HONEY CHILD PROJECT

Charleta Guillory, MD, FAAP
Associate Professor of Pediatrics
Baylor College of Medicine

Associate Director of Level II Nurseries and
Director of Texas Children's Hospital
Neonatal-Perinatal Public Health Program

OBJECTIVES

- **Identify factors associated with preterm births among African-American (AA) women.**

- **Describe how African-American women are disproportionately affected with preterm births, infant morbidity and infant mortality.**

- **Describe the role of the Honey Child Program in combating the high African-American prematurity rate in Texas.**
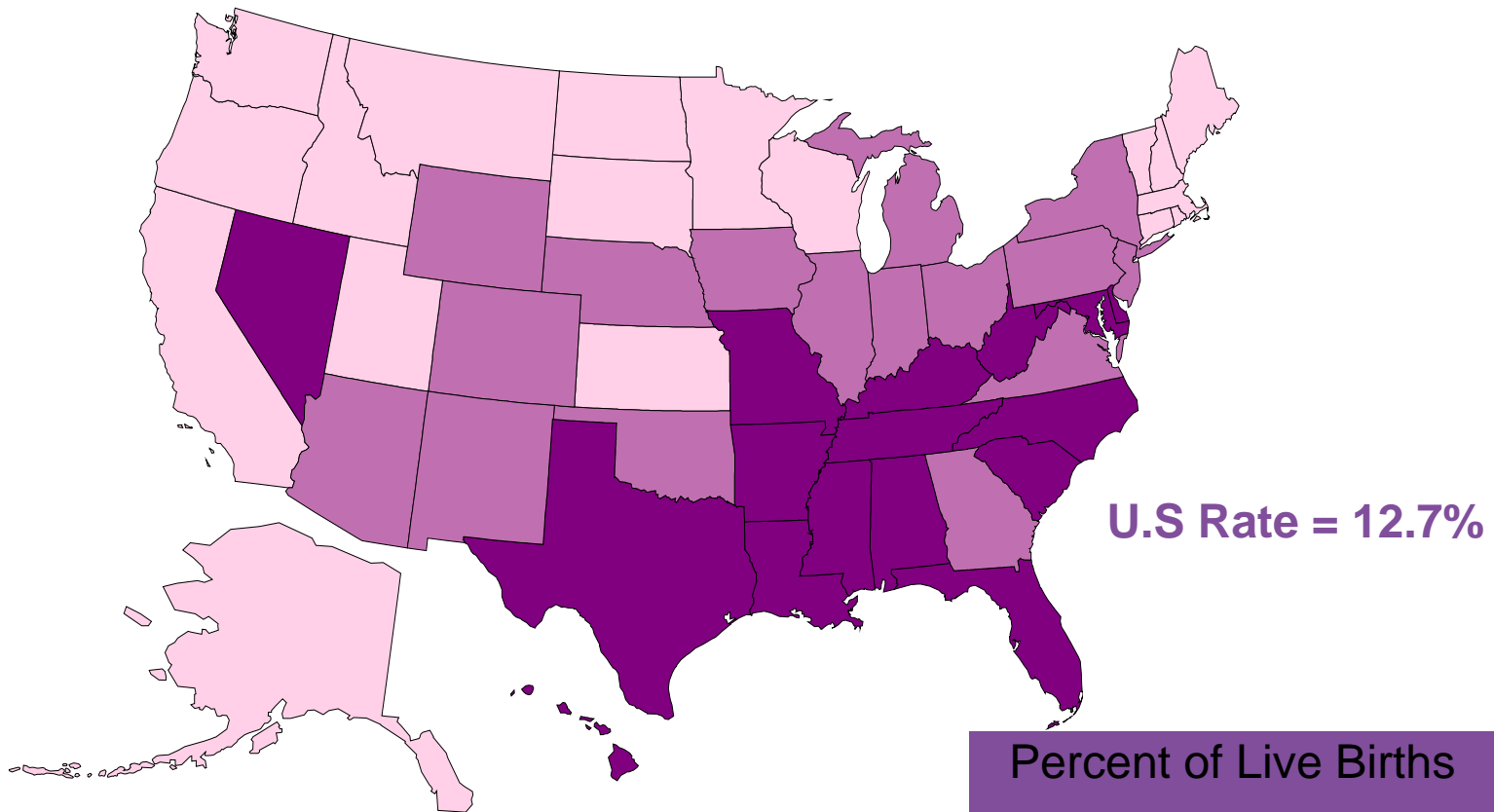
DISTRIBUTION OF GESTATIONAL AGE
Texas & United States, 2006

	US (%)	US (Count)	Texas (%)	Texas (Count)
Term	**87.2**	**4,265,555**	**86.3**	**399,603**
Total Preterm	**12.8**	**542,893**	**13.7**	**54,612**

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PRETERM BIRTH RATES BY STATE
UNITED STATES, 2004

U.S Rate = 12.7%

Percent of Live Births

- Over 12.6 (17)
- 11.4 to 12.6 (16)
- Under 11.4 (18)

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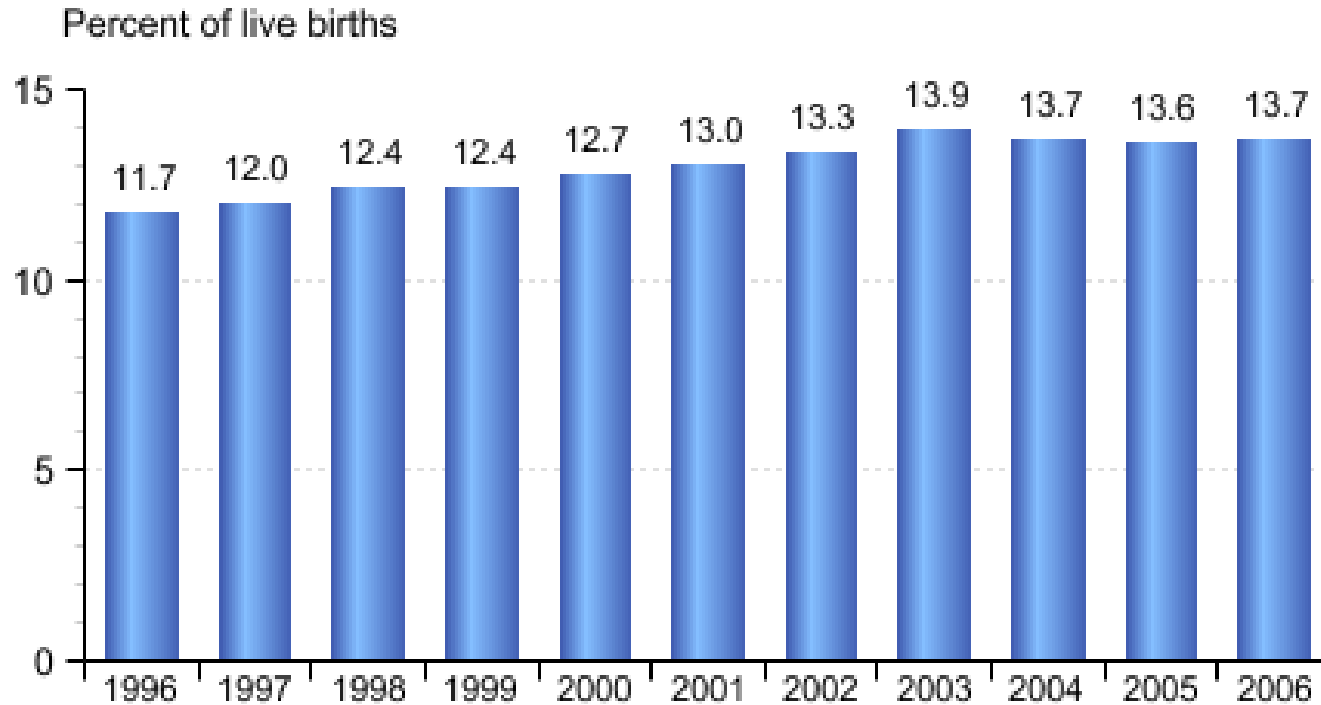*Note:* Value in ( ) = number of states (includes District of Columbia)
Value ranges are based on equal counts
Source: National Center for Health Statistics, 2004 final natality data
Prepared by March of Dimes Perinatal Data Center, December 2005

PRETERM BIRTH
TEXAS, 1996-2006

Percent of live births

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Our Health

A Defender & Texas Children's Hospital Alliance

CHARLETA GUILLORY
NEONATOLOGY

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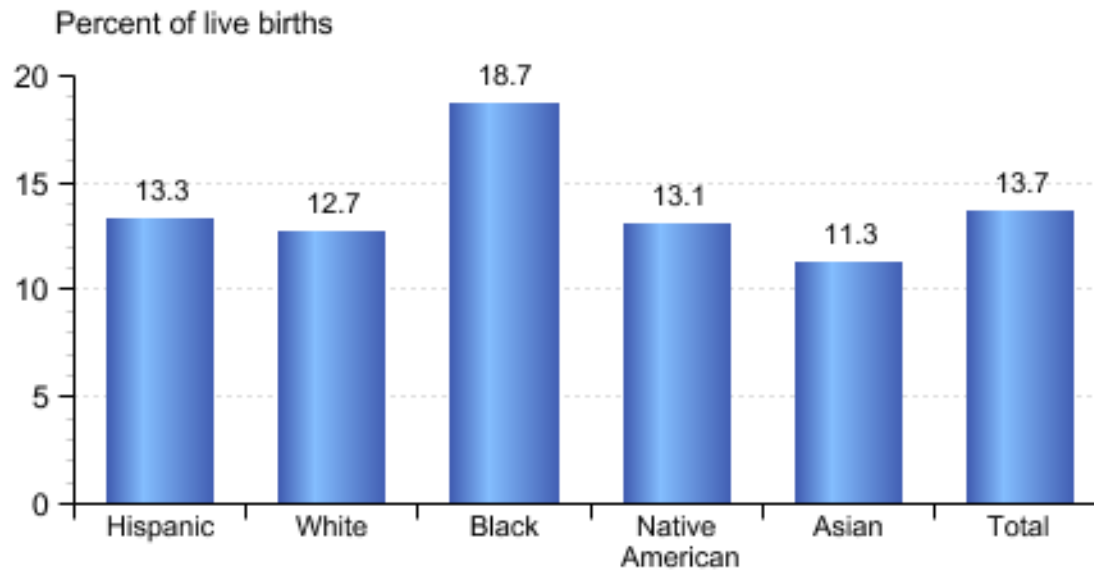
"You can change things before you get pregnant. Do some pre-conception planning. Get your diabetes under control, treat infections early and learn the signs of pre-term labor. By doing these things you will develop a trusting rela-

> " 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

tionship with your physician."

Dr. Guillory says once babies are born prematurely
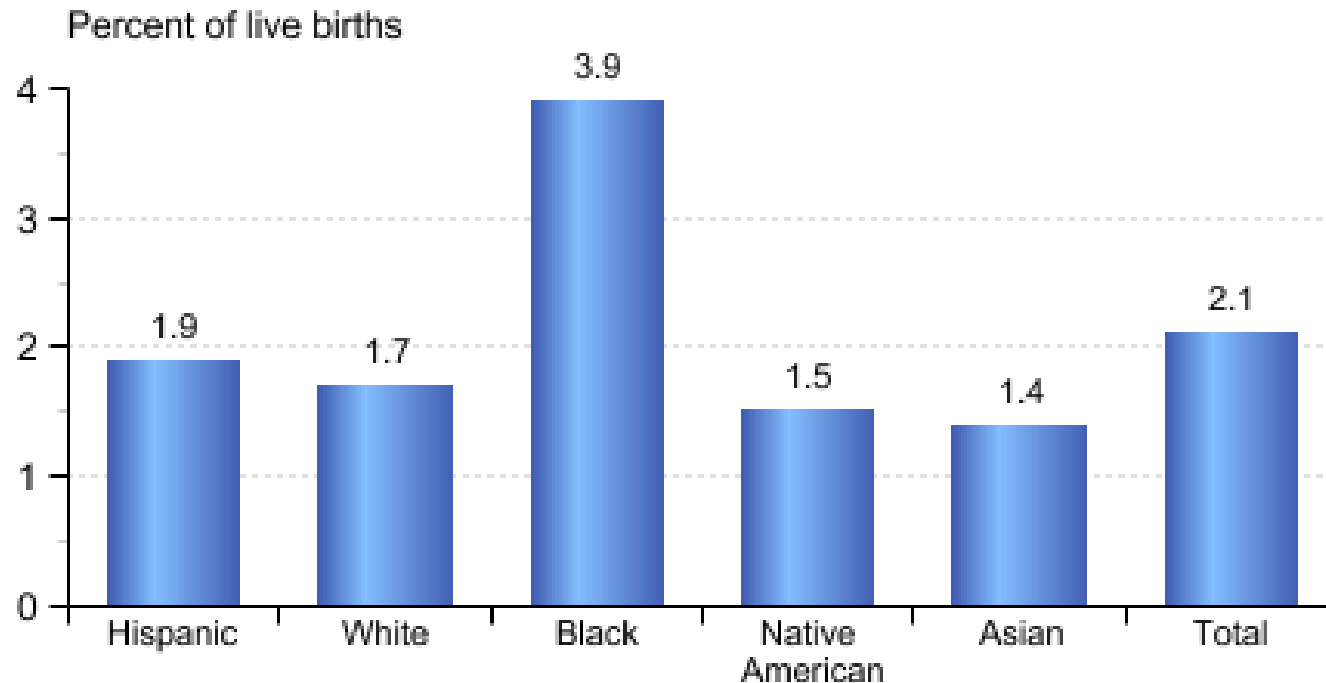
RACIAL-ETHNIC DISPARITIES
PRETERM BIRTH, TEXAS 2006

Percent of live births

	Hispanic	White	Black	Native American	Asian	Total
	13.3	12.7	18.7	13.1	11.3	13.7

PRETERM BIRTH IS A LEADING CAUSE OF INFANT MORTALITY AND CHILDHOOD DISABILITIES

12.8%

Term Births

Preterm Birth

36% **Infant Mortality**

50% **Neurologic Disabilities**

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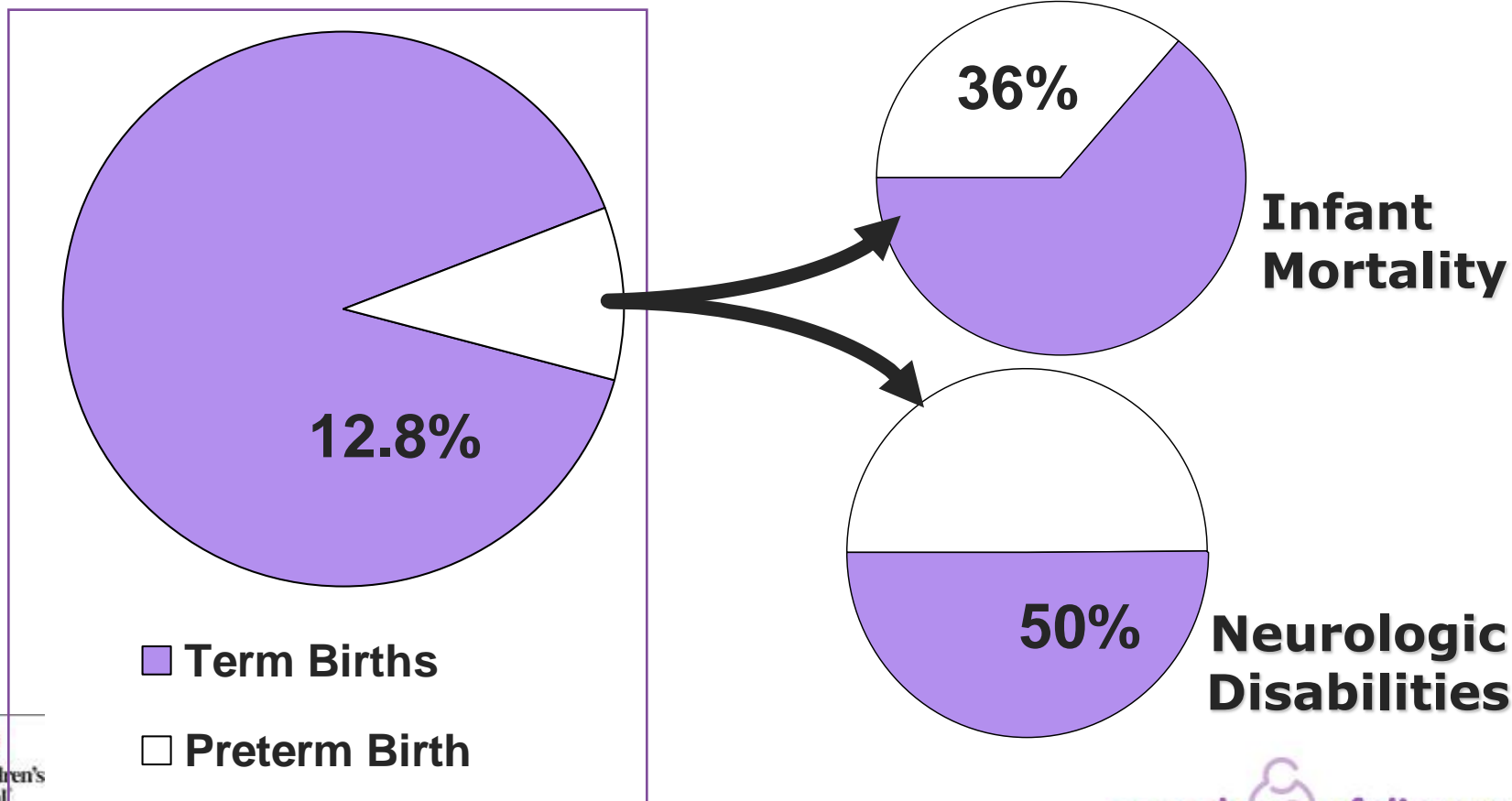
INFANT MORTALITY RATES BY RACE
TEXAS, 2006

Rate per 1,000 live births

Infant mortality rates per 1,000 live births:
- White: 5.8
- Black: 12.3
- Native American: 4.3
- Asian: 4.3
- Total: 6.5
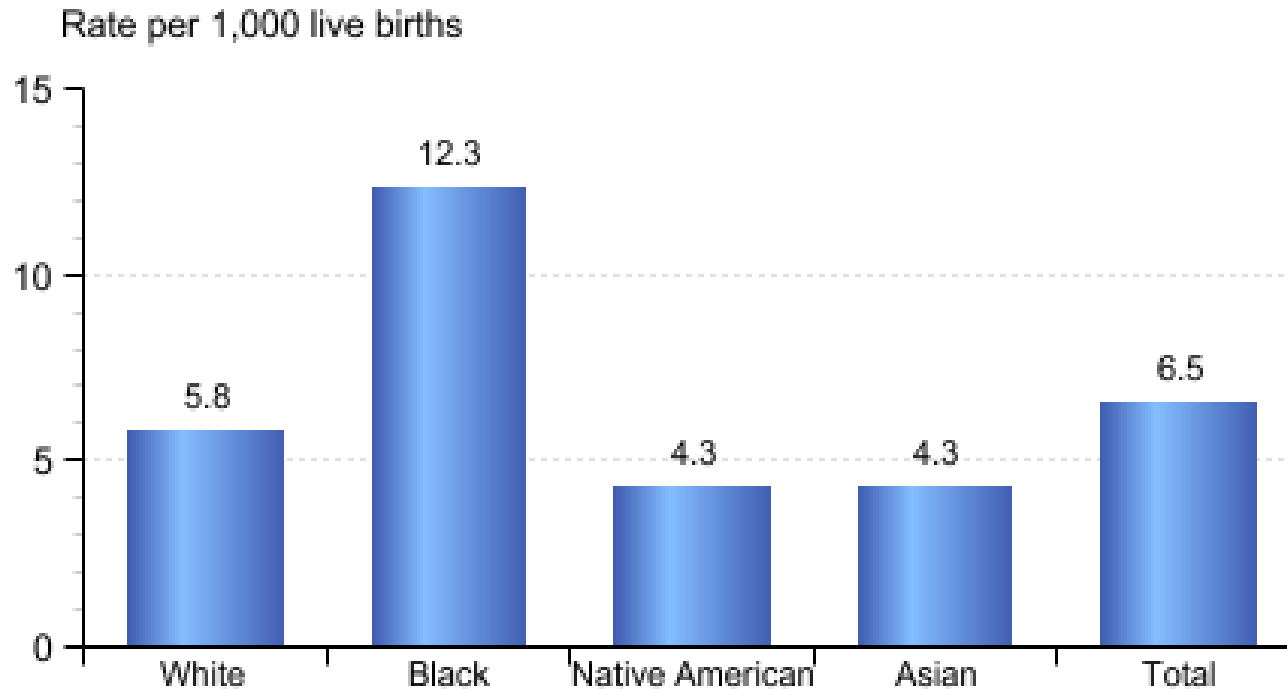
PERINATAL MORBIDITY & GESTATIONAL AGE

Source: Mercer BM. Preterm premature rupture of the membranes. Obstet Gynecol 2003;101:178-93.
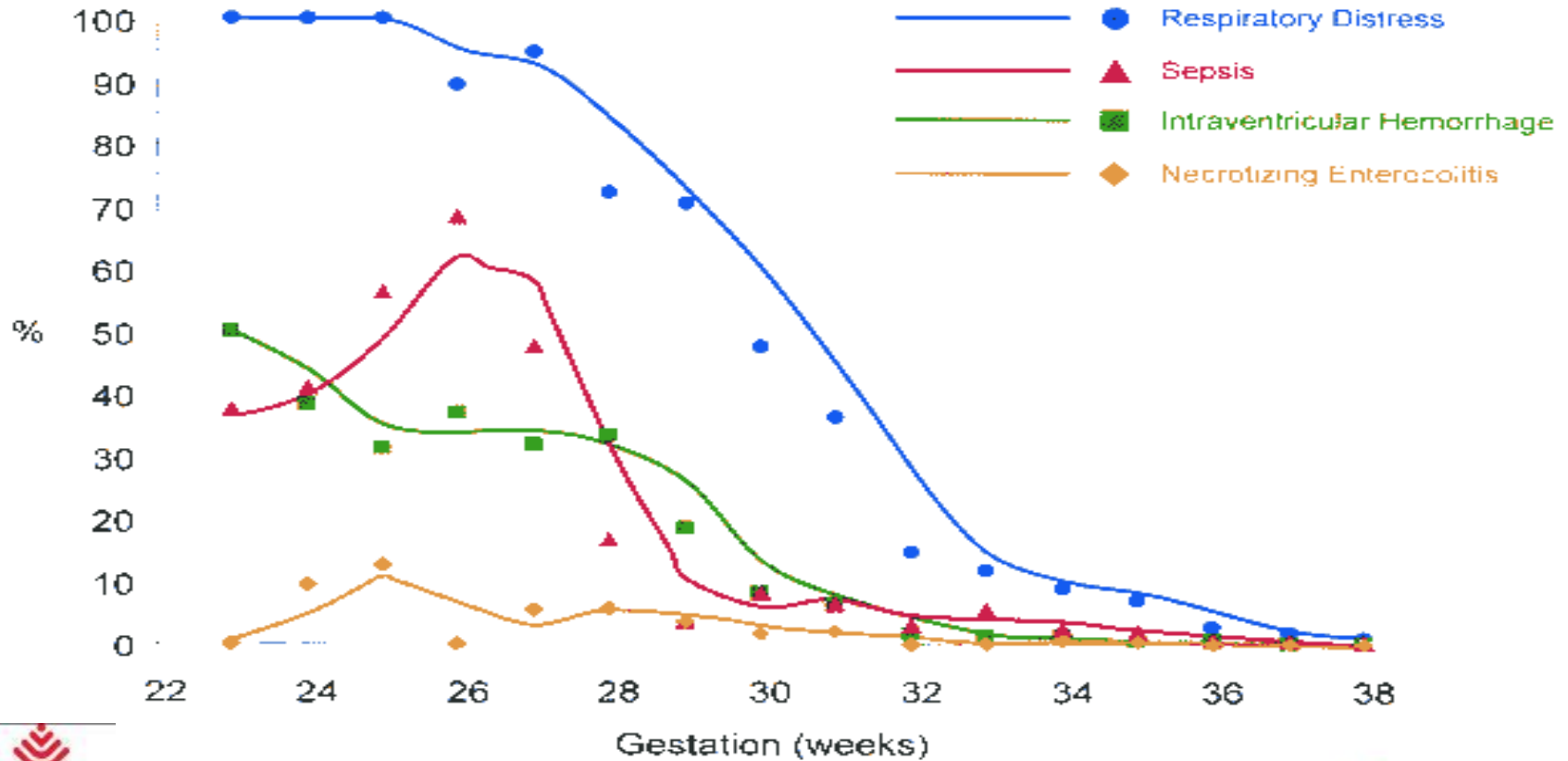
ECONOMIC CONSEQUENCES OF PRETERM BIRTH

- In 2005, the annual societal economic cost (medical, educational, and lost productivity) associated with preterm birth in the United States was at least $26.2 billion.

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AVERAGE FIRST-YEAR MEDICAL COSTS
INPATIENT/OUTPATIENT, 2005

	Full-term Delivery	Preterm Delivery
Total	$3,325	$32,325

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UNINSURED WOMEN
(Texas and US, 2006-2008 Avg)

Percent of women ages 15-44

Chart showing uninsured women as a percent of women ages 15-44:
- Texas: 32.2
- US: 20.1

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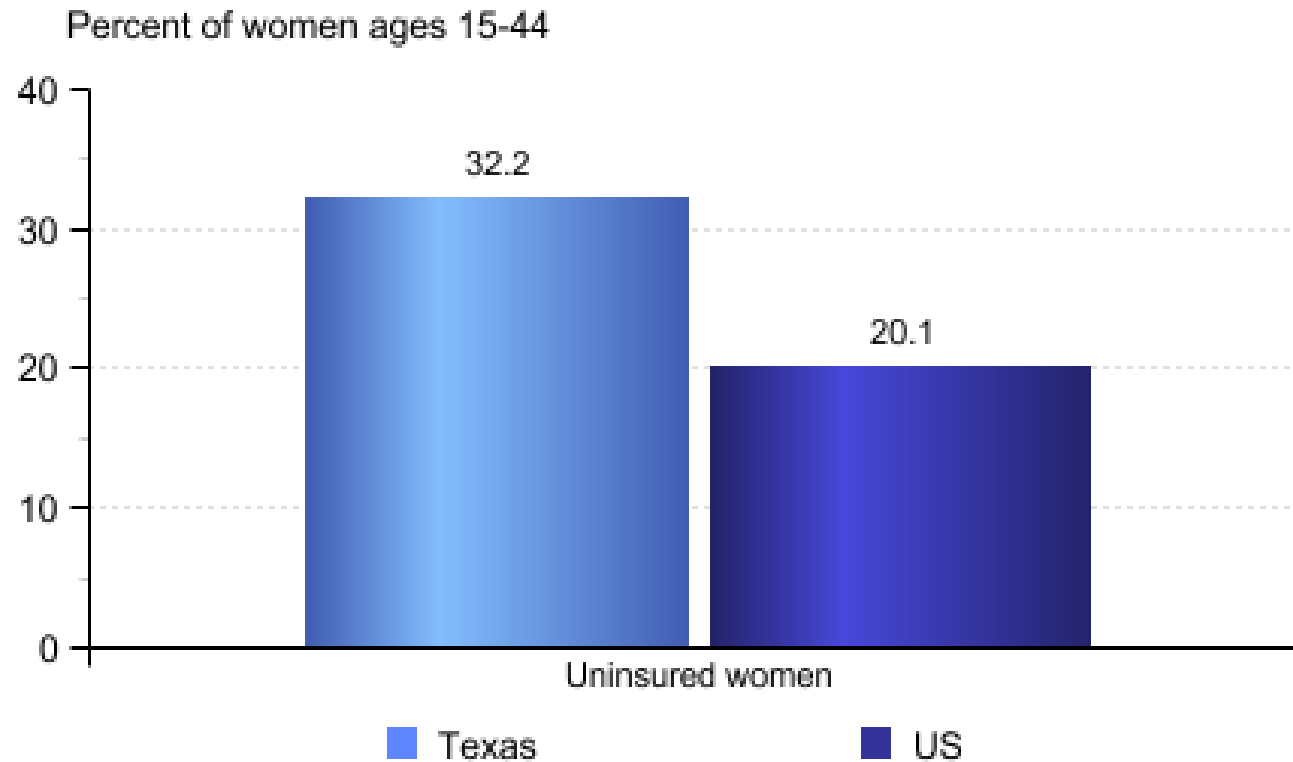
ADEQUATE/ADEQ+ PRENATAL CARE BY RACE/ETHNICITY
Texas, 2005

Percent of live births

Source: National Center for Health Statistics, final natality data. Kotelchuck M. An evaluation of the Kessner Adequacy of Prenatal Care Index and a proposed Adequacy of Prenatal Care Utilization Index. Am J Public Health 1994; 84: 1414-1420. Retrieved May 2, 2010, from www.marchofdimes.com/peristats.
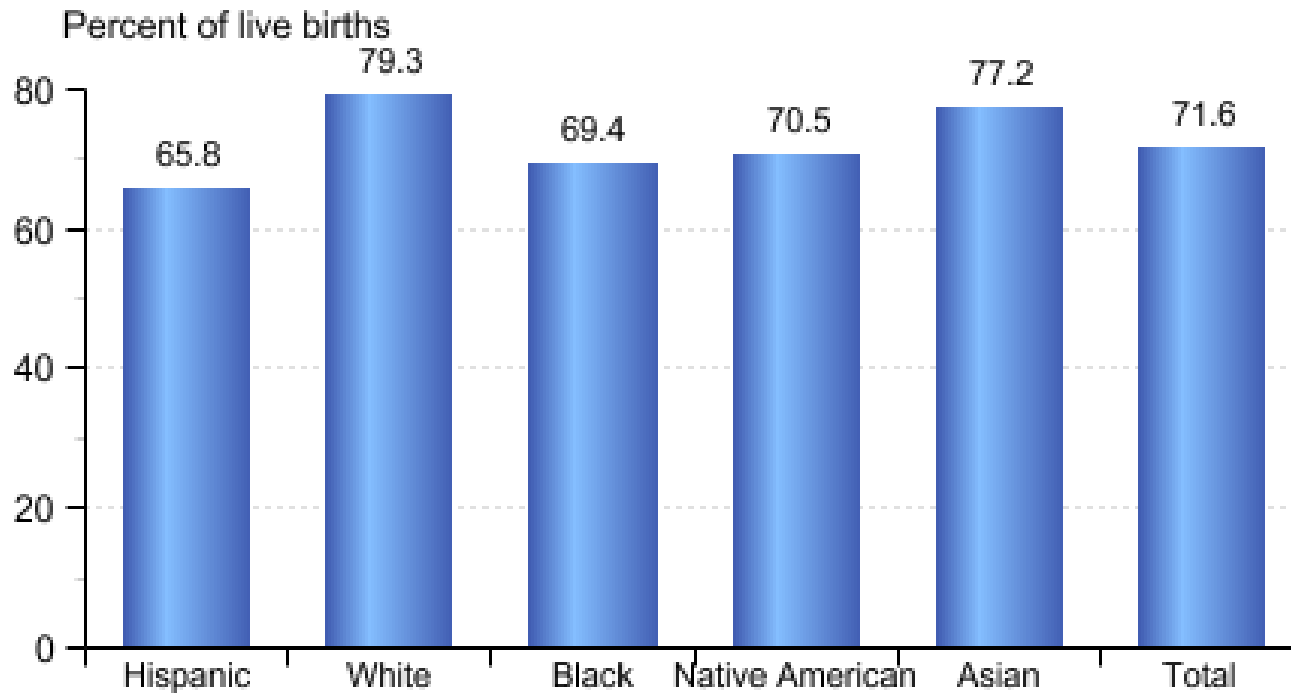
AFRICAN-AMERICAN PREMATURITY CAMPAIGN IN TEXAS

STEP 1: COMMUNITY INVOLVEMENT

January 2005 - UNTHSC School of Public Health

- **Statewide community assessment of 100 key informants**

- **Focus Group with African-American parishioners of child-bearing age**

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STEP 2: RESEARCH

January 2005 - Retrospective Cohort Study

- **Identified medical and social/behavioral risk factors associated with premature birth specific to black women**

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MEDICAL RISK FACTORS ASSOCIATED WITH PRETERM BIRTH AMONG AFRICAN – AMERICAN FEMALES

- **Study by Cynthia Dianne Laws, Texas State University – San Marcos, TX in 2005**

- **Risk Factors:**

  - **Pregnancy induced hypertension**

  - **Chronic hypertension**

  - **Cardiovascular disease**

  - **Diabetes**

  - **Eclampsia**

  - **No prenatal care**

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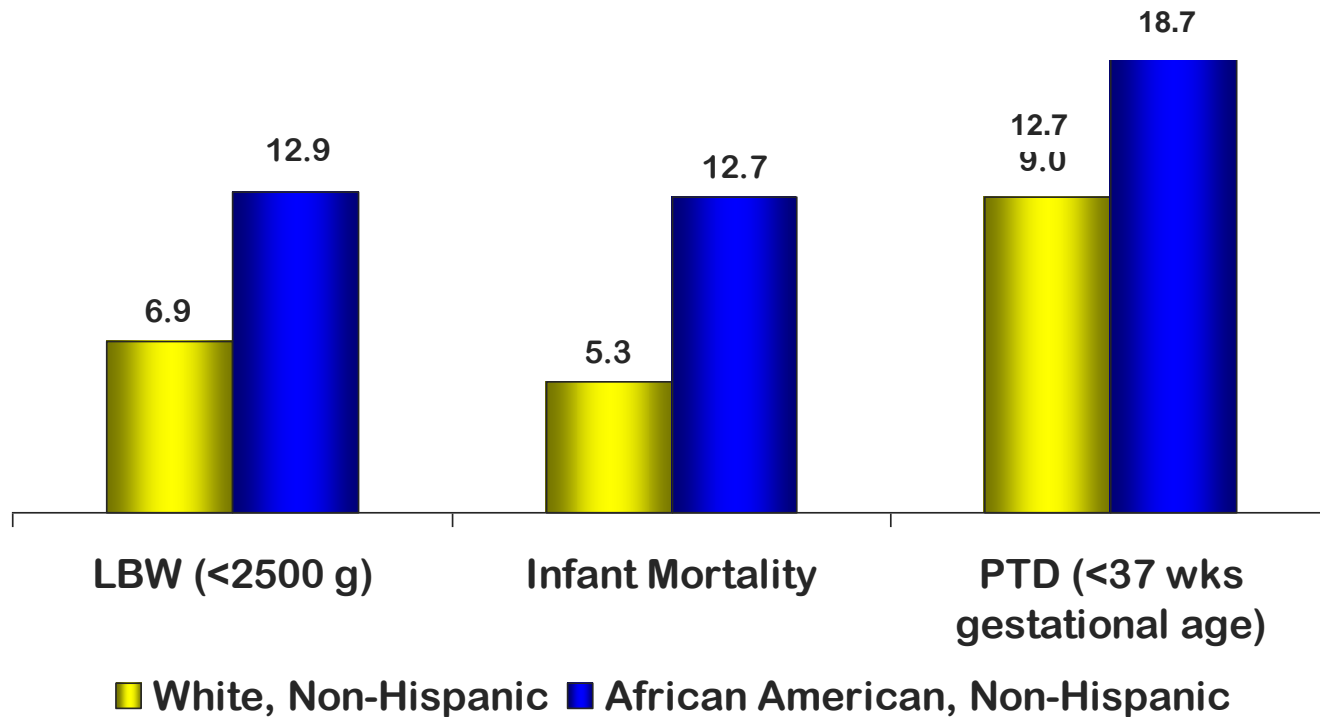
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STEP 3: MOD AND TEXAS DSHS PARTNERSHIP

- **Birth outcomes by race**

- **Infant mortality by race**

- **Racial disparity data by**

  – **Education**

  – **Prenatal care**

  – **Substance abuse**

BIRTH OUTCOMES BY RACE
TEXAS, 2005 - 2006

6.9   12.9   5.3   12.7   12.7   9.0   18.7

LBW (<2500 g)   Infant Mortality   PTD (<37 wks gestational age)

☐ White, Non-Hispanic   ☐ African American, Non-Hispanic

Slides Courtesy of Brian C. Castrucci, MA Director, Family Health Research and Program Development Office of Title V and Family Health Texas Department of State Health Services

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Infant mortality task-force data initiative

- **Identified high-risk zip codes**

- **Addressed race specific interventions to decrease infant mortality**

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STEP 5: PREMATURITY SUMMIT

- The Texas Chapter Prematurity Summit was held on August 4, 2005 in Houston, Texas. The Summit was hosted in partnership with the Alpha Phi Alpha Fraternity, Inc. National Conference.

- This statewide event highlighted the issue of preterm birth rates among disproportionately affected African-American women to 118 business, religious, community leaders, and policy-makers.

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PREMATURITY SUMMIT RESULTS

Identify necessary components for a culturally sensitive prenatal program.

- **Central location within the community**
- **Church-driven approach**
- **Peer/mentor facilitators**
- **Model must be built on trust**
- **Culturally competent material**
- **"Village-approach" to guide mother and infant**

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STEP 6: SECURE STAFF AND RESOURCES

- **The Meadows Foundation and Sid W. Richardson Foundation**

- **Director of Prematurity Initiatives hired on September 16, 2005**

STEP 7: DEMONSTRATION PROJECTS

Texas State Chapter awarded grants to address African-American birth outcomes

- **Any Baby Can of San Antonio, Inc.**

- **Panhandle Maternal Child Health Foundation – Amarillo**

- **Fort Bend Family Health Center, Inc.**

- **Komfort Keepers – Austin**

- **Parkland Foundation - Dallas**

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STEP 8: MOBILIZING PARTNERSHIPS
PREMATURITY AWARENESS SUNDAY

- Statewide Worship Services on November 13, 2005

  – **Pulpit messages/announcements**

  – **Bulletin/program inserts**

  – **African-American Ambassador Family spoke**

- 13 Host Churches

- Other Partners

- Total Documented Contacts = 8,815

STEP 9: PREMATURITY INTERVENTION IN THE AFRICAN-AMERICAN COMMUNITY

The Committee was responsible for outlining a specific program and strategies that would address health disparities in the African-American Community.

Results of the focus groups, cohort study, UNTHSC data, TSDHS data, prematurity summit and other current findings served as the framework for creating the *Honey Child* Program.

"HONEY CHILD PRENATAL EDUCATION PROGRAM"

Key Health Indicators

The *Honey Child* program seeks to address the following risk factors in African-American women:

- Obesity
- Absence of prenatal care
- Lack of social support
- Stress/Physical Abuse
- Interconception care

"You must start at the center of the community, which is the church in African-American communities."

The Rev. Dr. Melvin B. Tuggle III Author of
"It Is Well With My Soul—Churches and Institutions Collaborating for Public Health"

The church is one of the most powerful elements to African American culture, and clergy leaders are key influencers to their congregations.

Pastors

- **Understand the urgency of this disparity**

- **Embrace the Honey Child program by leading the church family into action.**

- **Are a voice from the pulpit challenging members to serve the needs of the mind, body and souls of both the mother and child.**

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HONEY CHILD PROGRAM
Overview

A faith-based Prenatal Health Education Program that:

- **Addresses the specific needs of pregnant African American women ages 18-40.**

- **Offers free prenatal health education to African American pregnant women in the 1st to 2nd trimester (6 to 20 weeks).**

- **Is designed for implementation by community-based facilitators in a church setting.**

- **Is defined by a culturally-relevant prenatal curriculum, spiritual messaging, community involvement, active learning, and evaluation.**

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Honey Child Sites

- **Five sites**
  - **Greenspoint Baptist Church (Houston)**
  - **Wheeler Avenue Baptist Church (Houston)**
  - **Greater Mount Tabor Christian Center (Fort Worth)**
  - **Cornerstone Baptist Church (Arlington)**
  - **Greater Love Missionary Baptist Church (San Antonio)**
  - **Four-year pilot November 2006 – January 2011**

- **Sample Size = minimum of 400 women**

Core Components

Group Prenatal Education Sessions

– **Monthly meetings**

– **Groups of 6 to 12 women**

Peer Mentoring

– **Women will also receive intensive one-on-one support from a mentor through weekly telephone or in-person contact.**

– **Mentors and Facilitators are community or church volunteers who have received March of Dimes training.**

Honey Child Curriculum

Session 1: Nutrition **(12-16 weeks gestation)**

Session 2: Relaxation/Stress/Exercise **(16-20 weeks gestation)**

Session 3: Prenatal Care **(20-24 weeks gestation)**

Session 4: Self-Esteem **(24-28 weeks gestation)**

Session 5: Prematurity and Labor & Delivery **(28-32 weeks gestation)**

Session 6: Graduation **(32-36 weeks gestation)**

Post-Delivery Reunion

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NUTRITION SESSION AND LIFE ENRICHMENT

PRENATAL YOGA

WORKSHOPS

Makeovers

Breastfeeding

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Self-esteem Development

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MENTORS

CAP AND GOWN GRADUATION CEREMONY

Evaluation

The *Honey Child* program will measure the following variables:

- Nutrition
- Stress (Stress Survey)
- Knowledge
- Prenatal Care Visits
- Birth Outcomes

The evaluation plan also includes post-intervention focus groups with all participants to document the experiences of the women, facilitators, and mentors.

PILOT EVALUATION

Survey to assess participant knowledge and mentoring relationship

Participants Receive Honey Child Program
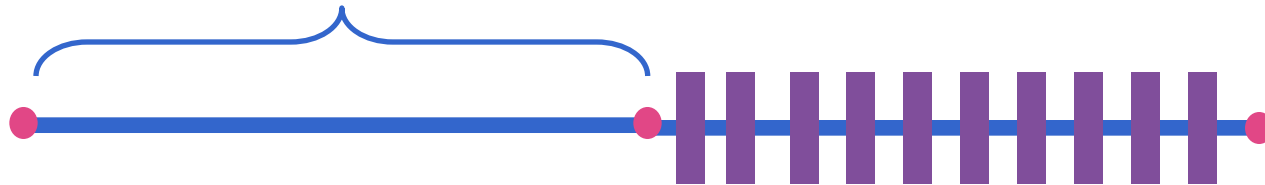
Baseline or Pre-Test

What people knew *before* they started Honey Child

Follow-up or Post-Test

What people knew *after* they completed Honey Child

Reunion

Assess mentoring and satisfaction survey

Honey Child Program Evaluation Results

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HONEY CHILD SITES

	Baseline Enrollment	Completion Rate[†]
Cornerstone Baptist Church (Arlington)	35	47%
Greater Love Missionary Baptist (San Antonio)	8	0%
Greater Mount Tabor Christian Center (Fort Worth)	49	31%
Greenspoint Baptist Church (Houston)	29	**72%**
Wheeler Avenue Baptist Church (Houston)	52	58%
TOTAL	**173**	**49%**

[†]Completion rate defined as those participants with all three forms completed: Baseline, Follow-up, and Reunion divided by total Baseline Enrollment. Completion rate calculation does not include participants with due dates from November 2009 and later.

Data source: March of Dimes Honey Child Program Evaluation, Tarrant County Public Health

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PARTICIPANT CHARACTERISTICS

- **Only those who completed *BOTH* the Baseline & Follow-up questionnaires were included in the analysis (n=86)**

- **Age range 18 to 37 years; mean = 25.0 years**

- **22% currently married; 76% never married**

- **87% had completed high school**

    - **31% high school graduates**

    - **34% some college**

    - **22% college graduates and/or completed post-graduate work**

PARTICIPANT CHARACTERISTICS

52% work full time or part time

- **31% worked 40 hours per week**
- **13% worked 30-40**
- **8% worked 20-30**

PARTICIPANT CHARACTERISTICS

96% had health coverage

- – 26% Medicaid fee for service
- – 26% Medicaid HMO
- – 21% Employer paid
- – 13% Other
- – 6% Emergency Medicaid
- – 4% Self insured
- – 1% Title V / State Assistance

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TOBACCO & ALCOHOL USE

In the 30 days prior to becoming pregnant:

- 13% smoked
- 18% drank alcohol

Since becoming pregnant:

- 9% smoked
- 1% drank alcohol

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PREVIOUS BIRTHS

How many times have you given birth?
- **Never: 64%**
- **1 time: 13%**
- **2 times: 18%**
- **More than 2 times: 6%**

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PREVIOUS BIRTHS

Have you ever had any of the following?

- **Preterm labor: 11%**
- **Premature birth: 11%**
- **A baby weighing < 5 lbs, 5 oz: 7%**
- **An infant who died: 7%**

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KNOWLEDGE & PREGNANCY EXPECTATIONS

- **80% of participants showed an increase in knowledge from baseline to follow-up**

- **59% showed a 20% or greater increase in knowledge**

- **Statistically significant increase in knowledge overall (p<0.001)**

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BIRTH OUTCOMES

- **64 reunion surveys used**

- **63 deliveries; 1 fetal death**

- **No multiple births reported**

- **Pregnancy weight gain ranged from 0 to 77 lbs; mean = 34 lbs**

BIRTH OUTCOMES

- **Gestational age ranged from 28 weeks to 41 weeks; mean = 38 weeks**

- **91% were full term births**

- **9% born before 37 weeks**

- **2% born less than 32 weeks**

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BIRTH OUTCOMES

- **Birth weight ranged from 1,502.5 grams (3 lbs, 5 oz) to 4,365.8 grams (9 lbs, 10 oz); mean = 3,210.2 (7 lbs, 1 oz)**

- **89% adequate birth weight (>=2,500 grams)**

- **11% were low birth weight (<2,500 grams)**

- **No very low birth weight infants (<1,500 grams)**

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SOCIAL SUPPORT & MATERNAL STRESS

- **At baseline, those participants with low social support had high maternal stress and vice versa.**

- **These findings are statistically significant (p<0.001)**

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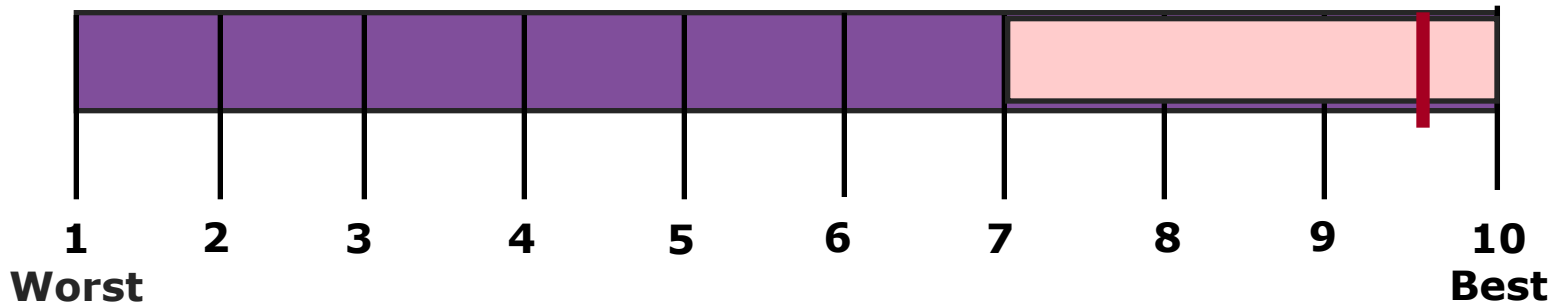march of dimes

SOCIAL SUPPORT & MATERNAL STRESS

- **Infant birth weight increased with**

  - **an increase in social support**
  - **a decrease in maternal stress**
  - **but not at a statistically significant level.**

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PROGRAM SATISFACTION

Average = 9.6

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Worst

Best

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CONCLUSION

- **Great Program!!**
- **Preliminary study has shown so far that out of the 173 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**
  - **91% full term births**
  - **9% pre-term before 37 weeks**
    - **2% born less than 32 weeks**

HONEY CHILD OUTCOMES

ACKNOWLEDGMENTS

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