

Our Health

A Defender & Texas Children's Hospital Alliance



Prematurity takes its toll on African-American babies

A walk through the Neonatal Intensive Care Unit at Texas Children's Hospital is unforgettable. Lights are dimmed, the mood is somber and the sound of life supporting machines ding all around.

In the midst of the hushed voices of medical professionals and concerned parents is Dr. Charleta Guillory, Associate Director Level II Nurseries at Texas Children's Hospital and Associate Professor of Pediatrics for Baylor College of Medicine. Dr. Guillory has been a fixture on the neonatal-perinatal scene since 1978, the year she began her fellowship with Baylor College of Medicine. Since then, her efforts to learn more about infant mortality and morbidity have been unwavering.

"The cause of 50 percent of pre-term labor is not known. A condition is difficult to treat if you do not know the cause," says Dr. Guillory.

What is known are the factors that affect the other half of babies born prematurely (born less than 37 weeks in gestation.) These are due to an increased rate of births to women who are older than 35, increased

years in various capacities. She led early advocacy efforts for the State Children's Health Insurance Program (CHIP), received the National March of Dimes Award of Distinction, last year was named the March of Dimes Texas Leadership Volunteer of the Year, co-chairs the Texas Pediatric Society Fetus and Newborn Committee, is a Fellow of the American Academy of Pediatrics and in 2006 she was named as one of "America's Top Pediatricians" by Consumers' Research Council of America. She holds many more awards and takes part in numerous other committees, but her passion continues to be researching the causes of infant mortality and morbidity.

"You can change things before you get pregnant. Do some pre-conception planning. Get your diabetes under control, treat infections early and learn the signs of pre-term labor. By doing these things you will develop a trusting relationship with your physician."

- Dr Charleta Guillory

"You can change things before you get pregnant. Do some pre-conception planning. Get your diabetes under control, treat infections early and learn the signs of pre-term labor. By doing these things you will develop a trusting relationship with your physician."

Dr. Guillory says once babies are born prematurely,



Health Disparities and Maternal Infant Health

Charleta Guillory, MD, MPH, FAAP
Associate Professor of Pediatrics
Section of Neonatology
Director, Neonatal-Perinatal Public Health
Program
September 13, 2018

OBJECTIVES

- 1) Identify the role health disparities play in both maternal and infant morbidity and mortality
- 2) Provide a practical framework for addressing maternal and infant disparities which will lead to improved outcomes
- 3) Offer directions about what can be done to address health disparities in your community

HEALTH DISPARITIES

- ❑ **Disparities** represent differences in outcomes that should not be
- ❑ **Disparities** represent unnecessary excess deaths

Socioeconomic, Racial And Ethnic Disparities In Health Persist In The United States

- The greatest and most persistent racial/ethnic disparities are present in:***
 - Maternal mortality
 - Infant mortality
 - Prematurity rates

African Americans have the highest rates of



MATERNAL DEATH
INFANT DEATH
PRETERM DELIVERY

of all racial/ethnic groups in the U.S.

EFFECTS OF HEALTH DISPARITIES ON AFRICAN AMERICAN WOMEN

1

Longstanding Effects of Chronic Stress

- Generational Disease
- Hypertension
- Diabetes
- Obesity

2

Increase rates of Maternal Morbidity in Pregnancy

3

Increase rates or Preterm Birth

4

Increased rates of Infant Death

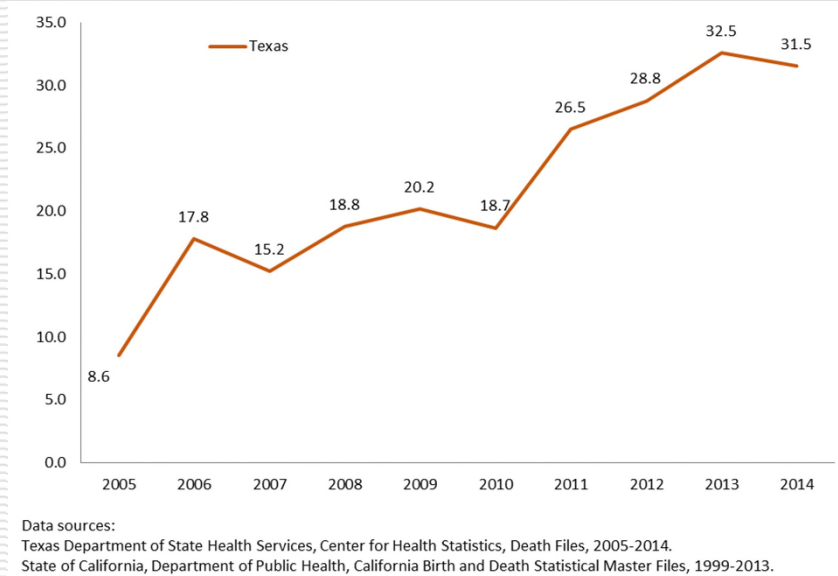
MATERNAL MORTALITY

MATERNAL MORTALITY (CDC)

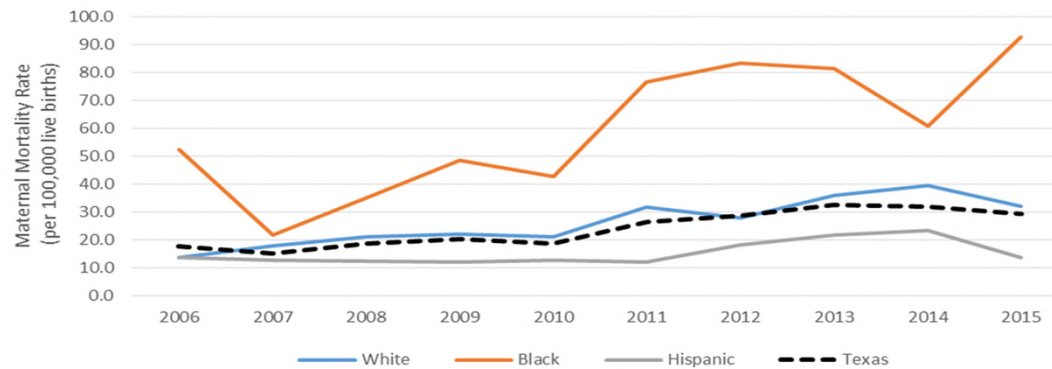
- Death of a woman while pregnant or within 1 year of termination of pregnancy from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.



TEXAS MATERNAL MORTALITY



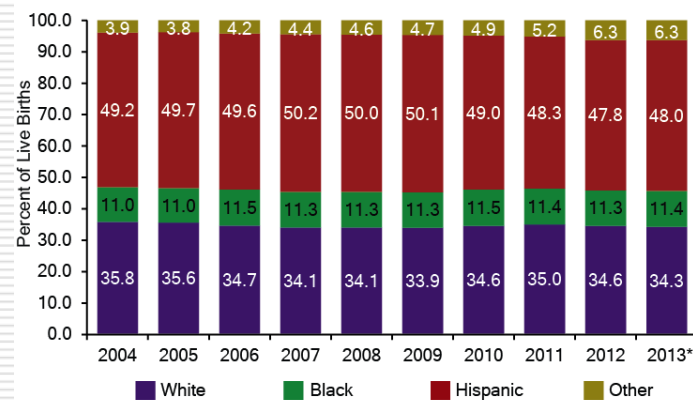
TEXAS MATERNAL MORTALITY BY RACIAL/ETHNIC GROUP



Prepared by: Office of Program Decision Support, Division for Family and Community Health Services, Texas Department of State Health Services, 07/21/2017.
Data Source: Death and Birth Files, Center for Health Statistics, Texas Department of State Health Services.
MMR - computed within 42 days following the end of pregnancy, using ICD-10 codes A34, O00-O95, O98-O99.

DEMOGRAPHIC SHIFT: RACE/ETHNICITY OF MOTHERS

Race/Ethnicity of Women with a Live Birth, Texas 2004-2013



*2013 Texas data are preliminary
Source: 2004-2013 Birth Files
Prepared by: Office of Program Decision Support

- Races in the "Other" category have increased their percentage of births in the past 10 years
 - In 2013, 25.5% of women in the "Other" category were Indian and 12.5% were Vietnamese
- Blacks have maintained a steady proportion of resident births in Texas since 2006

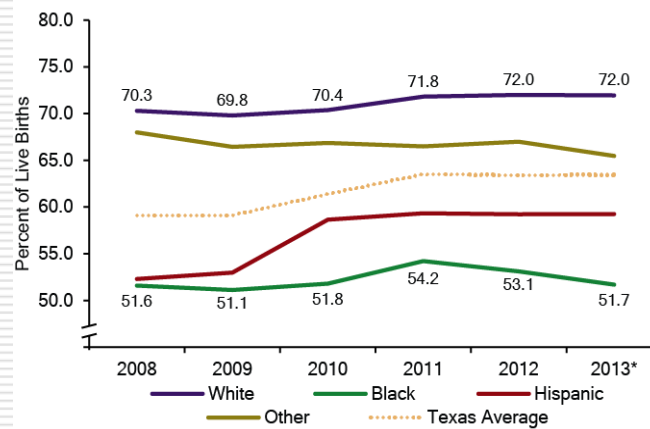
MATERNAL CARE: PRENATAL CARE

- ❑ Black women are less likely to enter prenatal care in the first trimester
- ❑ They are less likely to receive adequate care
- ❑ Minority patients generally receive lower quality care even with equal access to care and insurance coverage

Alexander et. al. Racial differences in prenatal care use in the U.S.
IOM Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare

MATERNAL CARE: PRENATAL CARE

First Trimester Entry Into Prenatal Care by Race/Ethnicity, Texas 2005-2013



*2013 Texas data are preliminary
Source: 2005-2013 Birth Files
Prepared by: Office of Program Decision Support

MATERNAL CARE

- ❑ Black women consistently experience 4X greater risk of pregnancy related death than white women
- ❑ This is independent of age, parity or education
- ❑ Black women are more likely to die from complications of hemorrhage, hypertensive disorders and cardiomyopathy
- ❑ National data set revealed Black women did not have statistically significant greater prevalence of pre-eclampsia, eclampsia, placental abruption or previa than white women but were 2-3X more likely to die from these conditions

MATERNAL DEATH AMONG BLACK WOMEN BY CAUSE AND TIMING OF DEATH, TEXAS, 2012-2015

Cause of Death	TIMING OF DEATH					TOTAL
	While Pregnant	0-7 Days Postpartum	8-42 Days Postpartum	43-60 Days Postpartum	61+ Days Postpartum	
Other Causes	2	1	0	0	2	14
Cardiac Event	0	2	4	1	6	13
Homicide	2	0	3	1	4	10
Hypertension/Eclampsia	0	2	2	0	5	9
Drug Overdose	0	0	2	1	4	7
Cerebrovascular Event	0	0	3	0	2	5
Infection/Sepsis	0	0	4	0	1	5
Amniotic Embolism	3	1	0	0	0	4
Pulmonary Embolism	2	0	1	0	1	4
Hemorrhage	0	1	1	0	1	3
Suicide	0	0	0	0	3	3
Substance Use Sequelae (e.g., liver cirrhosis)	0	0	0	0	0	0
TOTAL	9	7	20	3	38	77

PREPARED BY: Maternal & Child Health Epidemiology, Division for Community Health Improvement, DSHS.
 DATA SOURCES: 2012-2015 Death Files, 2011-2015 Live Birth and Fetal Death Files. Center for Health Statistics, DSHS.

□ 15% of perinatal deaths **PERSISTENT INEQUITY**

□ 30% of maternal deaths, US

□ 4% of the physicians

REASONS FOR INCREASES IN U.S. MMR

Possible Factors:

- Intermittent insurance coverage of some mothers with underlying medical conditions.
- Increase in older mothers
- Increases in obese and very obese mothers
- Increases in requested caesarian births
- Emerging infections
- Racial disparities remain high

RACIAL DISPARITIES IN MMR

Factors:

- Lack of prenatal care
- Lack of access to adequate care
- High rates of co-morbidity, or preexisting conditions.

Socioeconomic disadvantages thus lower access to and use of prenatal care.

RACIAL DISPARITIES IN MMR

Factors:

- ❑ Transportation problems
 - ❑ Skepticism regarding professional healthcare
 - ❑ Greater likelihood to develop certain complications such as peripartum cardiomyopathy, and hypertension
- ❑ “...even when one controls for these potential confounders, African American women still bear a significant proportion of the maternal mortality burden”

(Lang and King, 2008, pg. 522)

RACIAL DISPARITIES IN MMR

Factors:

Potential factors not fully appreciated include:

- Differences in nutrition
- Stress levels
- Family structures
- Genetics

A greater appreciation of these and other factors is needed to guide prevention and treatment strategies.

INCREASED MATERNAL MORBIDITY AND MORTALITY FOR BLACK WOMEN



**WE BELIEVE THAT
EVERY BABY
DESERVES THE
BEST POSSIBLE
START.**

**UNFORTUNATELY,
NOT ALL BABIES
GET ONE.**

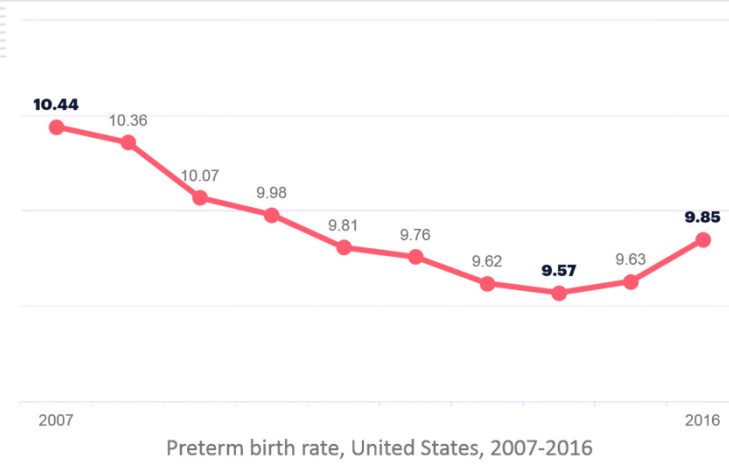


PREMATURITY & INFANT MORTALITY

- ❑ **Premature birth and its complications are the largest contributors to infant death**, and can cause long term health problems.
- ❑ **Long term problems** can include cerebral palsy, intellectual disabilities, chronic lung disease, blindness, and hearing loss.
- ❑ **Increasing rates**, especially in communities of color.
- ❑ **Babies have a higher chance of premature birth** based on race/ethnicity and zip code.
- ❑ **Many women do not get the evidence-based care** that can help prevent prematurity.
- ❑ **4 million** babies born each year. **380,000 (1 in 10)** are premature.
- ❑ **In addition to the human toll**, the societal cost of prematurity is more than \$26 billion per year.

TREND IN PREMATUREITY

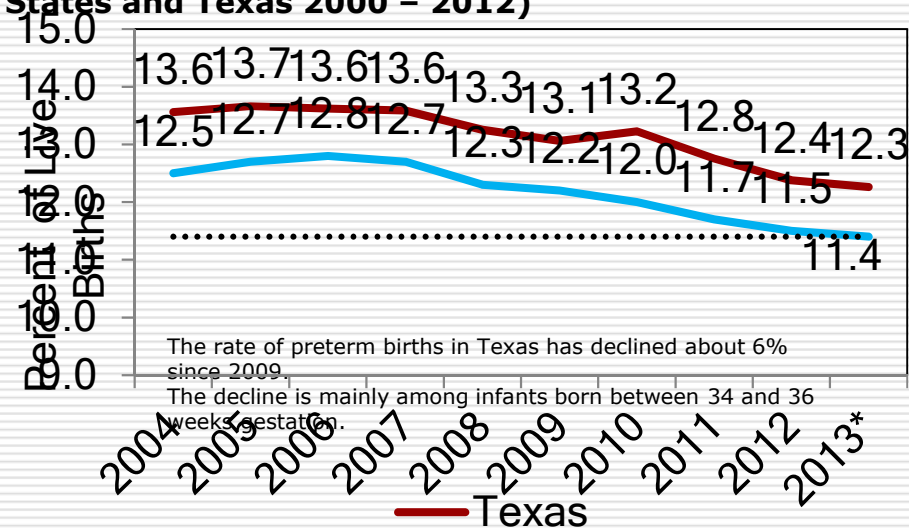
The preterm birth rate increased in 2016, for the second year in a row.



Premature/preterm is less than 37 weeks of gestation. Preterm birth rate is defined as the percentage of live births born preterm.
Source: National Center for Health Statistics, final natality data.
Prepared by March of Dimes Perinatal Data Center, February 2018.

Percent of Infants Born Preterm

(United States and Texas 2000 – 2012)

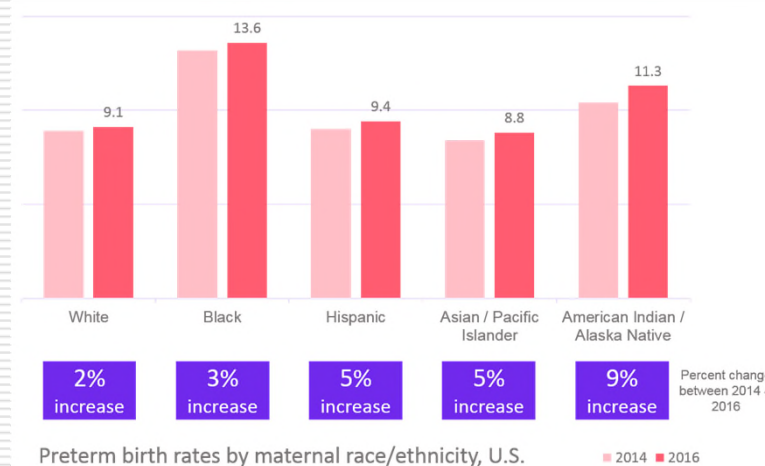


2013 data are provisional and subject to change.

Source: Texas data from Death Vital Records, DSHS, Center for Health Statistics; U.S. data from National Center for Health Statistics Vital Records Report, Deaths . Prepared by FCHS, Office of Program Decisions Support

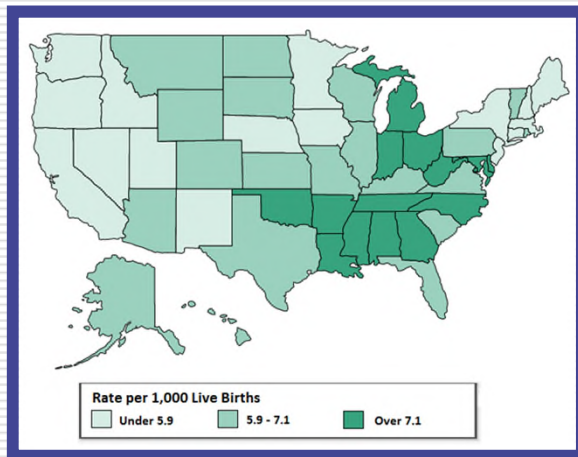
INCREASING PREMATUREITY & DISPARITY

Preterm birth rates are increasing for everyone, especially in African American woman.

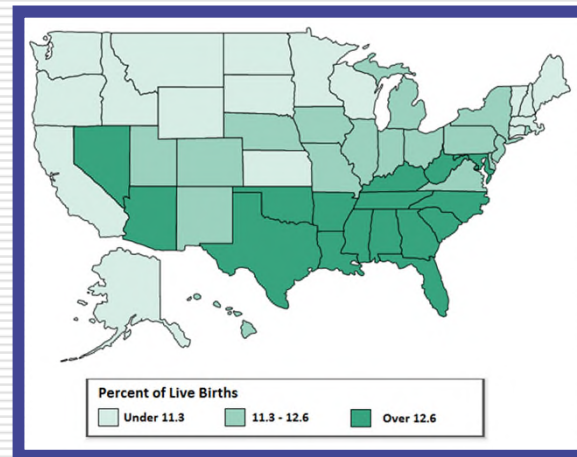


Premature/preterm is less than 37 weeks of gestation. Preterm birth rate is defined as the percentage of live births born preterm. Maternal rate based on "bridged" race; race categories exclude Hispanics. Source: National Center for Health Statistics, 2014 and 2016 natality data. Prepared by March of Dimes Perinatal Data Center, February 2018.

Infant Mortality 2009



Preterm Births 2009



**“INFANT MORTALITY
IS
THE MOST SENSITIVE
INDEX
WE POSSESS OF SOCIAL
WELFARE...”**

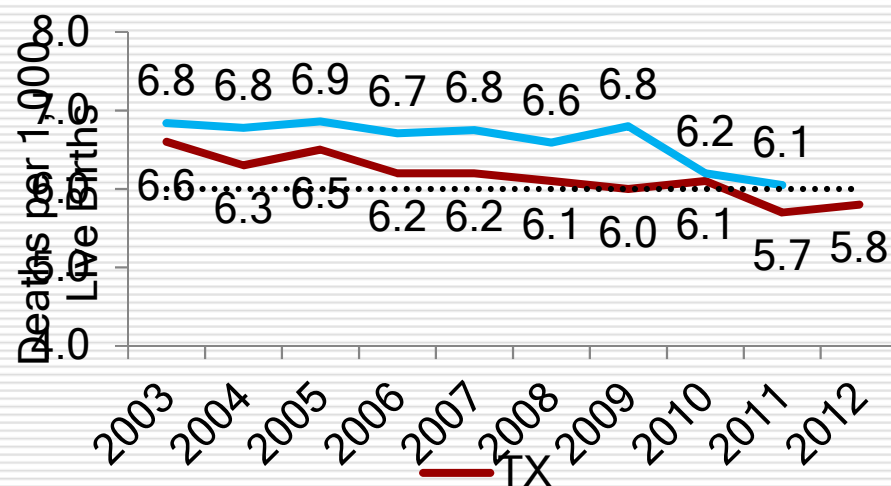
(A)nnual (R)eport of the (M)edical (O)fficer of (H)ealth, of the(L)ocal (G)overnment (B)oard, Thirty-ninth Report, PP.1910, Cd5263 (XXXIX), supplement on Infant and Child Mortality, Report of Dr Arthur Newsholme.

**Despite spending the most on health
care, the U.S. ranks behind**

26

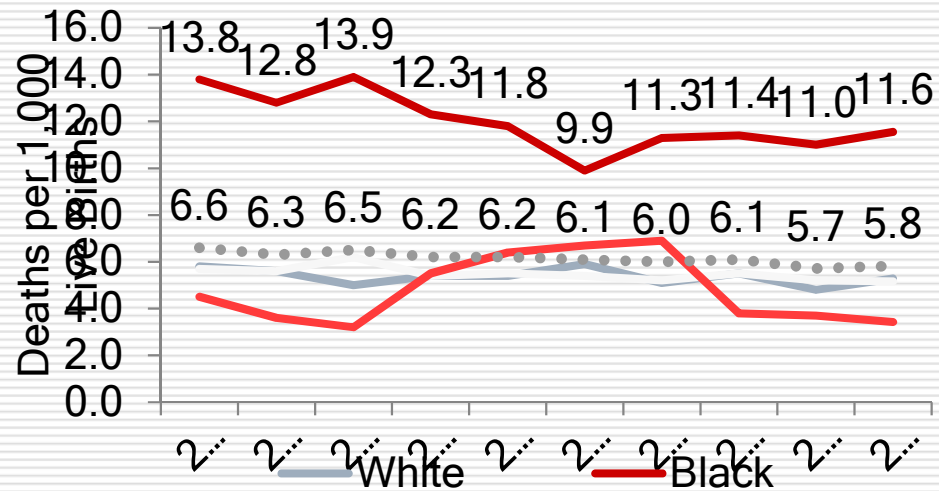
**other industrialized countries
in infant mortality**

Infant Mortality Rates for the United States & Texas



Source: Texas data from Death Vital Records, DSHS, Center for Health Statistics, U.S. data from National Center for Health Statistics Vital Records Report, Deaths, Prepared by FCHS, Office of Program Decisions Support

INFANT MORTALITY RATE BY RACE/ETHNICITY (2003-2012)



Source: Texas data from Death Vital Records, DSHS, Center for Health Statistics; Prepared by FCHS, Office of Program Decisions Support

TEXAS BABIES

	Infant Mortality* (2015)	Preterm Birth** (2015)	Low Birth Weight*** (2015)
U.S.	6.0	9.6	8.1
TEXAS Overall	5.6 (21st)	10.2 (12th) (Same rate with IL & NC)	8.2 (23rd)
Non-Hispanic WHITE	4.9	9.6	7.1
HISPANIC	5.2	9.8	7.7
OTHER****	3.4	9.3	9.0
Non-Hispanic Black	10.9 (23rd)	13.6	13.2

* Infant Death Per 1,000 live births.
 ** Percentage of birth before 37 completed weeks of gestation based on the obstetric estimate.
 *** Percentage of birth less than 2500 grams.
 () ranking in state comparisons
 Data source: National Vital Statistics Reports, Vol. 66, No. 1, January 5, 2017
 Data Source: Texas Birth and Death Certificate data.
 Prepared by: Texas Department of State Health Services, Center for Health Statistics

Leading Causes of US Infant Mortality

CONGENITAL ANOMALIES

PRETERM DELIVERY

Delivery prior to 37 weeks

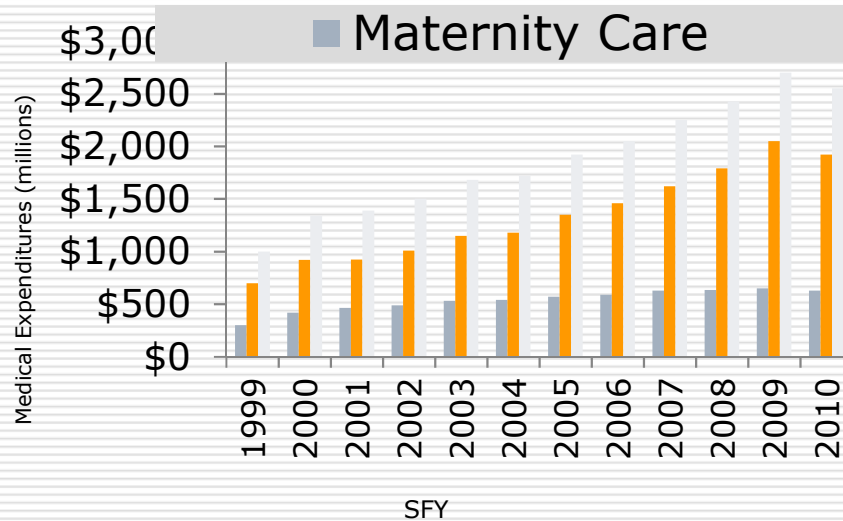
LOW BIRTH WEIGHT

Birth weight <2500g / 5lbs 8oz

MEDICAID COSTS

- **~54% of all Texas births (204,000) paid by Medicaid**
- **\$2.2 billion per year in birth and delivery-related services for moms and infants through first year**
 - >67% of Medicaid costs for hospitalized newborns tied to billing codes for prematurity
- **Newborn costs (1st year)**
 - Preterm infant: \$54,400
 - Term infant: \$480

TEXAS MEDICAID BIRTH EXPENDITURES (1999 – 2010)



Source: AHQP Claims Universe, TMHP. DSP Delivery records, HHSC

HEALTHY PEOPLE 2020

VISION:

***A SOCIETY IN WHICH
ALL PEOPLE***

***LIVE LONG, HEALTHY
LIVES***

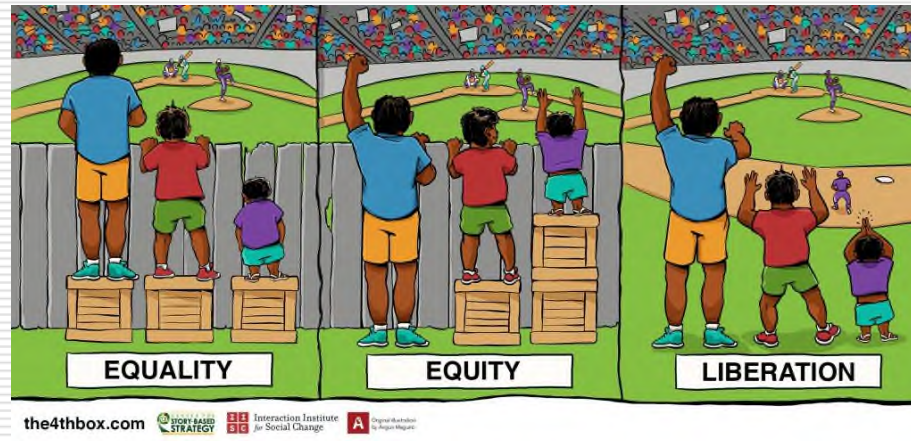
HEALTHY PEOPLE 2020

GOAL:

***ACHIEVE HEALTH EQUITY,
ELIMINATE DISPARITIES,
& IMPROVE THE HEALTH OF ALL
GROUPS***

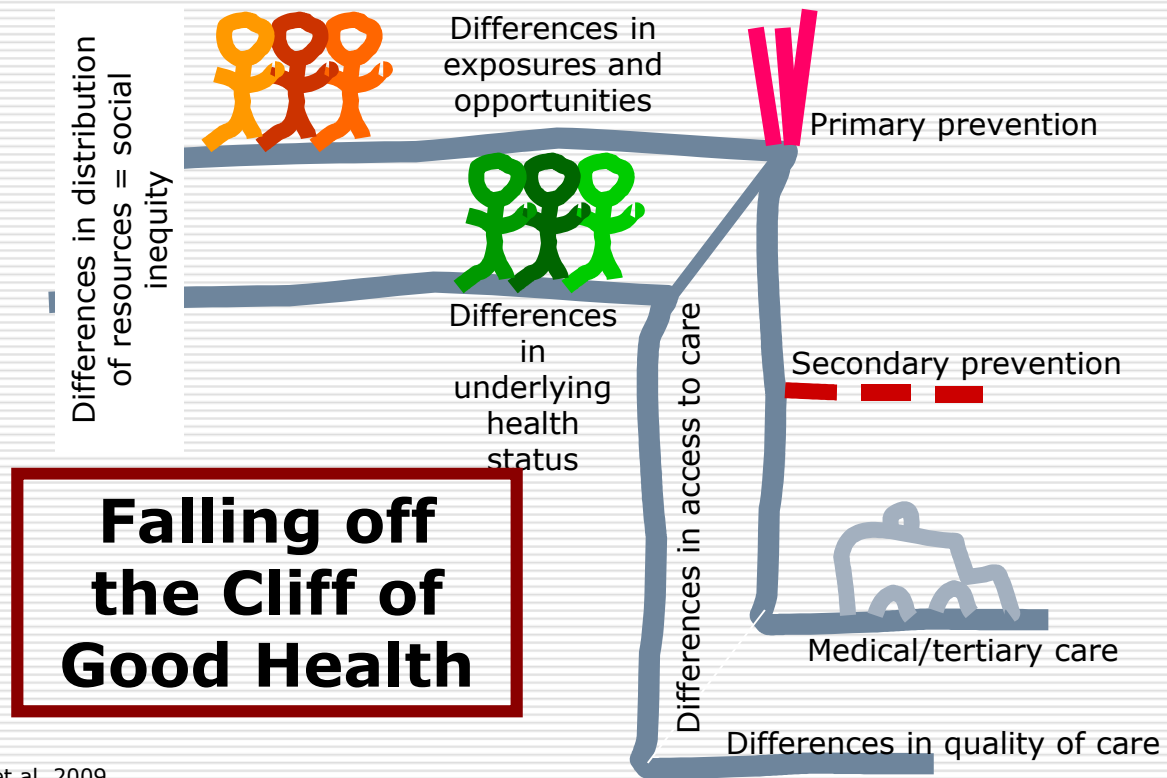
HEALTH EQUITY

*Everyone has
the same
opportunities
to be healthy*



HEALTH DISPARITIES

***PERSISTENT, AVOIDABLE
AND, THEREFORE,
UNFAIR HEALTH
DIFFERENCES BETWEEN
SOCIALY ADVANTAGED
AND SOCIALY
DISADVANTAGED
GROUPS***



Jones, et al, 2009

UNDERSTANDING RACIAL DISPARITIES

MEDICAL RISK

HEALTH BEHAVIOR

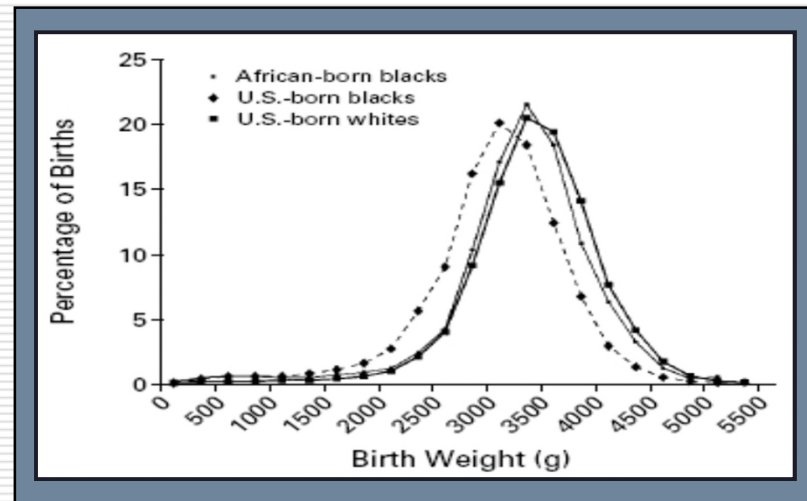
SOCIOECONOMICS



them

don't fully explain

And it's not genetics either



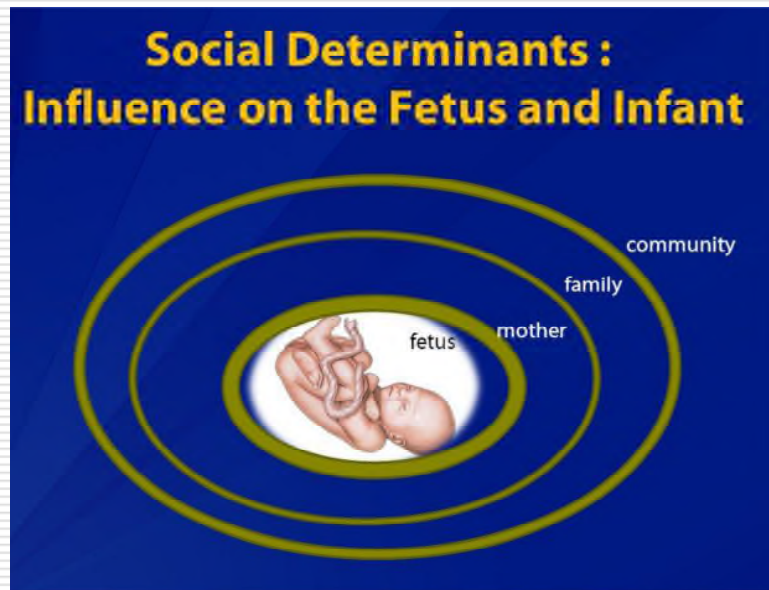
David RJ, Collins JW (1997). Differing birth weight among infants of U.S.-born blacks, African-born blacks, and U.S.-born whites. *New England Journal of Medicine*, 337(17), 1209-1214.

SOCIAL DETERMINANTS OF HEALTH

- The social determinants of health are the circumstances in which people are born, grow up, live, work, age, and die otherwise known as the Life Course Perspective Experience from the womb to the grave



SOCIAL DETERMINANTS OF HEALTH



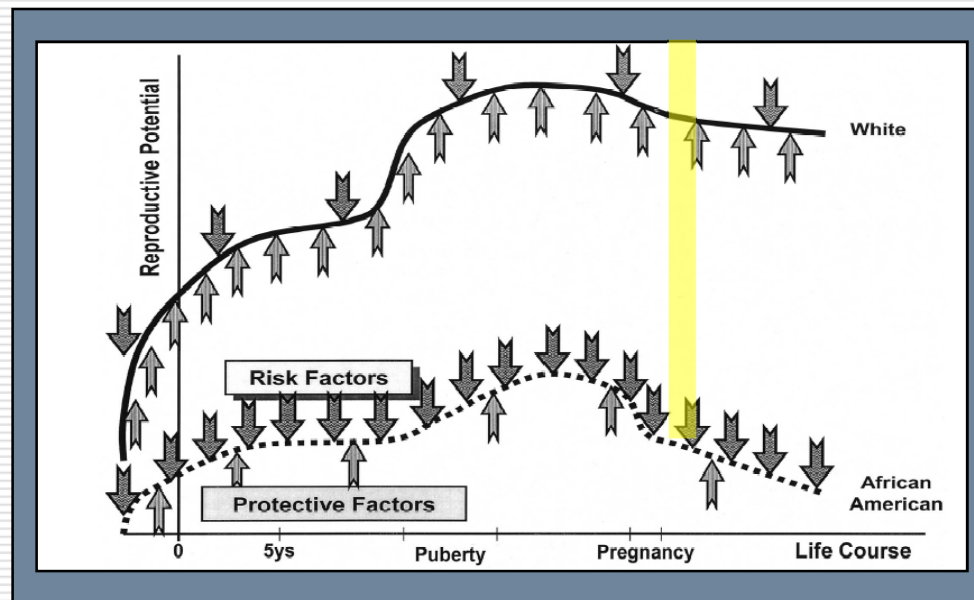
RACISM

“. . . a likely fundamental cause of the nation’s enduring racial/ethnic disparities in health”



“[Racism] is not about how you look; it is about how people assign meaning to how you look”

A LIFECOURSE PERSPECTIVE

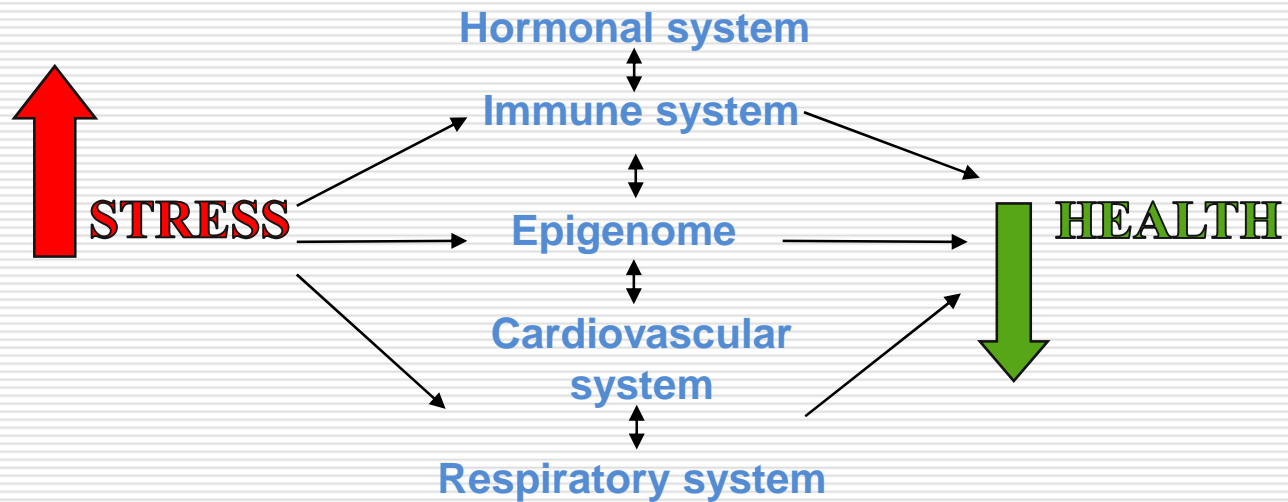


[http://dorothee-gy.hubpages.com/hub/Fight-or-Flight-
Reaction-Stress-and-Body-Responses#](http://dorothee-gy.hubpages.com/hub/Fight-or-Flight-
Reaction-Stress-and-Body-Responses#)

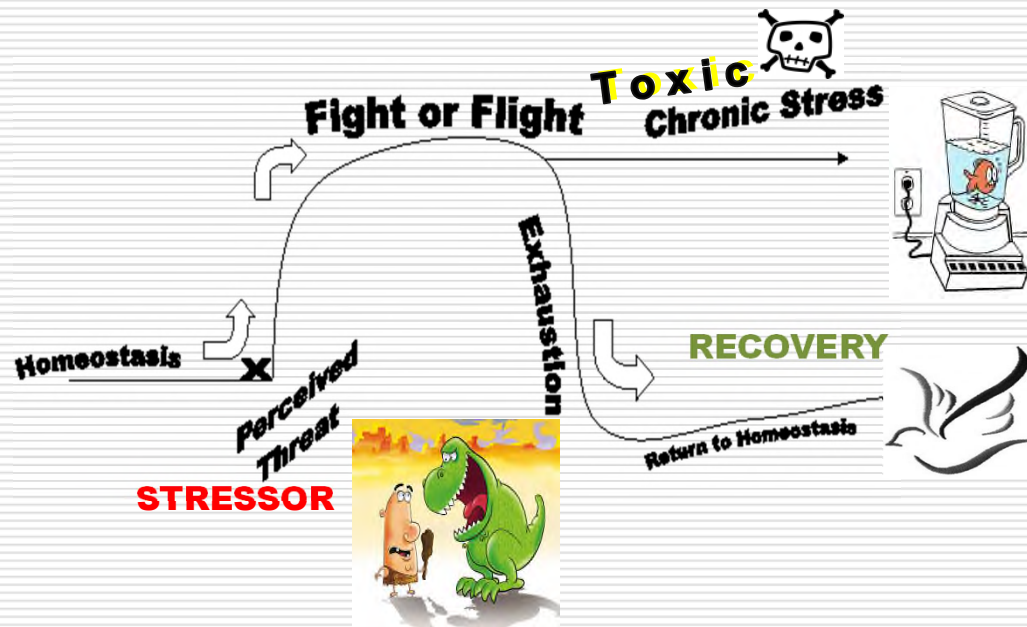


Life demands or challenges that tax or exceed one's ability to cope, thereby increasing health risk

STRESS GETS UNDER THE SKIN



AND TAKES A TOLL ON THE BODY



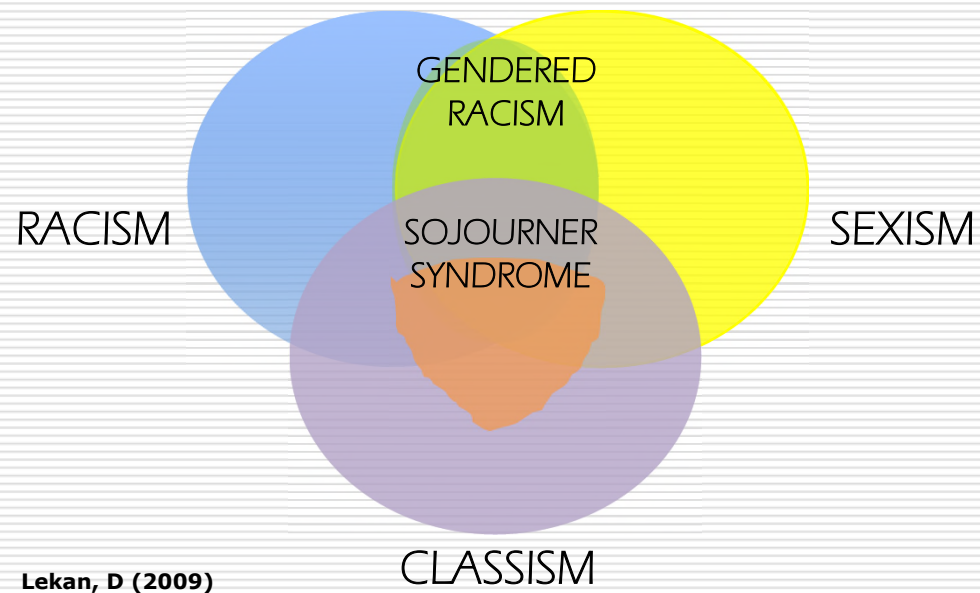


African-American pregnant women report more stressors and greater emotional distress than pregnant women from other racial/ethnic groups

BELOW THE SURFACE



INTERSECTING OPPRESSIONS



NOT A "THOSE PEOPLE" PROBLEM,

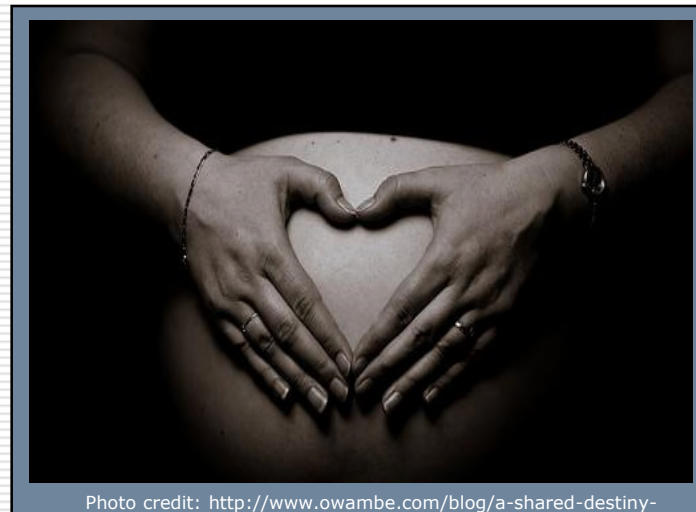


Photo credit: <http://www.owambe.com/blog/a-shared-destiny->

BUT AN "US" PROBLEM

A SHARED DESTINY...



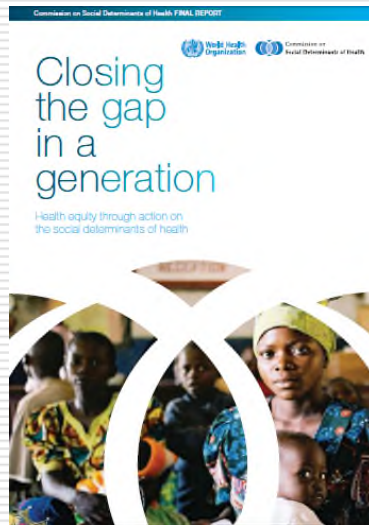
- ❑ Preterm/LBW costs U.S. billions/year
- ❑ Medicaid covers 1/3 of birth-related costs
- ❑ U.S. spends most, but has worse health
- ❑ U.S. only industrialized country without universal health care
- ❑ Texas highest % uninsured
- ❑ Countries with greater social equity enjoy better health

WHAT CAN



WE DO?

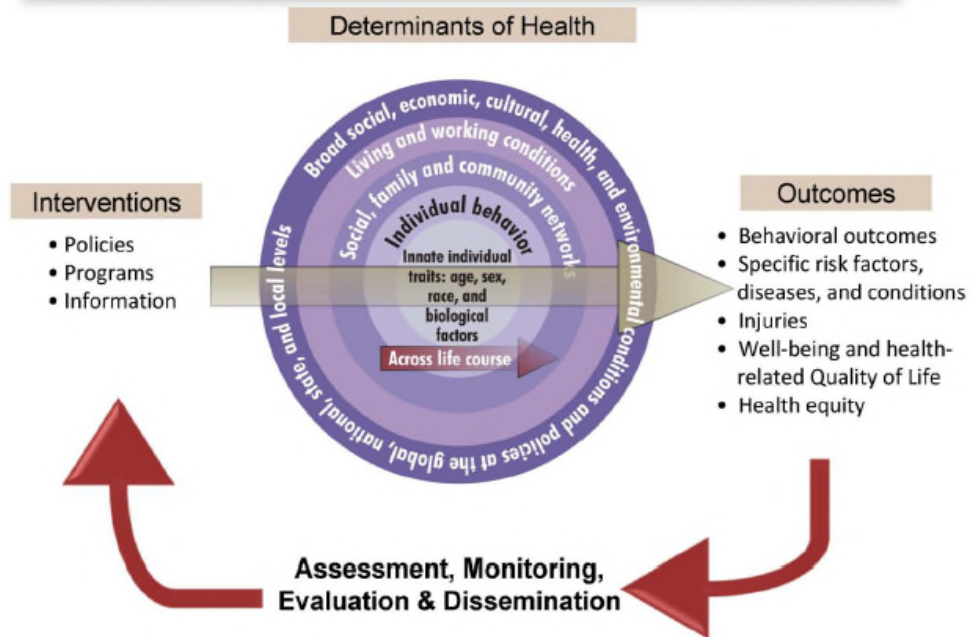
GUIDING PRINCIPLES FOR ACTION



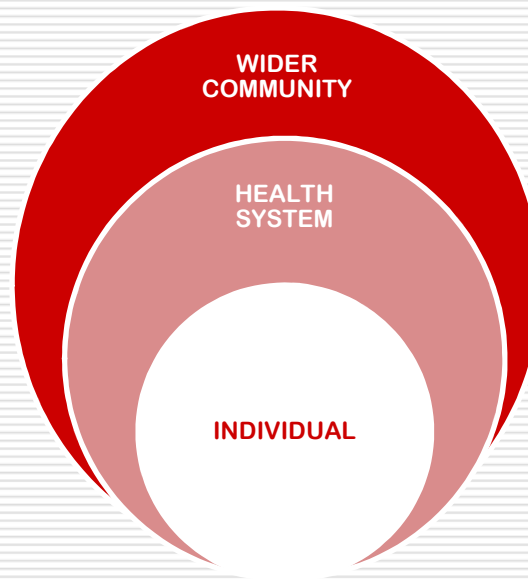
- Acknowledge and measure the problem
- Tackle the inequitable distribution of power, resources, and money
- Improve the conditions of daily life

http://www.who.int/social_determinants/thecommission/finalreport/en/

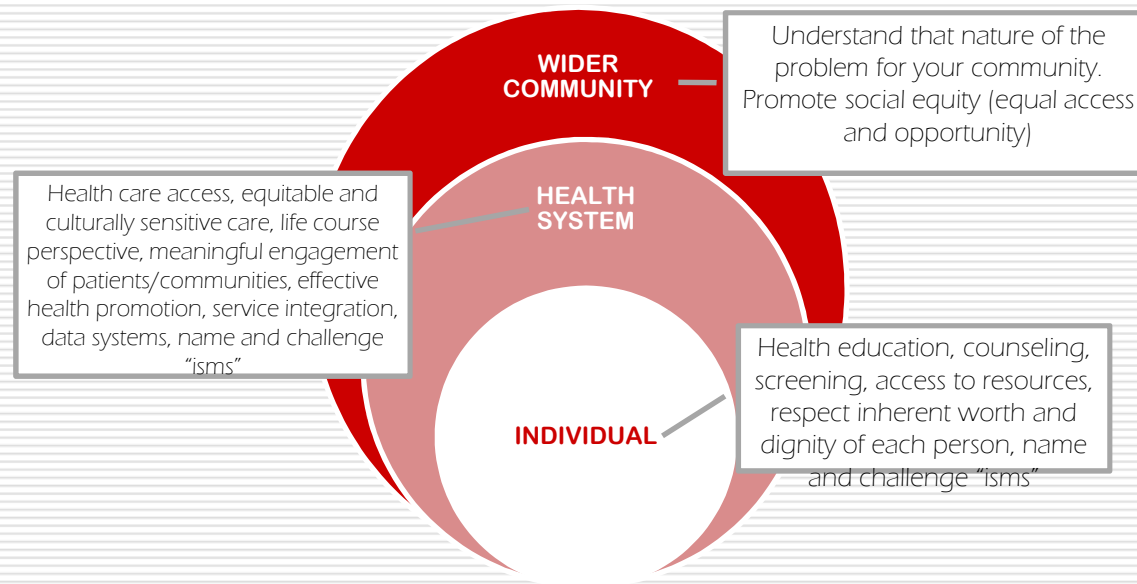
Action Model to Achieve Healthy People 2020 Overarching Goals



ADDRESS THE PROBLEM AT MULTIPLE LEVELS



ADDRESS THE PROBLEM AT MULTIPLE LEVELS



VALUE

All people equally

EDUCATE

Yourself and others

RECOGNIZE

How racism and social inequality operate

IDENTIFY

Needs and gaps in services and resources

ADVOCATE

For all mothers, babies, and families

ACTIVATE

For systems change and social equity

WHAT CAN YOU DO?

DO GOOD!

*GOOD DONE
ANYWHERE IS GOOD
DONE EVERYWHERE...
AS LONG AS YOU ARE
BREATHING, IT'S NEVER
TOO LATE TO DO SOME
GOOD.*

-MAYA ANGELOU



WHAT IS HONEY CHILD?

□ A faith-based Prenatal Health Education Program that:

- Addresses the specific needs of African American women
- Combines culturally relevant education with hands-on activities
- Supports positive health behaviors

□ Two core program components:

- Group Prenatal Education Sessions
- Mentoring



HONEY CHILD PRENATAL EDUCATION PROGRAM



Honey Child uses a spiritual approach to prenatal health promotion, and the curriculum includes the following topics:

- ❑ **O Taste and See:** Nutrition
- ❑ **P.O.W.E.R.:** Relaxation and Exercise
- ❑ **The Truth About Prenatal Care**
- ❑ **Through the Maker's Eyes:** Self Esteem
- ❑ **I Want My Nine Months:** Preterm Birth and Labor & Delivery
- ❑ **A Celebration of Health:** Graduation

PRENATAL EDUCATION



CONCLUSION

- ❑ Great Program!!
- ❑ Preliminary study has shown so far that out of the 176 participants, that
 - ❑ Pre-term birth rate among participants was 9%;the rate is 18.6% among AA women in Texas
 - ❑ prenatal care knowledge base has increased by 80%
 - ❑ 63 babies have been born full term
 - ❑ 90% full term births
 - ❑ 10% pre-term before 37 weeks
 - ❑ 2% born less than 32 weeks

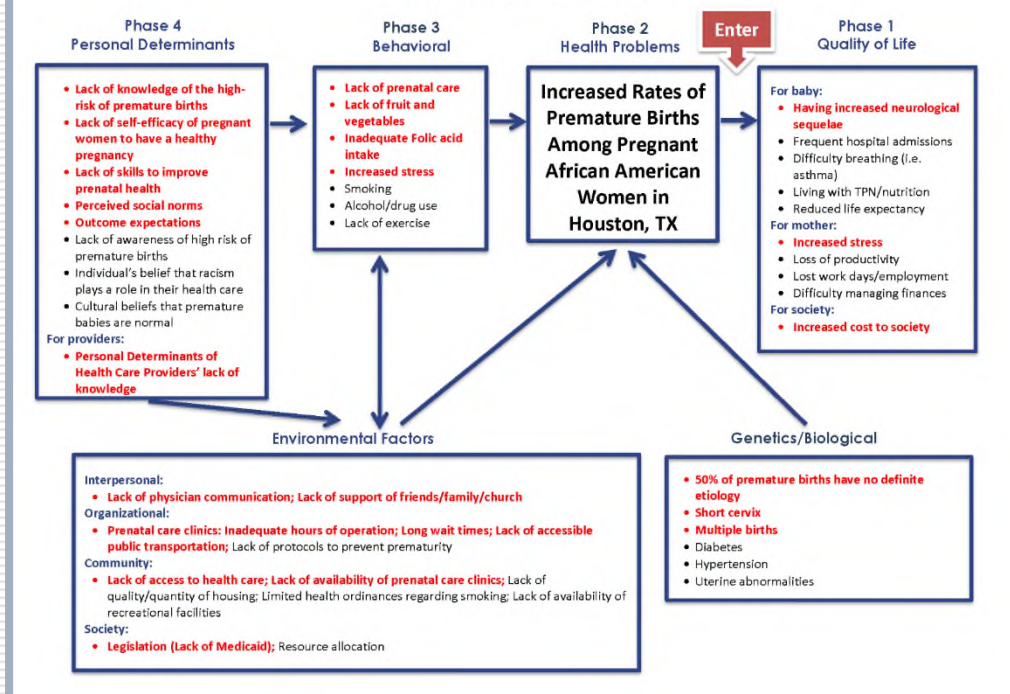


CONCLUSION

- ❑ Despite ongoing efforts to reduce health disparities in the United States, racial and ethnic disparities in both health and health care persist. Even when income, health insurance and access to care are accounted for, disparities remain.
- ❑ Disparities represent differences in outcomes that should not be.



PRECEDE Model



Honey Child New Beginnings: A Faith-Based Initiative Decreasing Disparity in Prematurity and Poor Outcomes for African-American Women

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Myrthala Miranda-Guzman CAP-OM¹, Wanda Wesson, MS²; Joanie Hare, MD⁵

¹Baylor College of Medicine/Department of Pediatrics; ²Cook Children's Hospital; ³Pediatric Medical Group; ⁴University of North Texas and March of Dimes Texas Chapter;

⁵Baylor College of Medicine/Department of Obstetrics and Gynecology

Problem

Despite recent gains, prematurity remains a leading cause of infant mortality and neurological disabilities. African-American women in Houston, Texas are disproportionately burdened, with high rates of premature births, 1.5 times higher than white women. Causes of this major public health issue are multi-factorial, requiring interventions targeted to this population.

Racial/Ethnic group	Prematurity Rates	Percentage of Houston population
African American	18.1%	24.1%
Hispanic	12.7%	45.8%
White	12.0%	26.6%
Asian	11.2%	6.4%

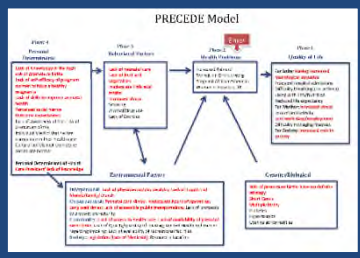
* Source: March of Dimes PeriStats (2014)

Project Description

The Honey Child Program is a faith-based initiative aimed at tackling the disparity in prematurity and poor birth outcomes for African-American babies. We enroll African-American women (17-44 years old), living in the Houston area, in their first or second trimester of pregnancy.

The program utilizes group prenatal care education, one-on-one mentoring and faith-based community support to target the social determinants of health. The program was started with the support of the Texas Chapter of the March of Dimes.

- Interventions include:
- Education on healthy pregnancy goals,
 - Improving access using a prenatal care navigator,
 - Provision of nutrition and folate,
 - Stress management techniques,
 - Empowerment exercises to improve communication skills with physicians and
 - Provide a safety-net of resources to meet daily needs.



Participant Characteristics

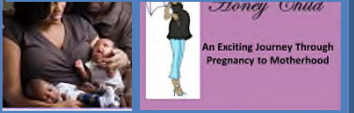
- Only those who completed BOTH the Baseline & Follow-up questionnaires were included in the analyses (n=205)
- Age range 17 to 38 years; mean = 25.0 years
 - 27% currently married; 69% never married
 - 88% had completed high school
 - 30% high school graduates
 - 38% high school and some college
 - 21% college graduates and/or completed post-graduate work



Results of Intervention

The Honey Child Program continues to enroll women. Preliminary results show a decrease in premature births from 18% to 10%. Participants entered prenatal care earlier, showed an increase in knowledge (p-value <0.001) and improved intake of fruits, vegetables and folate. As support increased, stress decreased. An interesting finding, mothers who had previous preterm births had a lower incidence of recurrence in the Honey Child Program. Post assessment data also showed high program satisfaction.

Gestational Age (wks)	Mean = 38 wks	Range (28-42 wks)
Preterm births		
<37 wks	11%	
<32 wks	4%	
Birth weight (g)	Mean = 3178 g	Range (1332 g - 4422g)
	(7 lbs 0 oz)	
<2500 g	7%	
	VLBW	
<1500 g	2%	
Pregnancy weight gain (lbs)	Mean = 31 lbs	Range (0-77 lbs)



Conclusion

African-American women are a high risk population and require specific culturally tailored interventions. Use of a faith-based environment provided necessary effective and committed resources. The Honey Child Program developed a tool-kit curriculum that can be duplicated in other faith-based communities.

SOLUTIONS

- ❑ Thorough review of maternal mortality and severe morbidity cases
- ❑ Standardization of care through implementation of evidence based practices, e.g., AIM
- ❑ Promote safe birth spacing via access to contraceptive methods

SOLUTIONS

- ❑ Increase first trimester entry into prenatal care presumptive eligibility; media campaigns on importance of early and consistent prenatal care
- ❑ Use available geo mapping data on disparities to focus public health campaigns
- ❑ Raise community awareness regarding the magnitude of as well as preventability of maternal mortality and severe morbidity, e.g., Honey Child Program

SOLUTIONS

- ❑ Support programs that emphasize primary care, disease prevention and the integration of reproductive and primary care, e.g., One Key Question
- ❑ Increase access to high-quality healthcare to manage chronic illness during inter-conception periods of life
- ❑ **ADVOCATE FOR UNIVERSAL ACCESS TO CARE — HEALTHCARE SHOULD BE A RIGHT FOR ALL NOT A PRIVILEGE**

REDUCING HEALTH DISPARITIES: SYSTEMS

- Improving provider knowledge about disparities
- Improving provider awareness of disparities
- Closely evaluating how different populations are represented in research
- Improving access to health care
- Patient centered health systems
- Empowering individuals to advocate for their health care needs

SOLUTIONS - INDIVIDUAL

- STOP

BLAMING THE VICTIM

- LOOK

**DENYING IMPLICIT BIAS REGARDING GENDER,
SOCIOECONOMIC STATUS AND RACE**

- LISTEN

**PATIENTS IN THE EYES
FOR OPPORTUNITIES TO EMPOWER
FOR EVIDENCE BASED BEST PRACTICES**

**WITHOUT JUDGEMENT
WITH EMPATHY**

Thank You

As we challenge ourselves to improve the health of our nation

– standing with mothers and babies