

Changing Paradigms in Maternal and Child Health: Innovative Lessons from the Life Course

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Faculty

Cheri Pies, MSW, DrPH
 Clinical Professor
 MCH and DrPH Programs
 School of Public Health
 University of California, Berkley

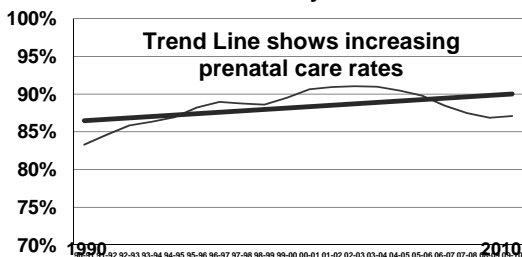
Bina Shrimali, MPH
 Health Equity Innovation Manager
 Alameda County Public Health
 Department
 Oakland, California

Acknowledgments

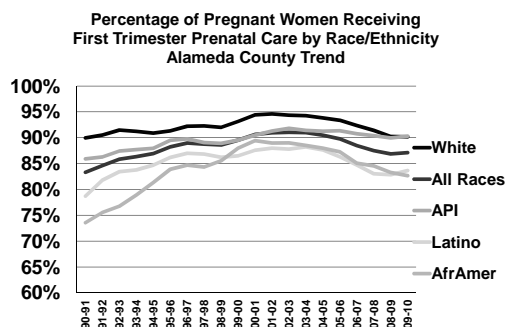
- Drs. Michael Lu and Neal Halfon, UCLA
- Dr. Paula Braveman, UCSF
- Padmini Parthasarathy
- Amy Fine
- Milt Kotelchuck
- Berkeley Media Studies Group
- Policylink
- Doak Bloss, Ingham County Health Department
- Staff of Alameda County Public Health Department
- Building Blocks Collaborative Partners

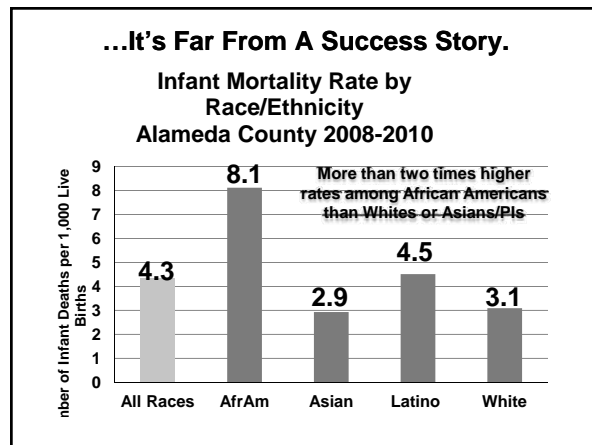
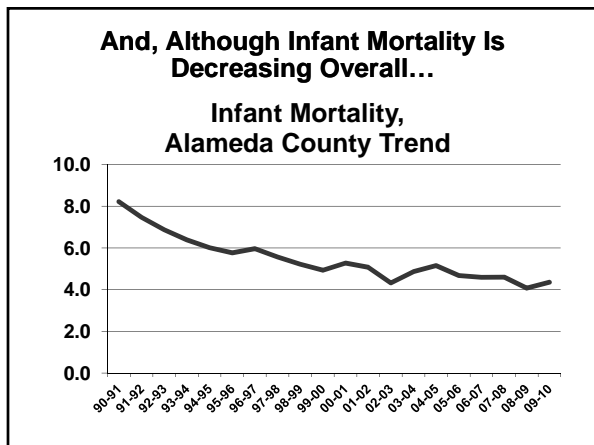
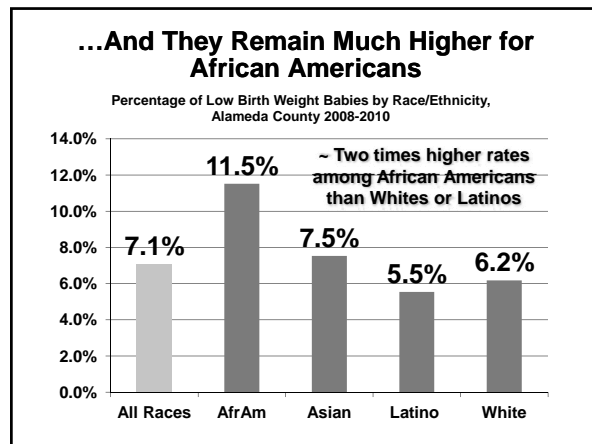
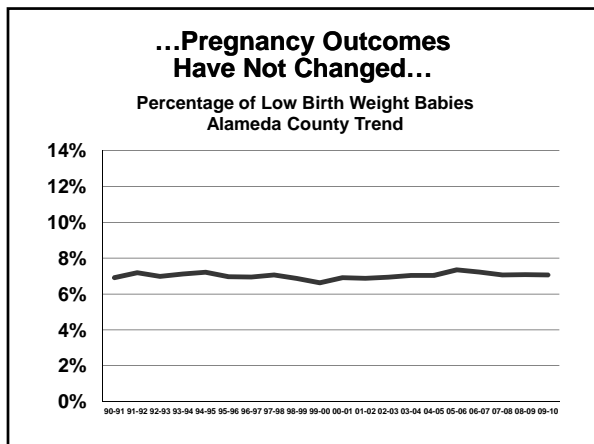
Context: A Snapshot of Alameda County, CA

While Rates of Care Have Increased...
 Percentage of Pregnant Women Receiving First Trimester Prenatal Care
 Alameda County Trend



...And Disparities Between Groups Have Decreased...
 Percentage of Pregnant Women Receiving First Trimester Prenatal Care by Race/Ethnicity
 Alameda County Trend





Paradigm Shift

- ## Where You Live Affects Your Health
- **Disinvested communities: poor health status**
 - Limited/unsafe parks
 - Crime
 - Fast food restaurants
 - Liquor stores
 - Poor performing schools

Where You Live Affects Your Health

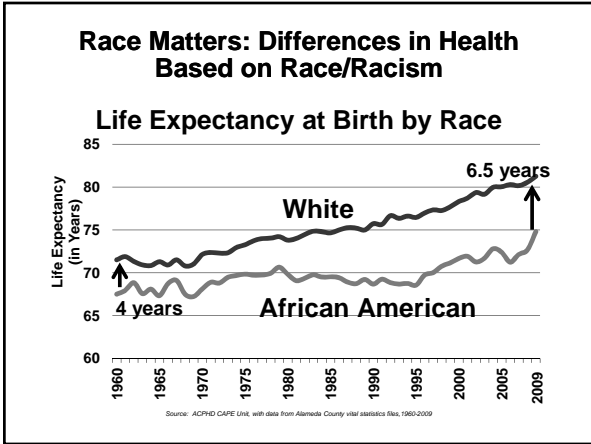
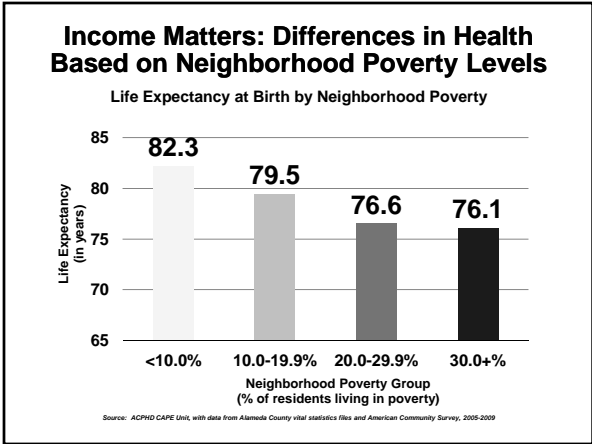
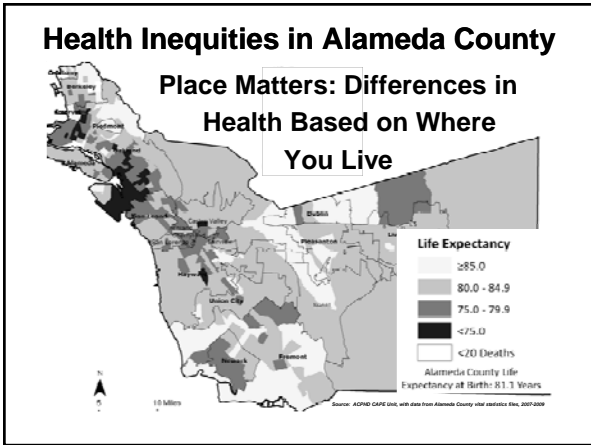
- Pollution and toxic exposures
- Limited public transportation
- Absence of high quality financial institutions
- Predatory lenders

Where You Live Affects Your Health

- Communities of opportunity: good health status
 - Parks
 - Safe/walkable streets
 - Grocery stores
 - Good schools
 - Clean air

Where You Live Affects Your Health

- Public transportation
- Good jobs
- Strong local businesses
- Financial institutions



Race, Income, and Place Impact Health

- Compared to a white child in the affluent Oakland Hills, an African-American born in high-poverty west Oakland is:
 - As an infant:
 - 1.5 times more likely to be born premature or low birth weight
 - 7 times more likely to be born into poverty

Race, Income, and Place Impact Health

- Compared to a white child in the affluent Oakland Hills, an African-American born in high-poverty west Oakland is:
 - As a child:
 - 2.5 times more likely to be behind in vaccinations
 - 4 times less likely to read at grade level

Race, Income, and Place Impact Health

- Compared to a white child in the affluent Oakland Hills, an African-American born in high-poverty west Oakland is:
 - As an adult:
 - 5 times more likely to be hospitalized for diabetes
 - 2 times more likely to die of heart disease

Race, Income, and Place Impact Health

- Compared to a white child in the affluent Oakland Hills, an African-American born in high-poverty west Oakland
 - Cumulative impact
 - 15 year difference in life expectancy

What is the Life Course Perspective?

What Life Course Is

- Life Course is a theory or perspective that seeks to understand, explain, and improve health and disease patterns across population groups
- It is a theory, perspective, framework
- There is no single, definitive text
- It reflects a convergence of ideas, informed by multiple sources

Is Life Course Old or New?

- We know that the same science is also informing other fields:
 - Barker Hypothesis – links LBW to increased risk of heart disease, diabetes
 - Felitti’s ACE Study – links early childhood adverse events to increased risk of obesity, heart disease, diabetes, depression

Is Life Course Old or New?

- Neurons to Neighborhoods – early environments, nurturing relationships, parents are the “active ingredients” in healthy brain development – from the earliest ages forward

Is Life Course Old or New?

- Lu/Halfon – link disparities in birth outcomes to differential developmental trajectories of the mother, based on early life experiences (programming) and cumulative stress
- Epi-genetics – links environmental triggers to gene expression

Key Questions

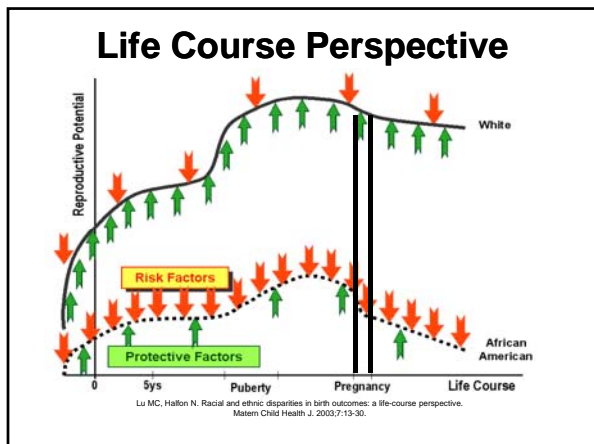
- MCH Life Course literature focuses on two key questions:
 1. Why do health disparities exist and persist across population groups?

Key Questions

2. What are the factors that influence the capacity of individuals or populations to reach their full potential for health and well-being?

Life Course Perspective

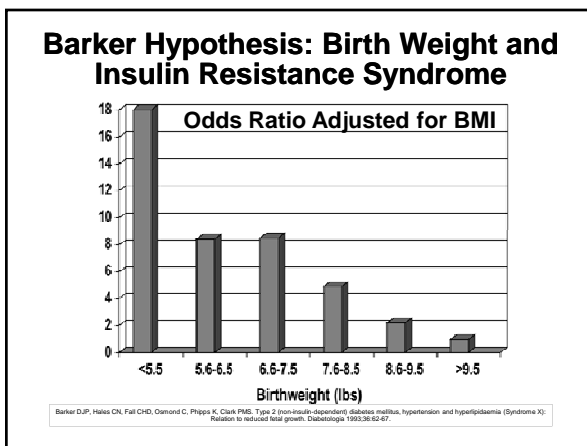
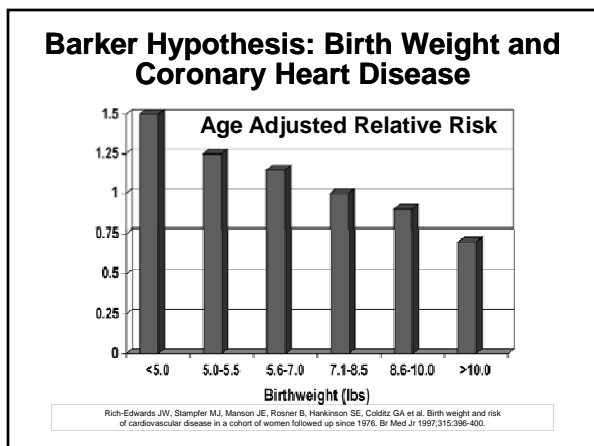
- It is a way of looking at life not as disconnected stages, but as an integrated continuum
- Suggests that a complex interplay of biological, behavioral, psychological, and social protective and risk factors contributes to health outcomes across the span of a person’s life



- ### Key Terms
- Pathways and Trajectories
 - Early Programming
 - Risk and Protective Factors
 - Cumulative Impact
 - Critical or Sensitive Periods

- ### Early Programming
- Early experiences can program an individual's future health and development

- ### Early Programming
- This includes prenatal programming as well as intergenerational programming (i.e. the health of the mother prior to conception) that impact disease or condition, or make an individual more vulnerable or susceptible to developing a disease or condition in the future
- Fine and Kotchuck, Rethinking MCH: The Life Course Model as an Organizing Framework Concept Paper, DHHS, HRSA, October 2010.

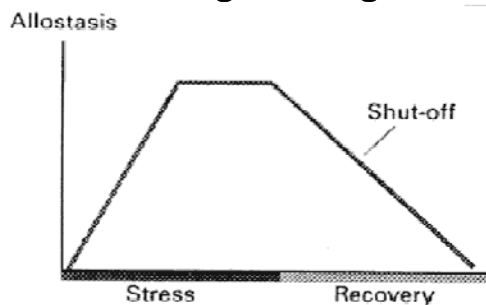


Cumulative Impact

- While individual episodes of stress may have minimal impact in an otherwise positive trajectory, the cumulative impact of multiple stresses over time may have a profound direct impact on health and development

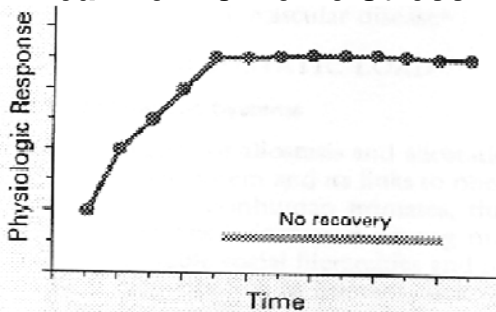
- Fine and Kotelchuck, Rethinking MCH: The Life Course Model as an Organizing Framework Concept Paper, DHHS, HRSA, October 2010.

Allostasis: Maintain Stability Through Change



McEwen BS. Protective and damaging effects of stress mediators. N Eng J Med. 1998;338:171-9.

Allostatic Load: Wear and Tear from Chronic Stress



McEwen BS. Protective and damaging effects of stress mediators. N Eng J Med. 1998;338:171-9.

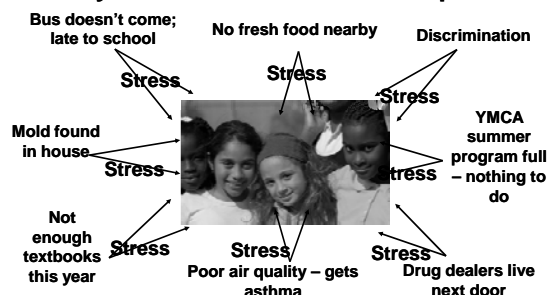
Stressed vs. Stressed Out

- Stressed = protective
 - Increased cardiac output
 - Increased available glucose
 - Enhanced immune functions
 - Growth of neurons in hippocampus and prefrontal cortex

Stressed vs. Stressed Out

- Stressed out = toxic
 - Hypertension and cardiovascular diseases
 - Glucose intolerance and insulin resistance
 - Infection and inflammation
 - Atrophy and death of neurons in hippocampus and prefrontal cortex

Your Neighborhood or Job Shouldn't Be Hazardous to Your Health Physical and Mental Health Impacts

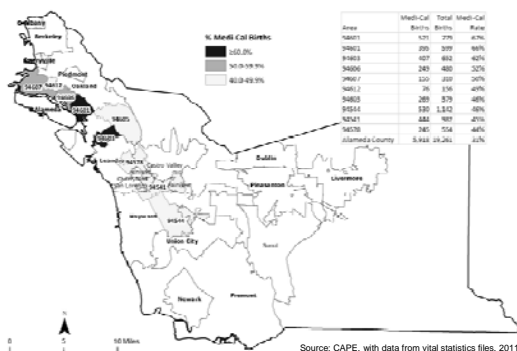


What We Have Learned from the Life Course Perspective

- Interventions that reduce risks and increase protective factors can change the health trajectory of individuals and populations

Life Course Perspective in Practice: Alameda County Public Health Department's Building Blocks for Health Equity Initiative

1 in 3 Newborns Start Life in Poverty



Health Equity

- Everyone in Alameda County, no matter where you live, how much money you make, or the color of your skin, should have opportunities to lead a healthy, fulfilling and productive life

Alameda County Life Course Initiative: Building Blocks for Health Equity

- Building Blocks for Health Equity (BB4HE) increases community and health department capacity to advance health and social equity by mobilizing partnerships, incubating projects, and redesigning services -- all toward our vision that ALL children in Alameda County have the best start in life

Building Blocks Collaborative: Launched in September 2009

- Key Objectives
 - Build a strong, engaged, multi-sector collaborative
 - Learn, share, and orient for a paradigm shift
 - Share resources and strengthen work of BBC partners

**Building Blocks Collaborative:
Launched in September 2009**

- Innovate! Plant seeds for and incubate new projects, redesign the way we currently work

**Building Blocks Collaborative:
Diverse and
Committed Organizations**

- What can we do together with the resources we have?
 - First 5 Alameda County
 - East Bay Regional Parks District
 - Mandela Marketplace
 - Berkeley Food and Housing Project

**Building Blocks Collaborative:
Diverse and
Committed Organizations**

- Urban Strategies Council, Alameda County Community Assets Network
- Brighter Beginnings
- Lotus Bloom Family Resource Center

**Building Blocks Collaborative:
Diverse and
Committed Organizations**

- Girls, Inc. of Alameda County
- Kaiser Permanente
- Alameda Health Consortium
- Youth Uprising
- Lifelong Medical Care

**Building Blocks Collaborative:
Diverse and
Committed Organizations**

- Centering Pregnancy
- Alameda County Sheriff Department
- City of Oakland
- Attitudinal Healing Connection

**Building Blocks Collaborative:
Diverse and
Committed Organizations**

- East Bay Asian Local Development Corporation
- Tiburcio Vasquez Health Center
- West Oakland Health Center
- Alameda County Public Health Commission

**Building Blocks Collaborative:
Diverse and
Committed Organizations**

- Alameda County Community Food Bank
- City of Berkeley Black Infant Health Community Advisory Board
- Food Transportation Resource Connection

**Building Blocks Collaborative:
Diverse and
Committed Organizations**

- Dig Deep Farms and Produce
- American Diabetes Association
- UC Berkeley School of Public Health
- UCSF Institute for Health Solutions
- Many more . . .

**Building Blocks Collaborative:
Bill of Rights**

- All children in Alameda County have a right to be born healthy and to:
 - Be believed in
 - Live, play, and grow in a clean, safe place
 - Receive a quality education
 - Be loved by a caring adult

**Building Blocks Collaborative:
Bill of Rights**

- Eat healthy food
- Explore nature
- Enjoy economic opportunity and financial security
- Access health care that promotes well-being

**Building Blocks Collaborative:
Bill of Rights**

- Be free from discrimination and violence
- Be included and valued by a supportive community

**Building Blocks Collaborative:
Project Planning Guiding
Principles and Framework**

- BBC Projects will:
 - Have a clear link(s) to the Bill of Rights
 - Be sustainable and build capacity
 - Work toward systems change

Building Blocks Collaborative: Project Planning Guiding Principles and Framework

– Provide opportunity for broad buy-in and involvement for community and BBC

- Driven by community need; building on BBC partner strengths

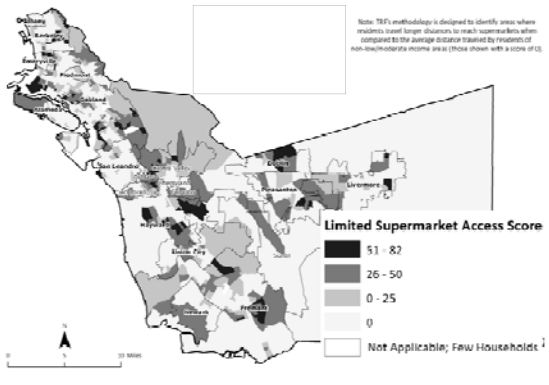
Building Blocks Collaborative: Project Planning Guiding Principles and Framework

– Be achievable, with greatest likelihood of demonstrating success

Planning Framework

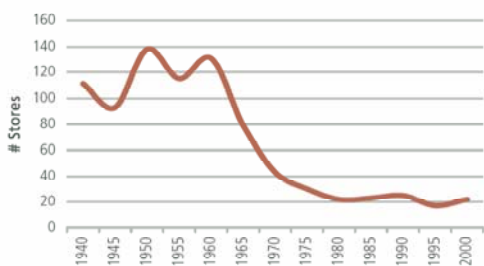


Problem: Lack of Healthy Food Stores



Problem: Lack of Healthy Food Stores

Figure 47: Number of Food Stores, West Oakland



Source: Fuller A, 2006.

Project: Food to Families

- Provide “prescriptions” for fresh food to families receiving health services
- Families fill prescriptions at local food businesses where local youth are employed

Problem: Lack of Healthy Financial Services

- \$3.89 million is stripped from Oakland each year from payday lenders

Project: Alameda County Prosperity Project

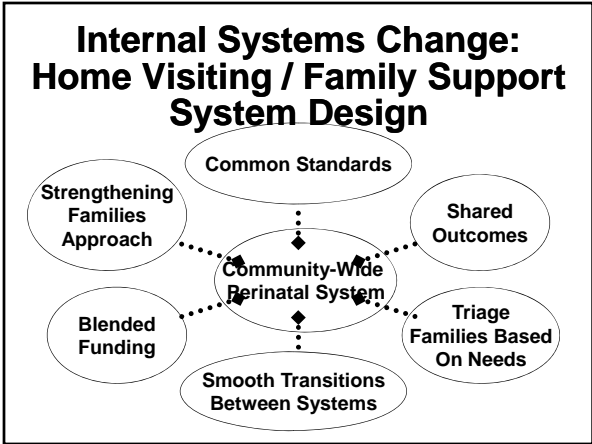
- Financial awareness and education
- Policies that expand access to non- predatory financial products

Internal Systems Change: Home Visiting / Family Support System Design

- Home visits provide an opportunity to enhance protective factors and reduce risks
 - Child health and development
 - Strong families
 - Parent health

Internal Systems Change: Home Visiting / Family Support System Design

- Kindergarten readiness → third grade test scores → high school graduation → employment, poverty status, health, incarceration, marital, and parenting status



What BBC Seeds Have Taken Root?

“Observing deep and amazing connections and collaborations within a multitude of agencies.”

“Rich dialogue that bridges individual/family needs with changing/broader community conditions.”

What BBC Seeds Have Taken Root?

“Growing relationships. The BBC has given me the opportunity to meet and come to know so many people representing so many opportunities to enrich and set the right course for our children, their families, and the community.”

What BBC Seeds Have Taken Root?

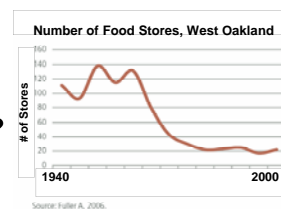
“Bill of Rights brought a broader purpose to our work.”

Framing the Problem

- What questions are we asking?
- How do these questions define the problem?
- How does the definition of the problem define the solution?

Flipping the Question

- How can we teach people how to eat more healthful meals?
- What policies and practices will increase the availability of food stores in west Oakland?



Flipping the Question

- How can we get more women's health services to ensure healthy births?
- How can current systems be realigned and transformed to create conditions for families and children to be healthy?

— Doak Bloss, Ingham County Health Department

Take Home Messages

- Today's experiences and exposures determine tomorrow's health
- Health trajectories are particularly affected during critical or sensitive periods
- The broader environment – biologic, physical, and social – strongly affects the capacity to be healthy

Take Home Messages

- **Inequality in health reflects more than genetics and personal choice**

- Fine, Kotelchuck, Adess, Pias 2009

Thank You!

Cheri Pies, MSW, DrPH
Clinical Professor
MCH and DrPH Programs
School of Public Health
UC Berkeley
cpies@berkeley.edu
510 – 643 – 1250

Thank You!

Bina Shrimali, MPH
Health Equity Innovation Manager
Alameda County Public Health
Department
Bina.shrimali@acgov.org
510 – 268 – 7078