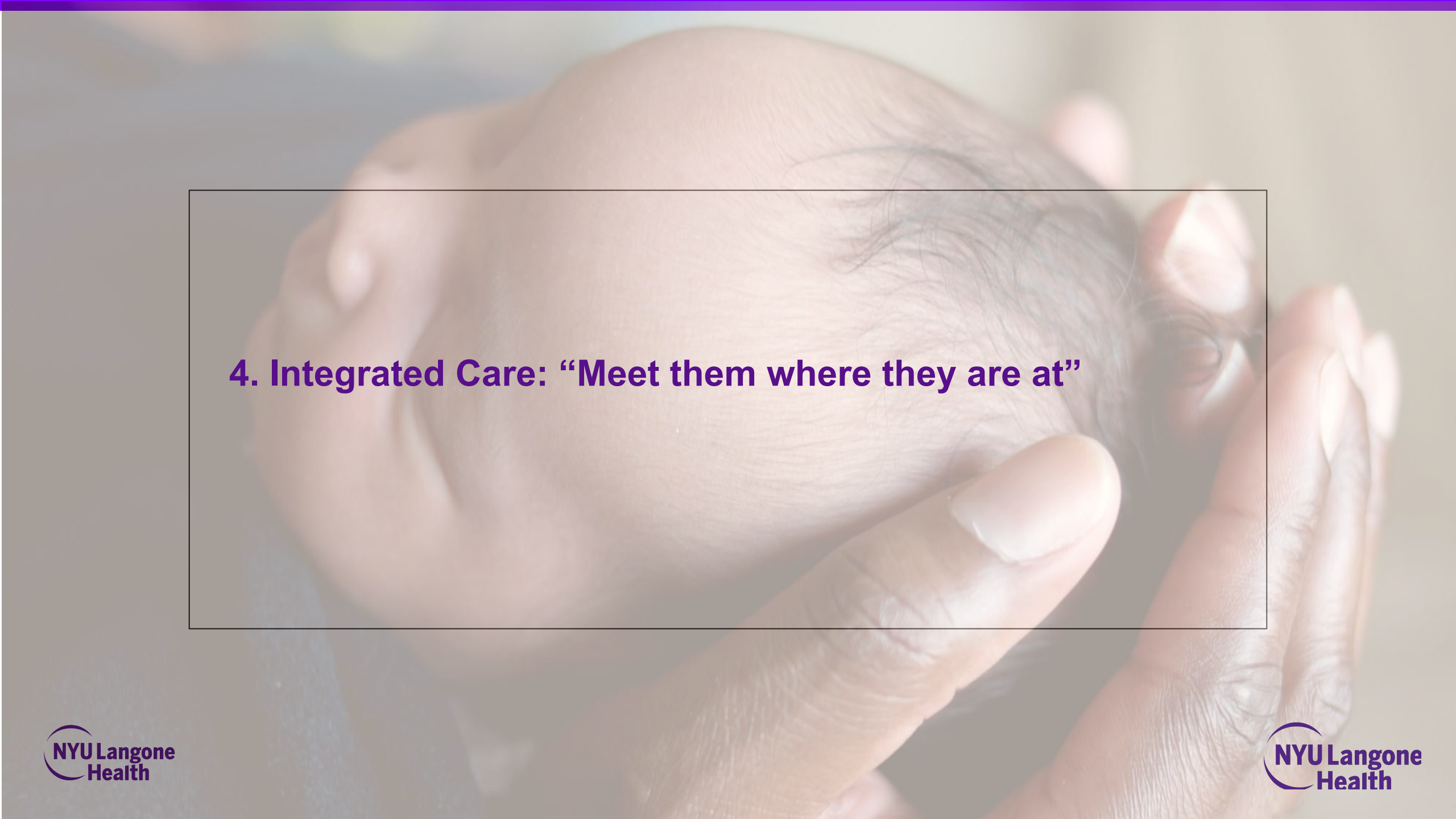
Barriers Faced at every level of socioecological influence





4. Integrated Care: “Meet them where they are at”

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The Story of Anna

Although with limited resources, Anna came to the Family Justice Center—a free, walk-in center that offers social and legal services to help survivors of domestic violence, elder abuse, and sex trafficking—seeking legal services as she was trying to locate her 14-year-old child, who to her knowledge was living in another state with her ex-husband. She was referred by her attorney to mental health services as she expressed significant distress in the process of providing information to apply for a nonimmigrant status “U-visa”

The psychiatrist started Anna on a low-dose selective serotonin reuptake inhibitor (SSRI), which helped with her low mood, sleep, and reduced some of her hypervigilance symptoms and panic. She also began working with the psychotherapist and over the next 10 months, initially in skills-based working using Seeking Safety model, and later using exposure techniques,

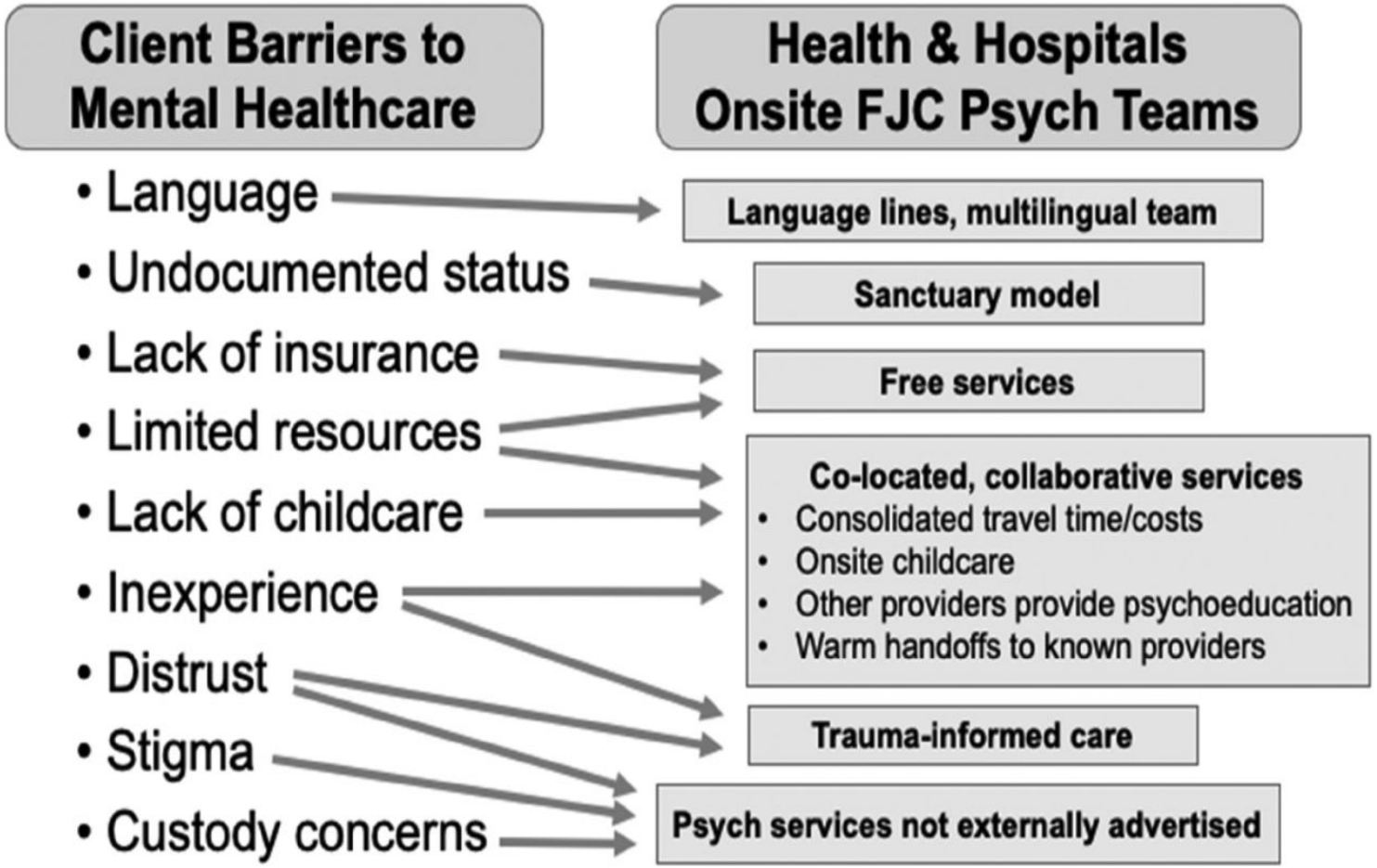
https://www.overtureglobal.io/story/a-call-to-action-mental-health-and-domestic-violence

A Call to Action: Mental Health and Domestic Violence

Affecting millions of individuals and families worldwide domestic violence is a global public health problem of epidemic proportions.

Obianuju O. Berry

Addressing client barriers to accessing mental healthcare by the H+H Family Justice Center Mental Health Collaboration.



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Berry et al, Medicine, Science, and the Law, 2023

H+H Domestic and Gender-Based Violence Programs

Family Justice Center Mental Health Program (FJCMHP)

- A collaboration between NYC Health + Hospitals (H+H) and the NYC Mayor's Office to End Domestic and Gender-Based Violence to provide mental health services to adults within the 5 Family Justice Centers in NYC
- The 5 FJCs are resource centers with legal and advocacy services for survivors of domestic violence, sex trafficking, and elder abuse.
- The FJCMHP offers free, culturally, and trauma-informed services by a team of psychiatrists, psychologists, and social workers integrated within the FJC setting to primarily adult survivors.

Domestic Violence Shelter Mental Health Initiative (DVSMHI)

- A collaboration between NYC Health + Hospitals (H+H), the NYC Department of Human Services/Human Resource Association (DHS/HRA), and the Office of Community Mental Health to increase access to mental health services for the10,000 children, teens, and adults in the 55 domestic violence shelters across all 5 boroughs in NYC
- The DVSMHI provides universal screening of adults and children, and offers free, culturally and trauma-informed services by a multidisciplinary team of adult and child psychiatrists, social workers, and peer counsellors, on-site at shelters, at H+H sites, and/or via telehealth.

Vision

Our vision is for NYC Health + Hospitals to become leaders

ulturally and trauma-responsive,

e, and sustainable behavioral

that are at risk for violence who

reside in the c

Health Equity

Changing Culture

Workforce Development

NYC HEALTH+ HOSPITALS

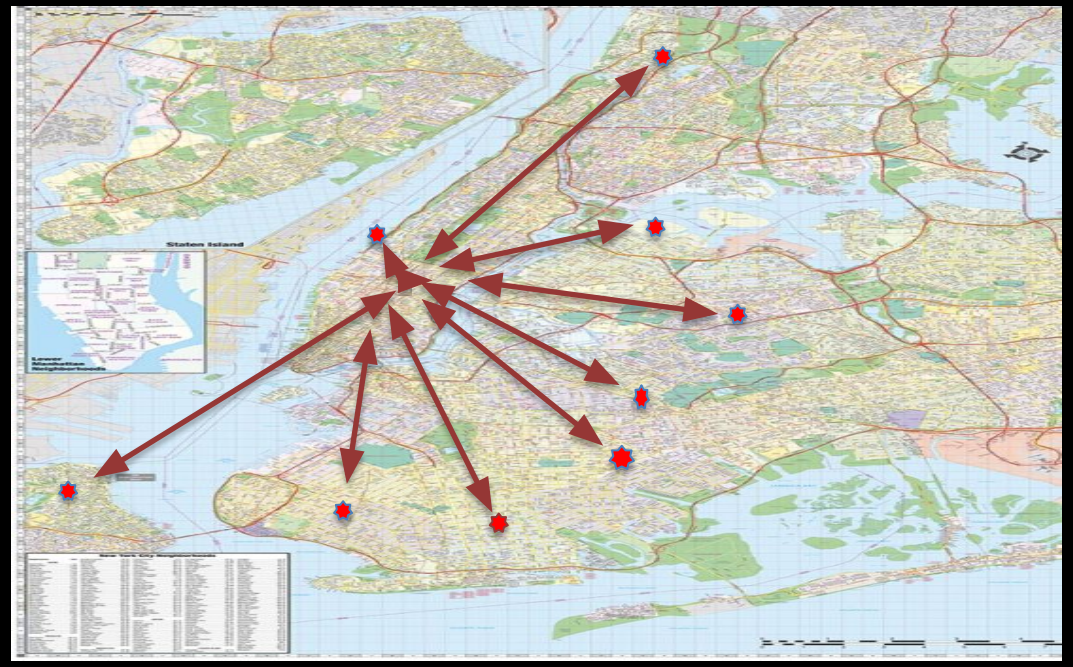
NYC Human Resources Administration Department of Social Services

NYC Mayor's Office to End Domestic and Gender-Based Violence

Mayor's Office of Community Mental Health

HASSENFELD CHILDREN'S HOSPITAL OF NEW YORK AT NYU LANGONE

Population Served: Demographics & Locations



Family Justice Center Mental Health Program

30% with children under 5 years of age
27% AA, 64% Latinx, 9% White
92% Below Federal Poverty Line
73% Housing Insecurity
83% Immigrant Status
30% Primary Language other than English
Mean Childhood ACE score 9.2

5 FJC sites across NYC
300 survivors served annually

Domestic Violence Shelter Mental Health Initiative

70% with children under 5 years of age

55 shelter sites across NYC
10,000 survivors served annually

Announcements (May 2023)

FOR IMMEDIATE RELEASE

NEW INITIATIVE REDUCES WAIT TIMES FOR MENTAL HEALTH APPOINTMENTS FOR DOMESTIC VIOLENCE SHELTER RESIDENTS

The $5.8 million Domestic Violence Shelter Mental Health Initiative will offer therapy

"We want survivors of domestic and gender-based violence to know that that they are not alone, and New York City is here to help and support them," said **New York City Mayor Eric Adams**. "With this new initiative, domestic violence shelter residents will have access to therapy appointments, trauma-informed care, and ongoing support, marking a significant step in our work to expand and strengthen care for survivors."

Services

- Adult and child psychiatrists, psychologists, social workers
- All services are free (no billing)
- Free, culturally and trauma-informed services
- Universal screening of adults and children
- Triage to short-term mental health evidence-based interventions (~3-9mos time frame)
  - Psychopharmacologic treatment
  - Psychotherapy
    - Individual Treatment
    - Group: skills based
- Extensive support and training to FJC and DVS staff
  - Mental Health 101
  - Suicide evaluation/crisis protocol development
  - Grounding/de-escalation techniques
  - Vicarious Trauma
  - Childhood Trauma

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SAMHSA
Substance Abuse and Mental Health Services Administration

NCTSN
The National Child Traumatic Stress Network

NYC HEALTH+ HOSPITALS

HASSENFELD CHILDREN'S HOSPITAL OF NEW YORK AT NYU LANGONE

NYC Mayor's Office to End Domestic and Gender-Based Violence

"Expanding Access to Trauma-Informed Parent-Child Mental Health Care in NYC Family Justice Centers"

NCTSN Category III - Direct Service Grant (2021-2026)

An innovative direct-service model for urban cross-system collaboration that increases access to mental health screening, referral, and provision of evidence-based, trauma-informed, multi-generational, mental health care for IPV exposed children ages birth to five and their IPV-survivor caregivers with an identified mental health disorder.

NYC Human Resources Administration Department of Social Services

NYC Mayor's Office of Community Mental Health

Original article

Co-location of specialized mental health services in an intimate partner violence advocacy organization

Medicine, Science and the Law
1–12

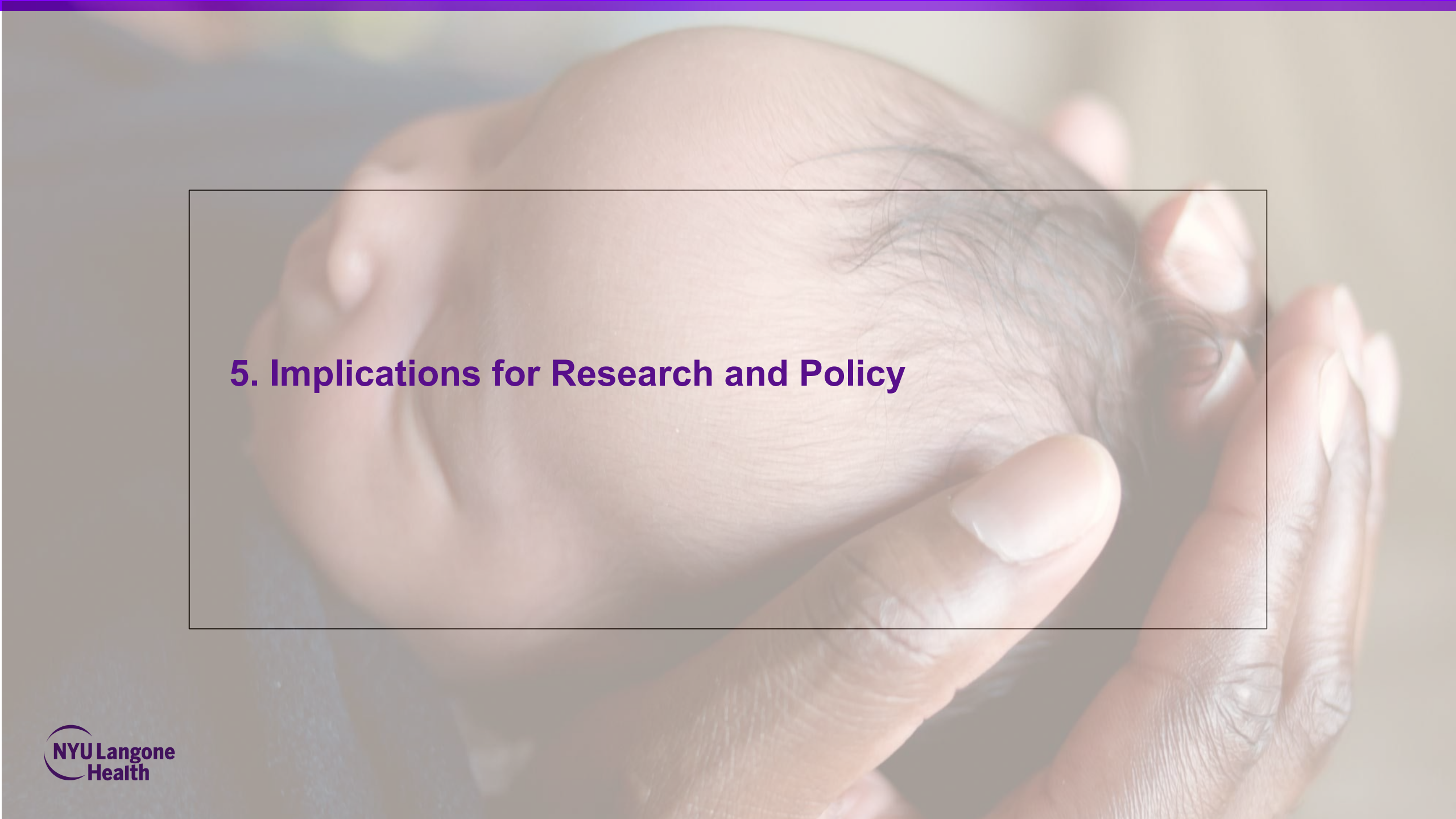
DOI: 10.1177/00258024231195496
journals.sagepub.com/home/msl
Sage

Obianuju O Berry[1,2], Phyllis Kaufman[2], Marina Weiss[3], Elizabeth Fitelson[4] and Catherine Monk[4,5,6]

~80% report improvement in depressive symptoms (PHQ-9)
~82% report improvement in anxiety symptoms (GAD-7)
~75% report improvement in PTSD symptoms (PCL-5)

92% reported improvement in relationships with family/children and parental efficacy

"I am now 7 months into being a single mother, and I'm starting to get comfortable in the role. My self worth is often tied to my son and how I interact with him. But therapy has definitely helped. I see myself being more patient, not having short outbursts, instead dealing with things productively, a step at a time. I think it has definitely changed things. I am different with him. I am working on my feelings about being a mother. "[MH clinician] said something that changed my life". [MH clinician] said to me, "as a mother I have all the power". Maybe I can't control what other people do, but I can be that rock. I can use my pain to strengthen myself and strengthen my son. I can be there for him always. This helped me so much. But yes, he's doing so well. It feels so good that he's doing so well, he's "thriving." I feel really good about that."



5. Implications for Research and Policy

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Background and Significance

HEALthy Brain and Child Development
Babies · Brains · Bright Futures

Developmental Origins of Health and Disease (DOHaD)

A theory that calls attention to the importance of the *prenatal* period in shaping risk for emergence of later disease

- *how environments alter networks*
- *how alterations in networks (even before birth) may signal that a child is at enhanced risk for developmental disorder or delay*






WHAT IS HBCD?

- A national initiative funded by NIH: HEALthy Brain and Child Development (HBCD)
- The largest study of child development of its kind (N~8000) followed prenatally to approximately ~age 10
- Will map multiple aspects of child development, from behavior to biome to brain
- Emphasis on adversity: families from social or economically disadvantaged contexts and those that face the challenges of mental health and/or substance use disorder(s)
- Adverse and protective measures to guide policies and promote well-being and resilience

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Domains of Assessment

HEALthy Brain and Child Development
Babies · Brains · Bright Futures

EEG for baseline, auditory evoked potential, visual evoked potentials, and face-object ERP task

Substance and other risk and protective factor exposures

MRI for structural, diffusion, resting state connectivity, and MR spectrosco

Behavioral, observational, and neurocognitive assessments

Wearable biosensors for heart rate (HR), HR variability, sleep/wake cycles, and physical activity

Biospecimens for substance use, genomic, epigenomics, nutrition, toxins, and COVID-19

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CHALLENGES WE MAY ENCOUNTER

- Housing insecurity and homelessness
- Food insecurity
- Intimate partner violence
- Trauma history
- Lack of reliable access to technology
- Legal risks
- Involvement of Child Protective Services
- Substance use
- Lack of reliable access to medical care

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Engaging communities in research

Developmental Cognitive Neuroscience 58 (2022) 101167

Contents lists available at ScienceDirect

Developmental Cognitive Neuroscience

journal homepage: www.elsevier.com/locate/dcn

Check for updates

Increasing diversity in developmental cognitive neuroscience: A roadmap for increasing representation in pediatric neuroimaging research

Luz M. Garcini [a,1], Maria M. Arredondo [b,*,1], Obianuju Berry [c], Jessica A. Church [d], Stephanie Fryberg [e], Moriah E. Thomason [c], Katie A. McLaughlin [f]

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ARTICLE INFO ABSTRACT

- **Research Design**
  - Involve community partners
  - Strength-based framework to highlight resilience vs deficits
  - Tailor research design and materials to target population
  - Research staff who are from similar backgrounds of target population
- **Data Collection**
  - Reduce barriers to participation
  - Invest time explaining research process
  - Increase competency of cultural competence/humility
  - Consult with community experts
- **Post Data Collection**
  - Give back to the participant community
  - Disseminate information

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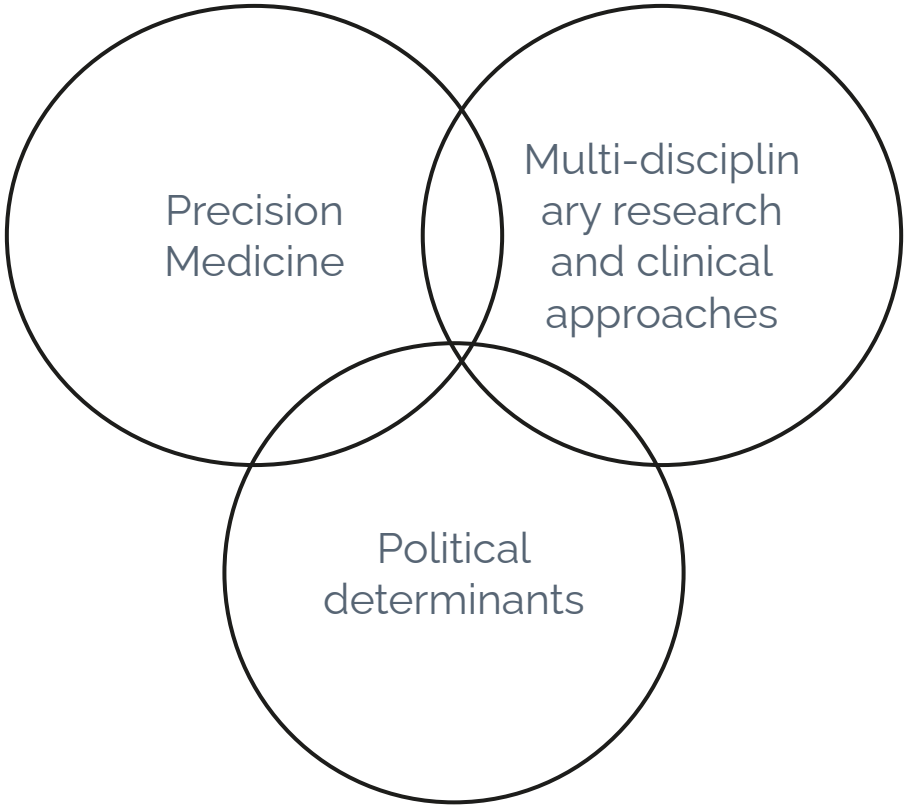
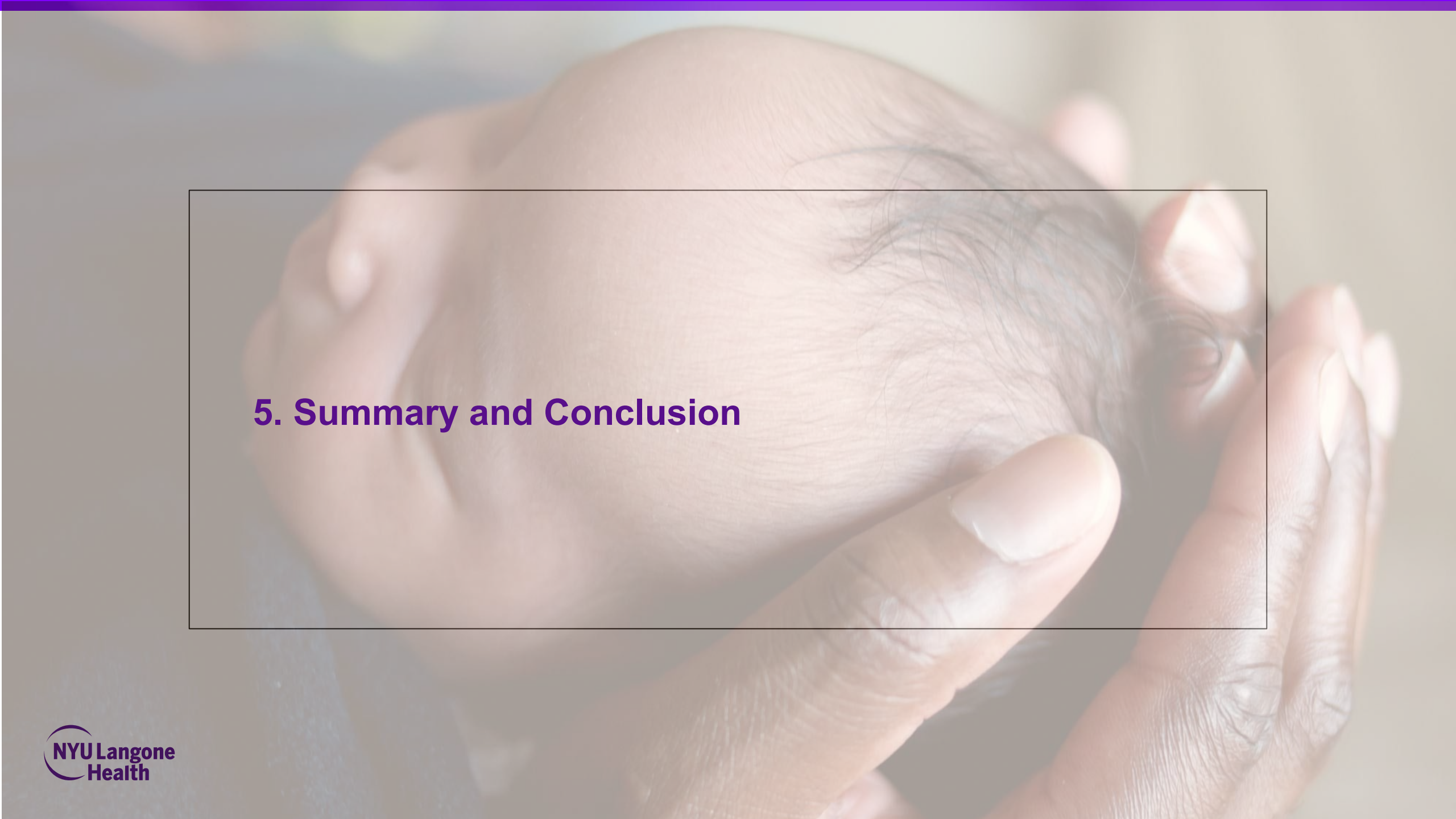
THE FUTURE


Precision Medicine
Multi-disciplinary research and clinical approaches
Political determinants



5. Summary and Conclusion

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The Story of Anna

Over the next 10 months, Anna was able to complete the application for her “U-Visa.” She reported significant improvement in all depressive and PTSD symptoms as well as in her ability to function as a a parent. She began attending financial empowerment groups, and subsequently dropped out of treatment after she found part-time employment.

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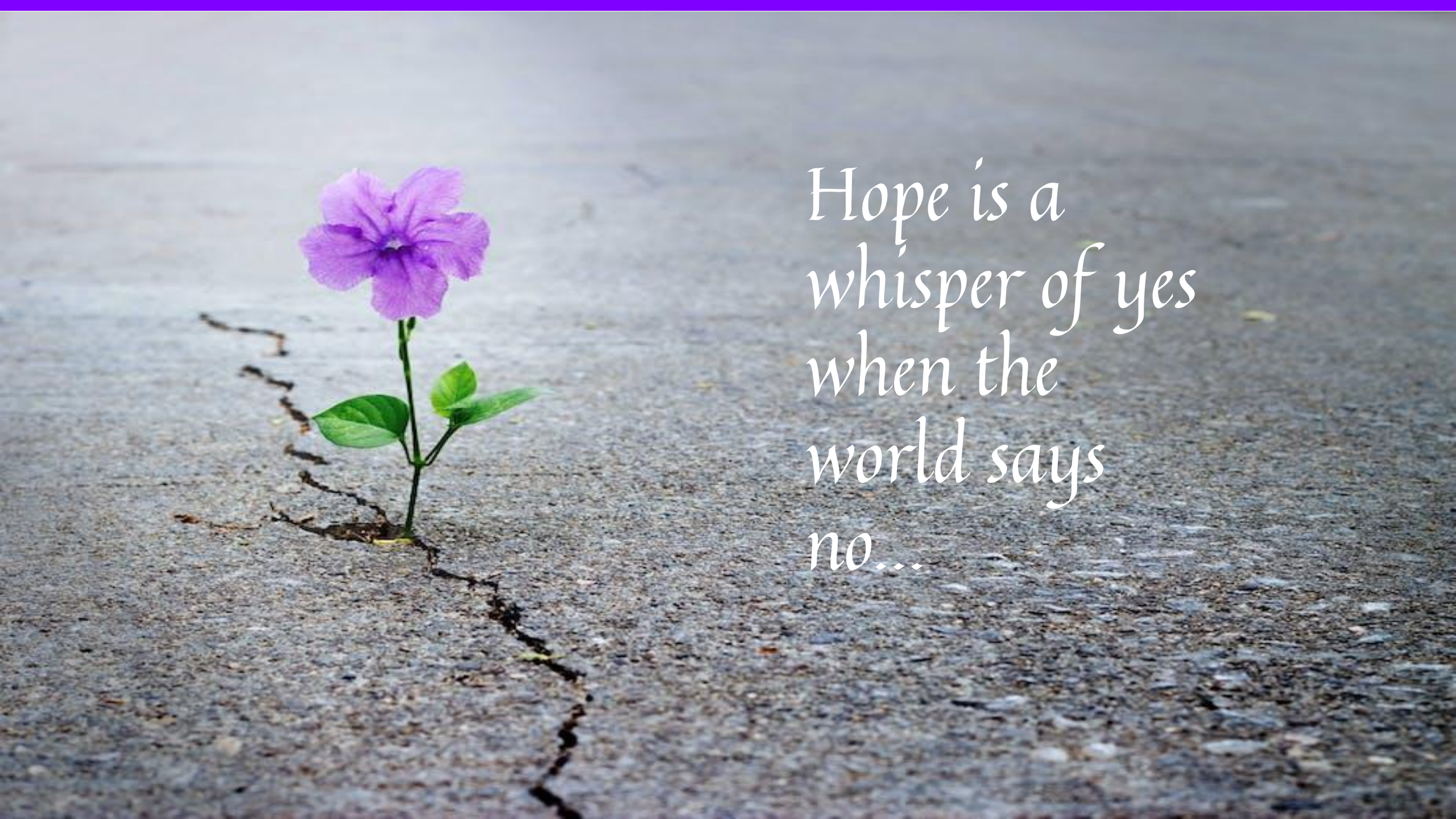
Hope is a
whisper of yes
when the
world says
no...

NYC HEALTH+ HOSPITALS

Questions/Comments

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June 10, 2024 – TTAC Spring Conference

PRENATAL-TO-3 POLICY IMPACT CENTER

Research for Action and Outcomes

CYNTHIA OSBORNE, PhD
Executive Director, Prenatal-to-3 Policy Impact Center
Professor of Early Childhood Education and Policy
Vanderbilt University, Peabody College of Education and Human Development

Who We Are

We are a nonpartisan research center at Vanderbilt University.

What We Do

We aim to accelerate states' equitable implementation of evidence-based policies that help all children thrive from the start.

Importance of Optimal Brain Development and Health

Safe, stable, stimulating, nurturing interactions between an infant and a parent or caregiver promote optimal brain and body development

Our health and wellbeing prenatally and in the first 3 years of life affect all future learning, behavior, and health

The absence of a comprehensive system of support can compromise a child's ability to learn and grow throughout life

State Policy Choices Shape Opportunities

State policy choices can empower parents and support children's healthy development.

We must care for the caregivers so that they can care for the children.

Systems of support require a combination of broad based economic and family supports and targeted interventions.

Variation in state policy choices leads to a patchwork of supports for families, depending on where they live.

Prenatal-to-3 Policy Goals

- Access to Needed Services
- Parental Health and Emotional Wellbeing
- Parents' Ability to Work and Provide Care
- Nurturing and Responsive Child-Parent Relationships
- Sufficient Household Resources
- Nurturing and Responsive Child Care in Safe Settings
- Healthy and Equitable Births
- Optimal Child Health and Development

NEW YORK

State Prenatal-to-3 Outcome Measures

Policy Goal	Outcome Measure	Worst State	Best State	Rank
Access to Needed Services	% Low-Income Women Uninsured	46.1%	1.0% (10.7% NY)	9
	% Births to Women Not Receiving Adequate Prenatal Care	23.3%	5.0% (12.7% NY)	17
	% Eligible Families with Children < 18 Not Receiving SNAP	31.5%	5.5% (17.0% NY)	39
	% Children < 3 Not Receiving Developmental Screening	74.7%	39.8% (68.5% NY)	44
Parents' Ability to Work	% Children < 3 Without Any Full-Time Working Parent	39.5%	12.6% (33.3% NY)	44
Sufficient Household Resources	% Children < 3 in Poverty	29.2%	6.1% (19.2% NY)	34
	% Children < 3 Living in Crowded Households	34.5%	7.4% (29.1% NY)	49
	% Households Reporting Child Food Insecurity	12.1%	0.7% (5.9% NY)	31
Healthy and Equitable Births	% Babies Born Preterm (< 37 Weeks)	15.0%	8.0% (9.7% NY)	14
	# of Infant Deaths per 1,000 Births	9.4	2.8 (4.2 NY)	8

NEW YORK

State Prenatal-to-3 Outcome Measures

Policy Goal	Outcome Measure	Worst State	Best State	Rank
Parental Health and Emotional Wellbeing	% Children < 3 Whose Mother Reports Fair/Poor Mental Health	10.3%	2.5%	9
	% Children < 3 Whose Parent Lacks Parenting Support	25.2%	6.2%	40
Nurturing and Responsive Child-Parent Relationships	% Children < 3 Not Read to Daily	73.2%	42.1%	21
	% Children < 3 Not Nurtured Daily	51.0%	26.6%	22
	% Children < 3 Whose Parent Reports Not Coping Very Well	43.8%	23.8%	27
Nurturing and Responsive Child Care in Safe Settings	% Providers Not Participating in QRIS^	97.6%	0.0%	
	% Children Without Access to EHS	95.5%	40.9%	28
Optimal Child Health and Development	% Children Whose Mother Reported Never Breastfeeding	37.4%	7.6%	26
	% Children < 3 Not Up to Date on Immunizations	43.4%	12.1%	37
	Maltreatment Rate per 1,000 Children < 3	33.4	2.0	30

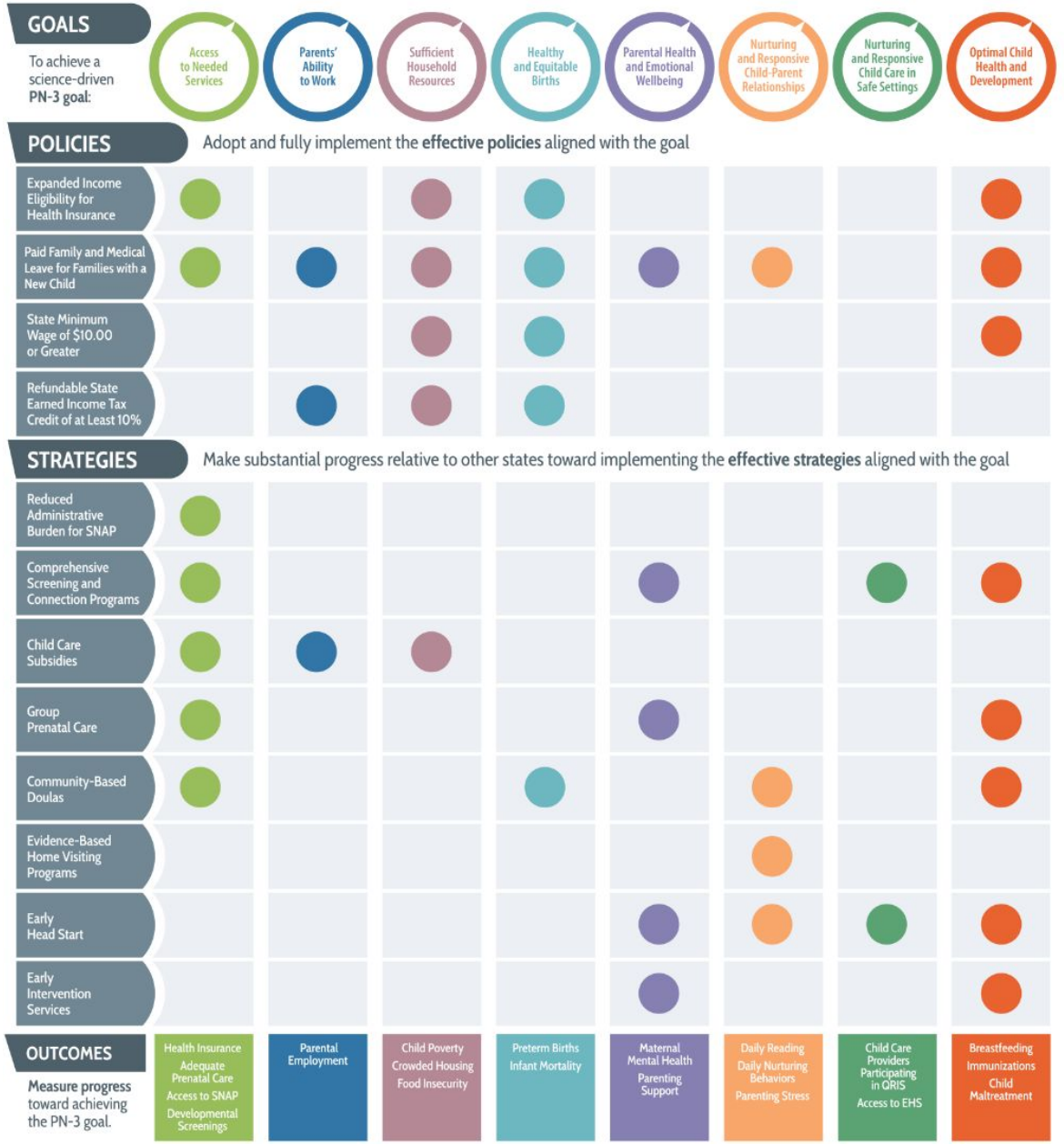
Prenatal-to-3 State Policy Roadmap

POLICIES	STRATEGIES	
Expanded Income Eligibility for Health Insurance ★	Reduced Administrative Burden for SNAP	Community-Based Doulas ★
Paid Family and Medical Leave for Families With a New Child ★	Comprehensive Screening and Connection Programs ★	Evidence-Based Home Visiting Programs
State Minimum Wage of $10.00 or Greater ★	Child Care Subsidies	Early Head Start ★
Refundable State Earned Income Tax Credit of at Least 10% ★	Group Prenatal Care ★	Early Intervention Services ★

★ Solution impacts maternal mental health or perinatal health outcomes

Prenatal-to-3 State Policy Roadmap

The alignment of policy goals, evidence-based policies and strategies, and outcomes that illustrate the wellbeing of children and families



The Prenatal-to-3 System of Care in New York

2023 Roadmap Summary (as of October 1, 2023)

2023 New York Roadmap Summary of Policies

2023 New York Roadmap Summary

Effective Roadmap Policy	2023 Policy Snapshot	
Expanded Income Eligibility for Health Insurance to 138%	138% of the FPL	New York has expanded Medicaid eligibility under the Affordable Care Act; thus, parents earning up to 138% of the FPL are eligible for Medicaid coverage in NY.
Paid Family Leave Program of at Least 6 Weeks	12 weeks	New York has a paid family leave program that provides up to 12 weeks of benefits.
State Minimum Wage of $10.00 or Greater	$14.20 per hour	The current state minimum wage in New York is $14.20. Legislation enacted in the last year will gradually increase the state minimum wage to $16.00 in 2026 with annual adjustment for inflation thereafter.
Refundable State Earned Income Tax Credit of at Least 10%	30% of the federal credit	New York has a refundable state EITC equal to 30% of the federal credit.

✓ State has adopted and fully implemented the policy

+1 State has newly adopted and fully implemented the policy since October 1, 2022

The Prenatal-to-3 System of Care in New York

2023 Roadmap Summary (as of October 1, 2023)

2023 New York Roadmap Summary of Strategies

Effective Roadmap Strategy	2023 Strategy Snapshot		
Reduced Administrative Burden for SNAP	○ 12-month Certification Period	○ Simplified Income Reporting	✓ Online Case Management
Comprehensive Screening and Connection Programs	○ Statewide Goal	✓ Medicaid Funding	✓ State Funding
★ Child Care Subsidies	✓ Income Eligibility (85% SMI)	✓ Limit Family Copayments	✓ Equitable Reimbursement Rates
Group Prenatal Care	○ Enhanced Medicaid Reimbursement Rate	○ State Funding	
Community-Based Doulas	○ Medicaid Coverage	○ Fund Training and Credentialing	
Evidence-Based Home Visiting Programs	○ Medicaid Funding		
Early Head Start	○ State Support		
Early Intervention Services	○ Very Low Birthweight Qualification	○ At-Risk Qualification	✓ Eliminate Family Fees

★ State implemented all key policy levers ✓ State has met the criteria for the key policy lever ○ State has not met the criteria for the key policy lever

Effective Policies to Improve Maternal Mental Health

Expanding Medicaid access led to:

- ✔ A 10.9 percentage point decrease in the likelihood of severe psychological distress for parents with a higher Medicaid income threshold.
- ✔ A decrease in the likelihood of experiencing postpartum depressive symptoms.

Implementing paid family leave led to:

- ✔ A 5.3 percentage point increase in the number of parents who reported coping well with the day-to-day demands of parenting.
- ✔ A 12 percentage point decrease in parental consumption of any alcohol.

Setting tipped wages at the same level as full minimum wage led to:

- ✔ A 19.7% reduction in prenatal poverty-related stress scores among unmarried women of color with no college degree.

Effective Policies to Improve Maternal Mental Health

Increasing the generosity of the earned income tax credit (EITC) led to:

- ✔ A 4% reduction in the likelihood that married mothers reported poor mental health days in the past month, and a 4.7% reduction for unmarried mothers, for a $1,000 increase.
- ✔ A 3% to 4% reduction in state suicide rates (for a 10% or greater credit).

Participation in comprehensive screening and connection programs led to:

- ✔ A reduction in disparities between Black and White mothers in Family Connects in maternal anxiety by 48.3% and maternal depression by 43.5%.
- ✔ An 8.3 percentage point decrease in reported clinical anxiety among mothers in Family Connects.

Participation in Group Prenatal Care led to:

- ✔ A 31% reduction in the number of cases of probable depression for women in group prenatal care.
- ✔ An increased likelihood that high-stress women experience fewer depressive symptoms in the postpartum period.

Effective Policies to Improve Maternal Mental Health

Participation in Early Head Start led to:

- ✔ Less parenting stress, less family conflict, and more positive and emotionally responsive home environments at age 2.

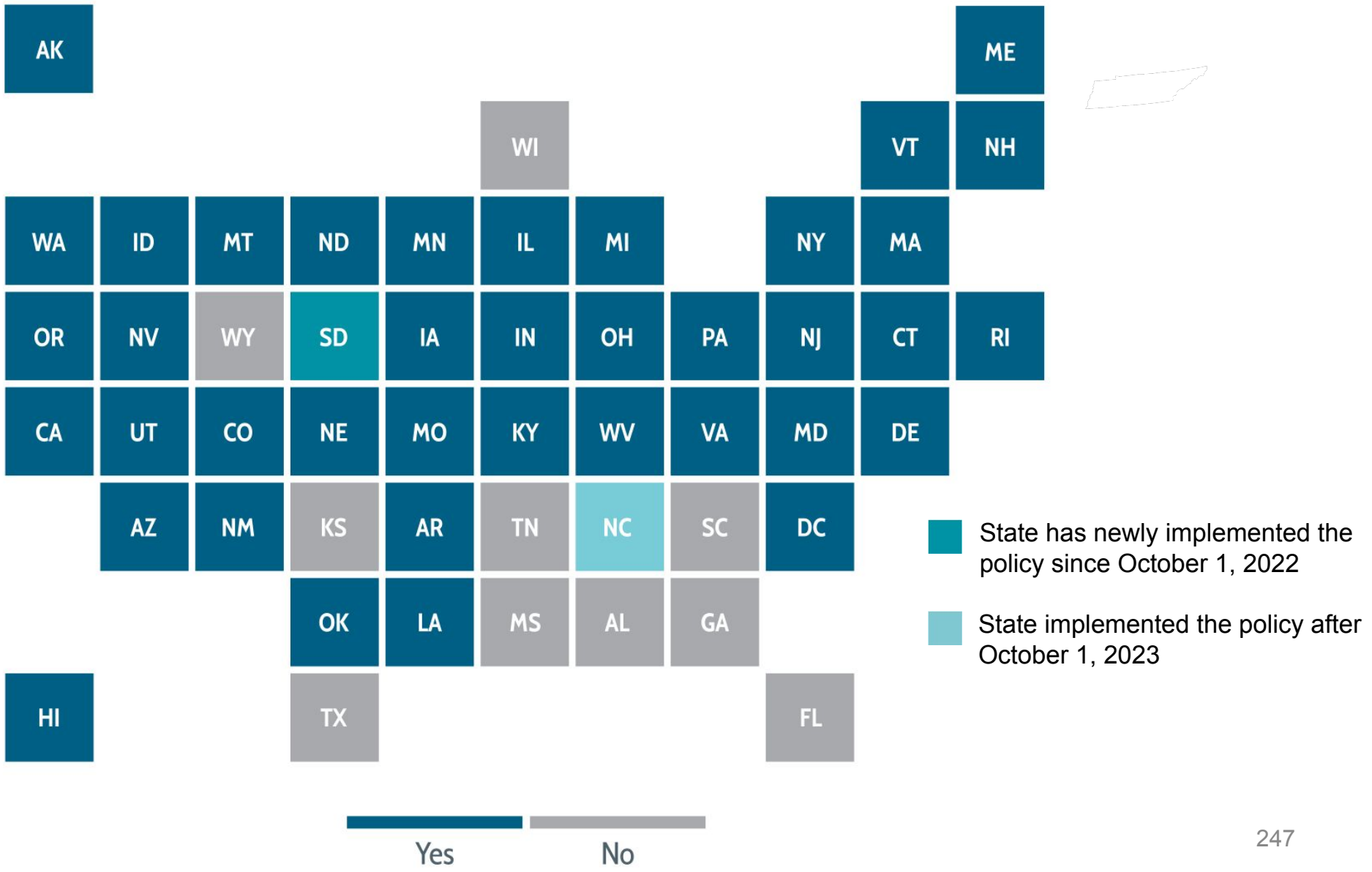
Participation in Early Intervention led to:

- ✔ Mothers of low birthweight, premature infants who received EI services scored significantly higher on scales of maternal self-confidence and maternal role satisfaction than control groups.

Medicaid Expansion

41

states have implemented the Medicaid expansion under the Affordable Care Act.



Medicaid Expansion

How Does Medicaid Expansion Impact PN-3 Outcomes?

- An 8.6 percentage point increase in preconception Medicaid coverage (B)
- An increase of 0.9 months of Medicaid coverage postpartum (I)
- An increase in receiving adequate prenatal care by 3.6 percentage points for Hispanic women and 2.6 percentage points for non-Hispanic women (EE)

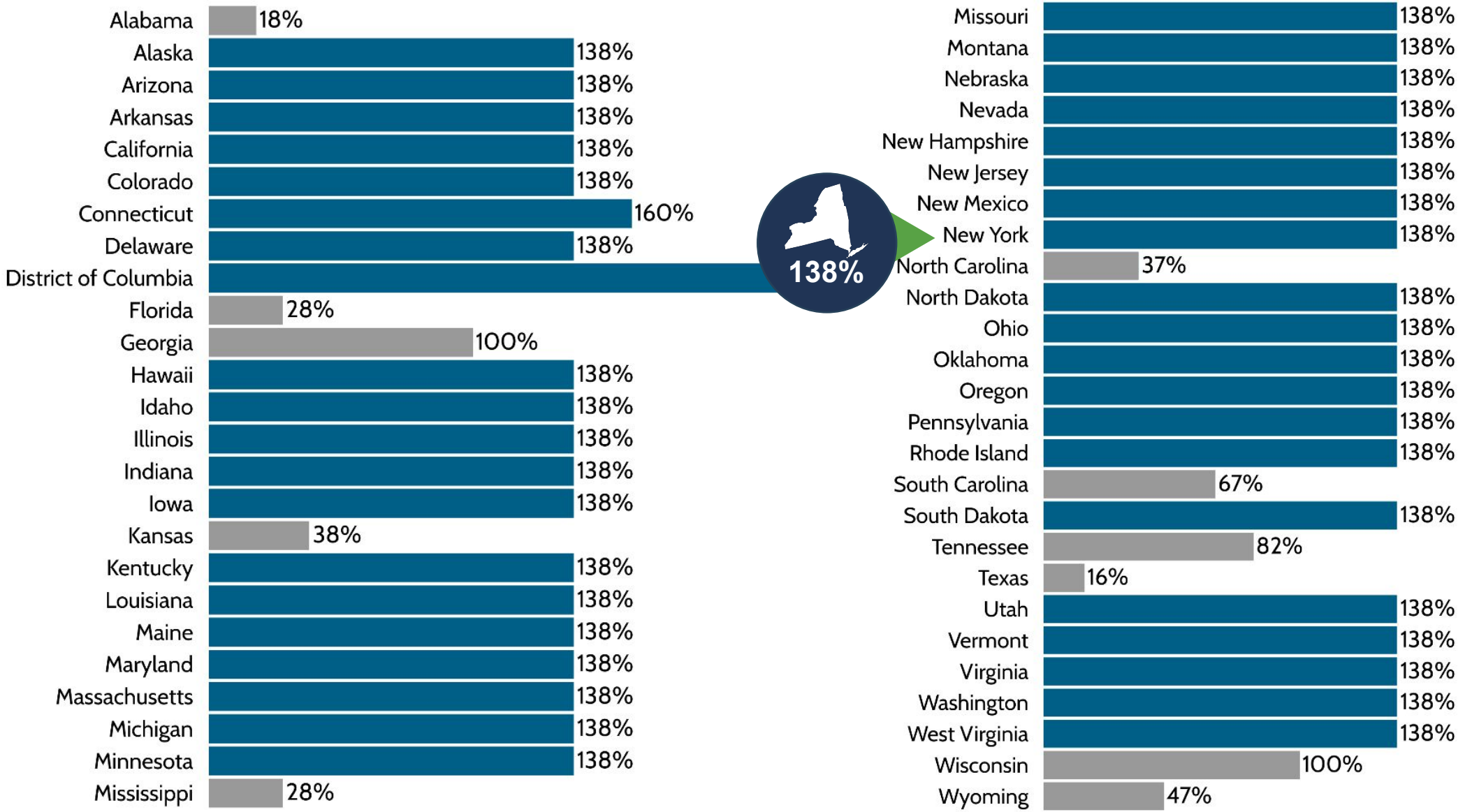
- A 4.7 percentage point decrease in the likelihood of experiencing a catastrophic financial burden (KK)
- A decrease in financial difficulty and health care avoidance because of cost (C, G, H, K, & II)
- A reduction in the poverty rate (Supplemental Poverty Measure) of up to 1.4 percentage points, corresponding to lifting more than 690,000 people out of poverty (CC)

- 0.53 fewer infant deaths per 1,000 live births among Hispanic infants (V)
- 16.3 fewer Black maternal deaths per 100,000 live births (7.0 per 100,000 live births in the overall population) (J)

- 422 fewer cases of neglect per 100,000 children under age 6 (U)
- 17.3% reduction in first-time neglect reports for children under age 5 (NN)

Medicaid Expansion

Parents' Medicaid Income Eligibility Limits as a Percentage of the Federal Poverty Level

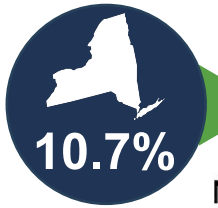


Source: Expansion status: As of October 1, 2023. Medicaid state plan amendments (SPAs) and Section 1115 waivers; Income eligibility limits: As of October 1, 2023, KFF, Georgetown University Center for Children and Families, Medicaid SPAs (South Dakota).

Medicaid Expansion

% Low-Income Women of Childbearing Age Without Health Insurance

Low income <= 138% Federal Poverty Level



Vermont	1.0%
Massachusetts	5.5%
Hawaii	7.4%
West Virginia	8.7%
Rhode Island	8.9%
District of Columbia	9.0%*
Michigan	9.2%
Wisconsin	10.2%
New York	10.7%
Kentucky	10.8%
New Hampshire	10.8%
Minnesota	11.0%
Louisiana	11.1%
Pennsylvania	11.6%
Oregon	11.9%
Ohio	12.1%
North Dakota	12.3%*
Connecticut	12.9%
Iowa	13.1%
Indiana	13.6%
Maine	13.6%
Maryland	14.8%
Delaware	15.0%*
Washington	15.1%
California	15.7%
Virginia	16.4%
Illinois	16.5%
Montana	17.2%
Idaho	17.4%
Arkansas	17.7%
New Mexico	18.6%
Arizona	18.7%
Colorado	19.2%
Utah	20.9%
South Carolina	22.5%
Nebraska	22.6%
Tennessee	23.1%
Nevada	24.0%
Kansas	24.3%
North Carolina	25.2%
Alaska	25.8%*
Missouri	26.4%
Wyoming	26.7%*
New Jersey	27.6%
South Dakota	28.1%*
Alabama	29.2%
Florida	30.0%
Mississippi	31.1%
Georgia	33.6%
Oklahoma	34.7%
Texas	46.1%

Source: 2021 American Community Survey (ACS) 1-Year Public Use Microdata Sample (PUMS).

Additional Medicaid Efforts in New York

Access to Health Care Coverage:

- ✔ Pregnant people and individuals up to 12 months postpartum are eligible for pregnancy Medicaid (223% of FPL).
- ✔ Seeking CMS approval for continuous eligibility for children ages 0-6.
- ✔ S.2237B would expand eligibility for Basic Health Plan to people 19 and older who do not qualify due to immigration status - passed the Senate.

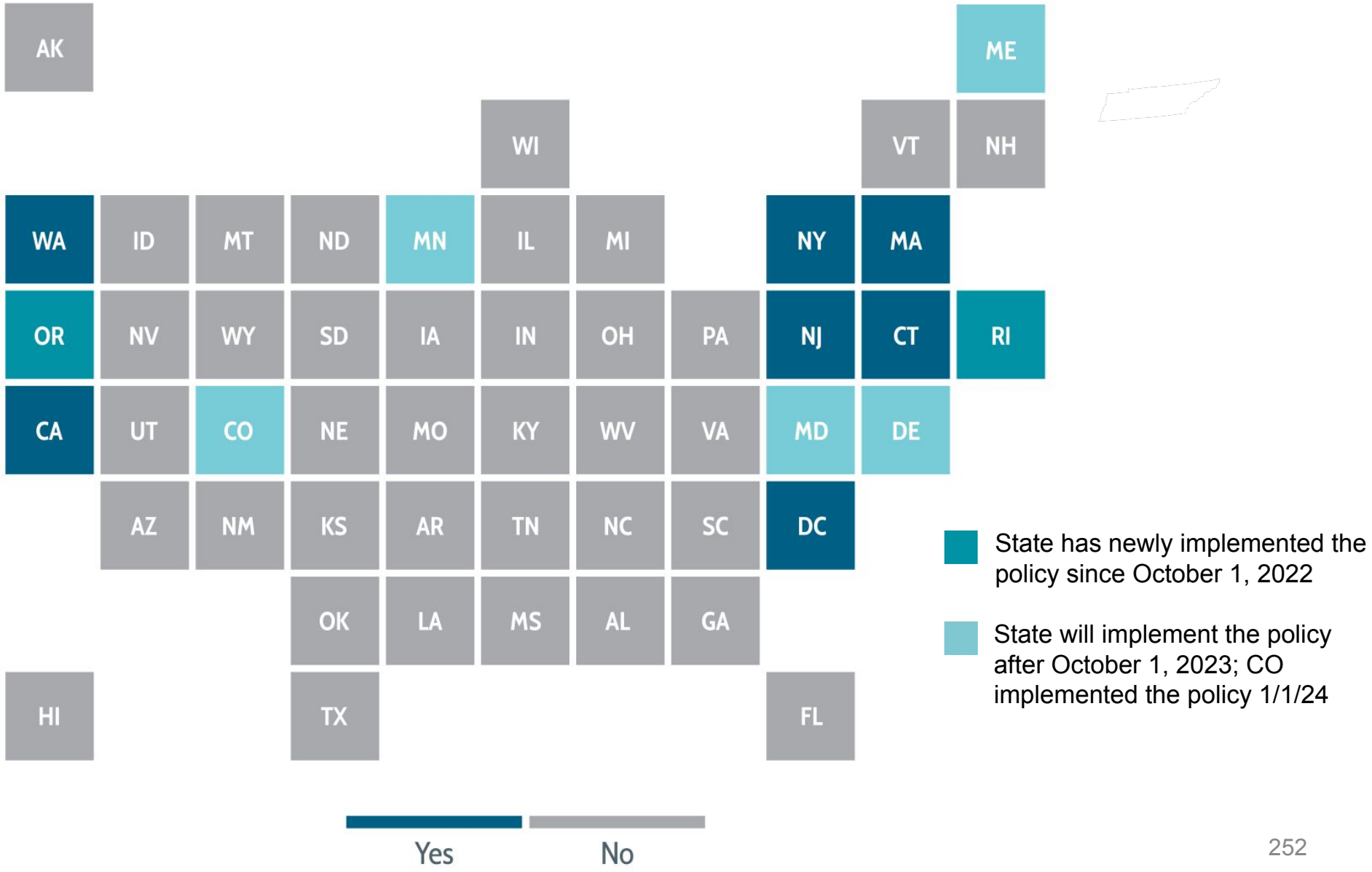
Statewide Perinatal Health Initiatives:

- ✔ NY Medicaid covers doula care as of March 1, 2024.
- ✔ NY Medicaid covers one postpartum home visit.
- ✔ NY Office of Mental Health announced additional funding opportunities to support HealthySteps.
- ✔ Adding comprehensive screenings for social care needs under NYHER Section 1115 Waiver in late 2024.

Paid Family Leave

10

states have implemented a statewide paid family leave program.



Paid Family Leave

How Does Paid Family Leave Impact PN-3 Outcomes?

- An increase in family leave-taking in the first year after birth of 5 weeks for mothers and up to 3 days for fathers (B)
- An increase in family leave-taking of 14.4 percentage points among Black mothers and 6.4 percentage points among Hispanic mothers (no significant increase was found among White mothers) (N)
- An increase in the receipt of postpartum care of 1.5 percentage points for White women and 3.4 percentage points for women of other racial and ethnic groups (Z)

- Up to an 8 percentage point increase in maternal labor force participation in the months surrounding birth (D)
- An increase in time worked by mothers of 7.1 weeks in the second year of a child's life (B)
- A 13% increase in the likelihood of mothers returning to their prebirth employer in the year following birth (B)
- An 18.3 percentage point increase in the probability of mothers working 1 year following birth (B)

- A 2 percentage point reduction in the official poverty measure rate, with even greater effects among single mothers with low levels of education and income (M)
- A 2 percentage point decrease in food insecurity, with even greater effects among households with multiple children (Y)

- A 12% reduction in postneonatal infant mortality (S)

Paid Family Leave

How Does Paid Family Leave Impact PN-3 Outcomes?

- A 5.3 percentage point increase in the number of parents who reported coping well with the day-to-day demands of parenting (C)
- A 12 percentage point decrease in parental consumption of any alcohol (P)

- An increase in mothers' time spent with children, including reading to their children 2.1 more times per week, having breakfast with children 0.7 more times per week, and going on outings with children 1.8 more times per month (A)

- A 1.3 percentage point increase in exclusive breastfeeding at age 6 months (G)
- A 7.5 percentage point increase in the likelihood of breastfeeding initiation among Black mothers (K)
- Up to a 7 percentage point decrease in the likelihood of infants receiving late vaccinations among families with low incomes (E)
- A decrease in hospital admissions for pediatric abusive head trauma of 2.8 admissions per 100,000 children under age 2 and 5.1 admissions per 100,000 children under age 1 (I)

Paid Family Leave

Projected Paid Family Leave (PFL) Benefits

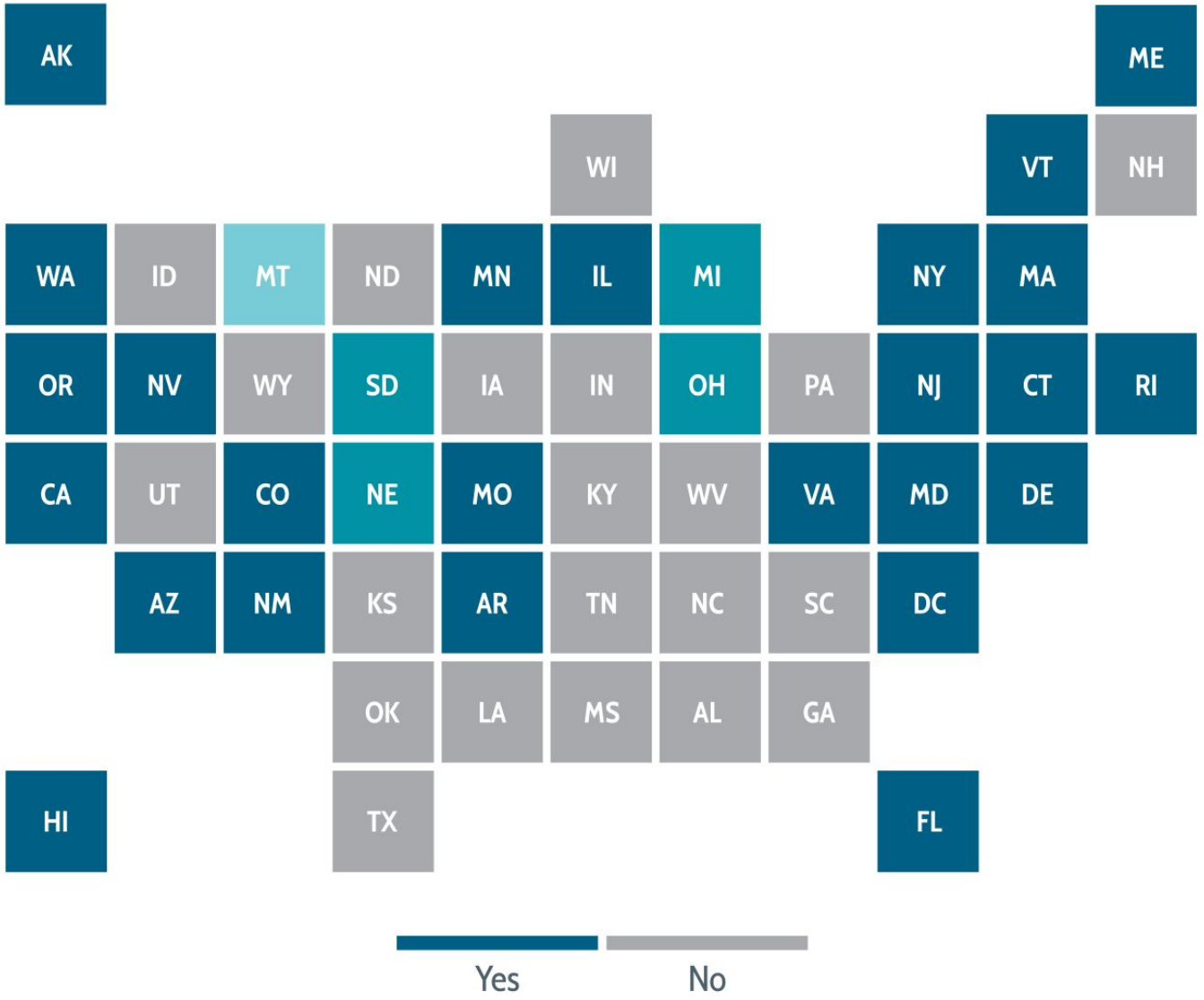
Based on National Median Earnings for Full-Time Workers

Notes: Estimates calculated using state parameters as of January 1, 2024. An "*" indicates estimated benefits based on policy guidelines; paid family leave programs in these states are not yet fully implemented and workers cannot not yet receive these benefits. Benefit estimates are pre-tax estimates based on median earnings for full-time female workers in the state, estimated at 2022 levels. Weekly totals may not precisely add to total benefits because of rounding.

State Minimum Wage

30

states have implemented a minimum wage of $10.00 or greater.



$15.00 per hour

The current state minimum wage in New York is $15.00.

The current minimum wage in NYC and surrounding areas is $16.00.

State has newly implemented the policy since October 1, 2022

State implemented the policy after October 1, 2023

State Minimum Wage

How Does State Minimum Wage Impact PN-3 Outcomes?

- For mothers with no college degree with children under age 6, a 10% increase in the minimum wage reduced poverty by 9.7% (J)
- A 10% increase in the minimum wage led to a 3.5% increase in earnings for families with low incomes and produced a 4.9% reduction in poverty for children under age 18 (B)

- A $1.00 minimum wage increase above the federal level led to a 2% decrease in low birthweight and a 4% decrease in postneonatal mortality (E)
- For pregnant women, setting the tipped minimum wage at the full federal minimum wage level led to overall healthier birthweights (O)

- A $1.00 increase in the minimum wage reduced child neglect reports by 9.6% overall and 10.8% for children ages 0 to 5 (G)
- Children affected by a $1.00 increase in the minimum wage from birth through age 5 saw an 8.7% higher likelihood of excellent or very good health and missed 15.6% fewer school days due to illness or injury from ages 6 through 12 (I)

State Minimum Wage

State Hourly Minimum Wages as of October 2023 (Nominal)

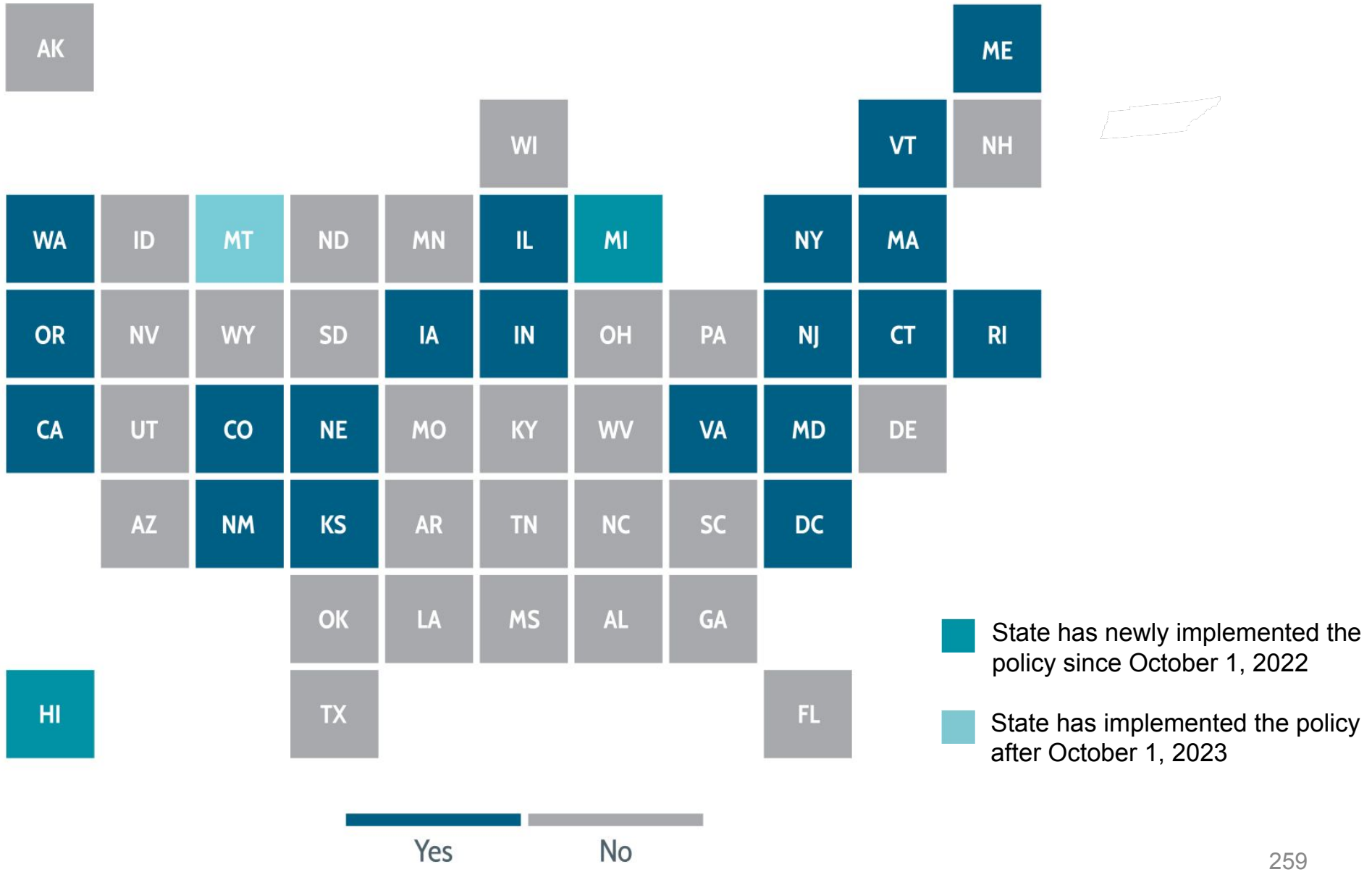
*As of January 1, 2024, New York's state minimum wage increased to $15.00 per hour

District of Columbia	$17.00
Washington	$15.74
California	$15.50
Connecticut	$15.00
Massachusetts	$15.00
New York	$14.20
Oregon	$14.20
New Jersey	$14.13
Arizona	$13.85
Maine	$13.80
Colorado	$13.65
Maryland	$13.25
Vermont	$13.18
Illinois	$13.00
Rhode Island	$13.00
Florida	$12.00
Hawaii	$12.00
Missouri	$12.00
New Mexico	$12.00
Virginia	$12.00
Delaware	$11.75
Nevada	$11.25
Arkansas	$11.00
Alaska	$10.85
South Dakota	$10.80
Minnesota	$10.59
Nebraska	$10.50
Michigan	$10.10
Ohio	$10.10
Montana	$9.95
Vest Virginia	$8.75
Alabama	$7.25
Georgia	$7.25
Idaho	$7.25
Indiana	$7.25
Iowa	$7.25
Kansas	$7.25
Kentucky	$7.25
Louisiana	$7.25
Mississippi	$7.25
/ Hampshire	$7.25
orth Carolina	$7.25
lorth Dakota	$7.25
Oklahoma	$7.25
ennsylvania	$7.25
uth Carolina	$7.25
Tennessee	$7.25
Texas	$7.25
Utah	$7.25
Wisconsin	$7.25
Wyoming	$7.25

State Earned Income Tax Credit

23

states have implemented a refundable EITC of at least 10% of the federal EITC.



State Earned Income Tax Credit

How Does State Earned Income Tax Credit Impact PN-3 Outcomes?

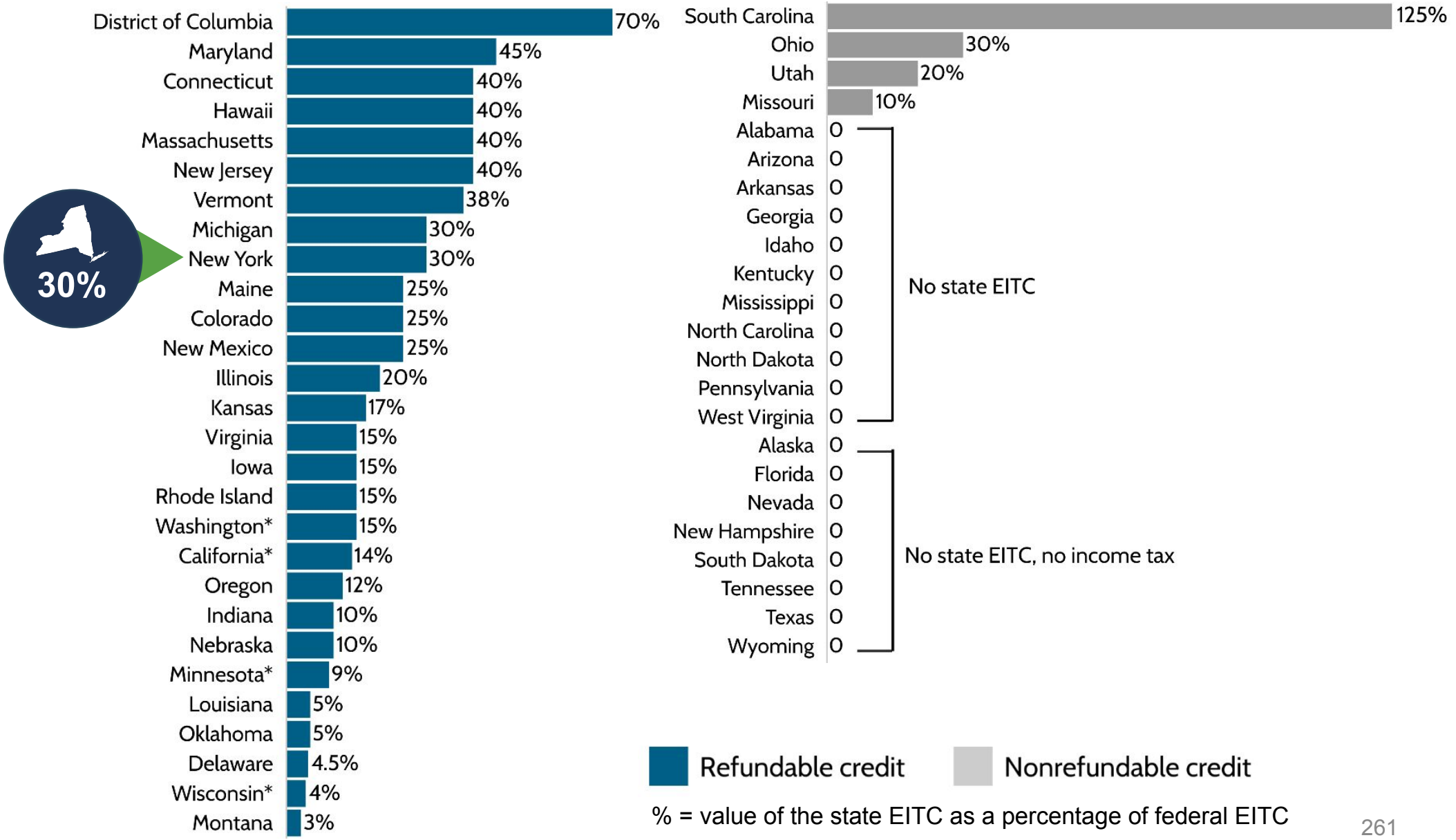
- With each additional $1,000 in average EITC benefits (federal plus state), unmarried mothers with children under age 3 were 9 percentage points more likely to work (C)
- A state EITC set at 10% of the federal credit increased employment among single mothers by 2.1 percentage points compared to single women with no children (GG)
- Living in a state with an EITC increased the likelihood of mothers' employment (for at least one week per year) by 19% (B)

- State EITCs increased mothers' annual wages by 32% (B)
- A $1,000 increase in average federal and state EITC benefits led to an increase of $2,400 in the pre-tax earnings of households with infants and toddlers, and poverty was reduced by 5 percentage points (C)
- A rigorous simulation found that if all states adopted the policy of the most generous EITC state, then child poverty would be reduced by 1.2 percentage points (KK)

- The state EITC led to increases in birthweight of between 16 and 104 grams, depending on the credit's generosity level (B, CC)
- In states with refundable EITCs of at least 10% of the federal credit, Black mothers with a high school education or less saw greater reductions in low birthweight rates for their infants (1.4 percentage points) compared to White mothers with a high school education or less (0.7 percentage points) (II)

State Earned Income Tax Credit

Variation Across States in EITC Generosity and Refundability



Tax year 2023,
as of October 1, 2023

STRATEGY

COMPREHENSIVE SCREENING AND CONNECTION PROGRAMS

3 states have established a **goal** to implement comprehensive screening and connection programs statewide

CT NJ OR

21 states use **Medicaid funding** to support comprehensive screening and connection programs

AL AZ CA CO CT DC FL
IL MD MA MN MO NJ NY
NC OH OK OR SC TX WA

20 states provide **state funding** to support comprehensive screening and connection programs

AZ CA CO CT DC FL IL
IA MD MA MN NJ NY NC
OR SC TX VT WA WI

★ **3** states have implemented all key policy levers for comprehensive screening and connection programs

CT NJ OR

Comprehensive Screening

How Do Comprehensive Screening and Connection Programs Impact PN-3 Outcomes?

- DULCE families received an average of 0.5 more community resources at the 6 and 12 month follow up (J)
- Family Connects families accessed 0.9 more community resources (B)
- HealthySteps families had 3.5 times higher odds of being informed about community resources (F)
- DULCE families had an 11 percentage point increase in the likelihood of attending at least 5 routine health care visits by 12 months (J) and HealthySteps families had 1.7 times greater odds of attending the 12 month well-child visit (F)

- Family Connects reduced disparities between Black and White mothers in maternal anxiety by 48.3% and maternal depression by 43.5% (L)
- Family Connects mothers were 8.3 percentage points less likely to report possible clinical anxiety (B)

- Among those parents in Family Connects using nonparental care, out-of-home care quality was rated higher (0.66 points on a 5 point scale) compared to control families (B)

- By child age 12 months, Family Connects families reduced emergency department visits by 50% (B)
- DULCE families were 15 percentage points more likely to have received immunizations on time at child age 6 months (J)
- HealthySteps families were 3 percentage points less likely to put their infants in the wrong sleep position (E)

STRATEGY

GROUP PRENATAL CARE

8 states offer an **enhanced Medicaid reimbursement rate** to incentivize group prenatal care

CA LA MD NJ OH SC TX UT

10 states invest **funding** to pilot or scale up group prenatal care in the state

IL IN MD MI MT NJ NM OH SC TX

★ **5** states have implemented both key policy levers for group prenatal care

MD NJ OH SC TX

Group Prenatal Care

How Does Group Prenatal Care Impact PN-3 Outcomes?

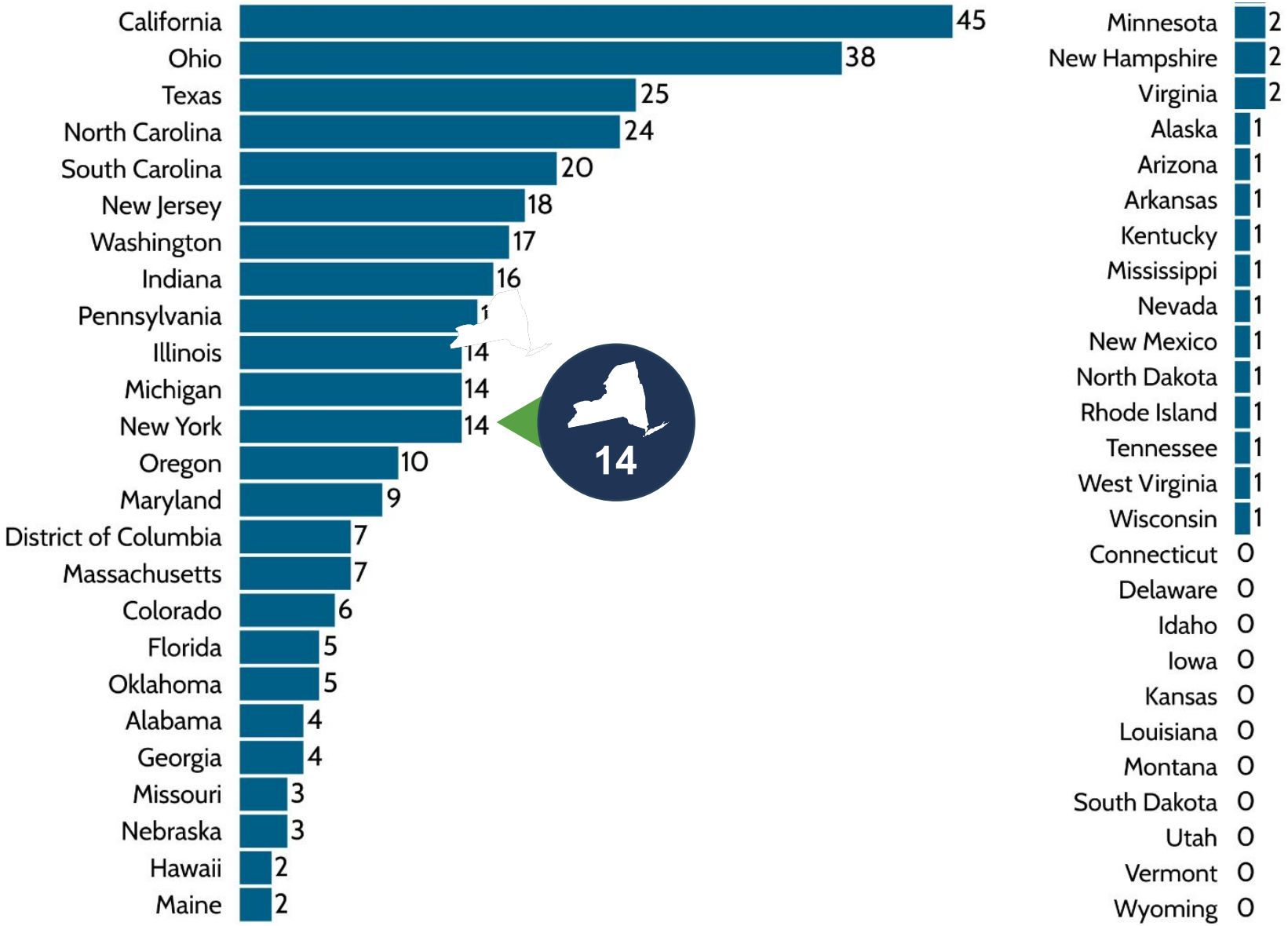
- A 6.4 percentage point decrease in the likelihood of receiving inadequate prenatal care compared to individual prenatal care participants(C)
- Approximately 2 more prenatal visits among participating Black women with high-risk pregnancies compared to women in individual care (H)

- Cases of probable depression decreased by 31% for women in group prenatal care compared to 15% for women in individual prenatal care from the second trimester to 1 year postpartum (A)
- High-stress women in group prenatal care were more likely than women in individual prenatal care to experience a decrease in depressive symptoms postpartum (D)

- The rate of breastfeeding initiation increased by approximately 12 percentage points for women in group prenatal care compared to women in individual prenatal care (C)

Group Prenatal Care

Number of Centering Pregnancy Sites Across States



Source: As of 2023. Centering Healthcare Institute Inc.

STRATEGY

COMMUNITY-BASED DOULAS

As of October 2023:

12 states cover and reimburse community-based doula services under **Medicaid**

CA DC FL MD MI MN
NV NJ OK OR RI VA

9 states fund grants or scholarships to support doula **training and credentialing**

CA CO CT MI MO NV
NJ OR WV

★ **5** states have implemented both key policy levers for community-based doulas

CA MI NV
NJ OR

New York and Massachusetts now also cover and reimburse community-based doula services under Medicaid. Among other states, New York now funds a grant program to support recruitment, training, support, and mentorship of community-based doulas.

Community-Based Doulas

How Does Community-Based Doulas Impact PN-3 Outcomes?

- A 10 percentage point increase in attendance at four or more well-child visits within the first 6 months of life (E)
- A 10 percentage point increase in attending a maternal postpartum visit within 60 days of delivery (E)
- A 40.5 percentage point increase in attending birthing classes (A)

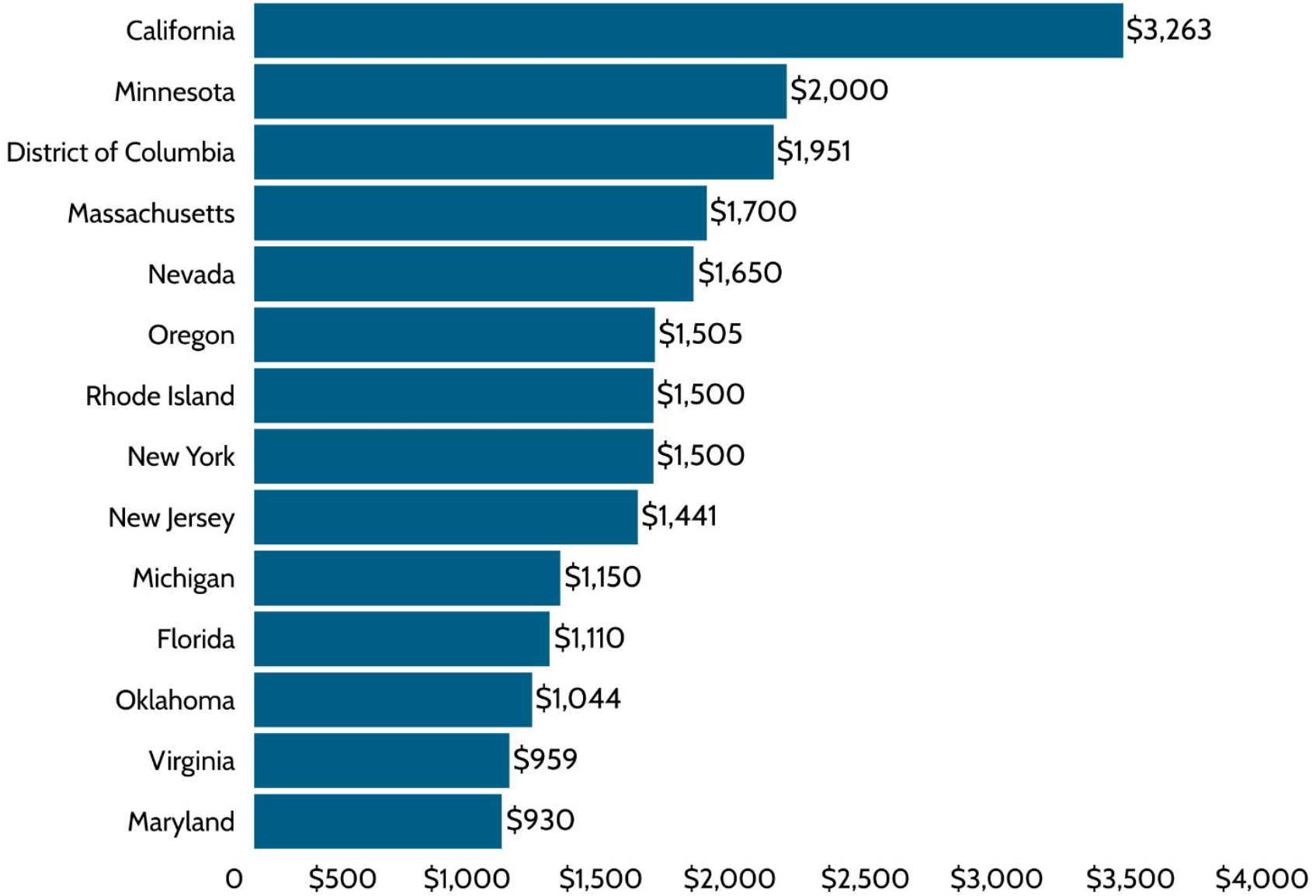
- An 8 percentage point decrease in rates of preterm birth (E)
- An 8 percentage point decrease in rates of low birthweight (E)
- A 5 percentage point decrease in NICU admissions (E)
- An 11.4 percentage point decrease in epidural use (A)

- A significant increase in parental guidance and encouragement towards infants at child age 4 months (C)
- Increased engagement with infants in stimulating activities such as reading, playing peekaboo, and playing with toys at child age 3 months (B)
- A 9.4 percentage point increase in mothers' knowledge of safe infant sleep practices (A)

- An increase in breastfeeding initiation rates ranging from 7.0 (A) to 14.3 (D) percentage points
- A 12.3 percentage point decrease in nonbeneficial feeding practices that involve giving infants popular but nutritionally deficient food (D)

Community-Based Doulas

Maximum Medicaid Reimbursement Rates for Doula Services



*DE, CT, CO, NH, OH, WA, and SD are working on implementing Medicaid reimbursement rates.

As of June 2024

Community-Based Doulas

Covered Services Under Medicaid Beyond Labor and Delivery

State	Total Number of Visits	Detail on Number and Timing of Visits
California	11	Initial visit, 8 follow-up visits, two optional extended postpartum visits, 9 additional postpartum visits can be provided with recommendation from a licensed Medicaid provider
District of Columbia	12	
Florida		Plans neogitiate difference rates and services
Massachusetts	5 to 8	Total number of visits varies depending on the length of visits
Maryland	8	
Michigan	6	Additional visits allowed with prior authorization
Minnesota	6	
Nevada	6	
New Jersey	8 or 12	Total number of visits vary by patient age
New York	8	
Oklahoma	8	
Oregon		At least 2 visits during each of the preantal and postpartum periods
Rhode Island	6	3 prenatal visits and 3 postpartum visits
Virginia	8	

STRATEGY

EARLY HEAD START

23 states **support** Early Head Start by becoming an EHS-CCP grantee, direct state funding to programs, and/or creating a state-specific program similar to EHS

AL AK AR CA CO CT DE DC
GA IA IL ME MD MA MN MO
NE OK OR PA RI WA WI

Among these 23 states:

6 states are an EHS-CCP grantee

AL CA DE DC GA PA

15 states direct state funding to EHS

AK CO CT DC IA ME MD MA
MN MO OK OR RI WA WI

5 states have a state-specific program similar to EHS

AR IL NE OR WA

Early Head Start

How Does Early Head Start Impact PN-3 Outcomes?

- Parents participating in EHS reported lower parenting distress as compared to the control group at child age 2 (I, S: effect size -0.11)

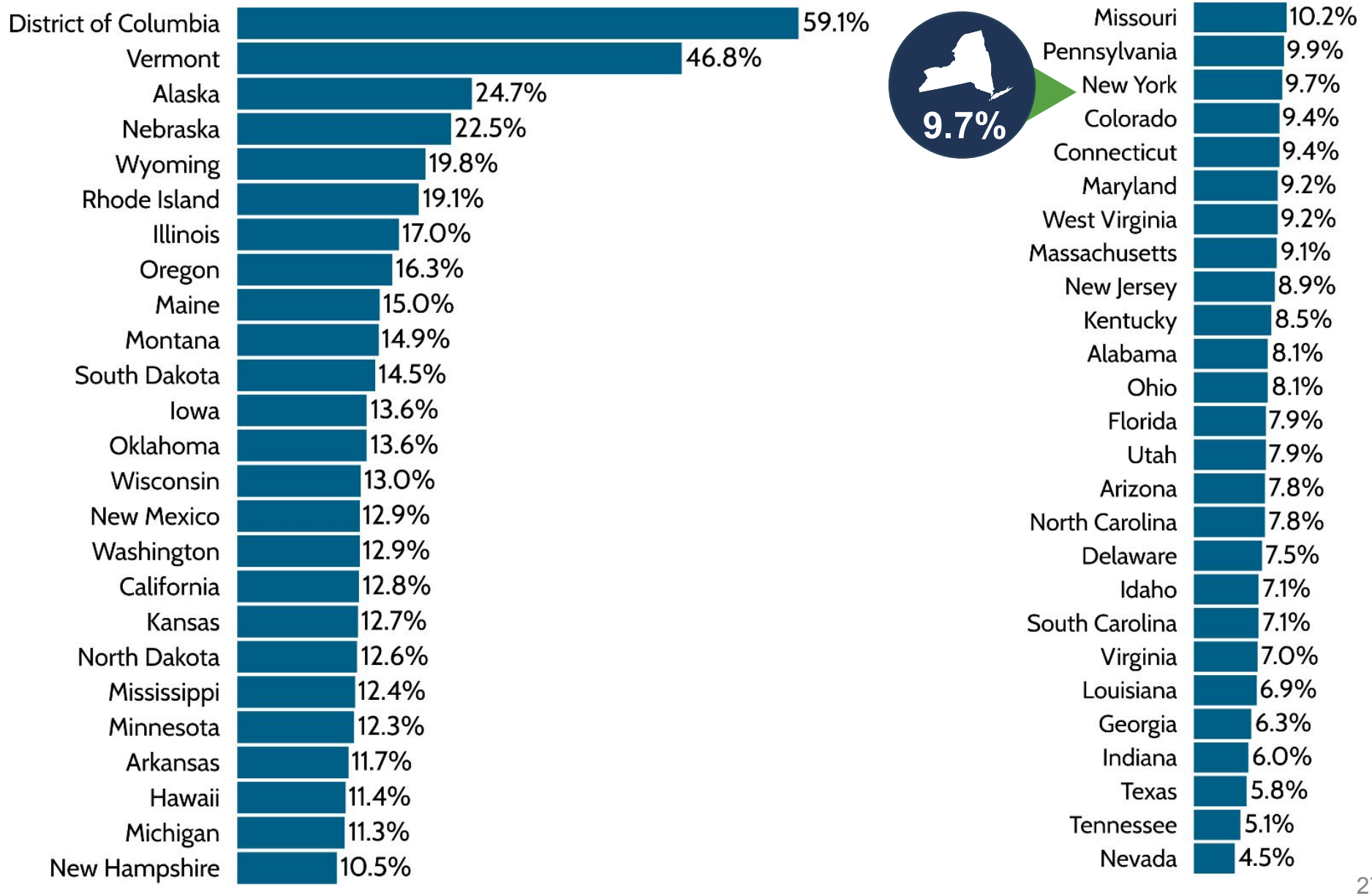
- EHS participation led to more supportive home environments for language and literacy (I, S: effect size 0.12), particularly for Black families (N: effect size 0.19) and families with moderate-level risk factors (N: effect size 0.18)
- Fewer parents participating in EHS reported spanking their child at age 3 (J, S: effect size -0.13)
- Black parents participating in EHS were more involved in their child's school at grade 5 (T: effect size 0.37)

- At age 2, the share of children participating in good-quality center-based care was 3 times greater among children participating in EHS as compared to the control group (K)
- In center-based care, caregiver-child interactions were better among EHS participants than among nonparticipants (K)

- Children in EHS were more engaged with their parent during play at age 3 (J, S: effect size 0.18)
- Children in EHS had higher developmental functioning assessment scores at age 2 (I, S: effect size 0.14), particularly Black children in EHS (N: effect size 0.23)
- Children in EHS had higher vocabulary skills at ages 2 and 3 (I, J and S: effect sizes 0.11)

Early Head Start

Estimated % of Income-Eligible Children With Access to Early Head Start



Sources: 2021 Office of Head Start, Early Head Start Notice of Award data and 2019-2021 American Community Survey (ACS) Public-Use Microdata Sample (PUMS).

STRATEGY

EARLY INTERVENTION SERVICES

17 states allow **very low birthweight** as a diagnosable or at-risk qualification for early intervention services

CA CT ID IN IA LA
MI MN MS MO NH NM
OH TX RI WV WI

6 states allow **at-risk** for delay as a qualifier for early intervention services

CA FL MA NH NM WV

34 states have **eliminated family fees** for children receiving EI services

AL AZ AR CO DE DC
FL HI ID IA KS ME
MD MA MI MN MS MT
NE NV NH NM NY ND
OK OR PA RI SC SD
TN VT WV WY

★ **3** states have implemented all key policy levers for early intervention services

NH NM WV

EI Services

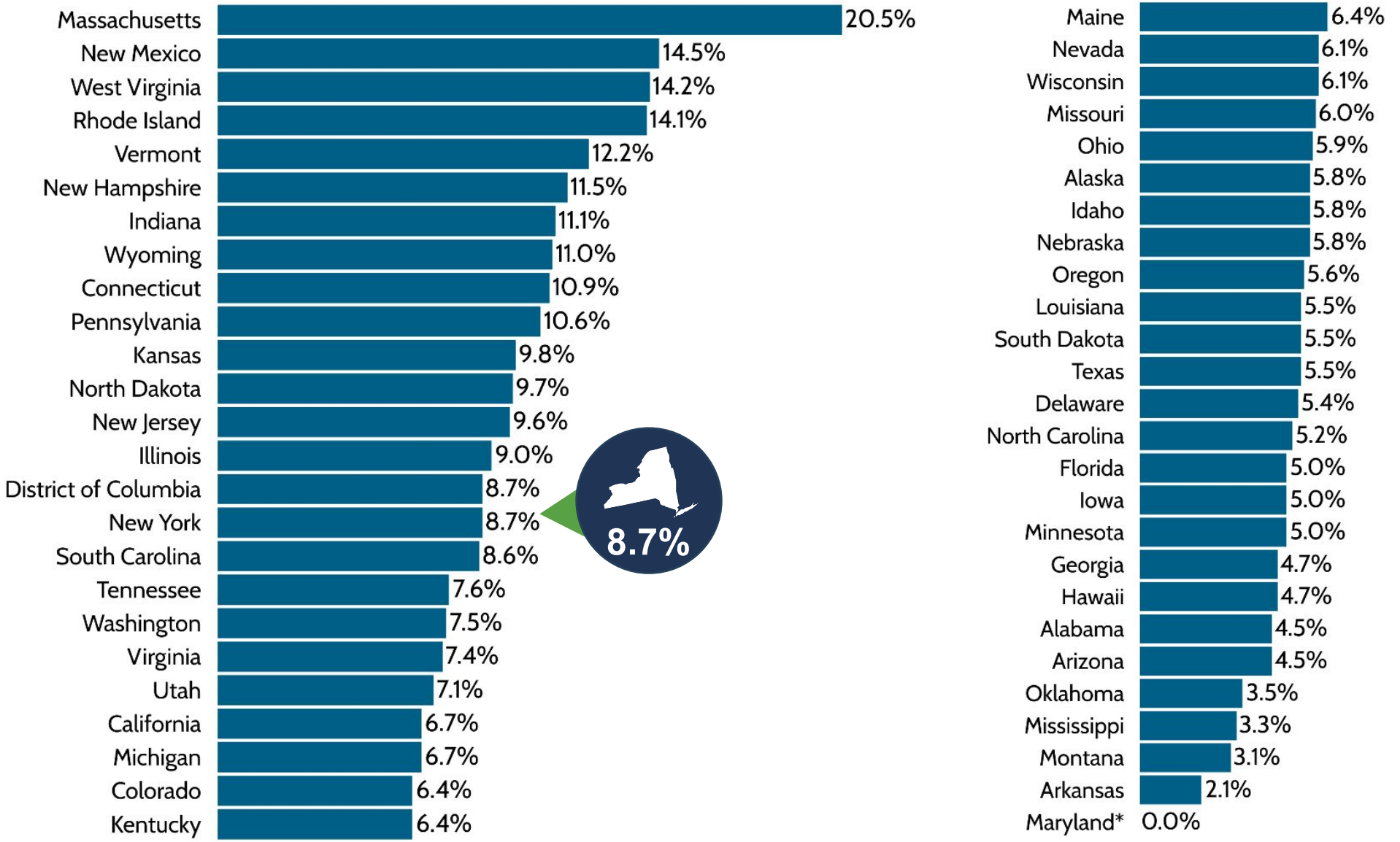
How Do Early Intervention Services Impact PN-3 Outcomes?

- Mothers of low birthweight, premature infants who received EI services scored significantly higher on scales of maternal self-confidence (B, D) and maternal role satisfaction than control groups (D)

- A meta-analysis of 31 studies found that EI services had an average effect size of 0.62 on children's cognitive skills and 0.43 on motor skills (F)
- Low birthweight, premature infants who were assigned to EI services saw better cognitive (C, D) and behavioral outcomes (C) at age 3 than infants in control groups
- EI services improved toddlers' receptive language skills relative to a control group (0.35 effect size) (E)

EI Services

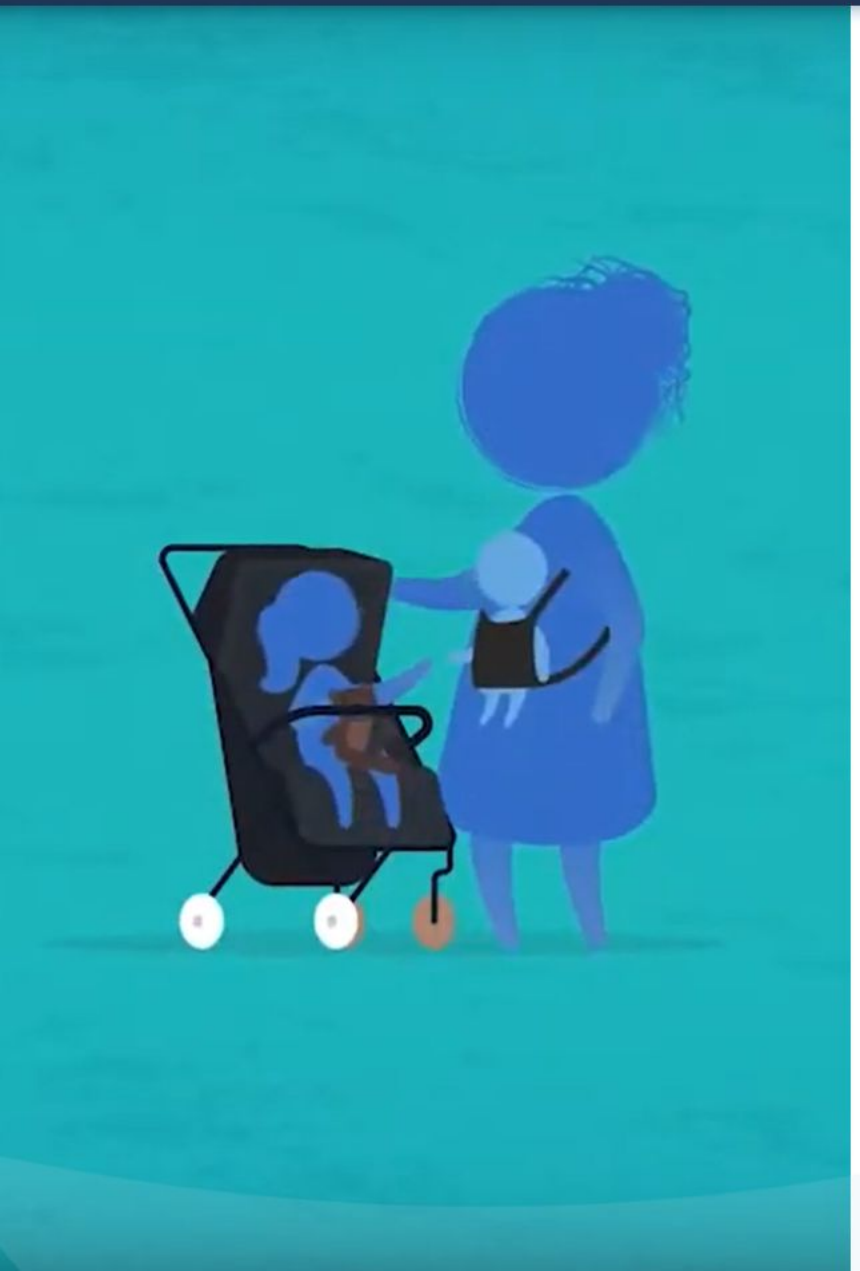
Cumulative % Children Under Age 3 Receiving EI Services



Sources: Cumulative % served in EI & Point-in-Time % served: As of 2021-2022. US Department of Education, EDFacts Metadata and Process System (EMAPS) and US Census Population Estimates; % babies born low birthweight: Vital Statistics from CDC WONDER 2021 Natality.

*Maryland does not have a value for the cumulative percent served under age 3 because data were flagged due to questionable quality. 0.0% is displayed for the purpose of graphics.

Policy Impact Calculator: Assumptions

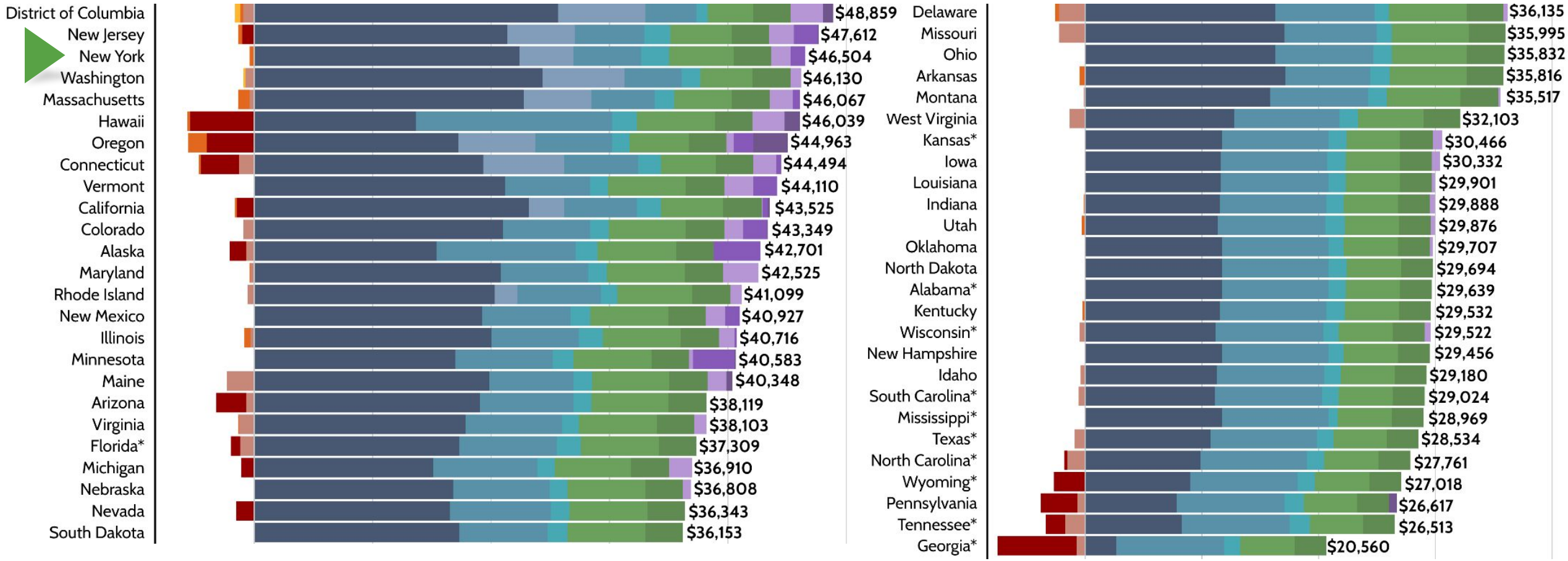


Lina

- Single mother with an infant and toddler
- She works full time all year, and earns the state's minimum wage
- She receives the benefits she is eligible for and files her taxes
- She takes 12 weeks of leave following her infant's birth
- She sends her children to center-based care that charges the 75th percentile of the market rate

The Impact of State Policy Choices on Family Resources Across States

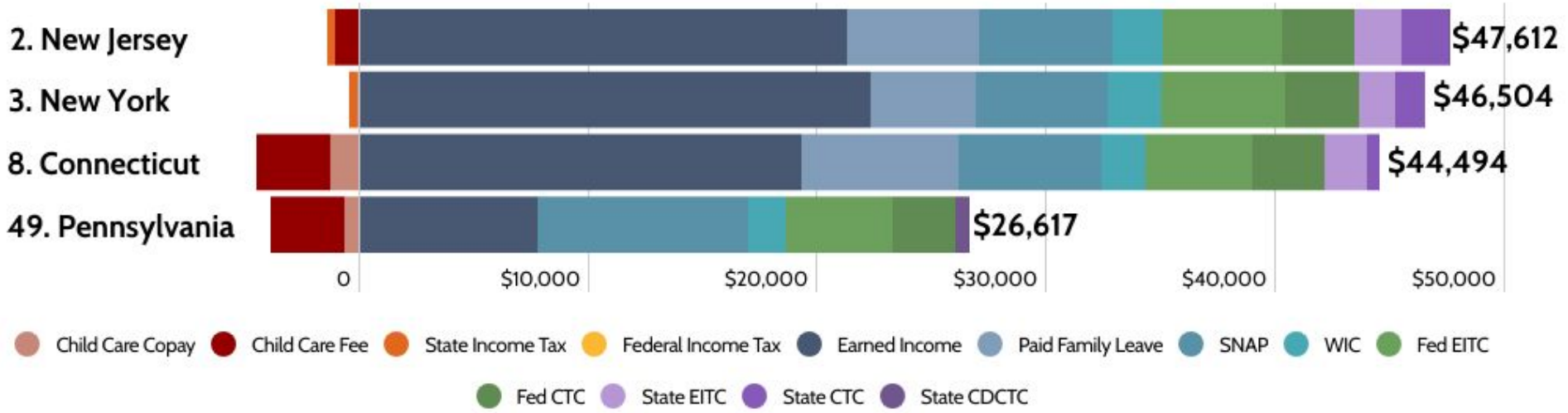
Total Annual Resources = Annual Minimum Wage Earnings + PFL + Net Federal and State Benefits - Out-of-Pocket Child Care Expenses



*State has not expanded eligibility for Medicaid under the ACA

The Impact of State Policy Choices on Family Resources

Annual Minimum Wage Earnings + PFL, Minus Out-of-Pocket Child Care Expenses, Plus Net Federal and State Benefits



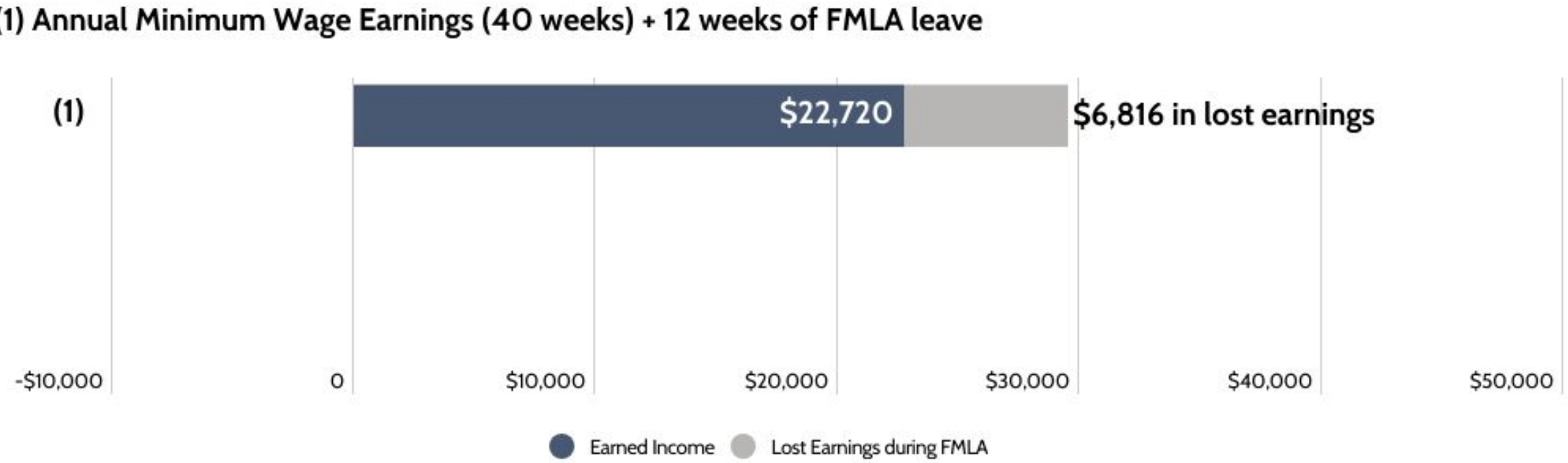
To the extent possible, data reflect state policies as of October 1, 2023 & tax year 2023. All earnings, benefits (both federal and state), and child care costs are based on a family of three comprised of a single parent working a full-time, minimum wage job for 9 months with 12 weeks of maternity leave. The family includes two children (an infant and a toddler) in full-time, center-based child care. For detailed source notes and additional information see our Policy Impact Calculator and Methods and Sources.

The Impact of State Policy Choices on Family Resources in New York

(1) Annual Minimum Wage Earnings (52 weeks)

To the extent possible, data reflect state policies as of October 1, 2023 & tax year 2023. All earnings, benefits (both federal and state), and child care costs are based on a family of three comprised of a single parent working a full-time, minimum wage job for 9 months with 12 weeks of maternity leave. The family includes two children (an infant and a toddler) in full-time, center-based child care. For detailed source notes and additional information see our Policy Impact Calculator and Methods and Sources.

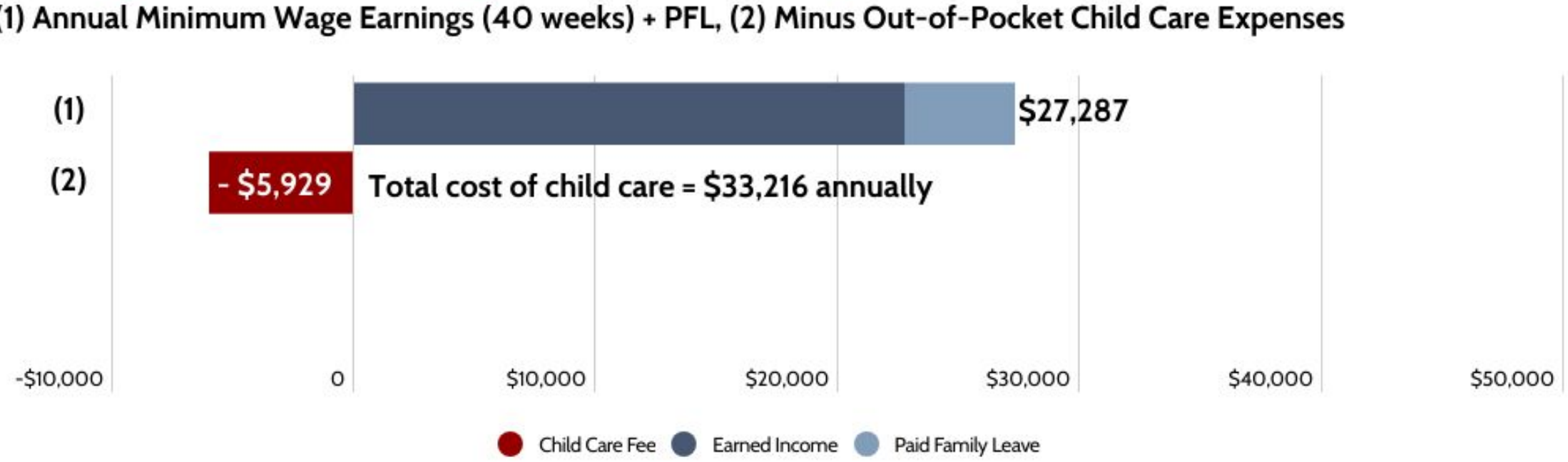
The Impact of State Policy Choices on Family Resources in New York



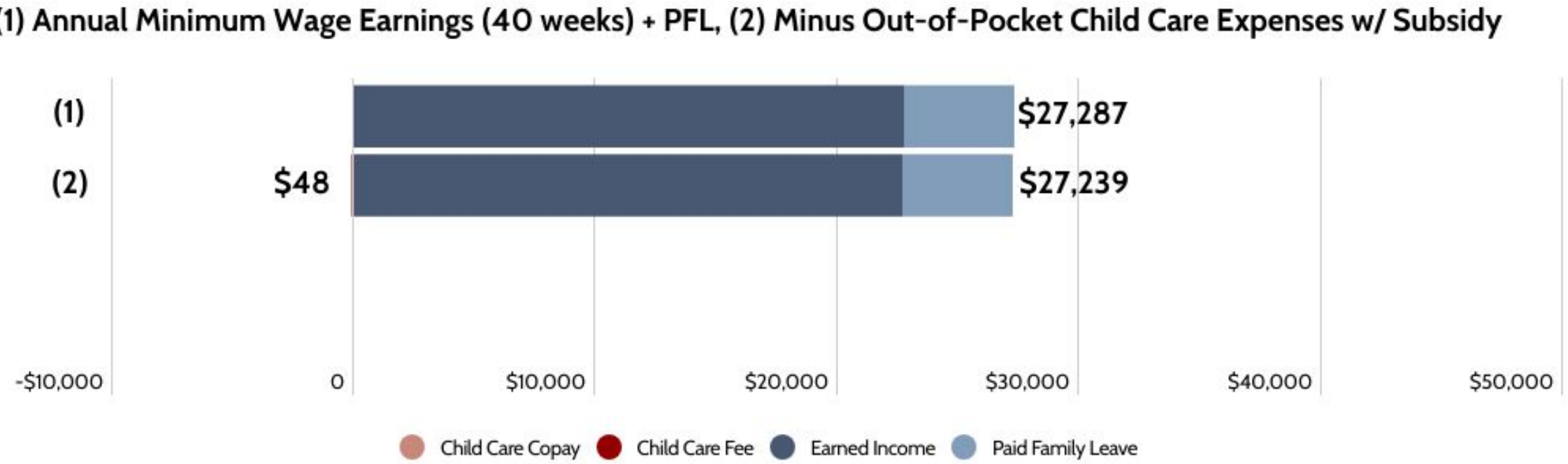
The Impact of State Policy Choices on Family Resources in New York

(1) Annual Minimum Wage Earnings (40 weeks) + 12 weeks of Paid Family Leave (PFL)

The Impact of State Policy Choices on Family Resources in New York

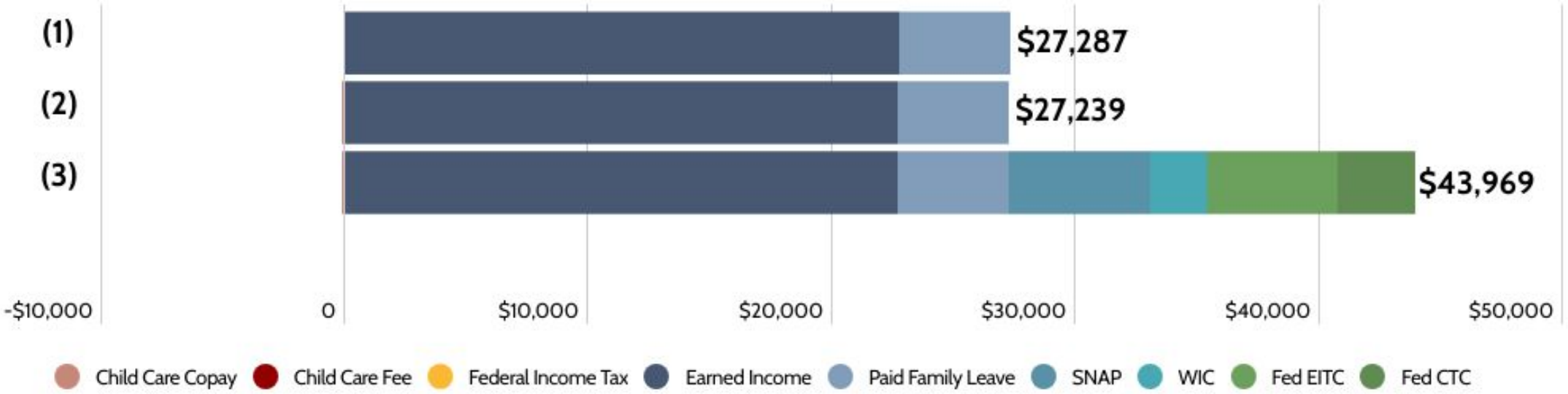


The Impact of State Policy Choices on Family Resources in New York



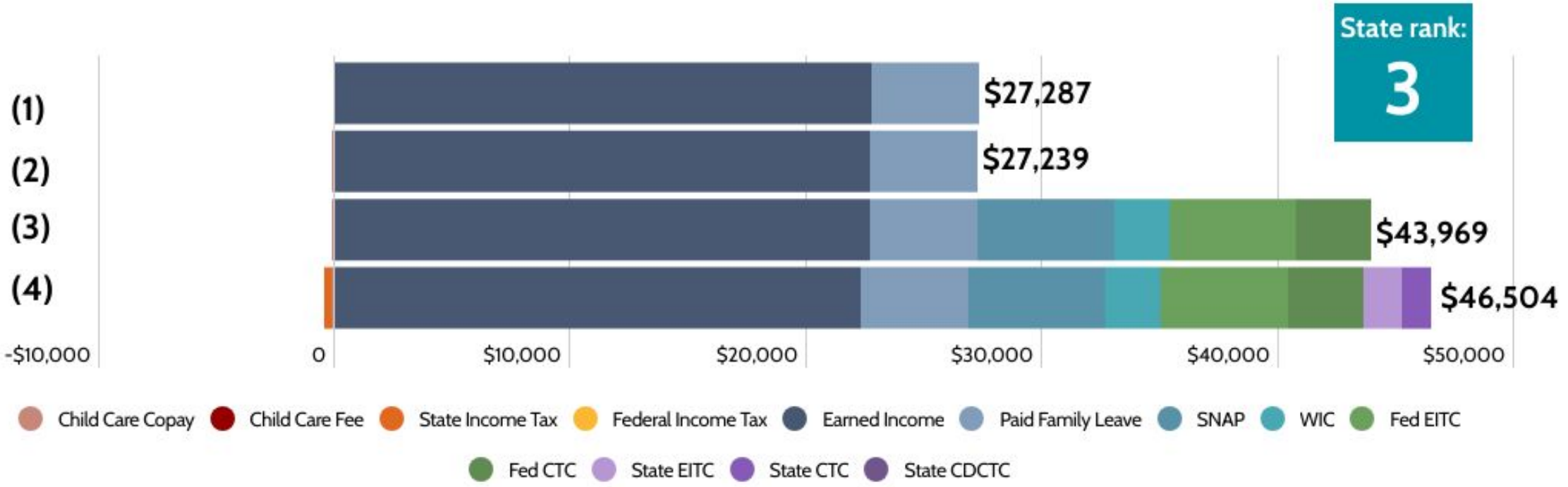
The Impact of State Policy Choices on Family Resources in New York

(1) Annual Minimum Wage Earnings (40 weeks) + PFL, (2) Minus Out-of-Pocket Child Care Expenses, (3) Plus Net Federal Benefits



The Impact of State Policy Choices on Family Resources in New York

(1) Annual Minimum Wage Earnings + PFL, (2) Minus OOP Child Care Expenses, Plus Net (3) Federal & (4) State Benefits



Summary

- The prenatal-to-3 period of development sets the stage for lifelong health and wellbeing.
- Many children lack the opportunities and rights they deserve for a healthy start, and these children are disproportionately children of color.
- State policy choices can reduce family stressors and increase capacities, which have substantial impacts on health and wellbeing over the life course.

prenatal-to-3 policy IMPACT CENTER

RESEARCH FOR ACTION AND OUTCOMES

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