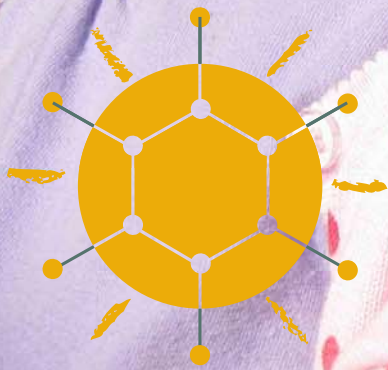


# Food Insecurity and Maternal & Child Health

Mariana Chilton, PhD, MPH

November 4, 2011



**Center for Hunger-Free  
Communities**

Drexel University School of Public Health

# Overview

- Food Insecurity
- Health Consequences
- Nutrition Assistance Programs
- Farm Bill





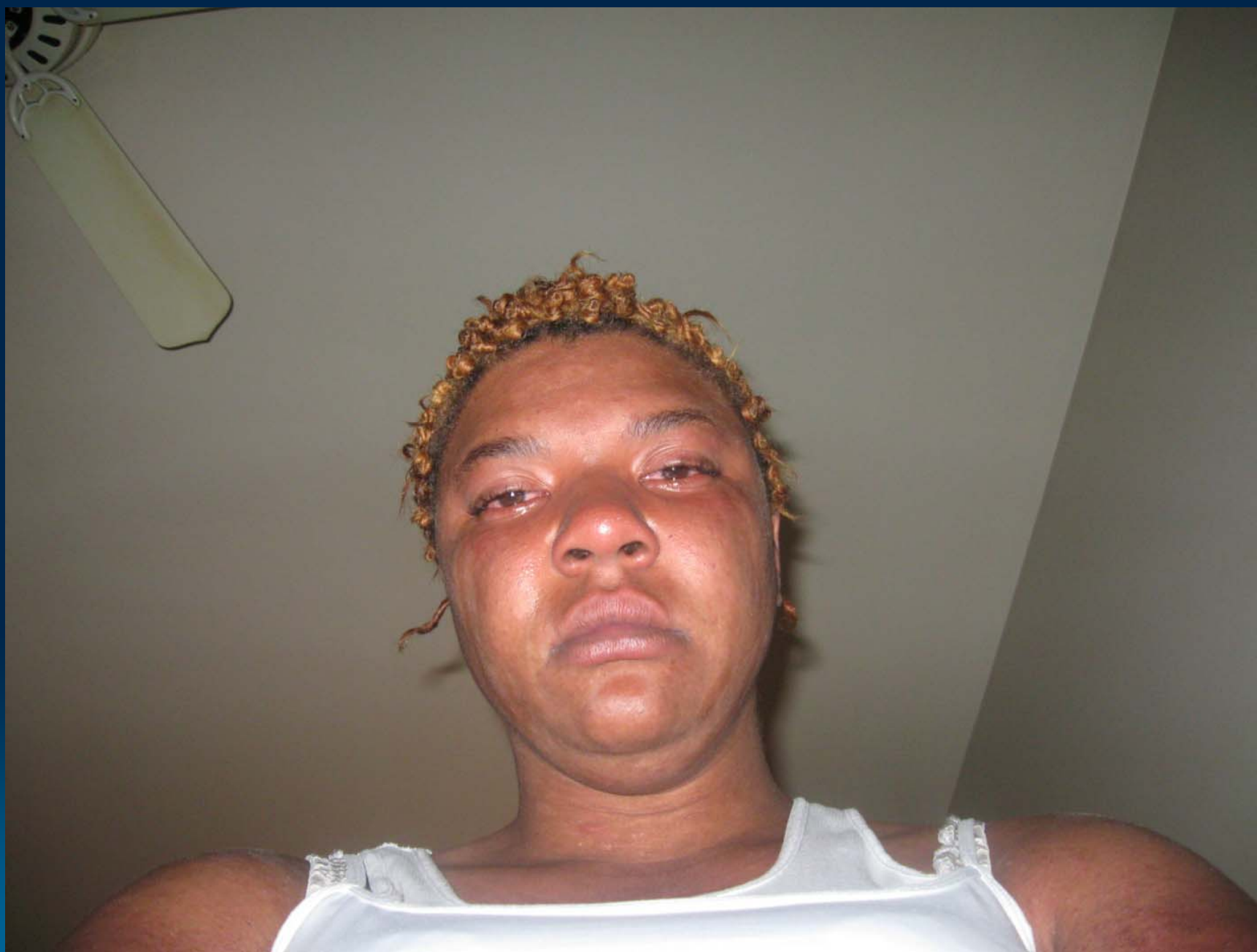
# Witnesses to Hunger











Erica S.







# Food Insecurity Definition

- Lack of access to enough food for an active and healthy life



# Categories of Food Insecurity

## 1995-2005      2006-?

- Food Secure
- Food Insecure
  - Without **hunger** → Low Food *Security*
  - With **hunger** → Very Low Food *Security*

Bush Administration No Longer Using the Word "Hunger"





# Witnesses to Hunger



# US Rates Food Insecurity 2010

- General population
  - 49 Million (14%)
- Children (under age 18)
  - 17 Million (21%)
- Young Children (under 6)
  - 9 Million (24.9%)



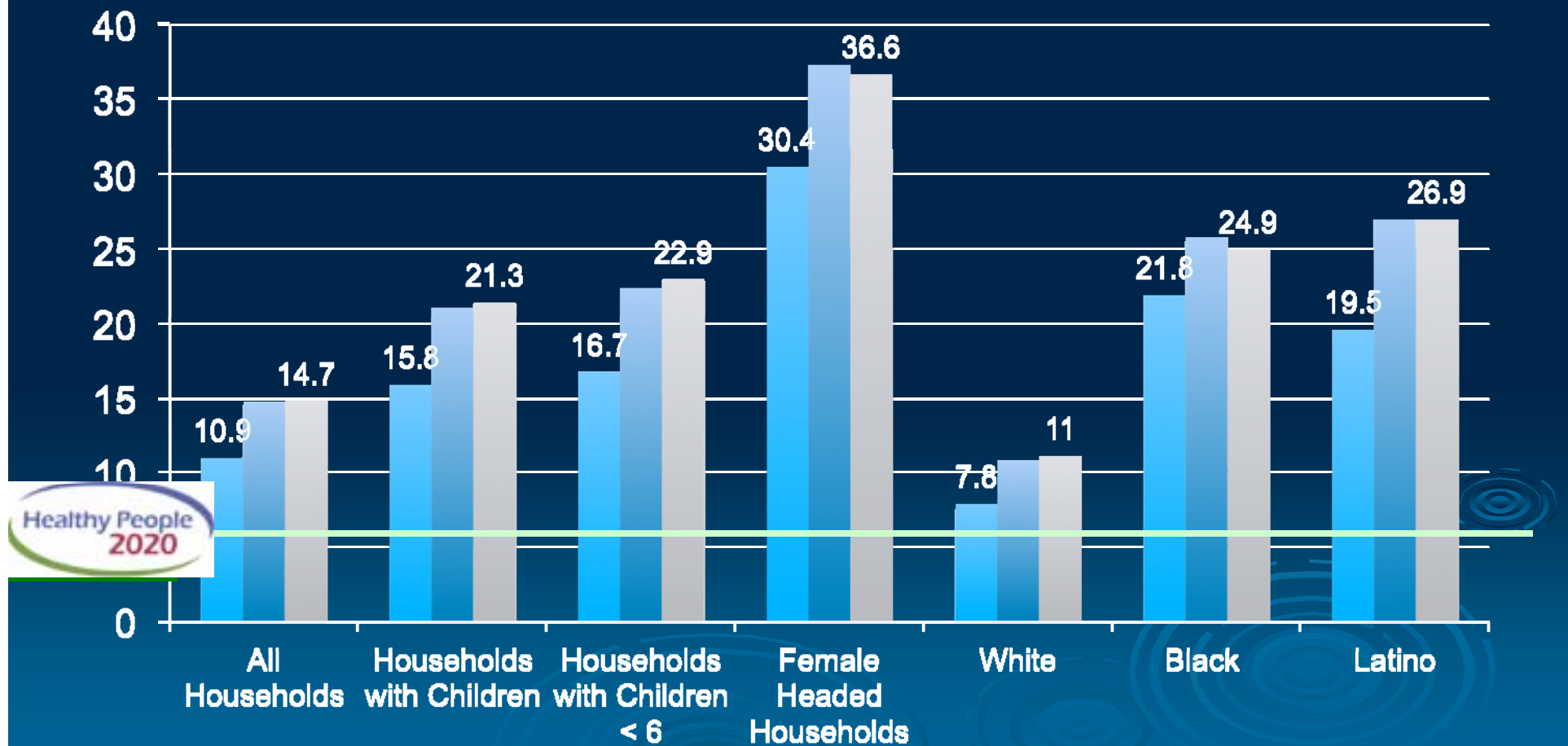
# 2009 US Census: Philadelphia Children Living in Poverty

44,000 Children Under Age 6



# Disparities in Food Insecurity by Household Type

■ 2007 ■ 2008 ■ 2009



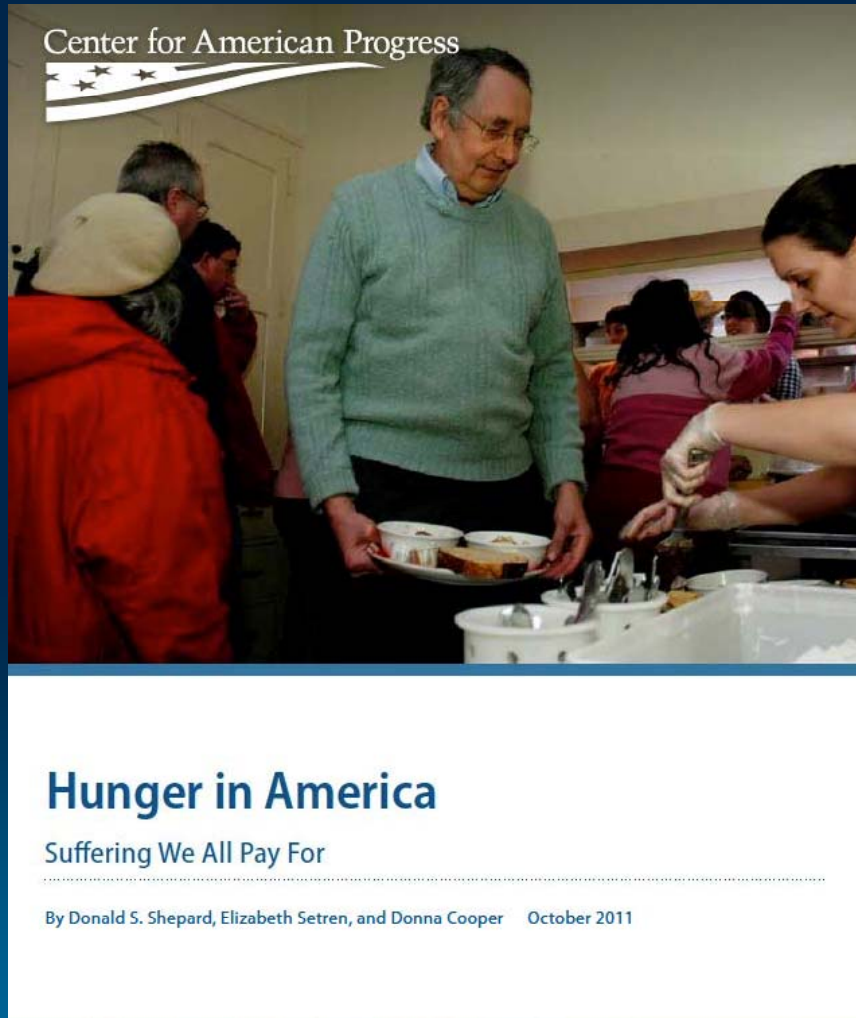




# Health & Social Impacts of Food Insecurity

- **Food Insecure children suffer more health problems compared to food secure children**
  - Poor development
  - Stomach aches, head aches, colds, ear infections
  - High hospitalization rates
- **Food Insecure children suffer more psychosocial and behavioral problems**
  - Aggression, hyperactivity, anxiety
  - Greater need for mental health services
- **Food Insecure children have more trouble with learning and academic performance**

# Cost of Hunger in the US



- \$167.5 Billion per year
- 6 Billion in PA (one of the highest rates in the nation)





# Children's HealthWatch Drexel Research



# Federal Assistance Programs-- monitored by CHILDREN'S HealthWatch

- Food Stamps (SNAP)
- Temporary Assistance for Needy Families (TANF)
- Women, Infants and Children (WIC)
- Medicaid
- Federal Housing Subsidies
- Energy Assistance



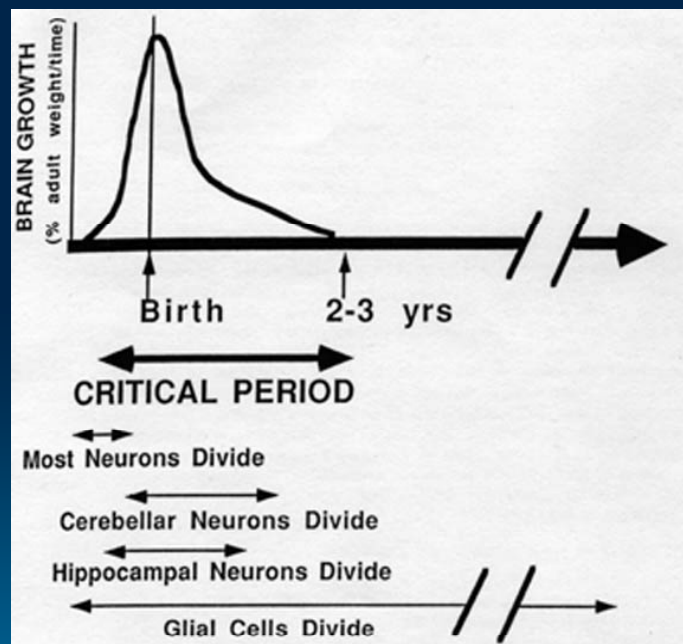
Health

- Food Insecurity
- Hospitalizations
- Child Wellbeing
- Maternal Depression
- Child Growth
- Child Development

# Why children 0-3?

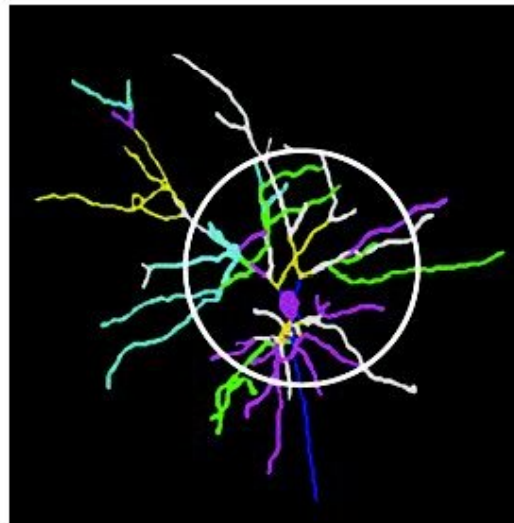


- Children 0-3 are in a period of **rapid brain growth**, essential for their cognitive, social and physical development
- Any interruption in good nutrition, or other hardship may have lasting effects later on in life

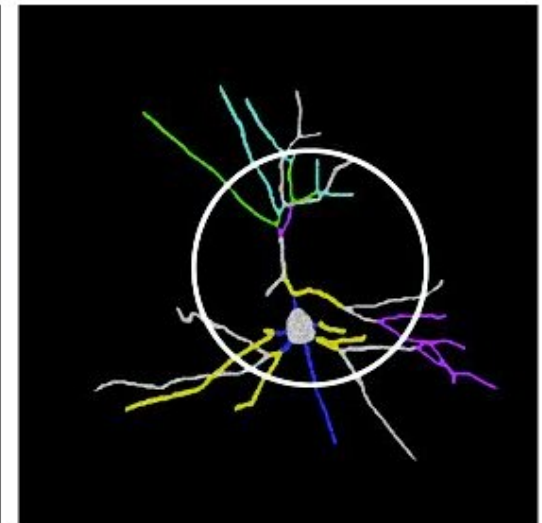


## CORE CONCEPTS IN THE SCIENCE OF EARLY CHILDHOOD DEVELOPMENT

### Toxic Stress Damages Developing Brain Architecture



**Typical neuron:**  
*many connections*



**Neuron damaged by toxic stress:**  
*fewer connections*

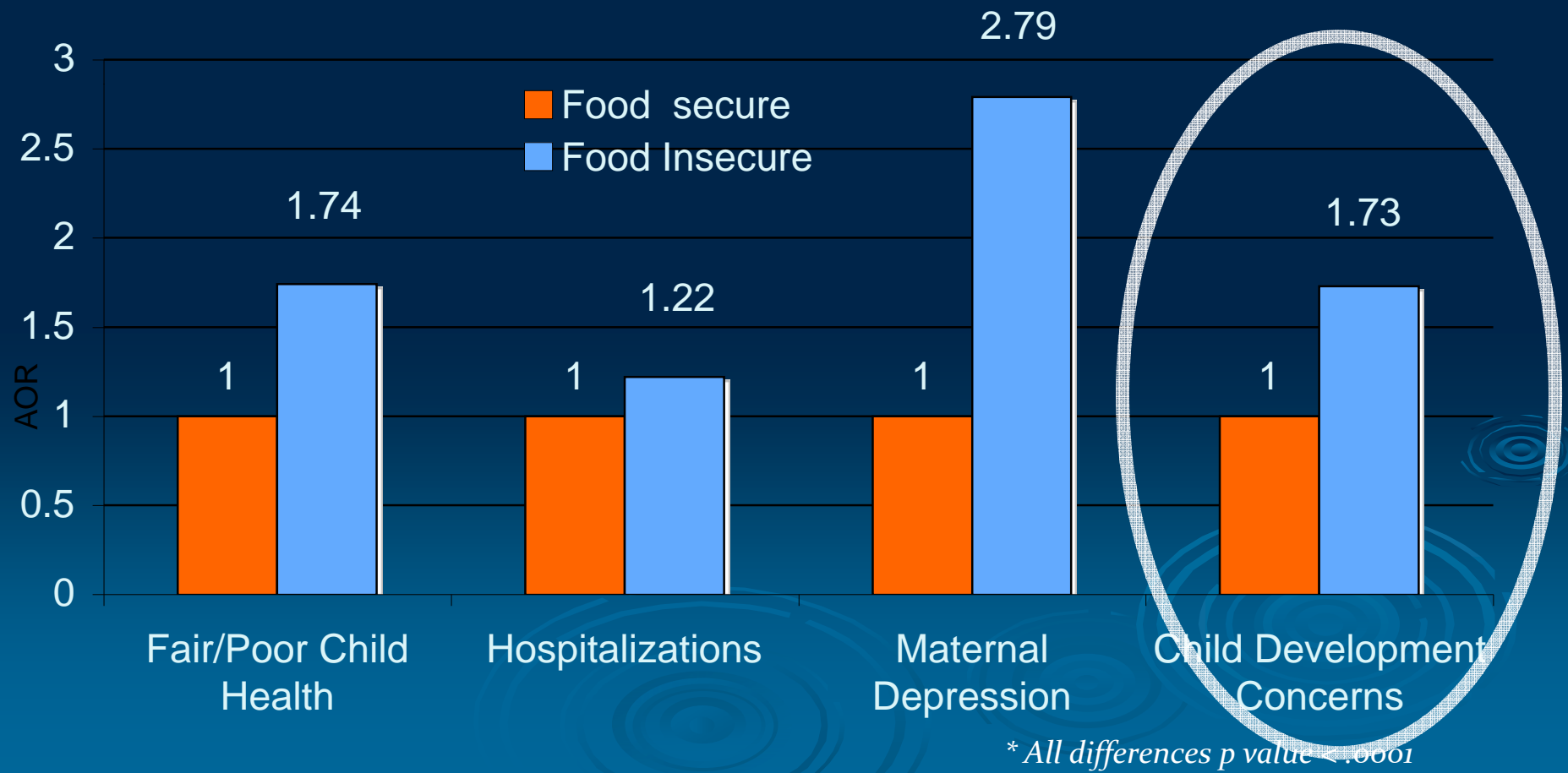




# Food Insecurity & Health Outcomes

## Adjusted Odds Ratios\*

*Controlled for site, race, child age, caregiver age, marital status, education, birth weight, child breastfed*



# Damage happens *before* school





# Economic Hardship



Housing Insecurity

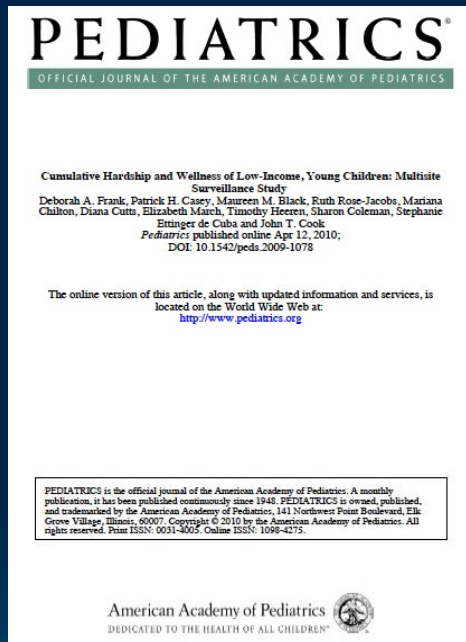


Food Insecurity



Energy Insecurity

# Translating Science Into Action



Research Article



Policy Brief



Press



Congressional Testimony

Policy Change  
Improved Services



Jobs



Energy



Food

# Federal Food Assistance

- SNAP (Food Stamps) → 40 Million (1 in 7)
- WIC → 50% babies born
- School Breakfast & Lunch → 31 Million children
- Afterschool feeding Programs
- Summer food programs



# Women Infants and Children (WIC)

- Improves birth outcomes & growth
- Improves child development
- Reduces maternal depressive symptoms





# Food Stamps as Medicine

*A New Perspective on Children's Health*



Children's Sentinel Nutrition Assessment Program [C-SNAP] | February 2007

# SNAP Improves Health and Wellbeing



PEDIATRICS®  
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

JN THE JOURNAL OF NUTRITION

- Food Stamps promotes child health and development
- Food Stamps reduces hospitalizations

PEDIATRICS®  
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

- SNAP improves math and reading scores

*The Review of Economics and Statistics*

VOL. XCIII

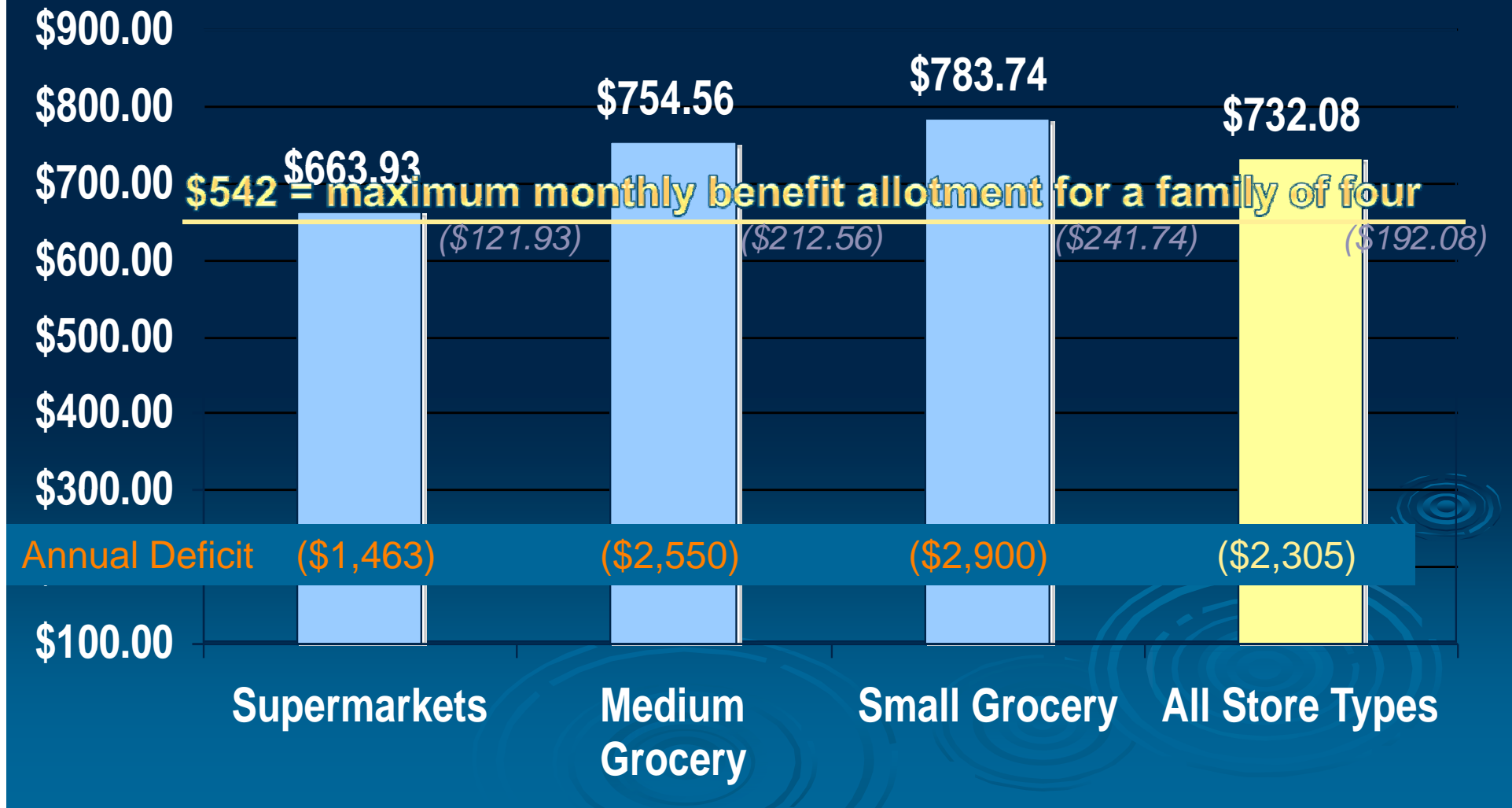
MAY 2011

NUMBER 2

- Food stamps improves birthweight, especially for the poorest families



# Cost of Thrifty Food Plan in Four Philadelphia Neighborhoods





# The Farm Bill 2012



Improve the basic SNAP benefits



Thank  
you!

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