Transforming Prenatal Care:
A Life-Course Perspective

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Improving the Health and Wellbeing of Children and Youth through Health Care System Transformation Committee Meeting 1

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How would you transform the health care system
to improve the health and wellbeing of children and youth in our nation,
from a life-course perspective?

Objectives

- **By the end of my talk, the audience should gain:**

  1. **greater familiarity with the life course perspective**
  2. **greater imagination of what a transformed prenatal care might look like, from a life course perspective**
  3. **greater awareness of key levers for systems transformation**

- **I have no financial disclosure or conflict of interest concerning material discussed in this presentation**

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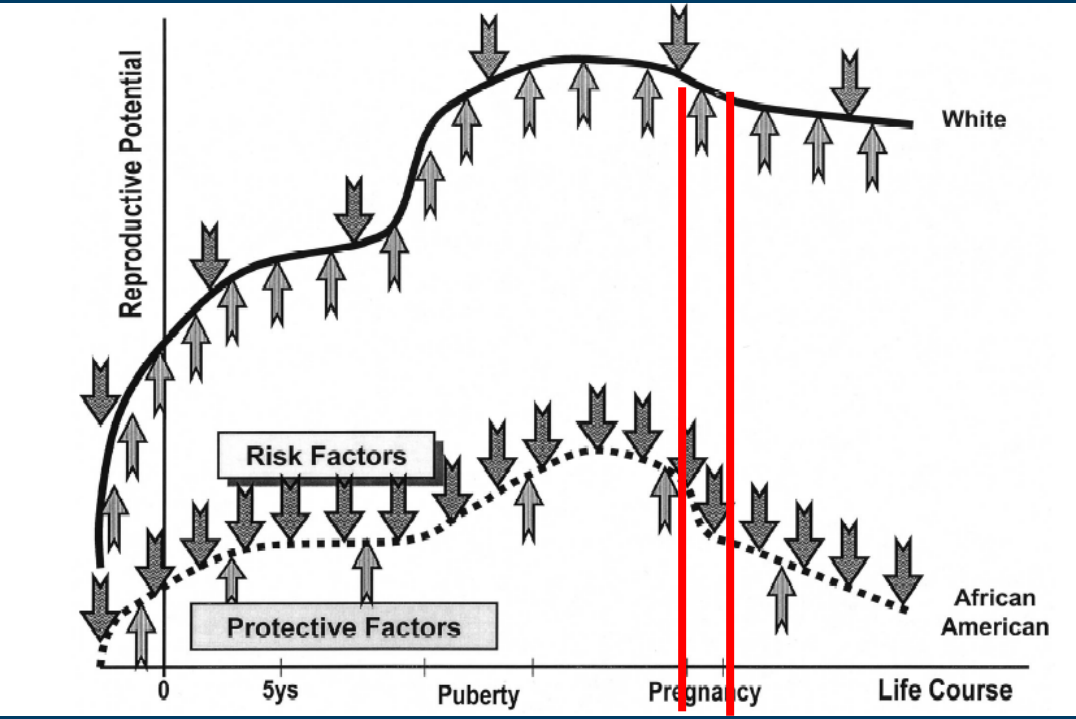
1.
The Life Course Perspective

Life-Course Perspective

A way of looking at life not as disconnected stages,
but as an integrated continuum

Life-Course Perspective

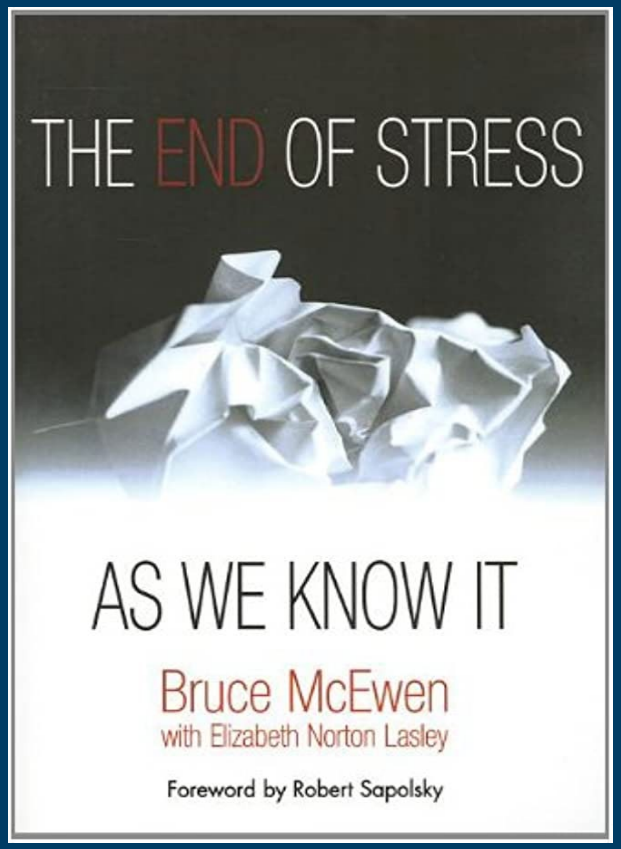


Lu MC, Halfon N. Racial and ethnic disparities in birth outcomes: a life-course perspective. Matern Child Health J. 2003;7:13-30.

Early Programming

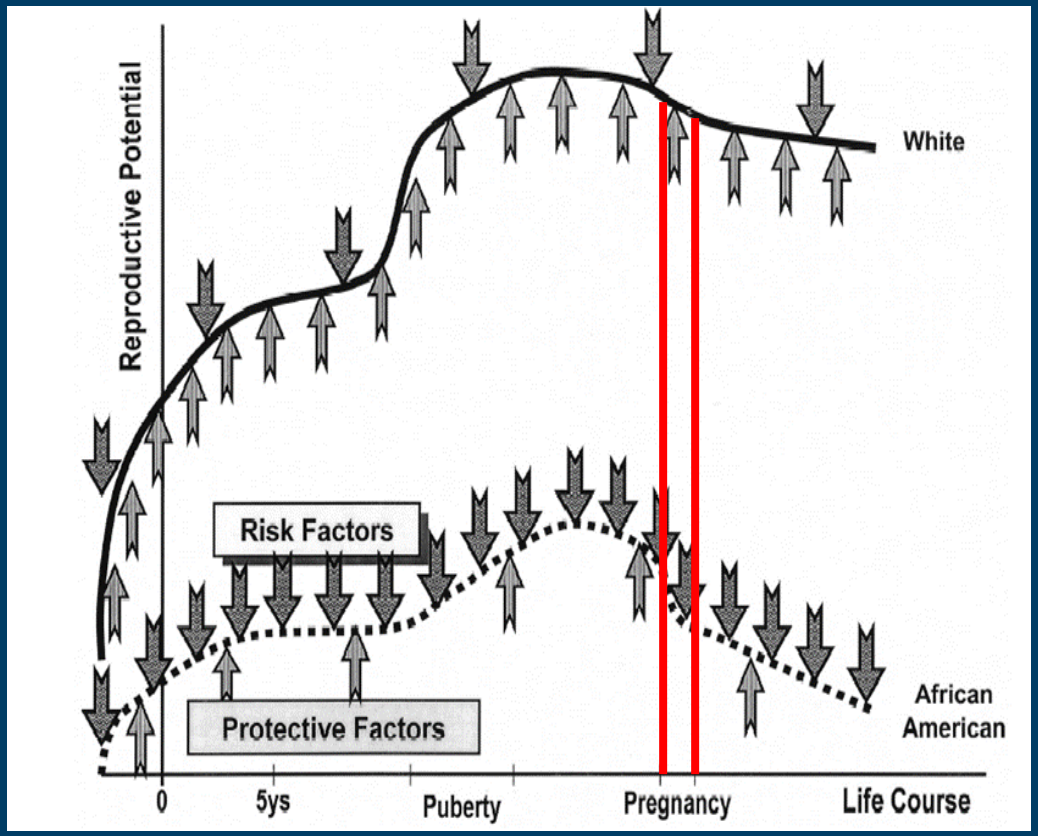
- aka Barker Hypothesis, Developmental origins of health & disease (DoHAD)
- Early life experiences can influence lifelong health & function
- Key influences include maternal stress, poor nutrition & environmental toxicants
- “Programming” via epigenetic modifications
- Chronic child & adult diseases may have a fetal origin

Cumulative Pathways



- Cumulative allostatic load, weathering hypothesis
- Chronic stress (biological & psychological) creates wear and tear on the body's allostatic systems (allostasis = maintain stability through change)
- Cumulative wear and tear (allostatic load) lead to deterioration in health & function
- Chronic stress from toxic air, food insecurity, poverty, violence & racism is making poor & BIPOC families sick

The Life Course Perspective



- Synthesis of early programming & cumulative pathways
- Reconceptualizes birth outcome as the end product of not only the 9 months of pregnancy, but the entire life course of the mother
- Disparities in birth outcomes are therefore the consequences of not only differential exposures to risk and protective factors during pregnancy, but also differential developmental trajectories set forth by early life programming and cumulative allostatic load across the life course

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2.
Transforming Prenatal Care:
A Life Course Perspective

The Purpose of Prenatal Care

Why Prenatal Care?

Current Practice

- Prenatal care was invented 180 years ago for early detection of preeclampsia
- In 1985, the Institute of Medicine recommended prenatal care as a cornerstone of our national strategy for preventing LBW and infant mortality
- Even today, much of prenatal care is on secondary prevention (early detection & treatment) of pregnancy complications

A Life-Course Perspective:

- Not only detect and treat pregnancy complications, but also:
- Restore maternal allostasis
- Optimize developmental programming

The Timing of Prenatal Care

When Prenatal Care?

Current Practice

- First trimester
  - Every 4 weeks
- Second trimester
  - Every 4 weeks
- Third trimester
  - Every 2 weeks until 36 weeks
  - Every week until delivery
- Postpartum
  - 6 weeks postpartum

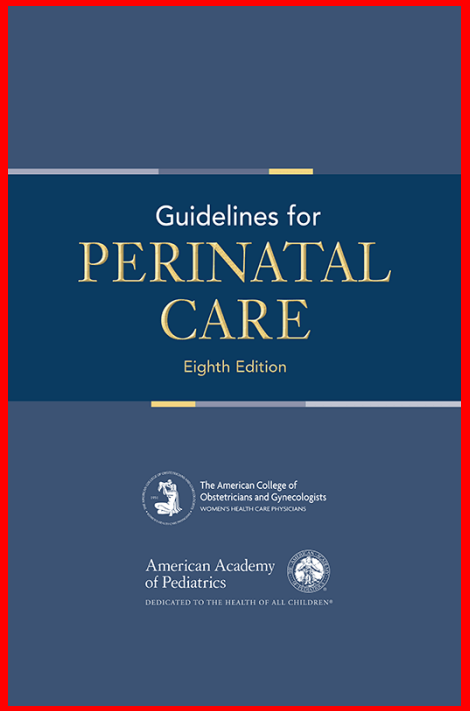
A Life-Course Perspective:

- To expect prenatal care, in less than 9 months, to reverse all the cumulative allostatic load over the mother's life course, is expecting too much of prenatal care
- Prenatal care needs to begin when the mother was just a baby inside her mother's womb, an infant, a child, an adolescent, and a young adult
- It needs to be a part of a longitudinally-integrated care continuum across the life course

The Content of Prenatal Care

***What* Prenatal Care?**

Current Practice

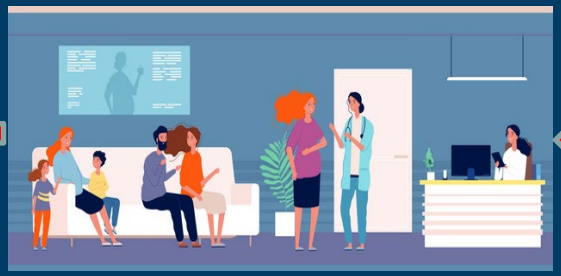


A Life-Course Perspective:

- **Address what truly matters to restore maternal allostasis & optimize developmental programming**
- **What truly matter?**
  - **Maternal stress**
  - **Poor Nutrition**
  - **Environmental Toxicants**
- **Expanded prenatal care:**
  - **Preventing evictions**
  - **Combating urban food deserts**
  - **Removing molds & dust mites**
  - **Dismantling institutionalized racism**

The Delivery of Prenatal Care

How Prenatal Care



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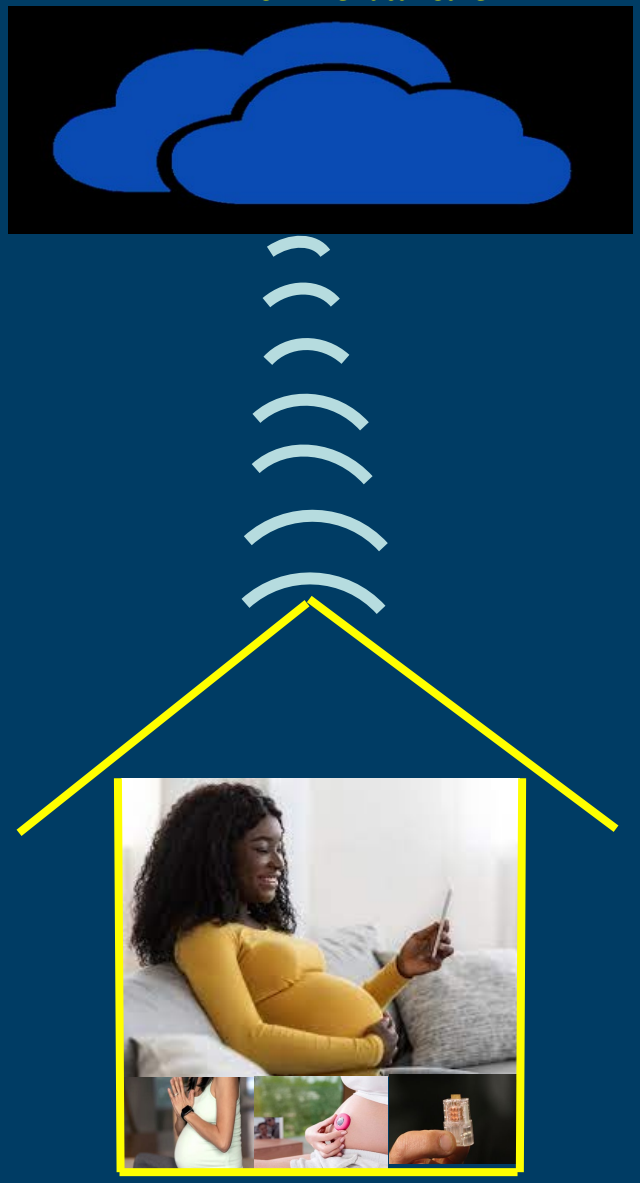
The Delivery of Prenatal Care

How Prenatal Care



The Delivery of Prenatal Care

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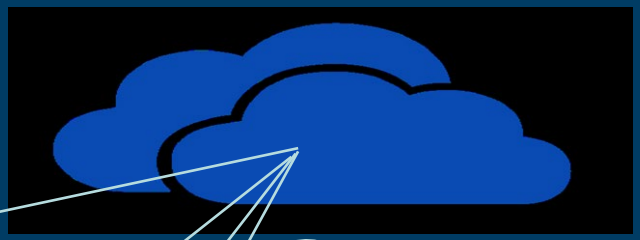

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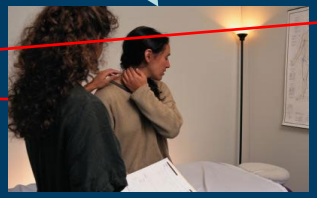

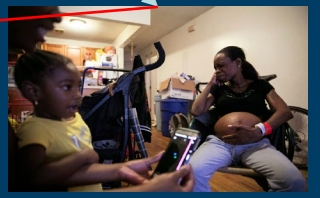

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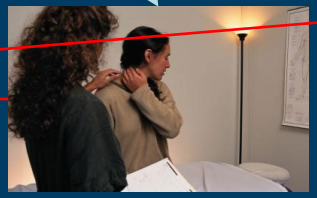

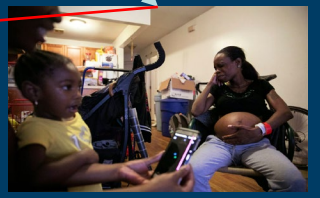

The Organization of Prenatal Care

Who provides prenatal care?

Accountable Care Communities for Children and Families

- **Core Elements**
  1. Shared vision & addressing gaps
  2. Integrator/backbone/bridge organization to connect Multisector Partners
  3. Trusted community leadership and governance
  4. Two-generation approaches
  5. Population and patient-level metrics and outcomes to achieve a shared community destination
  6. Data analytics and evaluation
  7. Community Care Coordination System
  8. Key Portfolio of Interventions
  9. Value-based payment
  10. Financial sustainability
  11. Learning Systems and Communications

Gratale D, Chang D. Defining an Accountable Community for Health for Children and Families. National Academy of Medicine. October 30, 2017. Discussion Paper: https://nam.edu/defining-an-accountable-community-for-health-for-children-and-families/

3.
Levers for
Health Systems Transformation

Payment & Financing

- Current system of **global payment** for pregnancy and childbirth does little to incentivize innovation and transformation
- Presently we pay for a lot of medical care (e.g. 15 clinical visits) that don't work well, while **vastly under-investing in social determinants and public health**
- Investing in **doulas, promotores & community health workers** to provide navigation services and bridge the clinical community gap is a good start, but their effectiveness is often limited by the sheer lack of community resources

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Payment & Financing

- **Cal-AIM (California Advancing and Innovating Medi-Cal)**
  - **$12 billion investment over 5 years to pay health plans to contract with CBO's and social services providers to tackle social determinants of health for some of California's sickest and most expensive patients**
  - **Covered services include home-delivered healthy meals; help with grocery shopping, laundry and money management; security deposits for homeless people in search of housing; and home repairs including removing mold, installing air purifiers and even replacing carpeting, blinds and mattresses.**
  - **Cal-Aim has also released its Medi-Cal's Strategy to Support Health and Opportunity for Children and Families**
    https://www.dhcs.ca.gov/CalAIM/Pages/CalAIM-Medi-Cal-Strategy-to-Support-Health-and-Opportunity-for-Children-and-Families.aspx
- **Need a transformational payment and financing system to support and sustain a transformational health system for children and families**

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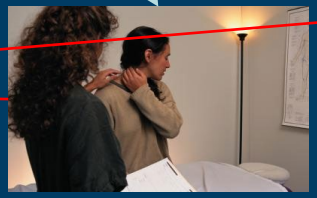
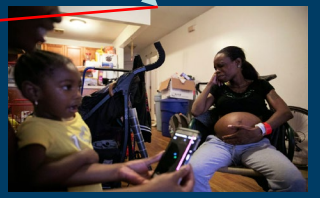
Leadership & Governance





Leadership & Governance

- Who will be the integrator? The backbone organization?
- Who will be accountable for the health and wellbeing of children, youth, and families in the community?
  - Doctor's office?
  - Health plan?
  - Public health?
  - Community-based organizations?
- Who will lead, integrate, coordinate, and account for a transformational health system for children and families?
  - Because leadership and governance matter

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Science & Technology

- How can we better leverage telehealth, wearables, sensors, labs on a chip to make healthcare more patient-centered?
- How can we better leverage AI, machine learning, and deep learning to improve clinical trials, predictive analytics, and precision health?
- How do we build a data system that is more vertically, horizontally, and longitudinally integrated
  - One that is capable of *tracking social determinants of health across the life course*?

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Equity and Anti-Racism

- **Focus on Equity**
  - ***Scientific and technological advances could widen disparities if there is differential access***

- **Focus on Antiracism**
  - ***What would an antiracist health system for children, youth & families look like?***

Every generation inherits a world it never made; and, as it does so, it automatically becomes the trustee of that world for those who come after. In due course, each generation makes its own accounting to its children.

Robert F Kennedy, 1963