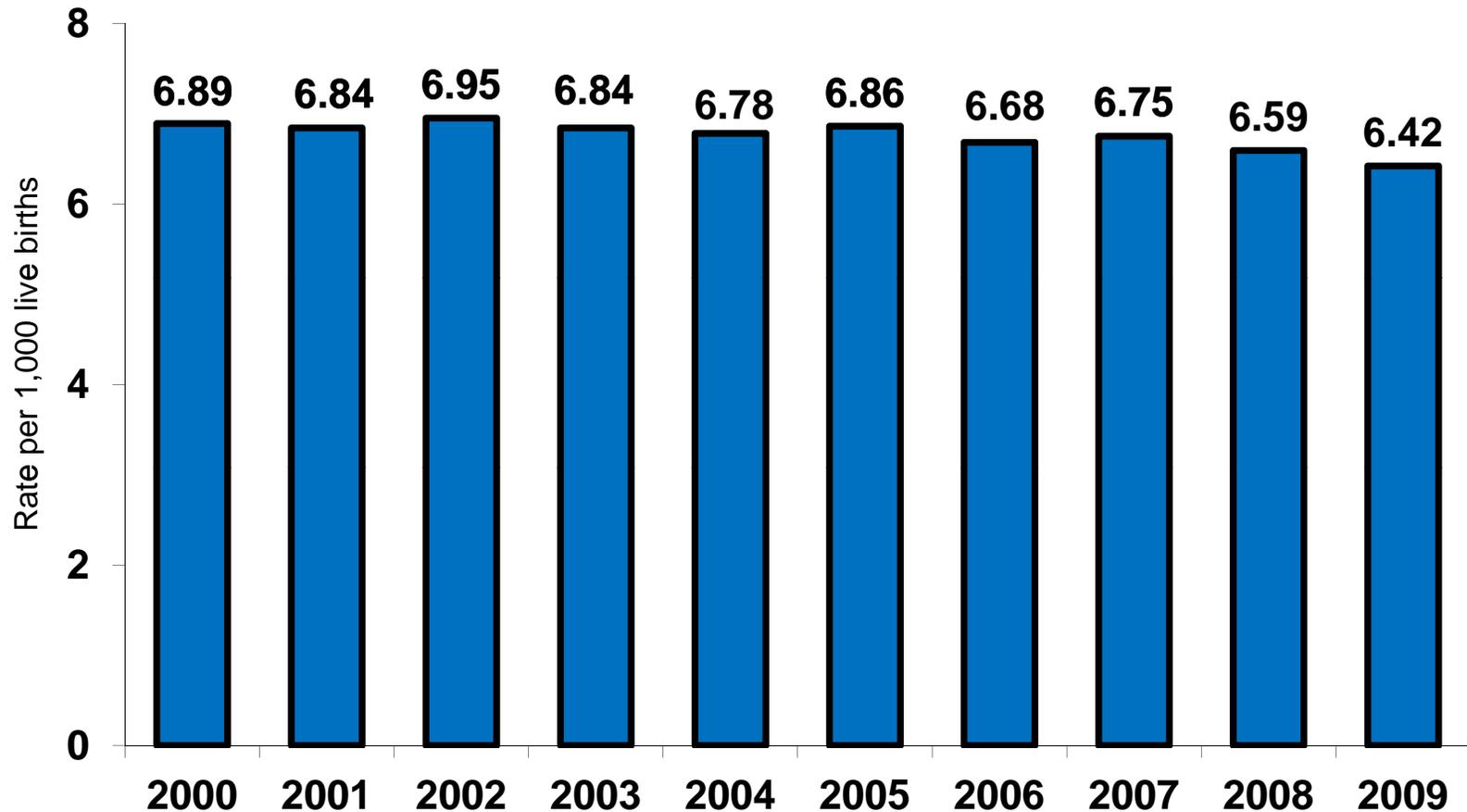


# **Understanding Racial and Ethnic Disparities in U.S. Infant Mortality Rates**

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Division of Vital Statistics, NCHS

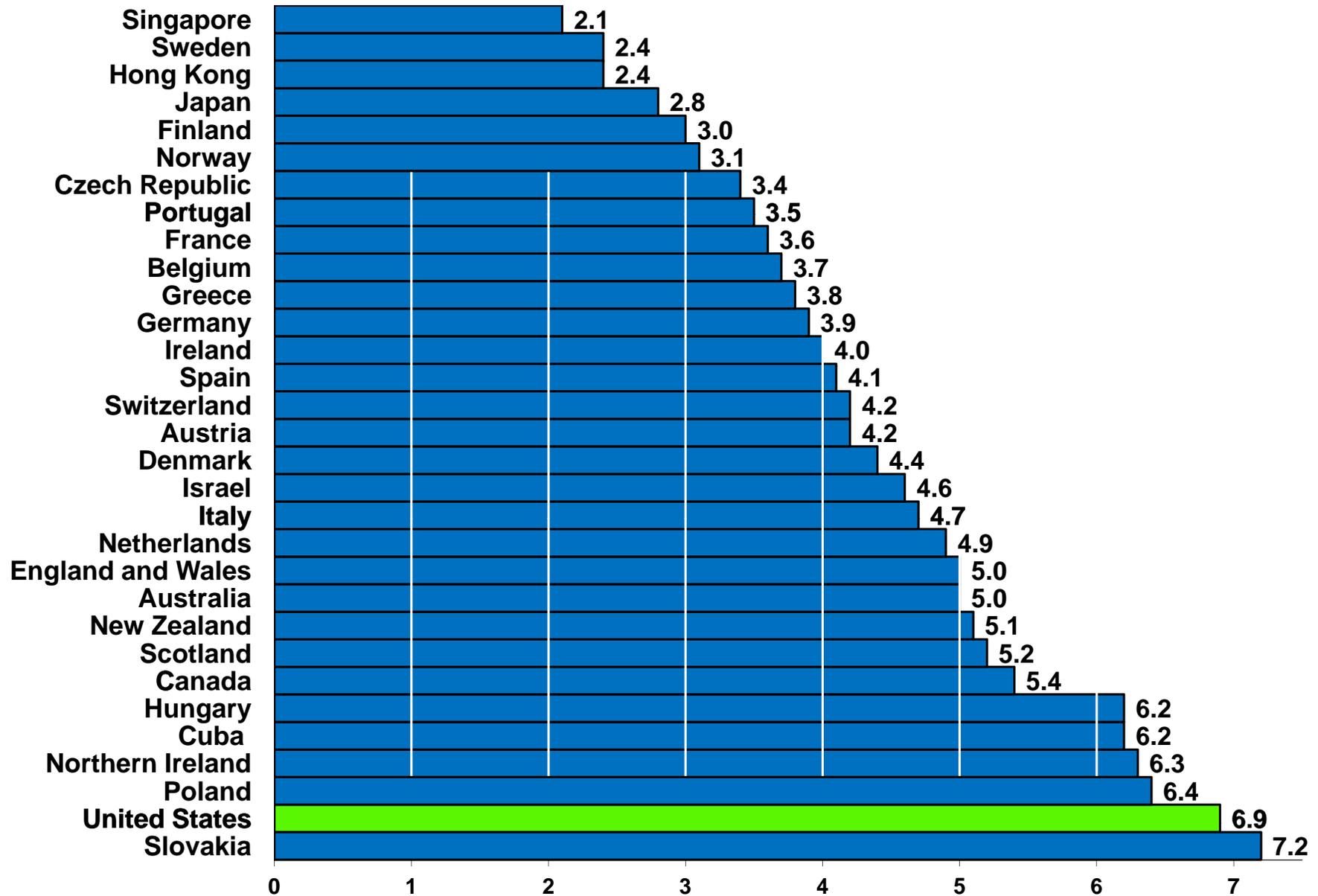
Presentation to the Board of Scientific Counselors  
September 22, 2011

# Infant mortality rate, United States, 2000-2009



Source: 2000-2007 data are from the linked birth/infant death data sets. 2008 and 2009 data are preliminary data from the main mortality files.

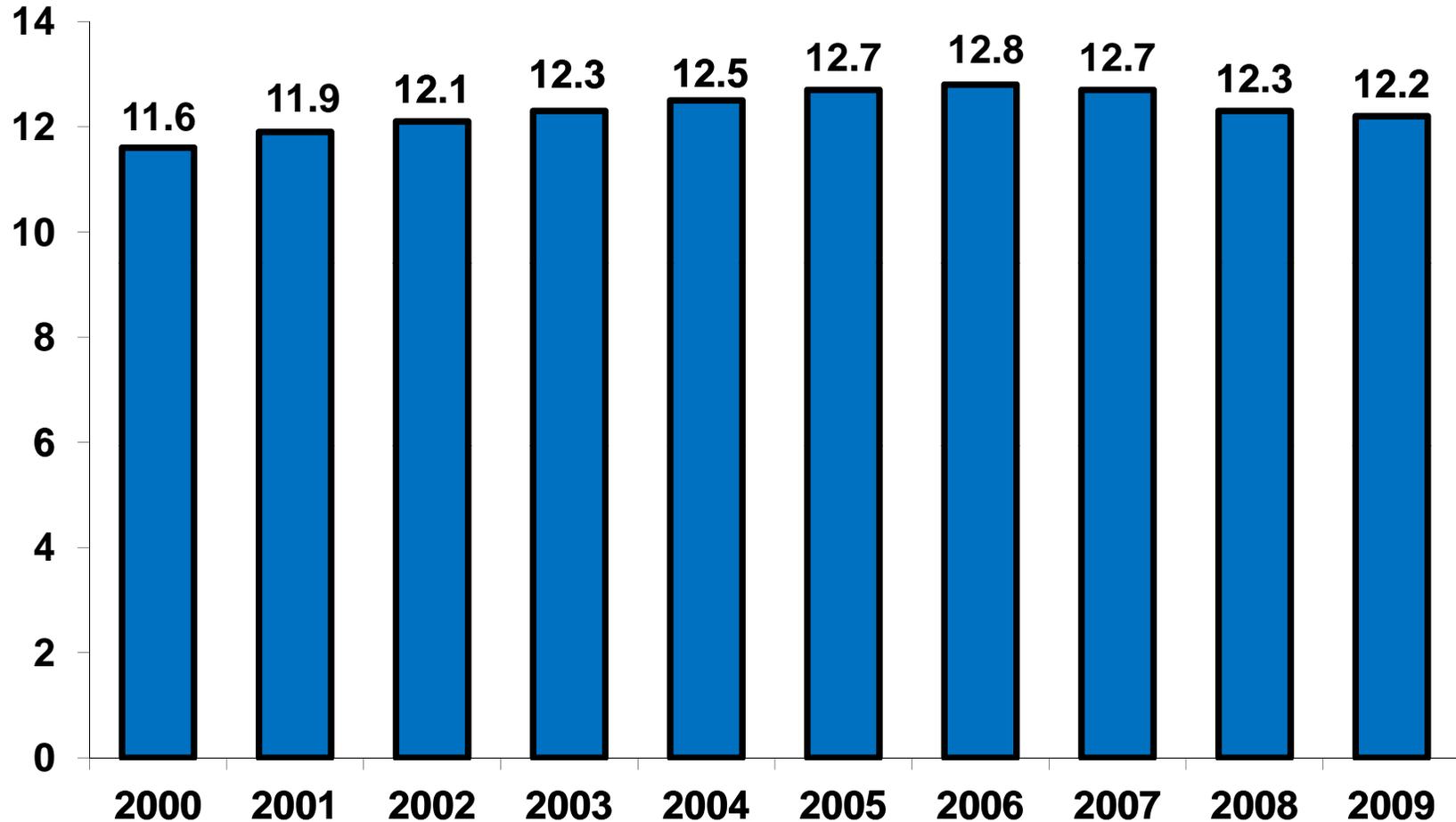
Figure 1. Infant mortality rates, selected countries, 2005



Source: Health, United States, 2008

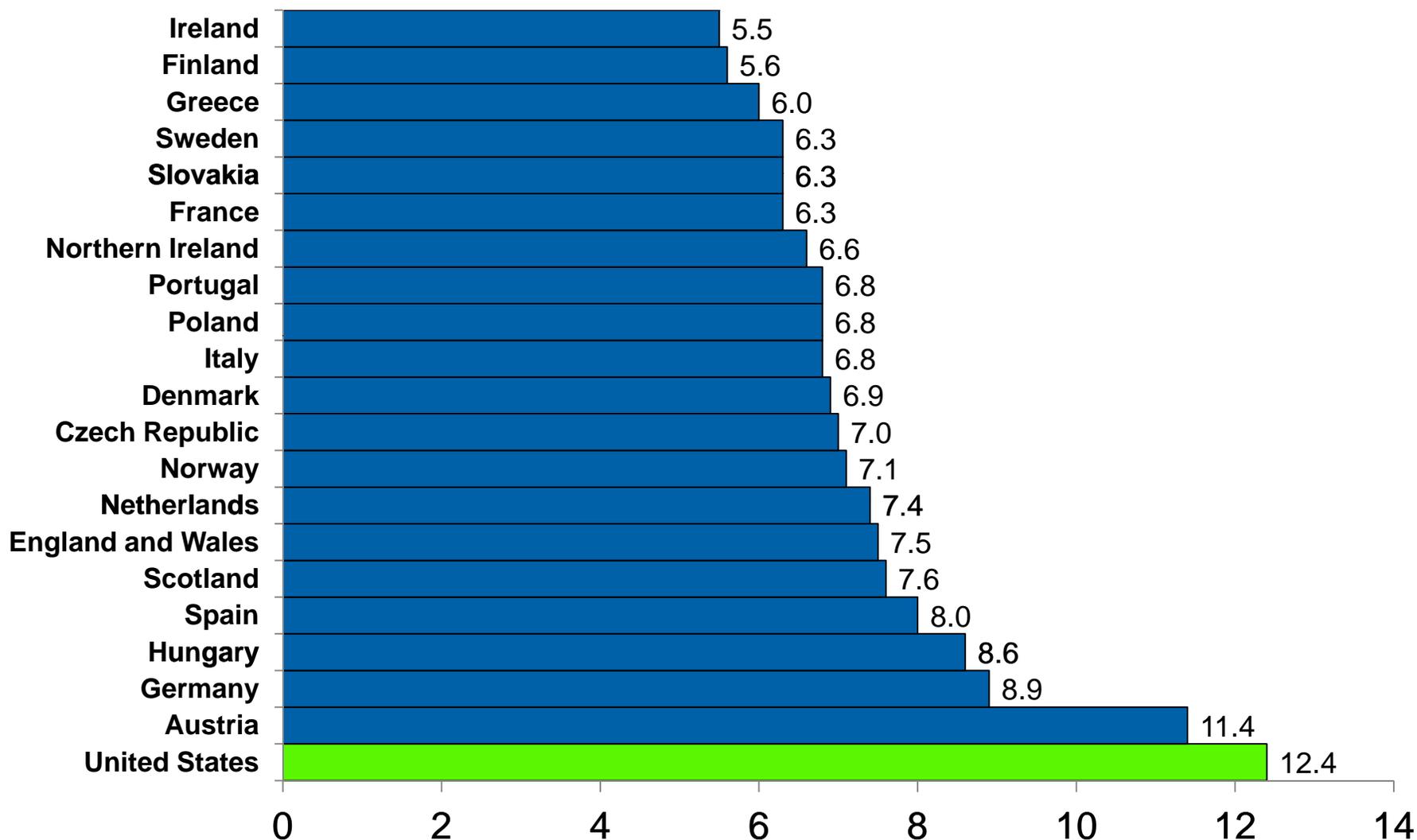
Rate per 1,000 live births

# Percentage of preterm births, US, 2000-2009



Source: Birth data from the National Vital Statistics System; 2009 data are preliminary.

Figure 3. Percentage of preterm births, United States and selected European countries, 2004



Note: Excludes births at <22 weeks of gestation to promote comparability between countries. Preterm births are those from 22 to 36 weeks of gestation. Source: NCHS linked birth/infant death data set (for US data), and European Perinatal Health Report (for European data).

*Centers for Disease Control and Prevention*

**MMWR**

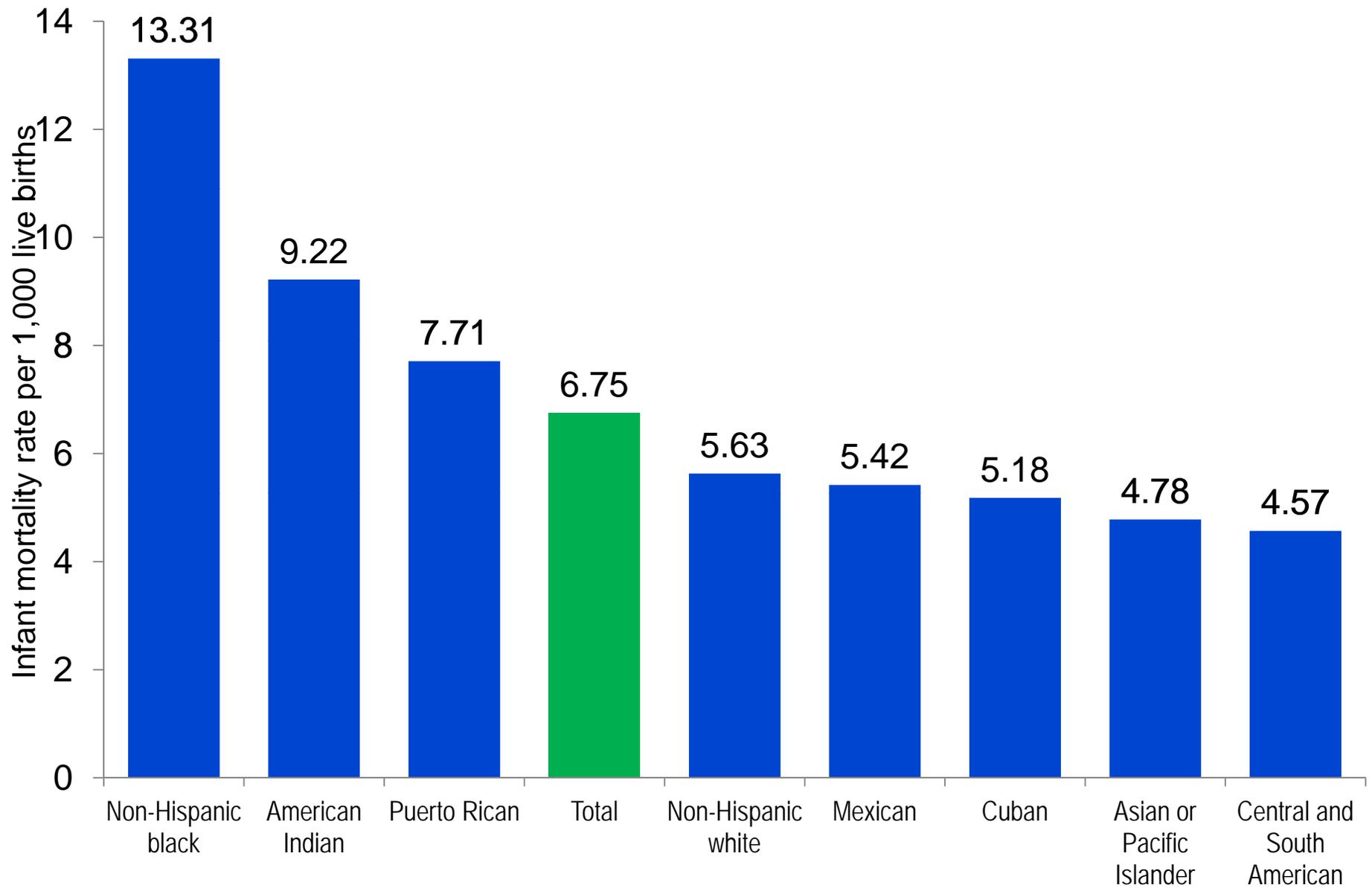
Morbidity and Mortality Weekly Report

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**CDC Health Disparities and Inequalities Report —  
United States, 2011**

Figure 1. Infant mortality rates by race and ethnicity of mother, US, 2007

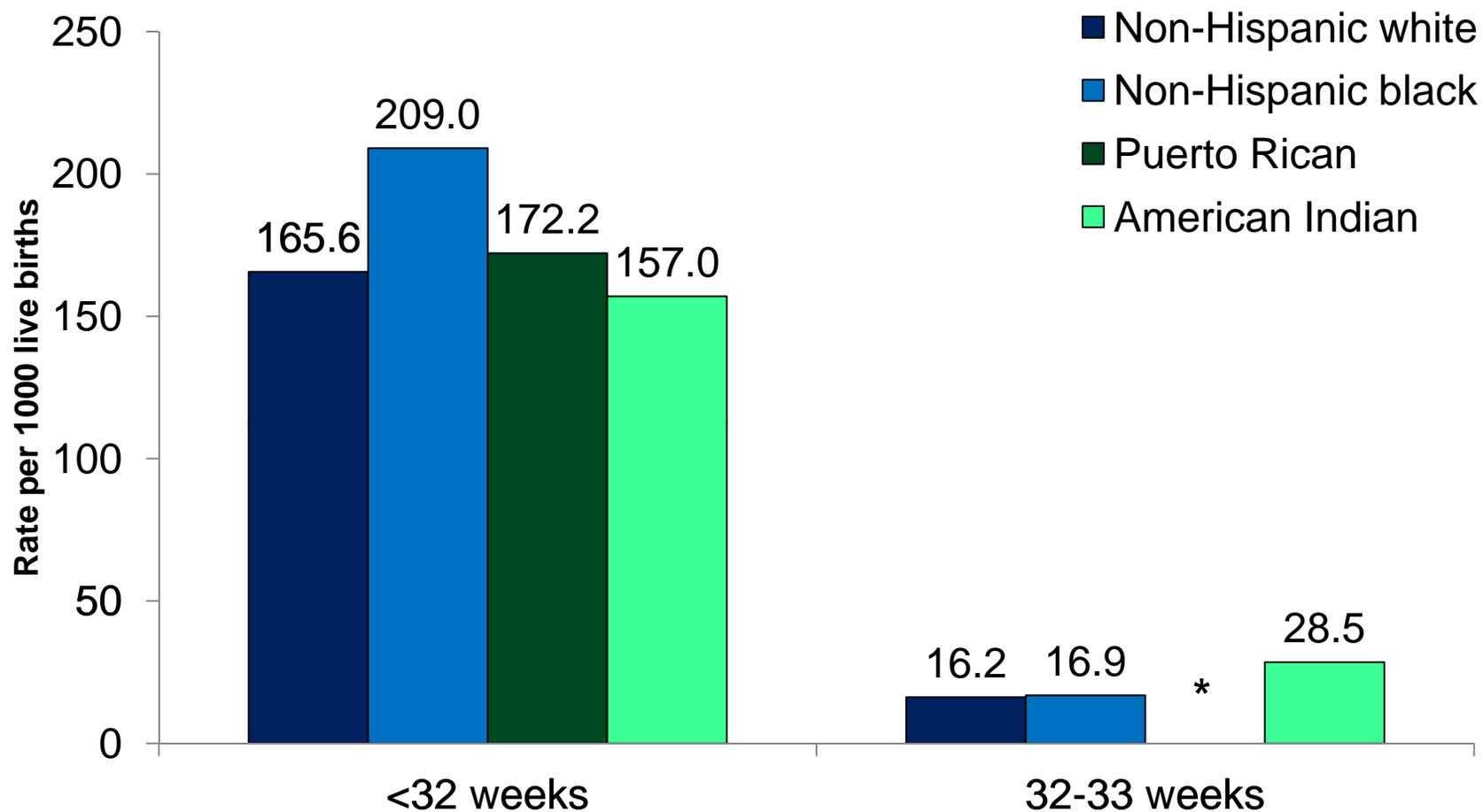


Source: CDC/NCHS linked birth/infant death data set, 2007.

# Infant mortality can be partitioned into two key components:

1. Gestational age-specific infant mortality rates (i.e. the mortality rate for infants at a given gestational age).
2. Distribution of births by gestational age.

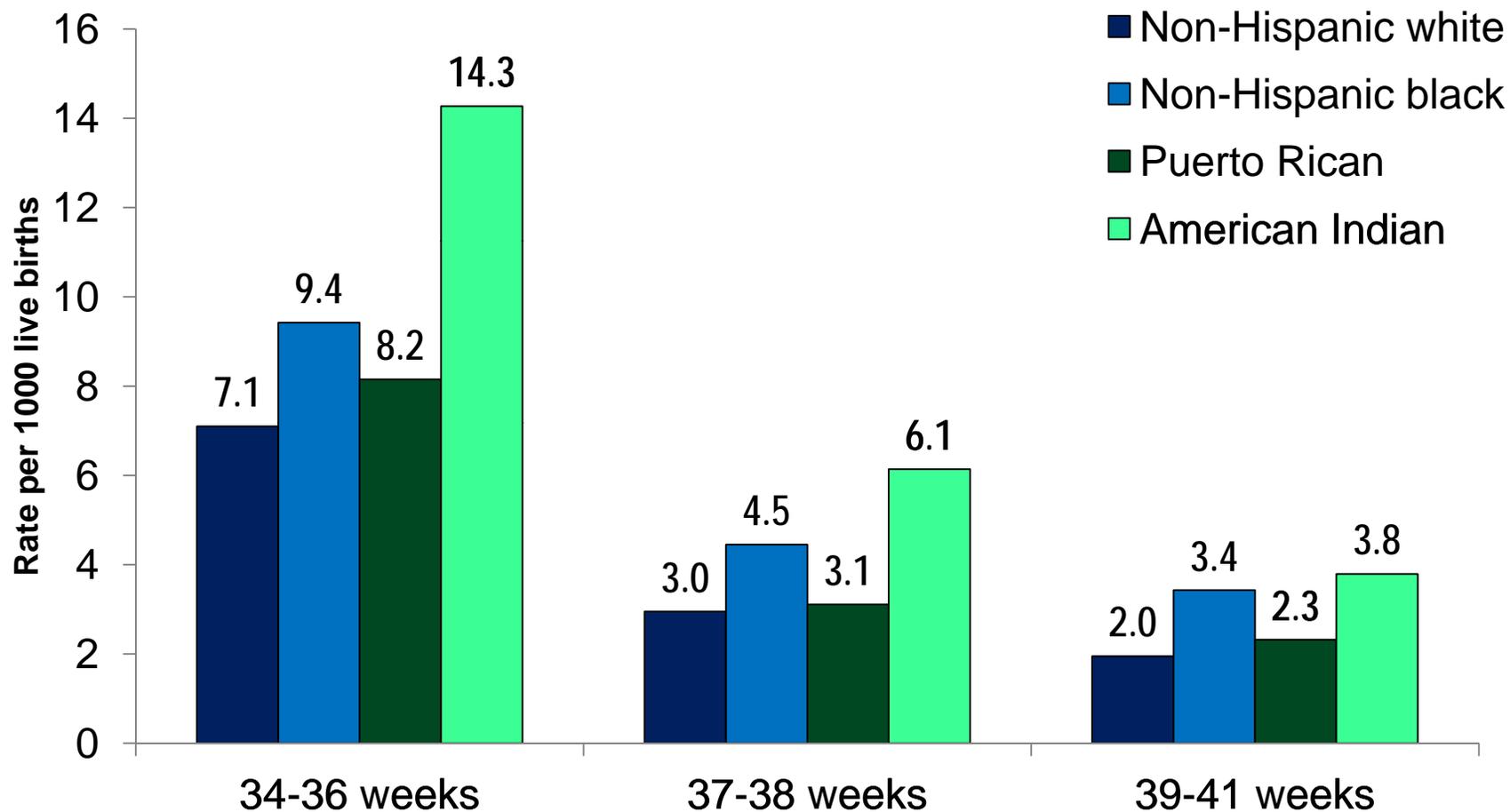
# Gestational age-specific infant mortality rates by race/ethnicity, US, 2007



Source: CDC/NCHS linked birth/infant death data set, 2007

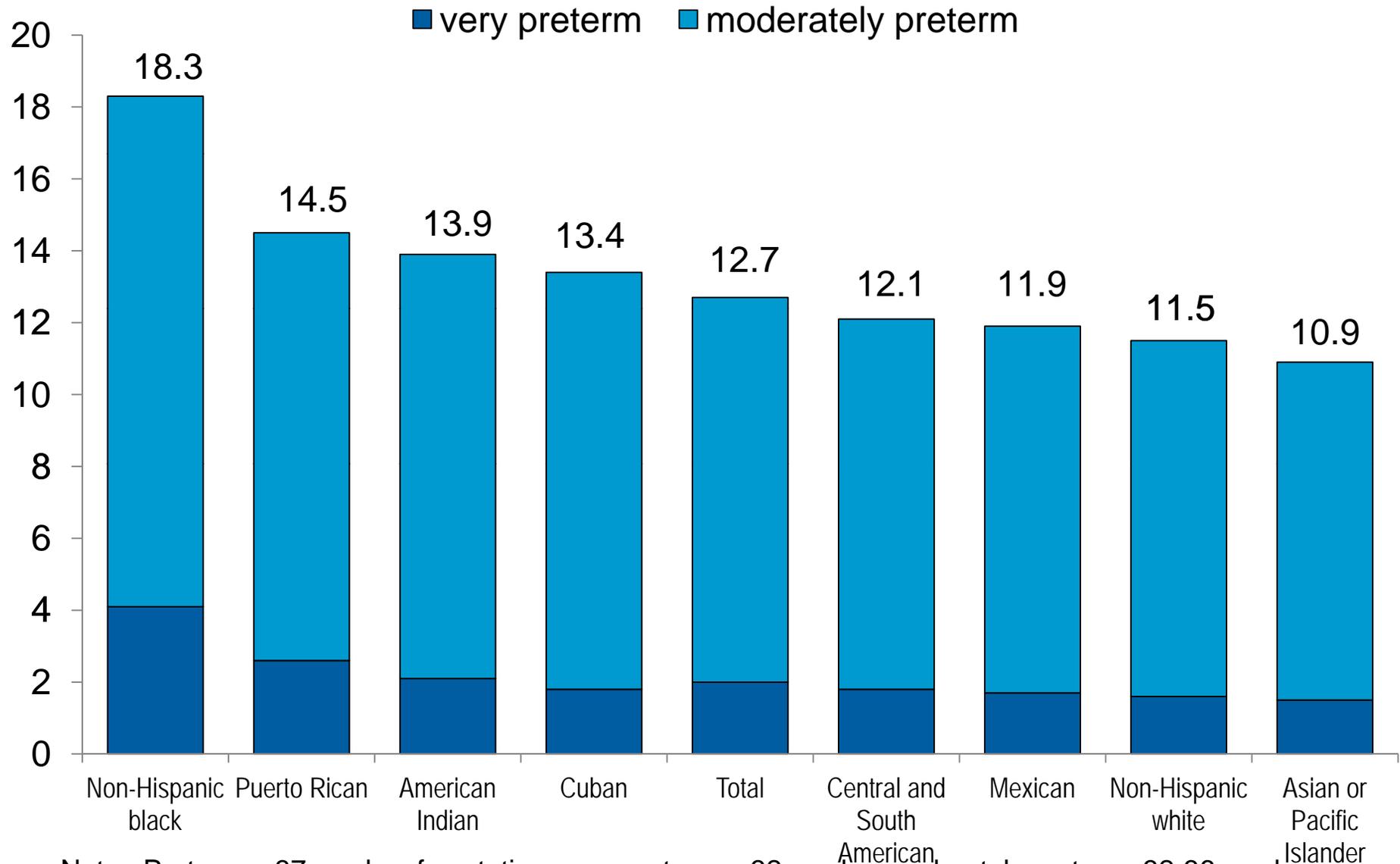
\* Figure does not meet standard of reliability or precision: based on <20 deaths in the numerator.

# Gestational age-specific infant mortality rates by race/ethnicity, US, 2007



Source: CDC/NCHS, linked birth/infant death data set, 2007

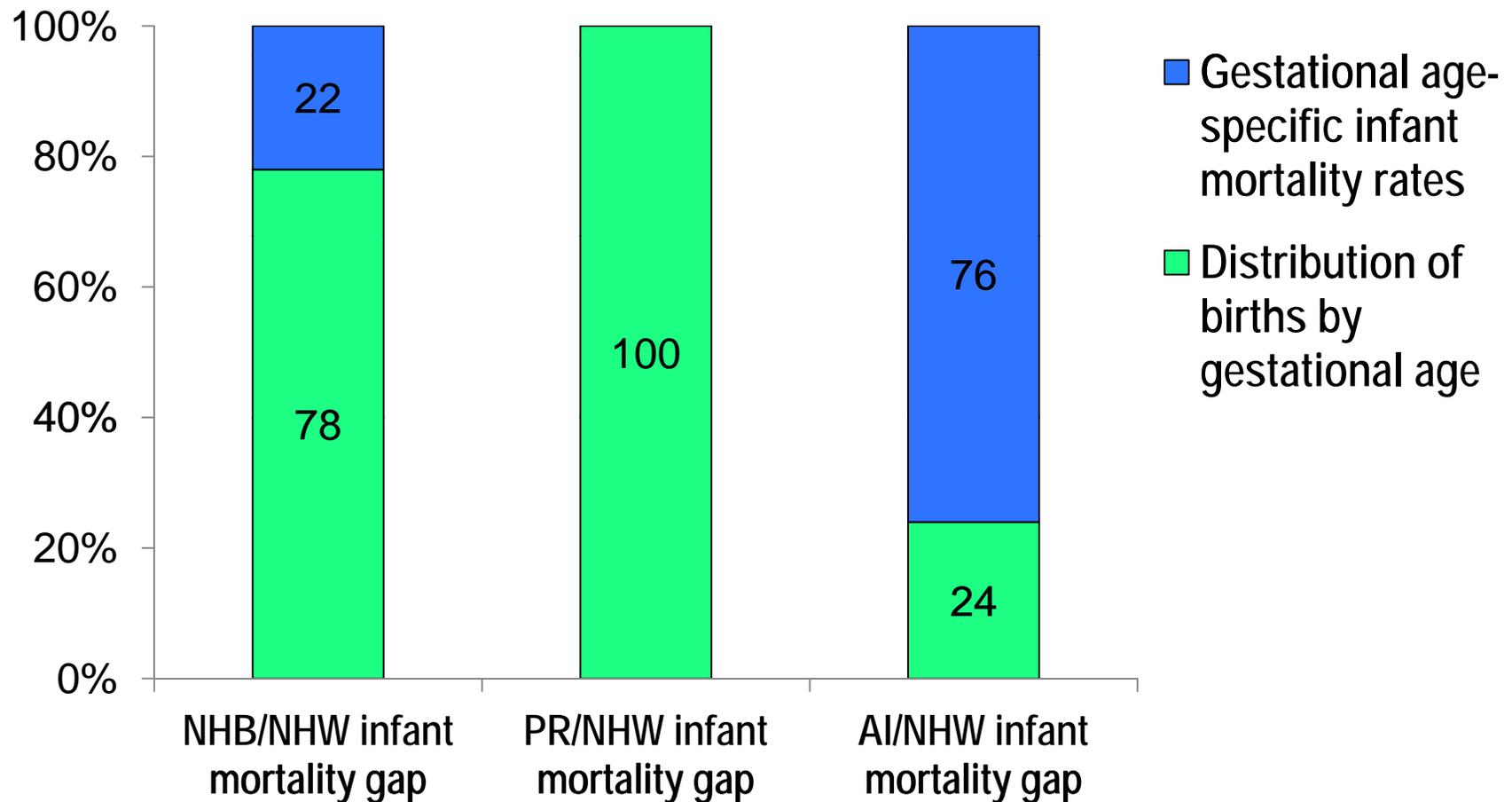
Figure 2. Percentage of preterm births by race and Hispanic origin of mother, United States, 2007



Note: Preterm: <37 weeks of gestation; very preterm: <32 weeks; moderately preterm: 32-36 weeks

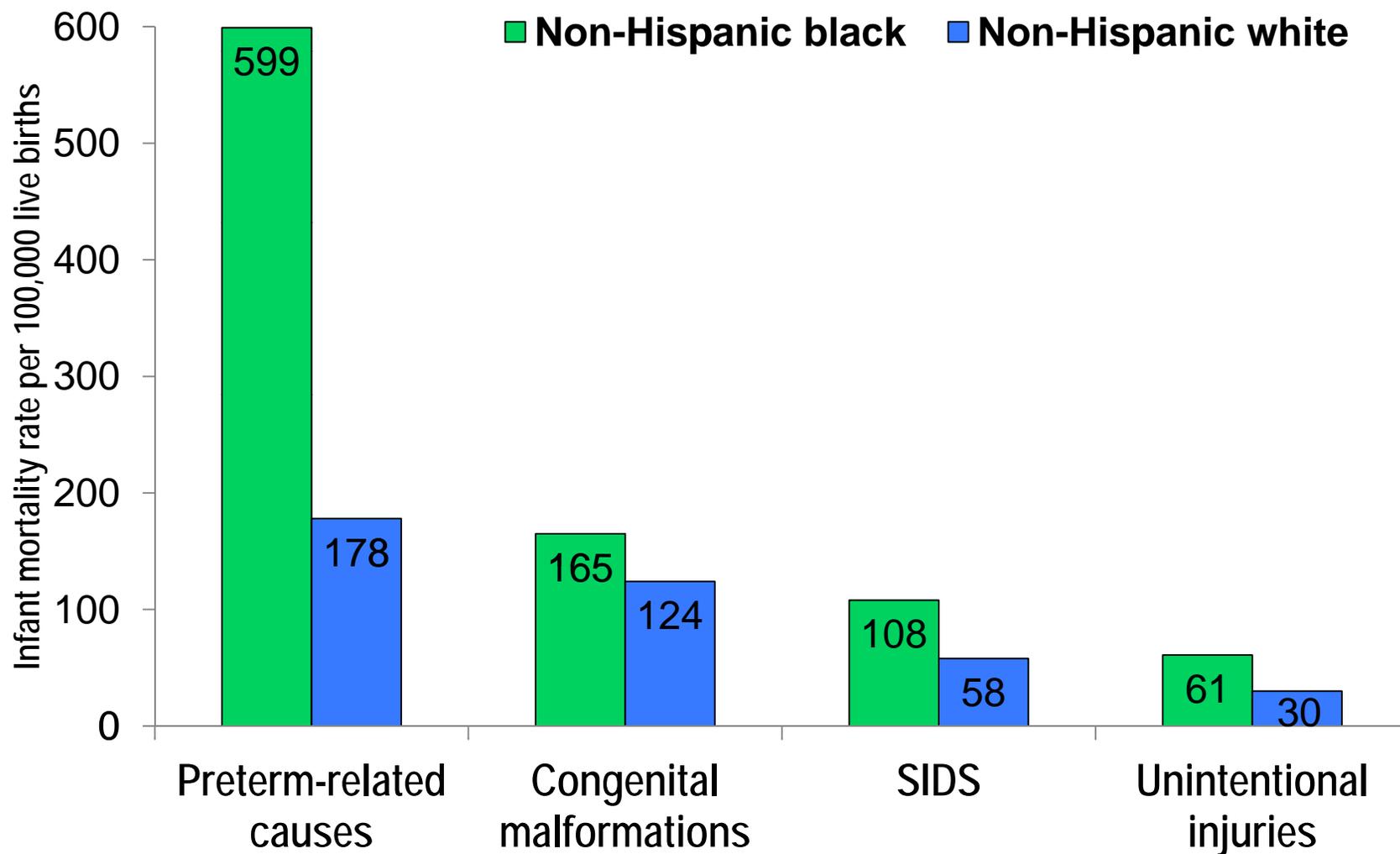
Source: CDC/NCHS linked birth/infant death data set, 2007

## Percent contribution of two factors to race/ethnic differences in infant mortality rates



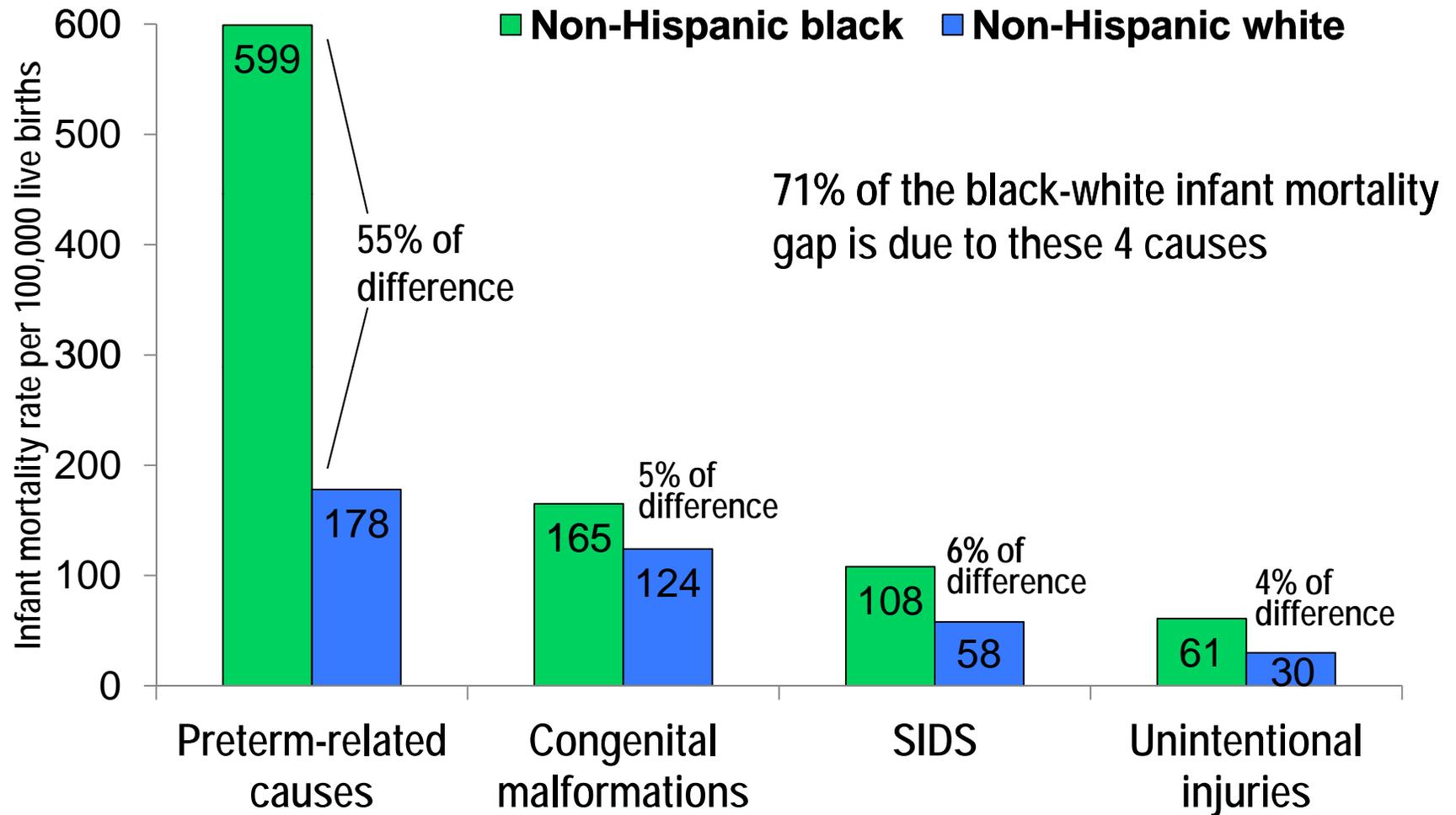
Note: NHW=non-Hispanic white, NHB=non-Hispanic black, PR=Puerto Rican, AI=American Indian  
Source: NCHS linked birth/infant death data set, 2007

## Infant mortality rates for selected causes of death for non-Hispanic black and non-Hispanic white women, 2007



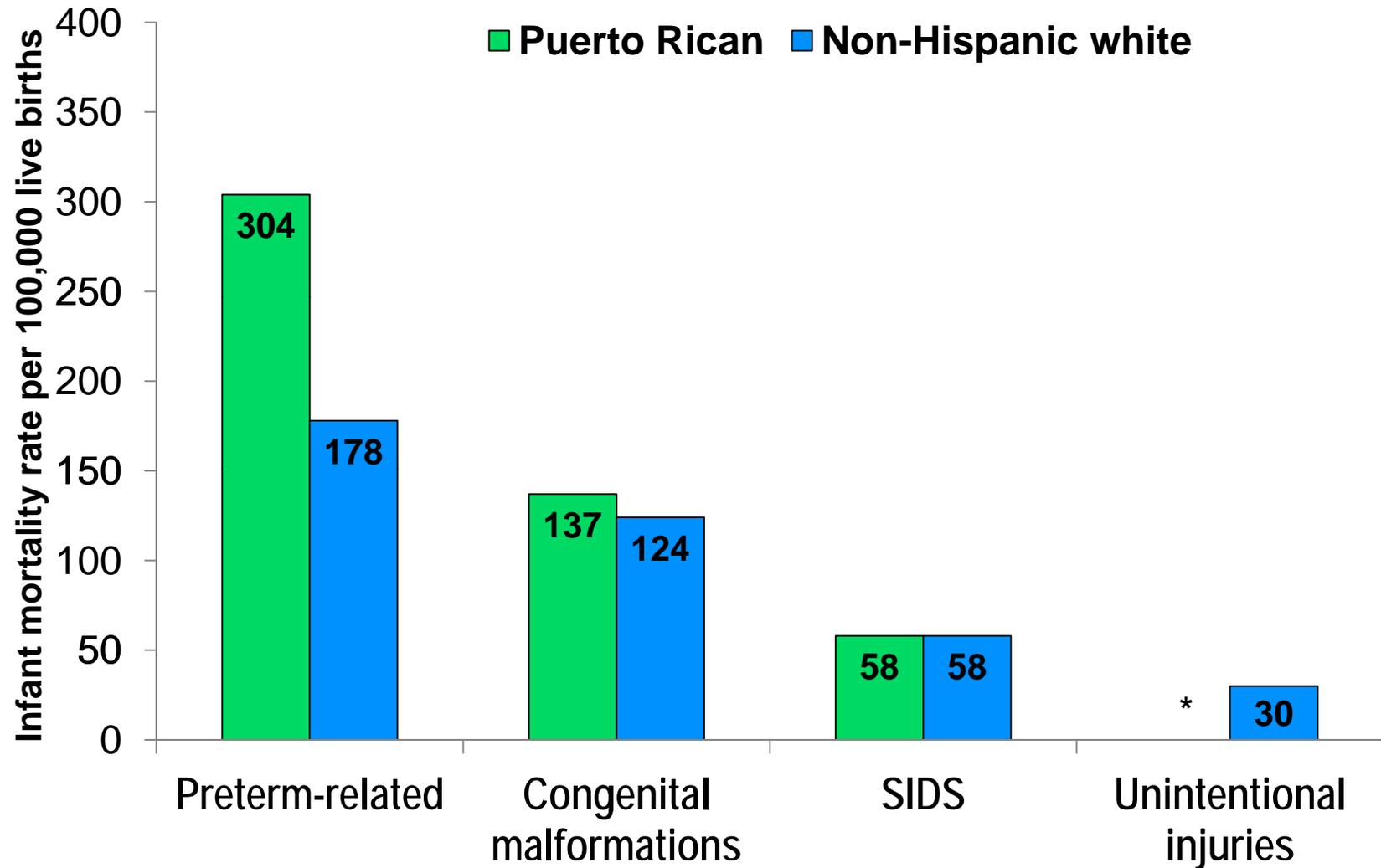
Source: CDC/NCHS linked birth/infant death data set, 2007

# Contribution of causes of death to the non-Hispanic black – non-Hispanic white infant mortality gap, 2007



Source: CDC/NCHS linked birth/infant death data set, 2007

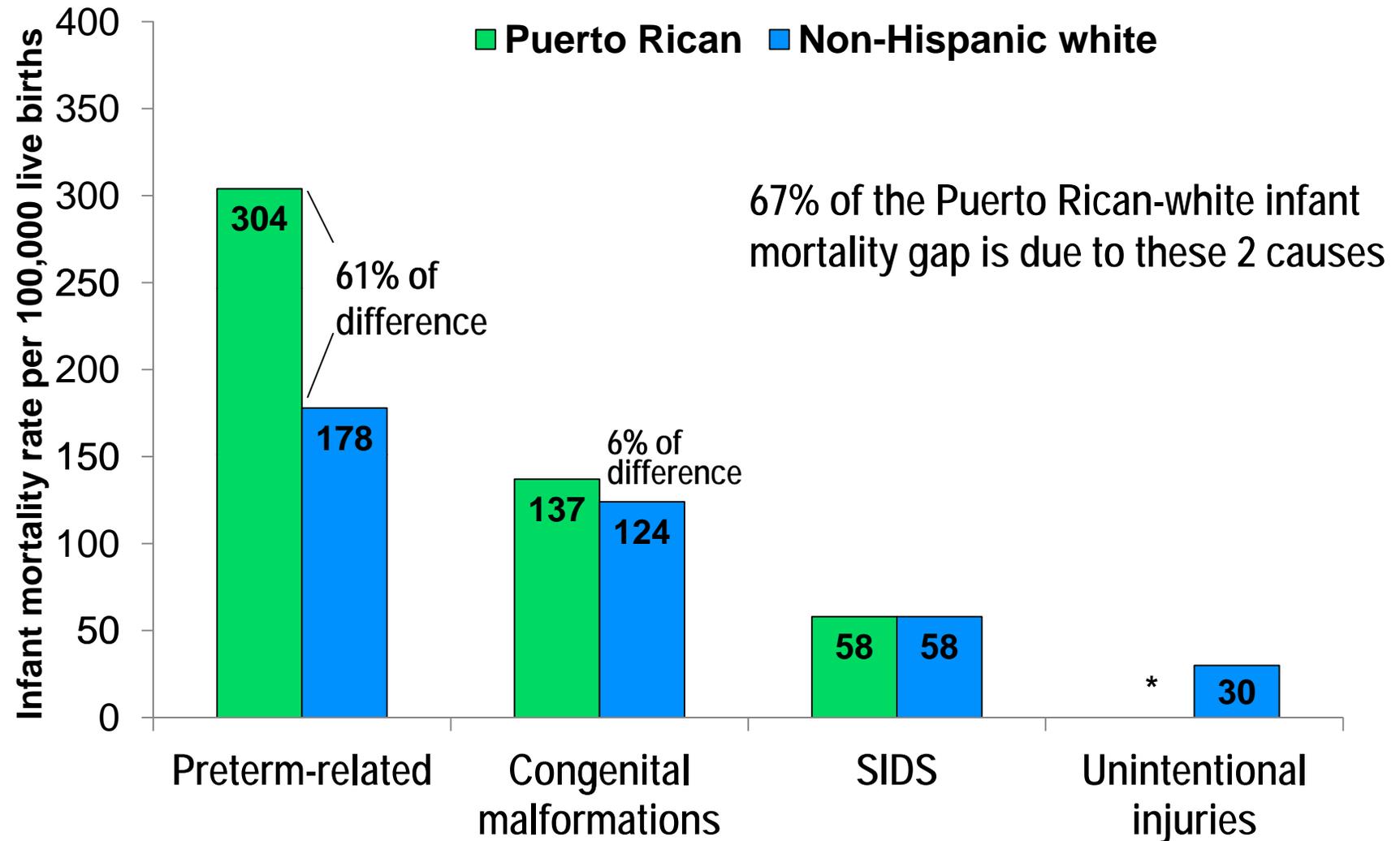
# Infant mortality rates for selected causes of death for Puerto Rican and non-Hispanic white women, 2007



Source: CDC/NCHS linked birth/infant death data set, 2007.

\* Figure does not meet standard of reliability or precision – based on <20 deaths in the numerator.

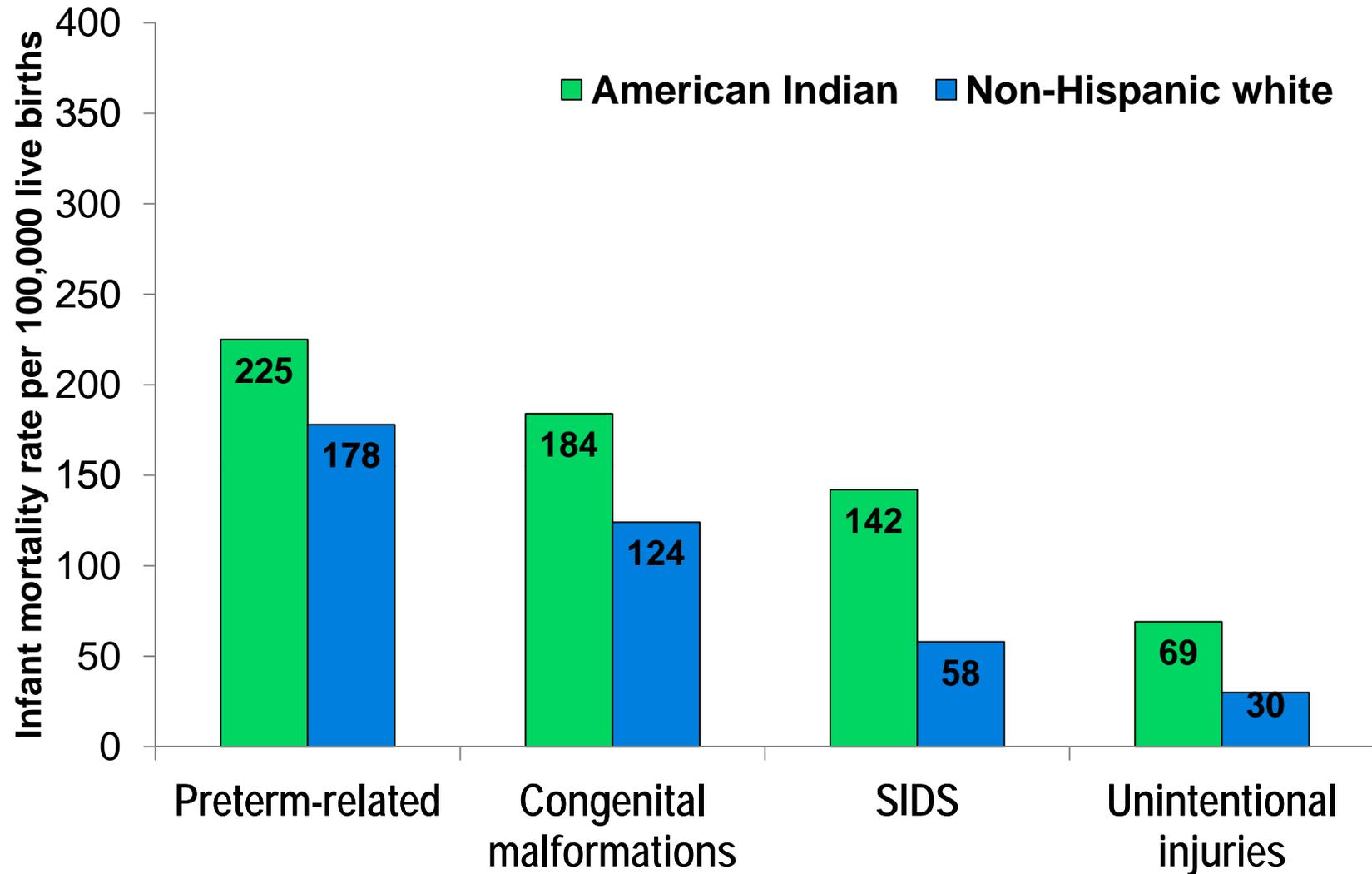
# Contribution of causes of death to the Puerto Rican -- non-Hispanic white infant mortality gap, US, 2007



Source: CDC/NCHS linked birth/infant death data set, 2007.

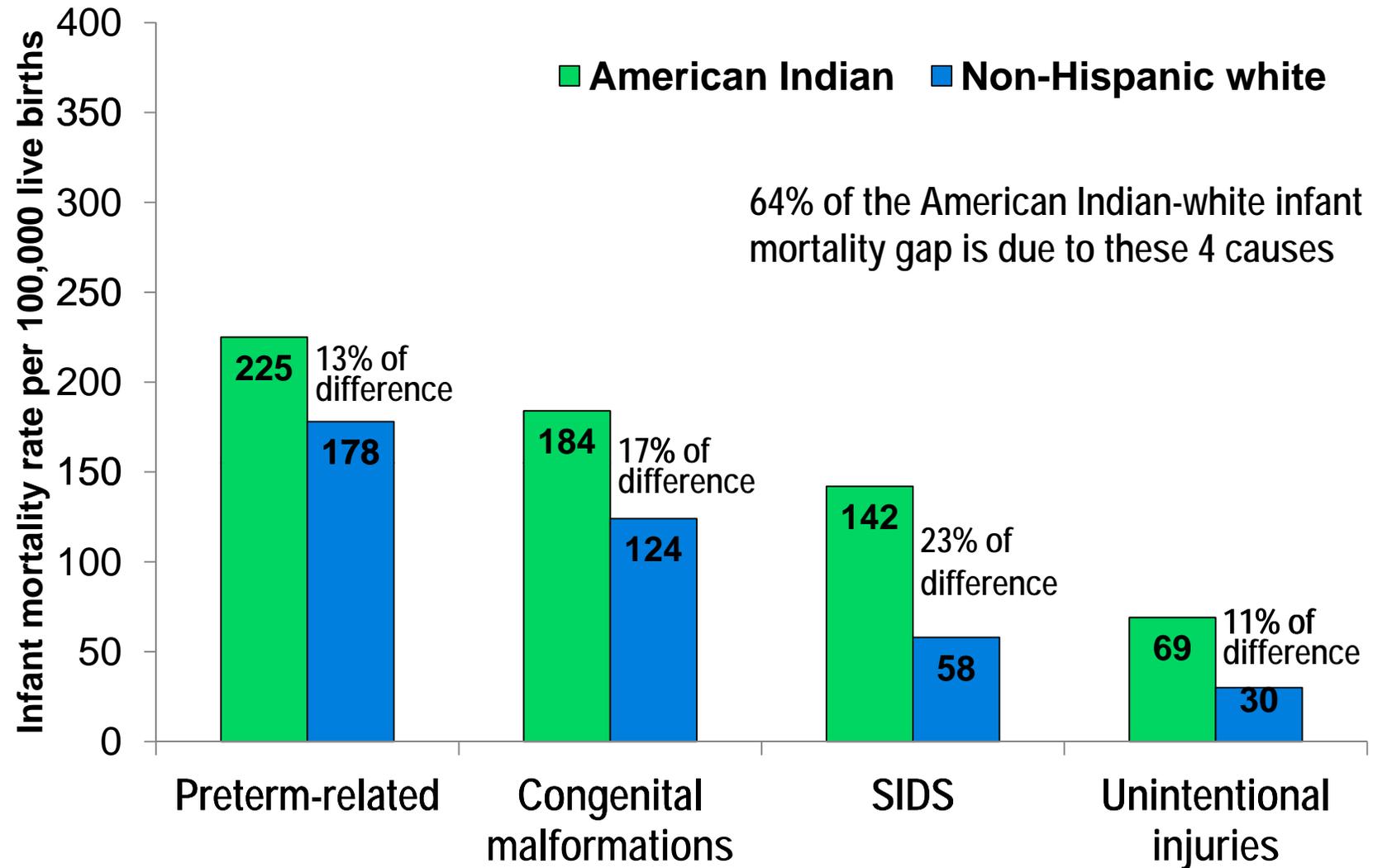
\* Figure does not meet standard of reliability or precision – based on <20 deaths in the numerator.

# Infant mortality rates for selected causes of death for American Indian and non-Hispanic white women, 2007



Source: CDC/NCHS linked birth/infant death data set, 2007.

# Contribution of causes of death to the American Indian -- non-Hispanic white infant mortality gap, US, 2007



Source: CDC/NCHS linked birth/infant death data set, 2007.

# Summary

- In 2007, the infant mortality rate for non-Hispanic black women was 2.4 times the rate for non-Hispanic white women.
- Infant mortality rates for American Indian women were 64% higher, and for Puerto Rican women 44% higher, than for non-Hispanic white women.
- The higher infant mortality rates for non-Hispanic black and Puerto Rican women were primarily due to their higher levels of preterm birth and preterm-related causes of death.
- In contrast, the higher infant mortality rate for American Indian women was mostly due to higher infant mortality rates for term and near-term infants – primarily due to causes such as SIDS and unintentional injuries.
- These different patterns suggest different prevention strategies.

## Understanding Racial and Ethnic Disparities in U.S. Infant Mortality Rates

Marian F. MacDorman, Ph.D., and T.J. Mathews, M.S.

### Key findings

#### Data from the 2007 linked birth/infant death data set

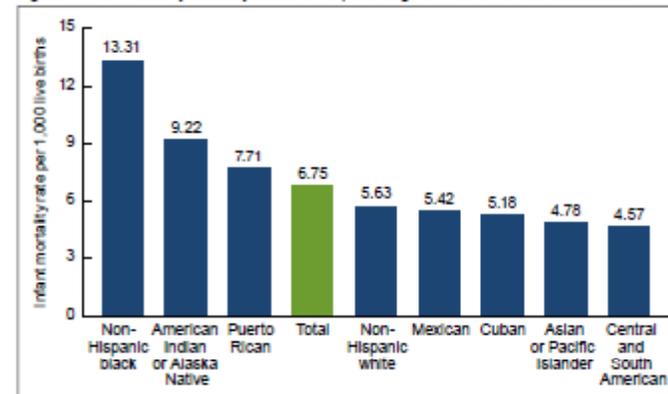
- In 2007, the infant mortality rate for non-Hispanic black women was 2.4 times the rate for non-Hispanic white women. American Indian or Alaska Native (AIAN) and Puerto Rican women also had relatively high infant mortality rates.
- The higher infant mortality rate for non-Hispanic black and Puerto Rican women, compared with non-Hispanic white women, was primarily due to their higher levels of preterm births and preterm-related causes of death.
- In contrast, the higher infant mortality rate for AIAN women was mostly due to higher infant mortality rates for term and near-term infants, not to a higher percentage of preterm births.
- Higher infant mortality rates from sudden infant death syndrome contributed the most to the infant mortality gap between AIAN and non-Hispanic white women.

Racial and ethnic disparities in health have generated increasing attention and concern in the past few years (1,2). One of the largest disparities found in health research is racial and ethnic differences in infant mortality (1,2). Disparities in U.S. infant mortality have been apparent since these data began to be collected more than 100 years ago (3). These disparities have persisted and even increased over time, suggesting that not all racial and ethnic groups have benefited equally from social and medical advances (1,4,5). This report examines racial and ethnic disparities in infant mortality rates in the United States with a particular focus on explaining the high infant mortality rates for non-Hispanic black, American Indian or Alaska Native (AIAN), and Puerto Rican women. Two key components of infant mortality are analyzed: gestational age-specific infant mortality rates, and the distribution of births by gestational age. Differences by cause of death are also examined.

*Keywords: infant death • racial and ethnic differences • causes of infant death*

### U.S. infant mortality rates vary greatly by race and ethnicity.

Figure 1. Infant mortality rates, by race and Hispanic origin of mother: United States, 2007



SOURCE: CDC/NCHS, linked birth/infant death data set, 2007.

## Questions?

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Data Brief available at :

<http://www.cdc.gov/nchs/data/databriefs/db74.pdf>.

