Our Health
A Defensor & 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. Rights and wrongs, the good and the bad, is seen in the eyes of the tiny premature babies the world around. The intake of the Neurology Intensive Care Unit is no different. A woman named Dr. Charleta Guillory, a Neurologist with Texas Children's Hospital, has made it her mission to raise awareness about the issues that African-American babies face due to prematurity.

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

"Dr. Charleta Guillory"

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Baylor College of Medicine
Texas Children's Hospital
Health Disparities and Maternal Infant Health

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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

Data sources:
Texas Department of State Health Services, Center for Health Statistics, Death Files, 2005-2014.
State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1999-2013.
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, D00-D05, D98-D99.
DEMOGRAPHIC SHIFT:
RACE/ETHNICITY OF MOTHERS

- 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

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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

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<tr>
<th>Cause of Death</th>
<th>While Pregnant</th>
<th>0-7 Days Postpartum</th>
<th>8-42 Days Postpartum</th>
<th>43-60 Days Postpartum</th>
<th>61+ Days Postpartum</th>
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<td>Other Causes</td>
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<td>Cardiac Event</td>
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<td>4</td>
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<td>Homicide</td>
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<td>1</td>
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<td>Drug Overdose</td>
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<td>2</td>
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<td>3</td>
<td>0</td>
<td>2</td>
<td>5</td>
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<tr>
<td>Infection/Sepsis</td>
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<td>0</td>
<td>4</td>
<td>0</td>
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<td>5</td>
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<td>Amniotic Embolism</td>
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<td>4</td>
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<td>Pulmonary Embolism</td>
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<td>0</td>
<td>1</td>
<td>4</td>
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<tr>
<td>Hemorrhage</td>
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<td>1</td>
<td>0</td>
<td>1</td>
<td>3</td>
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<tr>
<td>Suicide</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Substance Use Sequelae (e.g., Liver cirrhosis)</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>9</strong></td>
<td><strong>7</strong></td>
<td><strong>20</strong></td>
<td><strong>3</strong></td>
<td><strong>38</strong></td>
<td><strong>77</strong></td>
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PREPARED BY: Maternal & Child Health Epidemiology, Division for Community Health Improvement, DSHS.
PERSISTENT INEQUITY

- 15% of the population, US
- 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 PREMATURITY

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.
The rate of preterm births in Texas has declined about 6% since 2009.
The decline is mainly among infants born between 34 and 36 weeks of gestation.

2013 data are provisional and subject to change.
PREMATURE & DISPARITY

Preterm birth rates are increasing for everyone, especially in African American woman.
Infant Mortality 2009

Preterm Births 2009
2017 PREMATURE BIRTH REPORT CARD
PRETERM BIRTH RATES BY GRADES & STATES
“INFANT MORTALITY IS THE MOST SENSITIVE INDEX WE POSSESS OF SOCIAL WELFARE...”

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

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

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<tr>
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<td>6.0</td>
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<td><strong>TEXAS Overall</strong></td>
<td>5.6 (21st)</td>
<td>10.2 (12th)</td>
<td>8.2 (23rd)</td>
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<td>Non-Hispanic WHITE</td>
<td>4.9</td>
<td>9.6</td>
<td>7.1</td>
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<td>5.2</td>
<td>9.8</td>
<td>7.7</td>
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<td>OTHER****</td>
<td>3.4</td>
<td>9.3</td>
<td>9.0</td>
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<tr>
<td>Non-Hispanic Black</td>
<td>10.9 (23rd)</td>
<td>13.6</td>
<td>13.2</td>
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</table>

* 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: 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
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 BETWEENSOCIA LLY ADVANTAGED AND SOCIALLY DISADVANTAGED GROUPS
Differences in distribution of resources = social inequity

Differences in exposures and opportunities

Differences in underlying health status

Primary prevention

Secondary prevention

Medical/tertiary care

Differences in quality of care

Falling off the Cliff of Good Health

Jones, et al, 2009
UNDERSTANDING RACIAL DISPARITIES

**MEDICAL RISK**

**HEALTH BEHAVIOR**

**SOCIOECONOMICS**

They don’t fully explain them.
And it’s not genetics either

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

Social Determinants: Influence on the Fetus and Infant

Baylor College of Medicine

Texas Children’s Hospital
... 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
Life demands or challenges that tax or exceed one’s ability to cope, thereby increasing health risk.
STRESS GETS UNDER THE SKIN

- Hormonal system
- Immune system
- Epigenome
- Cardiovascular system
- Respiratory system

Heath
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

Adapted from A. R. James
INTERSECTING OPPRESSIONS

RACISM

SEXISM

GENDERED RACISM

SOJOURNER SYNDROME

CLASSISM

Lekan, D (2009)
NOT A “THOSE PEOPLE” PROBLEM,

BUT AN “US” PROBLEM

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

Determinants of Health

Interventions
- Policies
- Programs
- Information

Outcomes
- Behavioral outcomes
- Specific risk factors, diseases, and conditions
- Injuries
- Well-being and health-related Quality of Life
- Health equity

Assessment, Monitoring, Evaluation & Dissemination
ADDRESS THE PROBLEM AT MULTIPLE LEVELS
ADDRESS THE PROBLEM AT MULTIPLE LEVELS

INDIVIDUAL

Health education, counseling, screening, access to resources, respect inherent worth and dignity of each person, name and challenge "isms"

HEALTH SYSTEM

Health care access, equitable and culturally sensitive care, life course perspective, meaningful engagement of patients/communities, effective health promotion, service integration, data systems, name and challenge "isms"

WIDER COMMUNITY

Understand that nature of the problem for your community. Promote social equity (equal access and opportunity)
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
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.
Honey Child New Beginnings: A Faith-Based Initiative Decreasing Disparity in Prematurity and Poor Outcomes for African-American Women

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.

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.

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
- Providing a safety-net of resources to meet daily needs.

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.

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 toolkit 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