

# Data worth waiting for?

## Soon-to-be-released health data from the revised birth certificate

Presented by  
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**National Conference on Health Statistics**

August 8, 2012  
Washington, DC



# Attention!

- Preliminary data...
  - Please, do not quote or cite.

# Acknowledgements

Joyce A. Martin

Sally C. Curtin

Sharon E. Kirmeyer

Elizabeth C. Wilson

Stephanie J. Ventura

T.J. Mathews

Brady E. Hamilton

# Introduction

- Selected new data items available for first time
  - 2003 U.S. Standard Certificate of Live Birth

<b>MOTHER</b>	29a. DATE OF FIRST PRENATAL CARE VISIT MM / DD / YYYY <input type="checkbox"/> No Prenatal Care		29b. DATE OF LAST PRENATAL CARE VISIT MM / DD / YYYY		30. TOTAL NUMBER OF PRENATAL VISITS FOR THIS PREGNANCY (If none, enter AD')				
	31. MOTHER'S HEIGHT (feet/inches)		32. MOTHER'S PREPREGNANCY WEIGHT (pounds)		33. MOTHER'S WEIGHT AT DELIVERY (pounds)				
35. NUMBER OF PREVIOUS LIVE BIRTHS (Do not include this child)		36. NUMBER OF OTHER PREGNANCY OUTCOMES (spontaneous or induced losses or ectopic pregnancies)		37. CIGARETTE SMOKING BEFORE AND DURING PREGNANCY For each time period, enter either the number of cigarettes or the number of packs of cigarettes smoked. IF NONE, ENTER AD'		38. PRINCIPAL SOURCE OF PAYMENT FOR THIS DELIVERY			
35a. Now Living Number _____ <input type="checkbox"/> None		35b. Now Dead Number _____ <input type="checkbox"/> None		36a. Other Outcomes Number _____ <input type="checkbox"/> None		Average number of cigarettes or packs of cigarettes smoked per day: # of cigarettes OR # of packs Three Months Before Pregnancy _____ OR _____ First Three Months of Pregnancy _____ OR _____ Second Three Months of Pregnancy _____ OR _____ Third Trimester of Pregnancy _____ OR _____			
35c. DATE OF LAST LIVE BIRTH MM / YYYY		36b. DATE OF LAST OTHER PREGNANCY OUTCOME MM / YYYY		39. DATE LAST NORMAL MENSES BEGAN MM / DD / YYYY		40. MOTHER'S MEDICAL RECORD NUMBER			
<b>MEDICAL AND HEALTH INFORMATION</b>	41. RISK FACTORS IN THIS PREGNANCY (Check all that apply)			43. OBSTETRIC PROCEDURES (Check all that apply)			46. METHOD OF DELIVERY		
	42. INFECTIONS PRESENT AND/OR TREATED DURING THIS PREGNANCY (Check all that apply)			44. ONSET OF LABOR (Check all that apply)			47. MATERNAL MORBIDITY (Check all that apply)		

# New/New Items

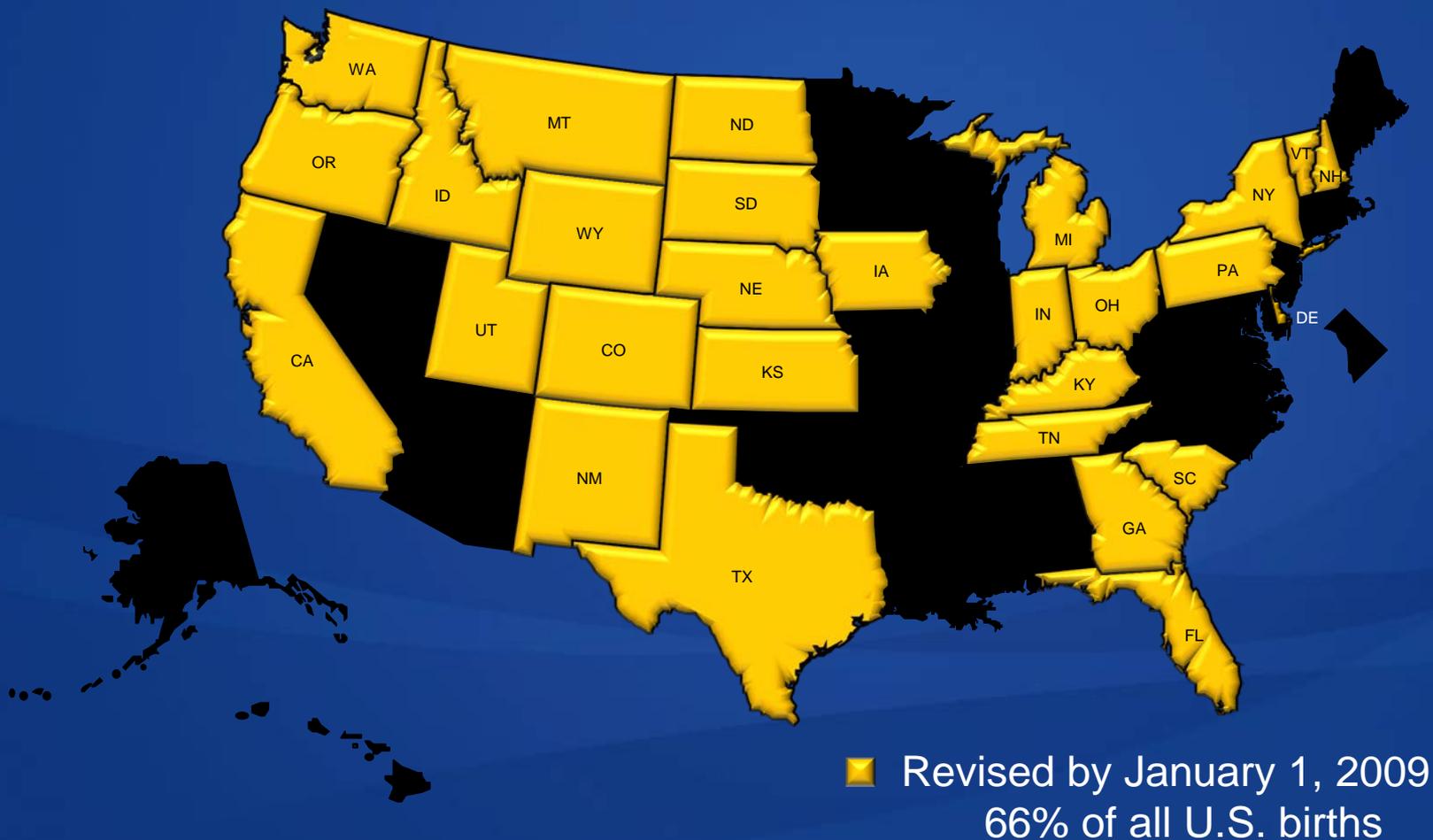
- Educational attainment of father
- Body mass index (BMI)
- Tobacco use 3 months prior to pregnancy
  - Quit prior to pregnancy
- Mother received WIC food during pregnancy
- Pregnancy resulted from infertility therapy
- Infections present during pregnancy (e.g., chlamydia)
- Source of payment for the delivery (e.g., Medicaid)
- Interval since last live birth
- Time of birth
- Maternal morbidities (e.g., ruptured uterus)
- Infant breastfed

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# Methods

- 2009 data from 28 reporting areas



# Methods

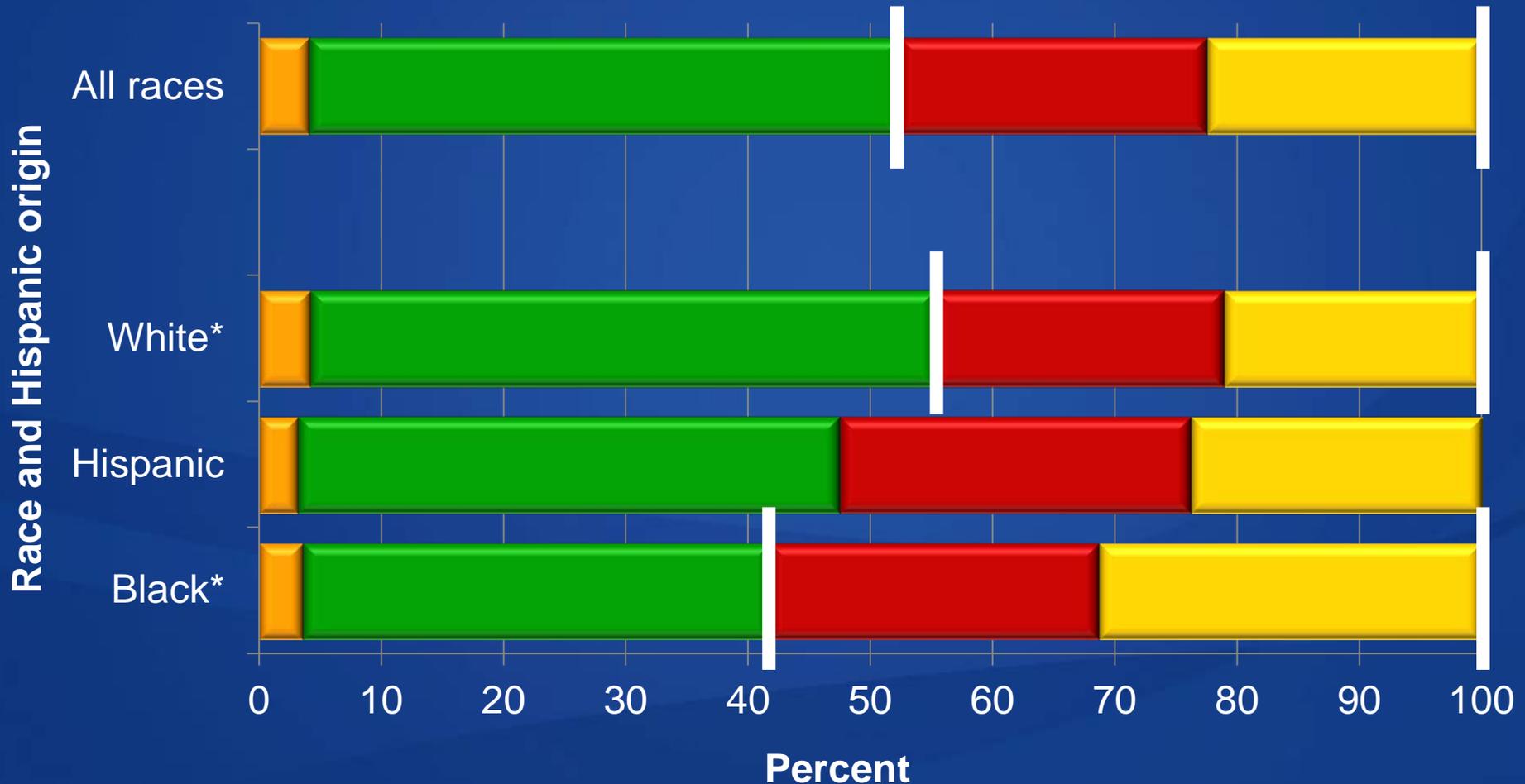
- Race/Hispanic origin groups:
  - Single-race
    - Non-Hispanic white
    - Non-Hispanic black
  - Hispanic
- Not generalizable to whole U.S.
  - Hispanic women overrepresented
  - Composition of Hispanic population differs from total U.S.



# RESULTS

# Pre-pregnancy BMI by race and Hispanic origin: 28-state reporting area, preliminary 2009

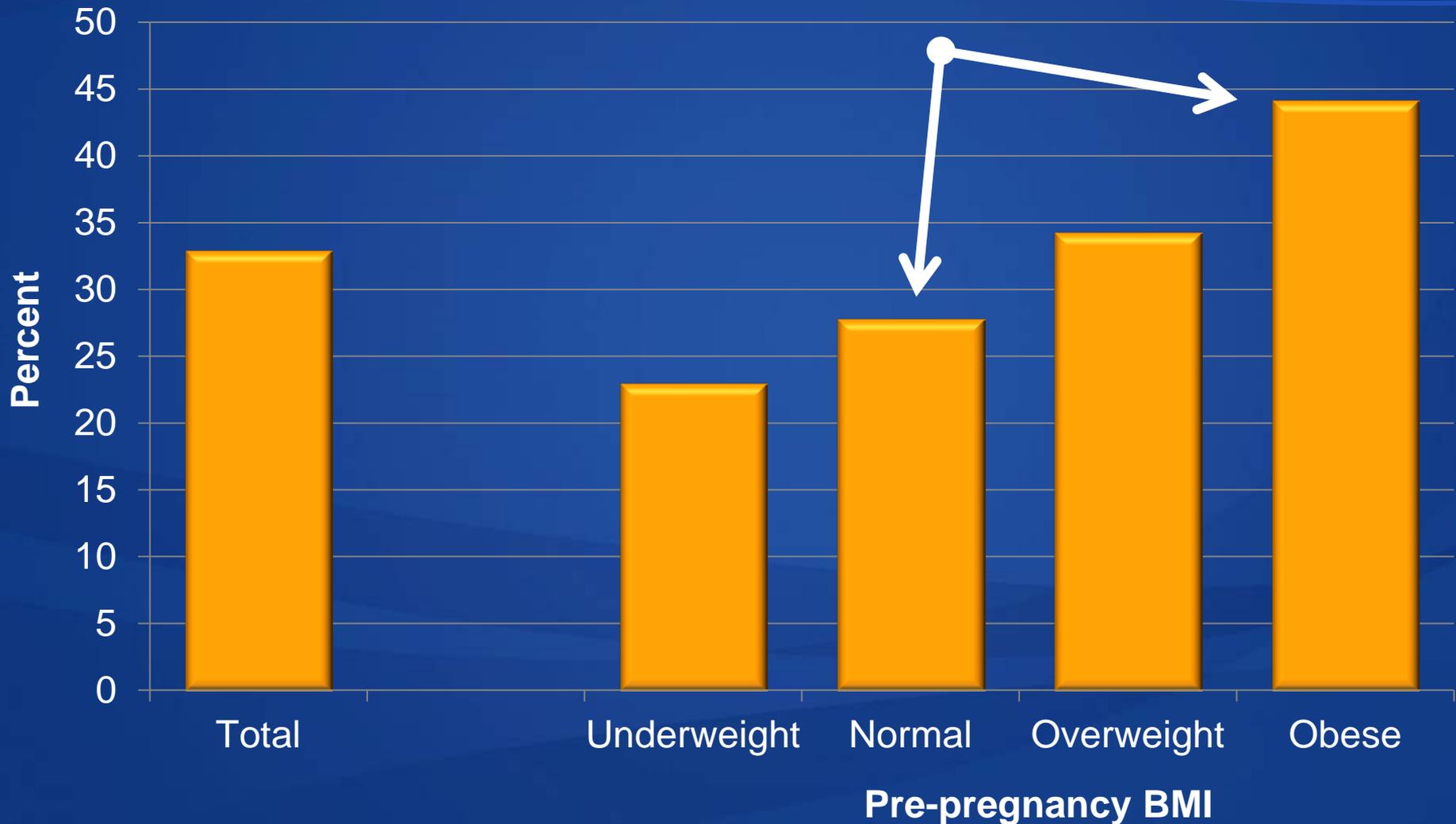
Underweight Normal Overweight Obese



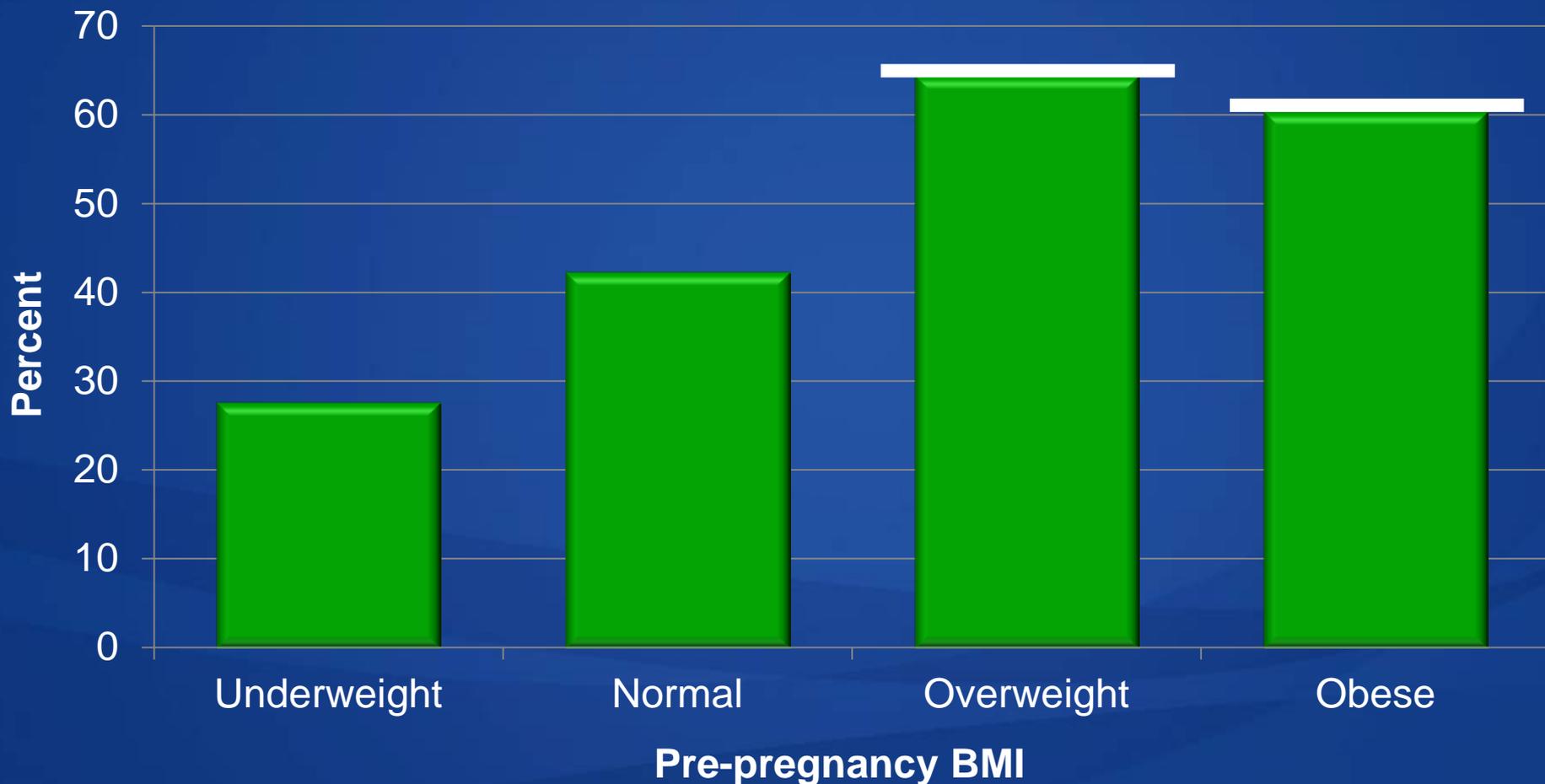
\* Non-Hispanic

Source: CDC/NCHS, National Vital Statistics System

# Cesarean delivery by pre-pregnancy BMI: 28-state reporting area, preliminary 2009



# High weight gain<sup>1</sup> for pre-pregnancy BMI: 28-state reporting area, preliminary 2009



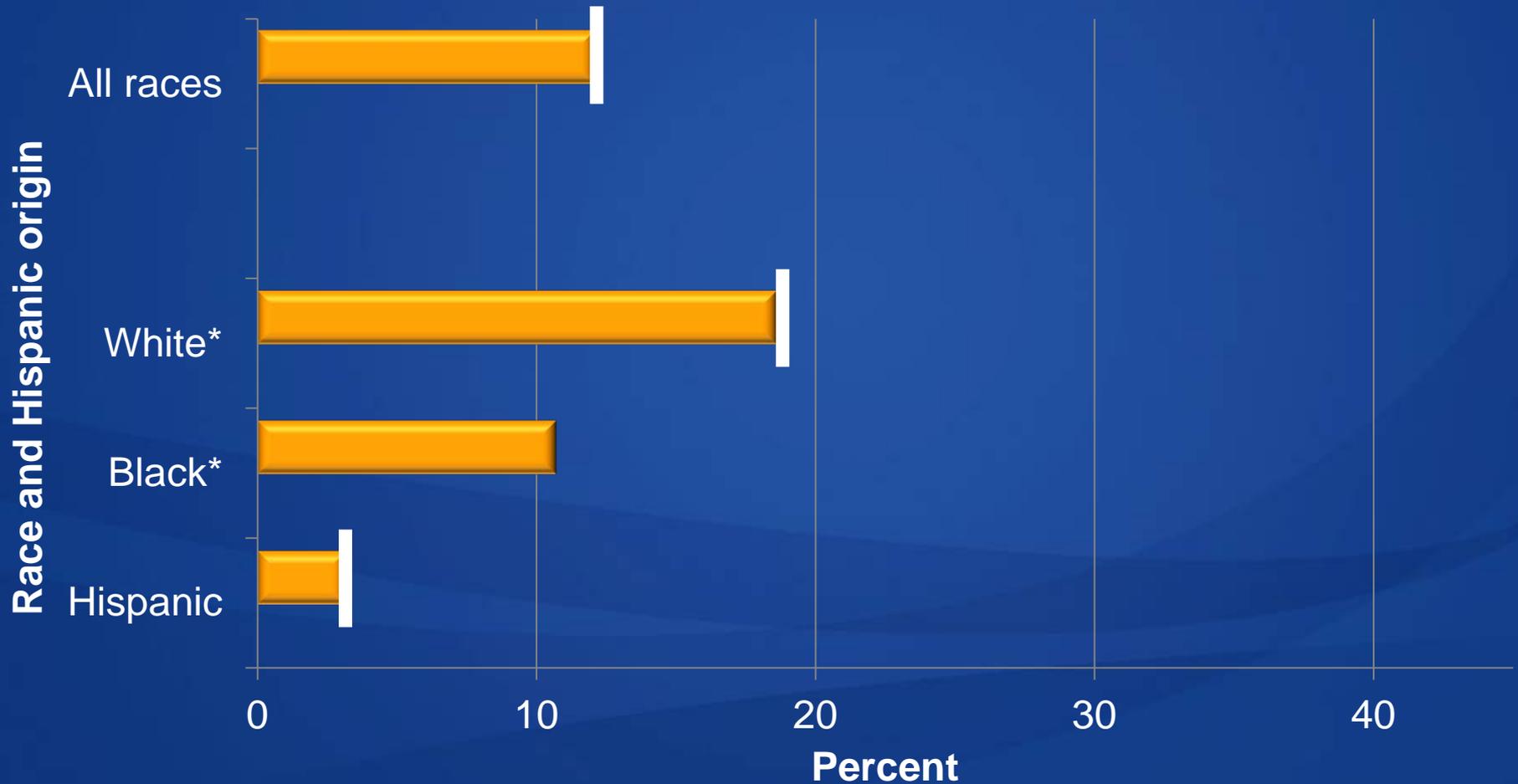
<sup>1</sup> Based on Institute of Medicine recommendation:  $\geq 40$  lbs for underweight,  $\geq 35$  lbs for normal weight,  $\geq 25$  lbs for overweight,  $\geq 20$  lbs for obese.

Source: CDC/NCHS, National Vital Statistics System

NOTE: Singletons only

# Smoked and quit prior to pregnancy: 25-state reporting area, preliminary 2009

Smoked 3 months prior to pregnancy      Quit prior to pregnancy

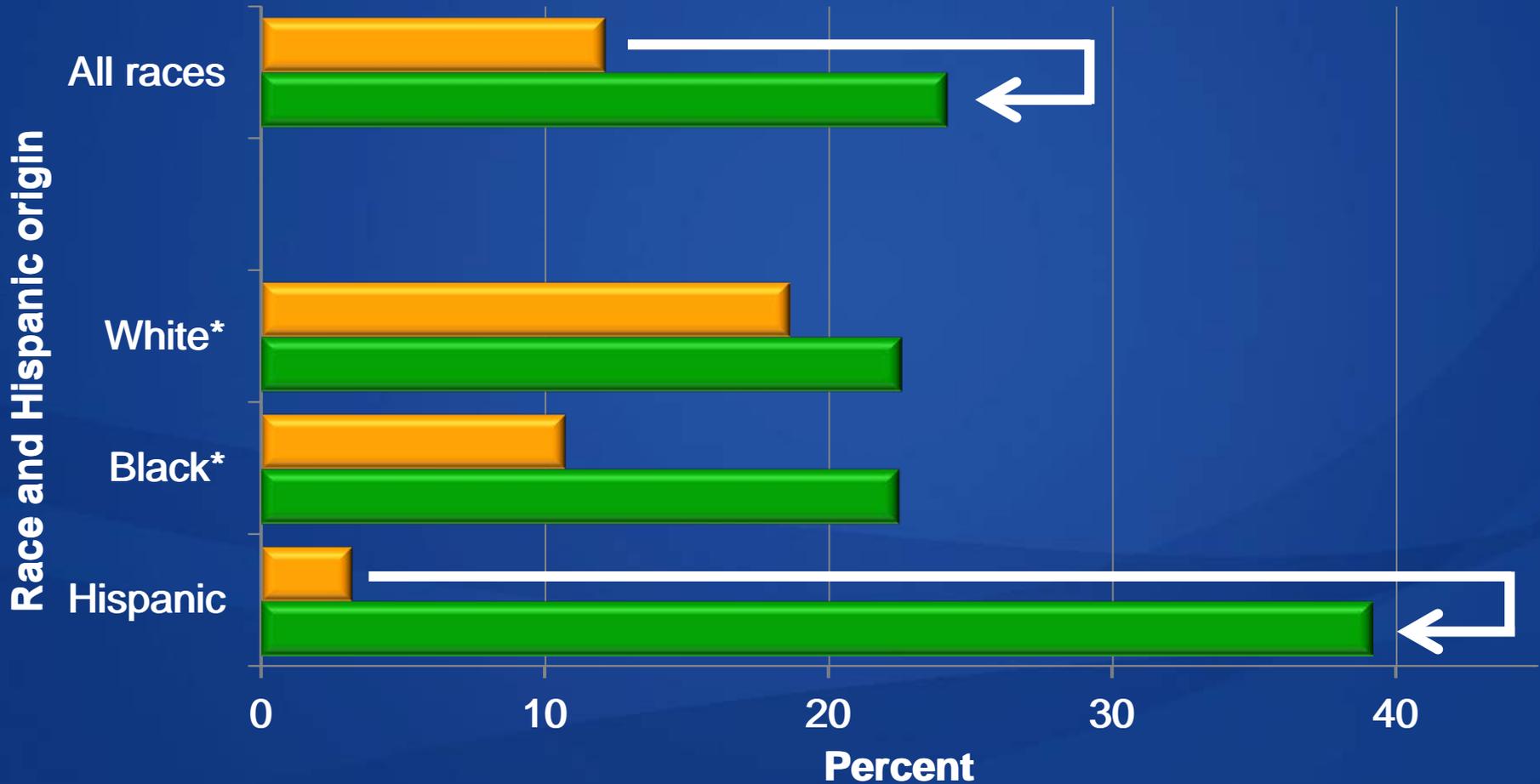


\* Non-Hispanic

Source: CDC/NCHS, National Vital Statistics System

# Smoked and quit prior to pregnancy: 25-state reporting area, preliminary 2009

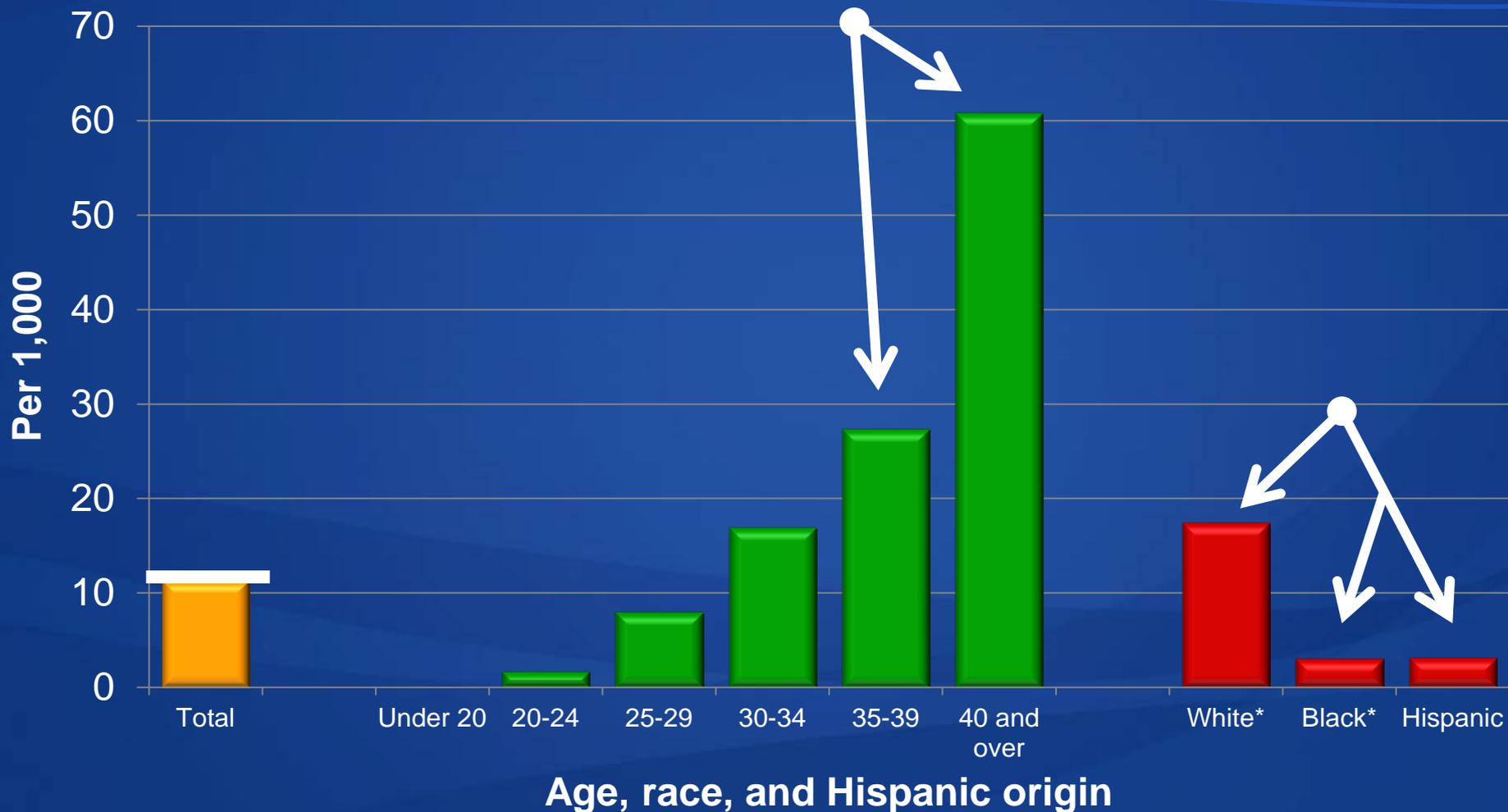
■ Smoked 3 months prior to pregnancy    ■ Quit prior to pregnancy



\* Non-Hispanic

Source: CDC/NCHS, National Vital Statistics System

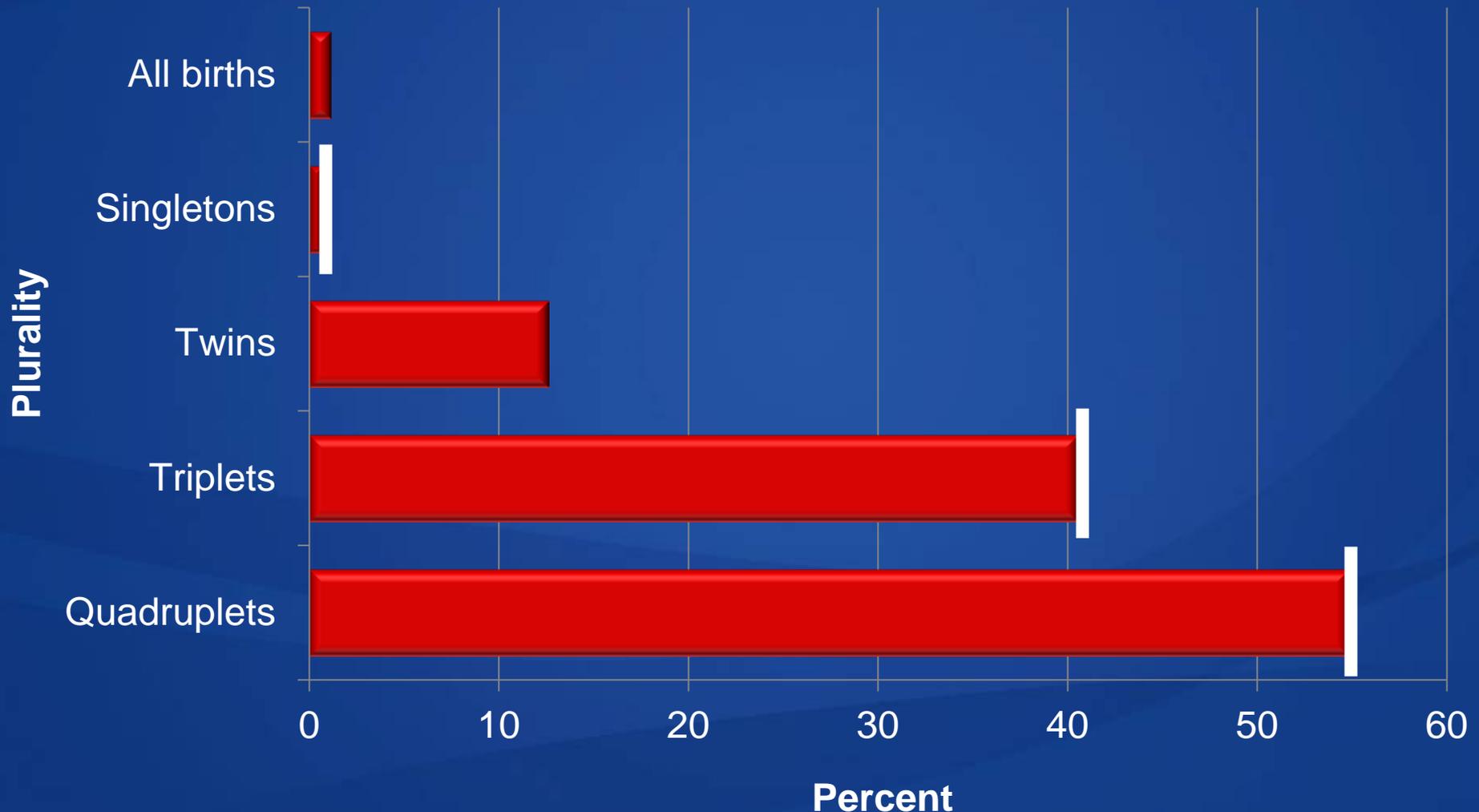
# Births resulting from infertility therapies, by age and race and Hispanic origin: 28-state reporting area, preliminary 2009



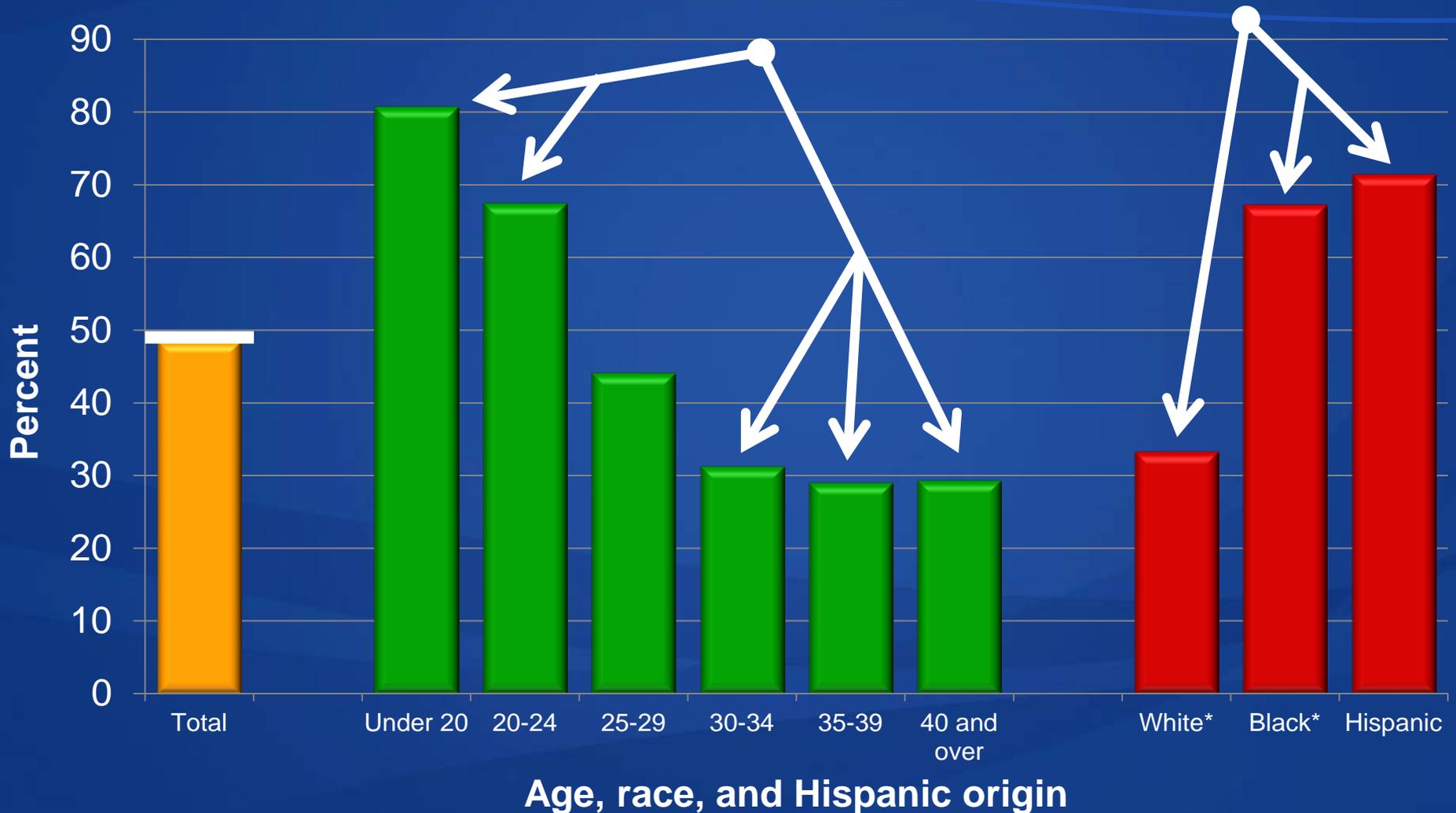
\* Non-Hispanic

Source: CDC/NCHS, National Vital Statistics System

# Births resulting from infertility therapies, by plurality: 28-state area, preliminary 2009



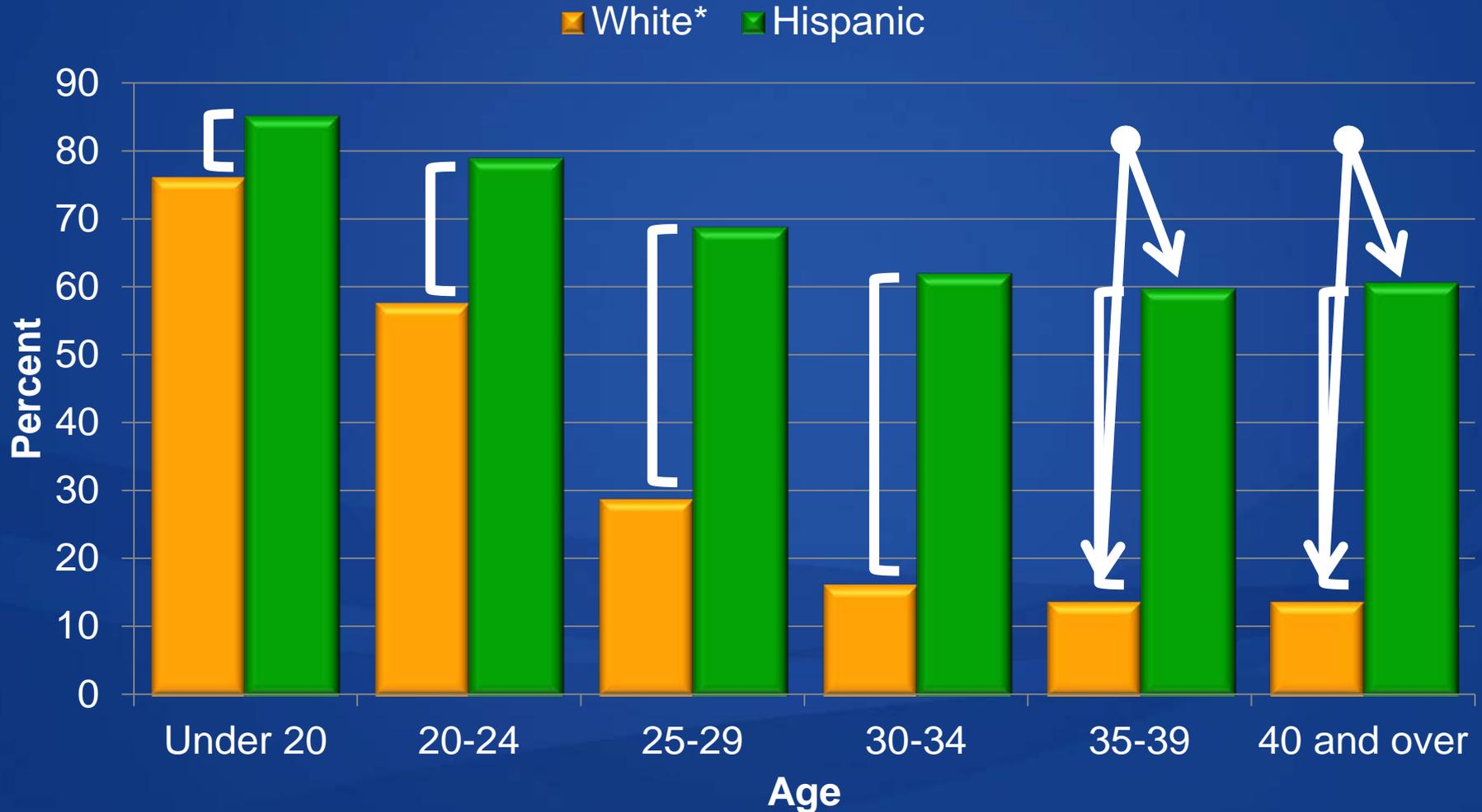
# Receipt of WIC food by age and race and Hispanic origin: 28-state reporting area, preliminary 2009



\* Non-Hispanic

Source: CDC/NCHS, National Vital Statistics System

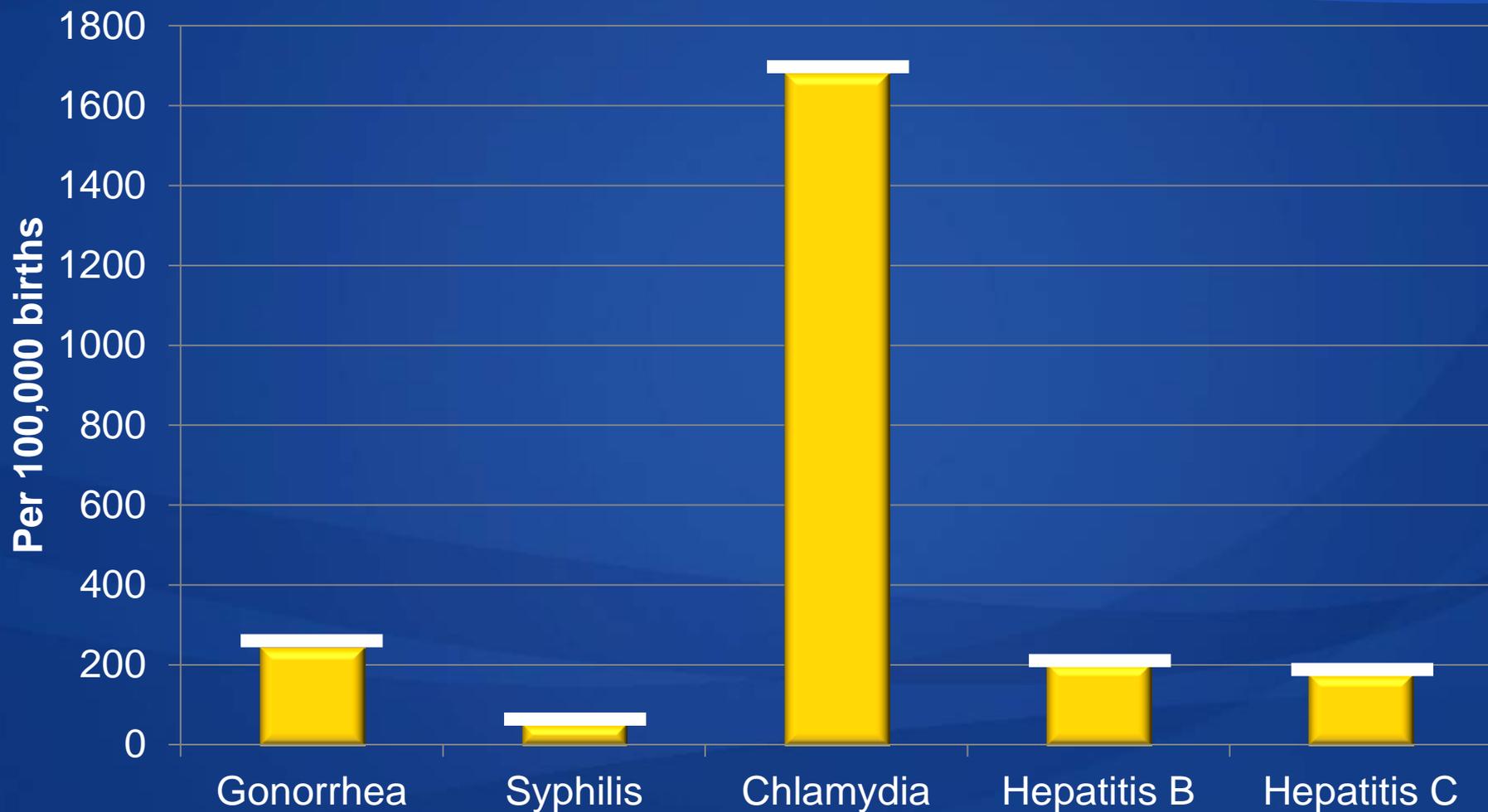
# Receipt of WIC food by age and race and Hispanic origin: 28-state reporting area, 2009



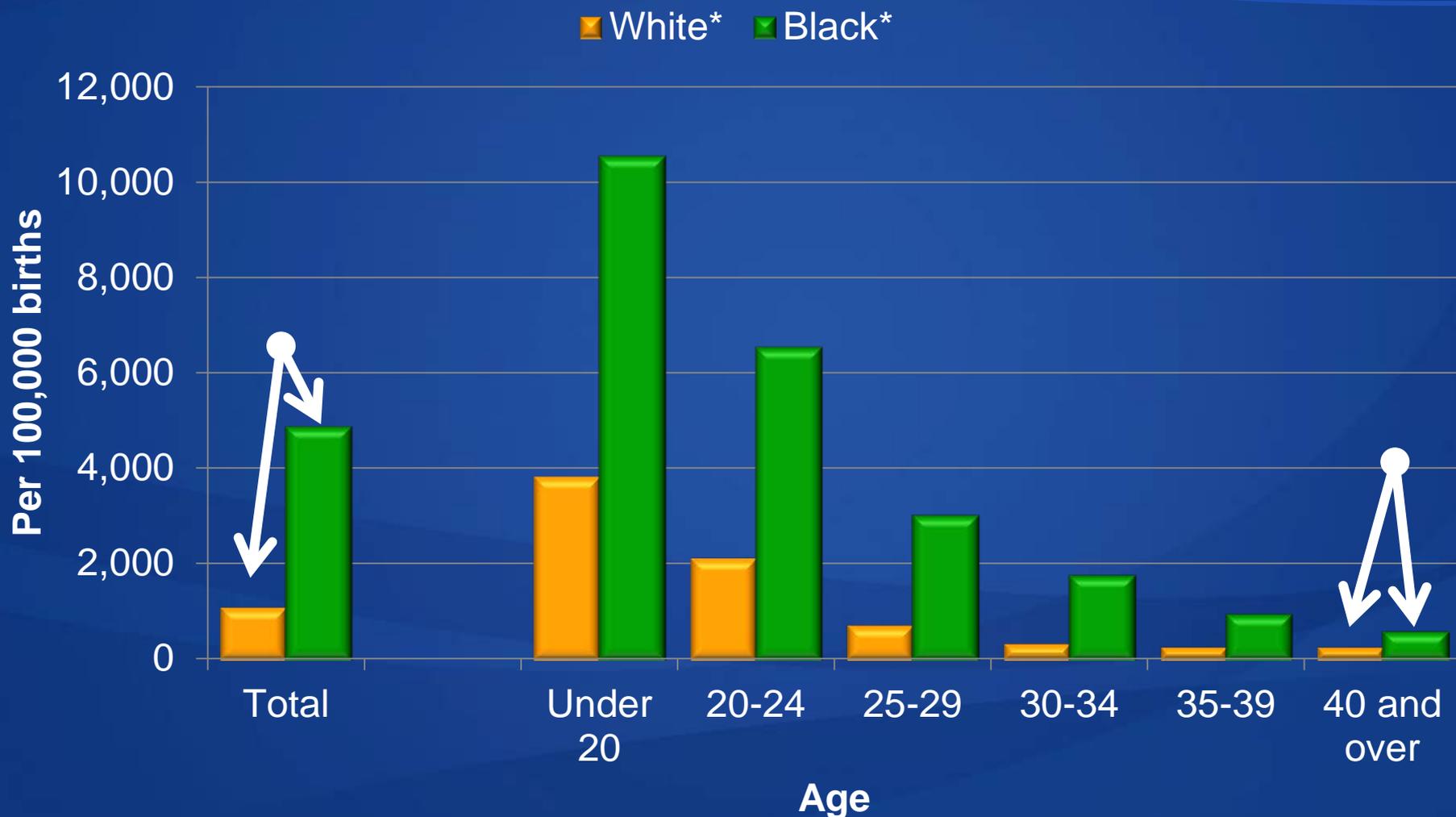
\* Non-Hispanic

Source: CDC/NCHS, National Vital Statistics System

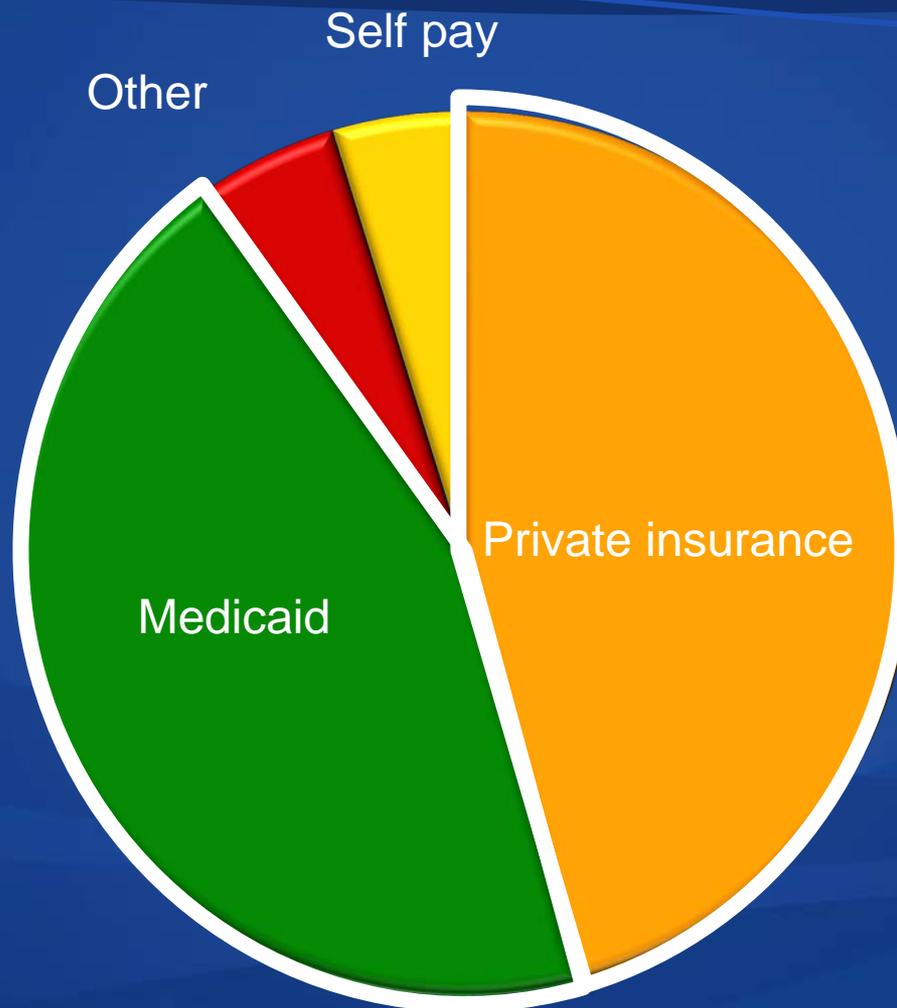
# Infections present and/or treated during this pregnancy: 28-state reporting area, 2009



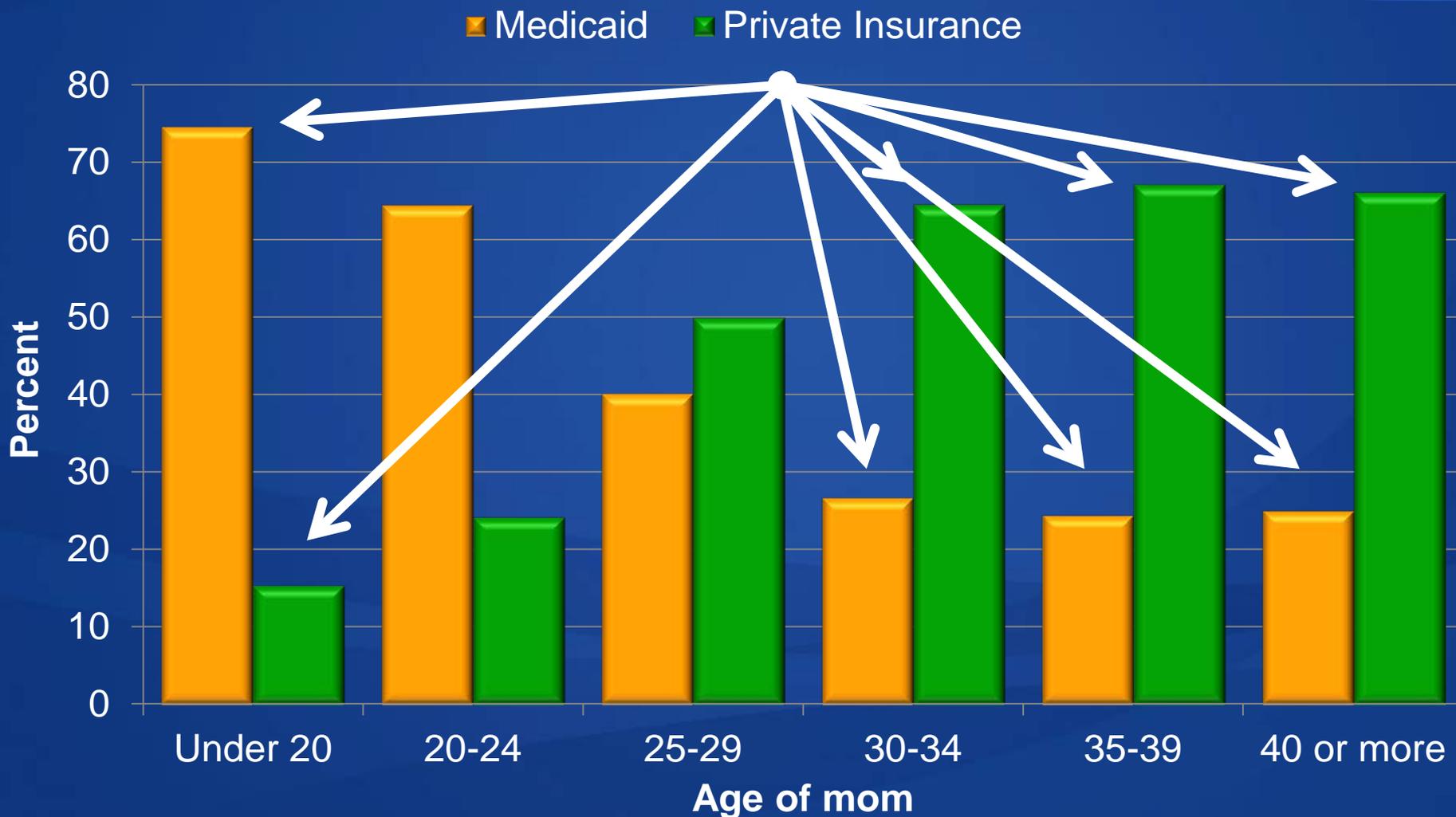
# Chlamydia by age and race and Hispanic origin: 28-state reporting area, 2009



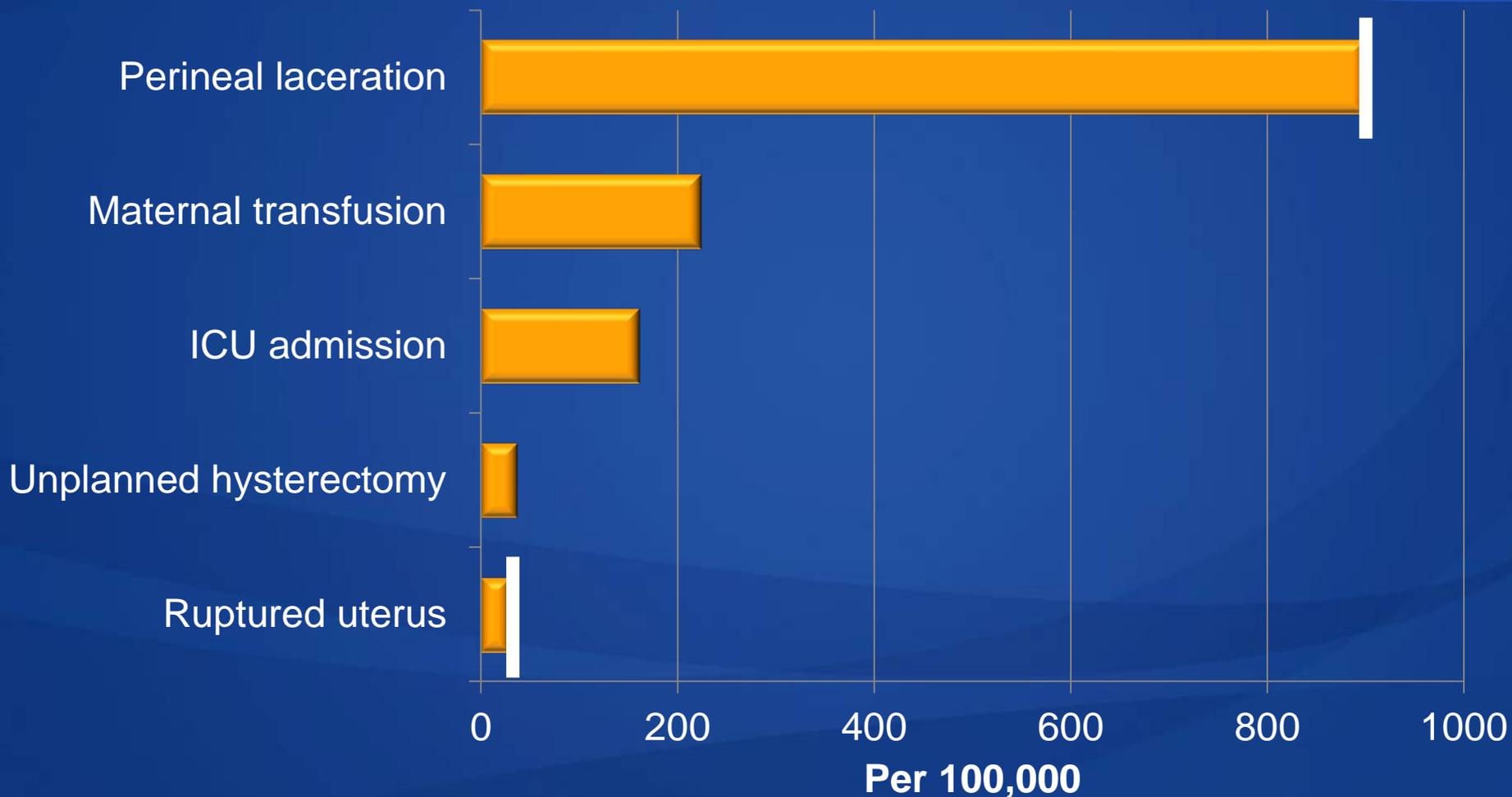
# Principal source of payment for delivery: 28-state reporting area, preliminary 2009



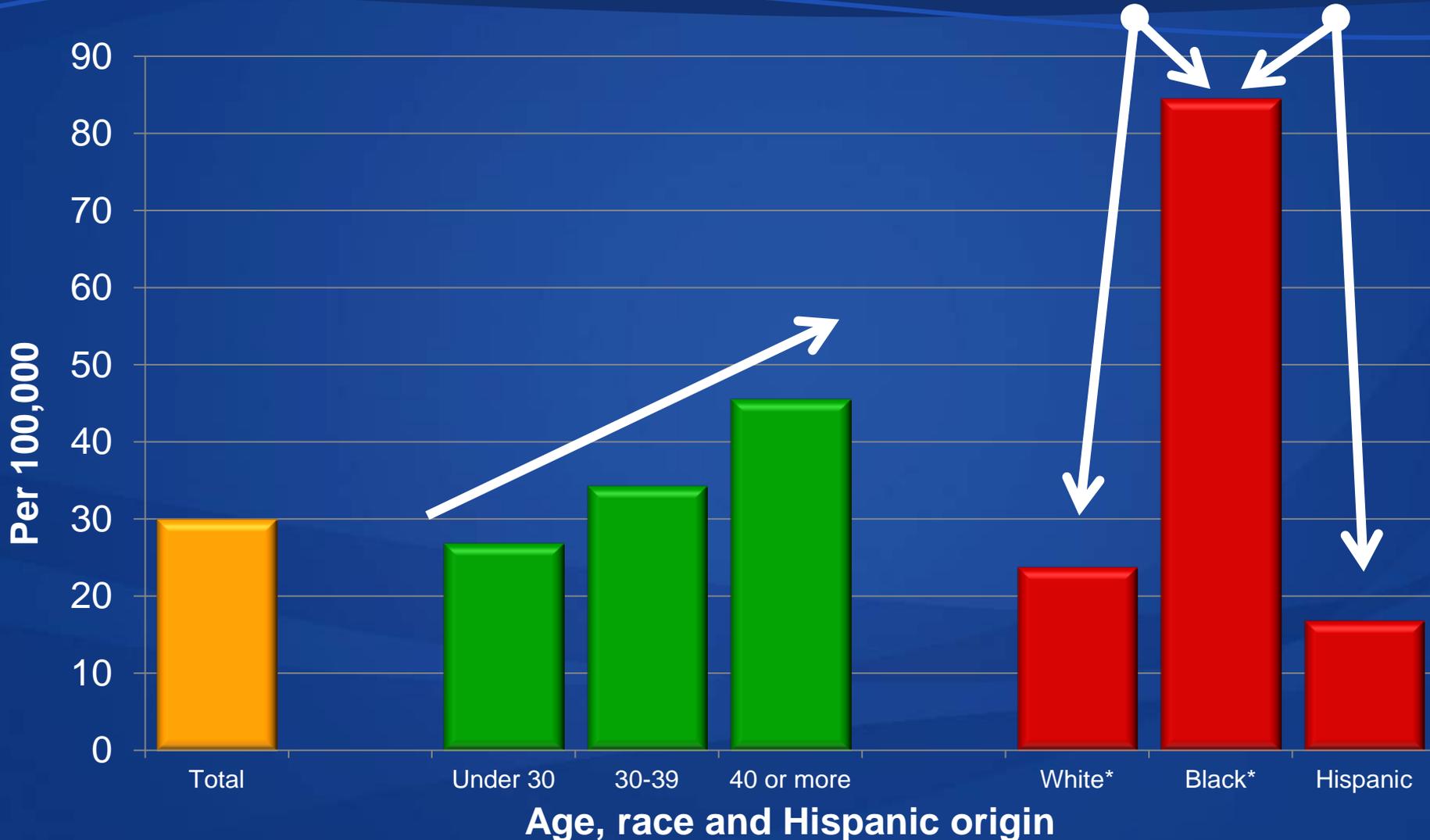
# Principal source of payment for delivery by age of mother: 28-state reporting area, preliminary 2009



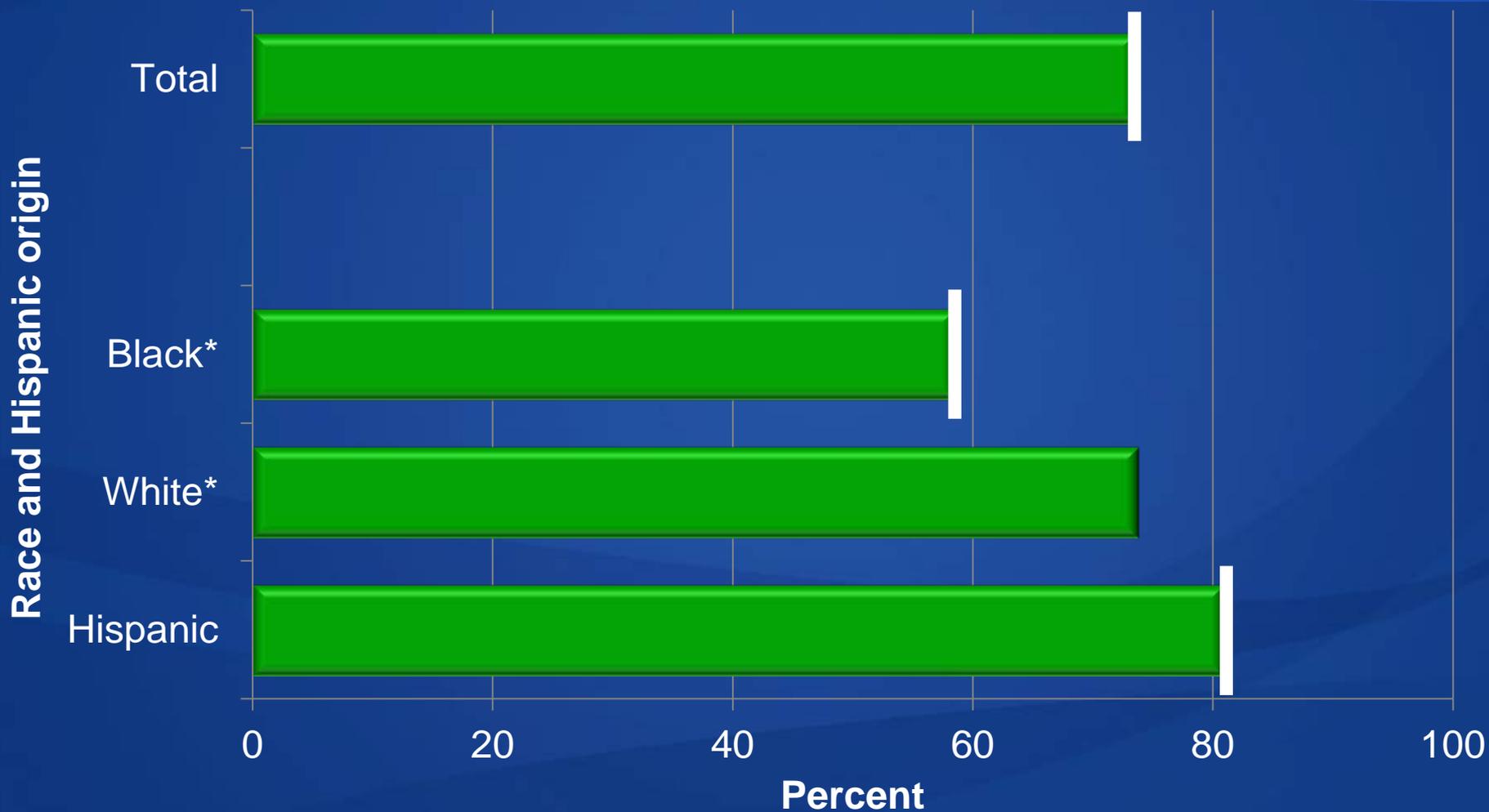
# Maternal morbidities: 28-state reporting area, preliminary 2009



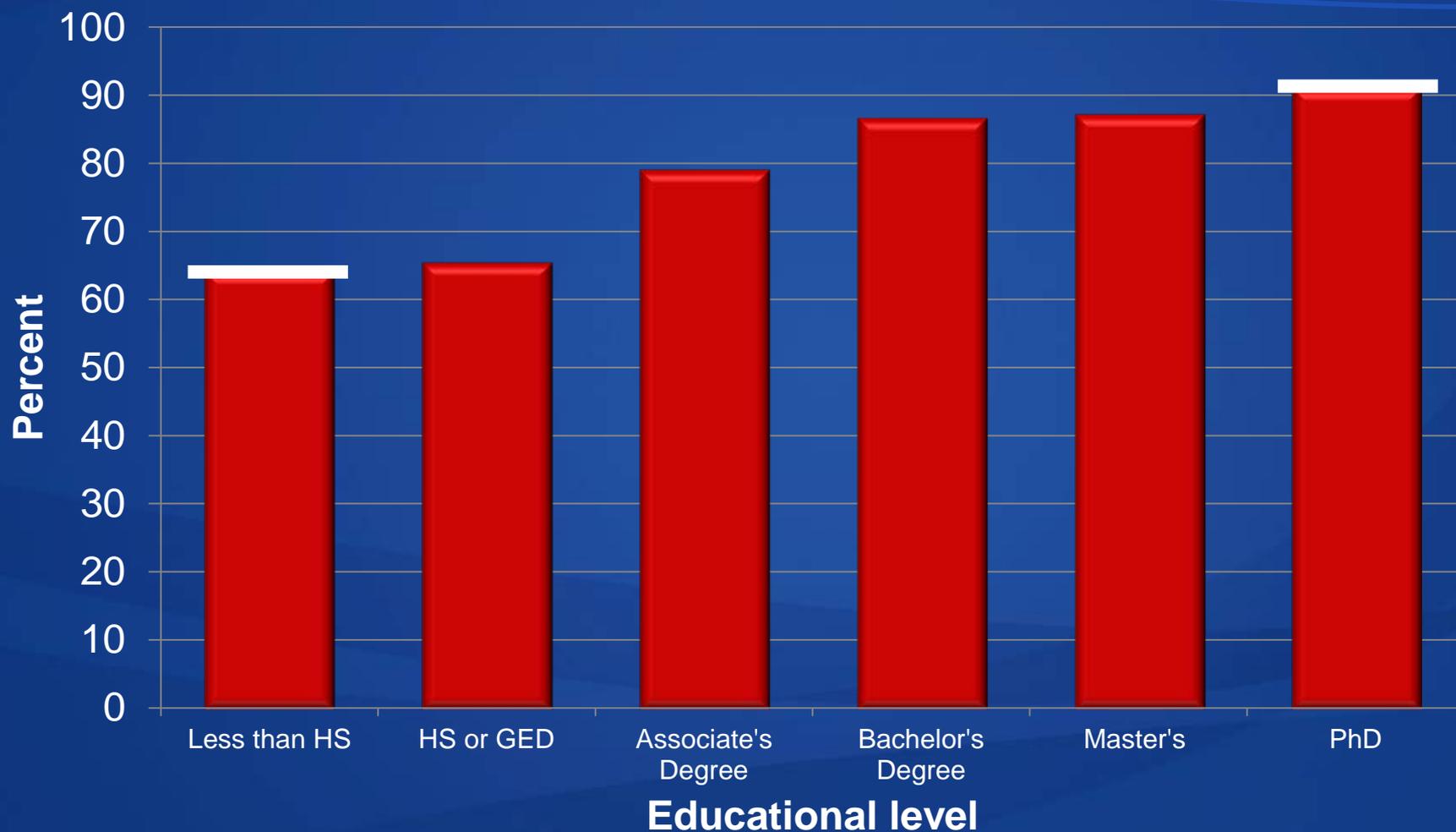
# Ruptured uterus by age and race and Hispanic origin: 28-state reporting area, preliminary 2009



# Infant breastfed at discharge from hospital by race and Hispanic origin: 28-state reporting area, preliminary 2009



# Infant breastfed at discharge from hospital by maternal educational attainment: 28-state reporting area, preliminary 2009



# DISCUSSION

# Data Quality

- Some items appear well-reported:
  - WIC
  - Chlamydia
  - Source of payment
  - BMI: Overweight
- Some items are likely underreported
  - Infertility treatment
  - Maternal morbidities
  - Smoking prior to pregnancy
  - Gonorrhea
  - BMI: Obese
  - Infant breastfed
- Differentials by age, race, and Hispanic origin compare well with other sources

# Data Quality

- Birth certificate vs. other data sources
  - Can be difficult to compare
    - 28-state reporting area vs. nationally representative samples
      - Birth certificate reporting area not nationally representative
      - Many states with higher rates are unrevised (e.g. infections)
    - Somewhat different populations
      - e.g. All births vs. Survey respondents
    - Somewhat different questions
      - e.g. Ever breastfed vs. during specific period (between birth and hospital discharge)
    - Different data years

# Data Quality

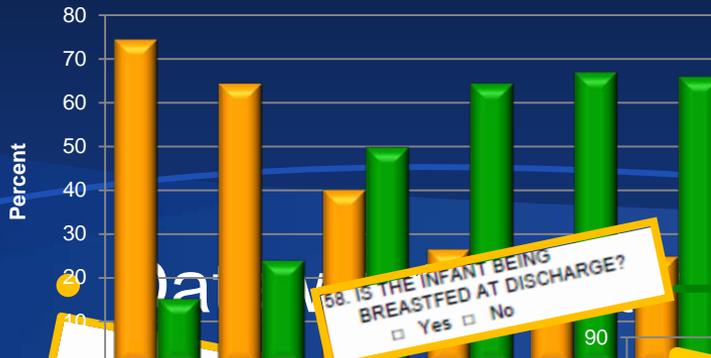
- Birth clerk interviews
  - Infertility treatment: availability of information
  - Infant breastfed: confusion on exclusivity and duration
- Good agreement with medical record
  - Interval since last live birth
  - Source of payment
  - Infant breastfed

# Stay tuned

- Steps to improve data quality
- Larger revised reporting area: national data by 2014
- Reports/data releases:
  - Births: Expanded data for 2009 (with new/new items)
  - Re-release the 2009 final birth file (with new/new items)
  - Report on quality of revised medical/health data for medical record review
  - 2010 Final file: Will re-release file with new/new items later this year

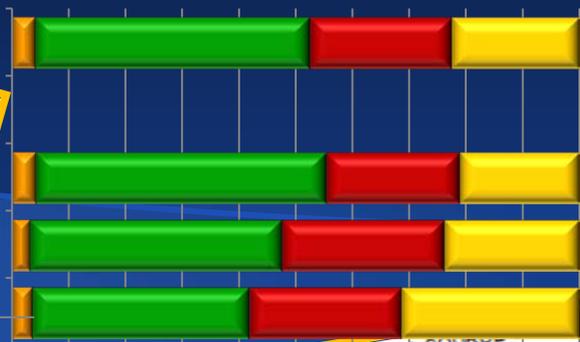
Medicaid Private Insurance

Underweight Normal Overweight Obese



34. DID MOTHER GET WIC FOOD FOR HERSELF DURING THIS PREGNANCY?  Yes  No

58. IS THE INFANT BEING BREASTFED AT DISCHARGE?  Yes  No



National Health Statistics



Births: Final data for 2009

Final data for 2009

47. MATERNAL MORBIDITY (Check all that apply) (Complications associated with labor and delivery)
- Maternal transfusion
  - Third or fourth degree perineal laceration
  - Ruptured uterus
  - Unplanned hysterectomy
  - Admission to intensive care unit
  - Unplanned operating room procedure following delivery
  - None of the above

36. PRINCIPAL SOURCE OF PAYMENT FOR THIS DELIVERY

- Private Insurance
- Medicaid
- Self-pay
- Other (Specify) \_\_\_\_\_



41. Pregnancy resulted from infertility treatment-if yes, check all that apply:

- Fertility-enhancing drugs, Artificial insemination or Intrauterine insemination
- Assisted reproductive technology (e.g., in vitro fertilization (IVF), gamete intrafallopian transfer (GIFT))

42. INFECTIONS PRESENT AND/OR TREATED DURING THIS PREGNANCY (Check all that apply)

- Gonorrhea
- Syphilis
- Chlamydia
- Hepatitis B
- Hepatitis C
- None of the above



Thank you

