

# Who are the Women Giving Birth in Various Settings?

Marian MacDorman\*, Eugene Declercq\*\*, T.J. Mathews\*

\*National Center for Health Statistics

\*\*Boston University School of Public Health

Institute of Medicine and National Research Council Workshop on  
Research Issues in the Assessment of Birth Settings

March 6-7, 2013

# Source of Data

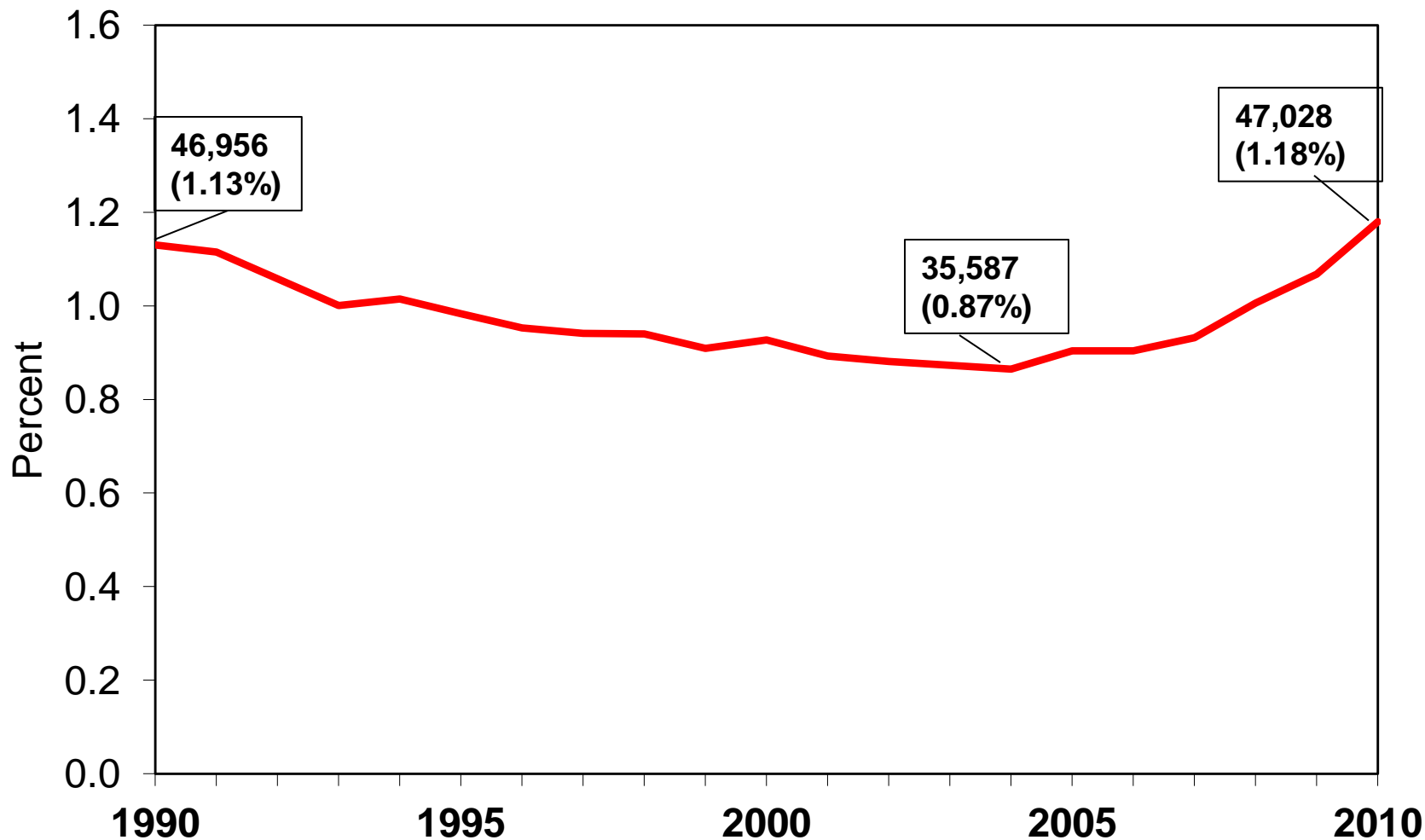
- Data based on all birth certificates filed in the US each year
- Shows number of births actually delivered in each location (home, birthing center, hospital, etc.)
- Data does not identify women who planned to deliver at home but were transported to a hospital.

# Long-Term Trends by Place of Birth

There have been large changes in US birthing patterns over the past century:

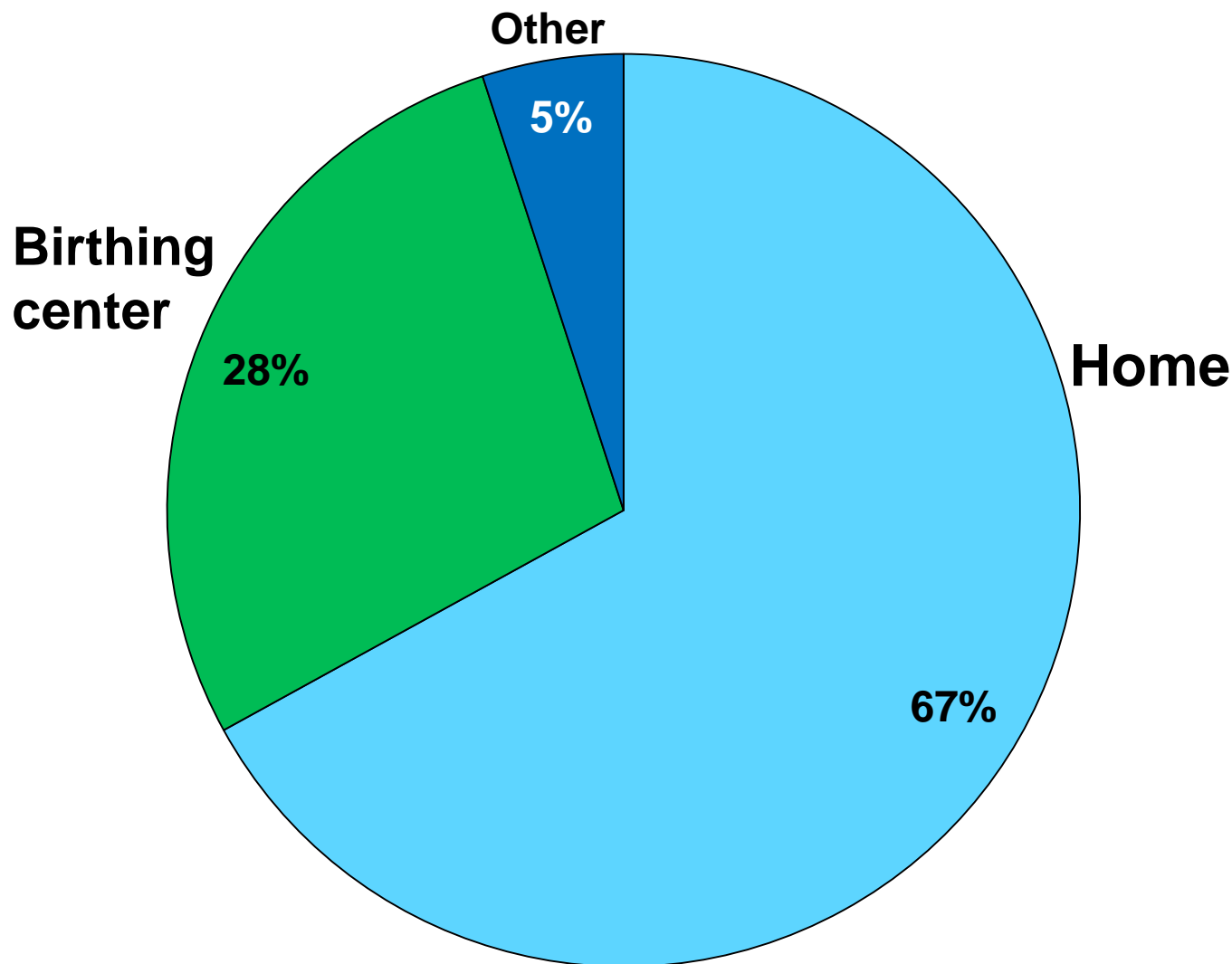
- In 1900, nearly all US births occurred at home.
- By 1940, only 44% of US births were born outside of a hospital
- By 1969, only 1% of US births were born outside of a hospital.
- Out-of-hospital births have remained around 1% for several decades.
- 1989 revision of the birth certificate allowed us to distinguish, for the first time, between types of out-of-hospital births (home or birthing center)

# Number and Percent of Out-of-Hospital Births, United States, 1990-2010



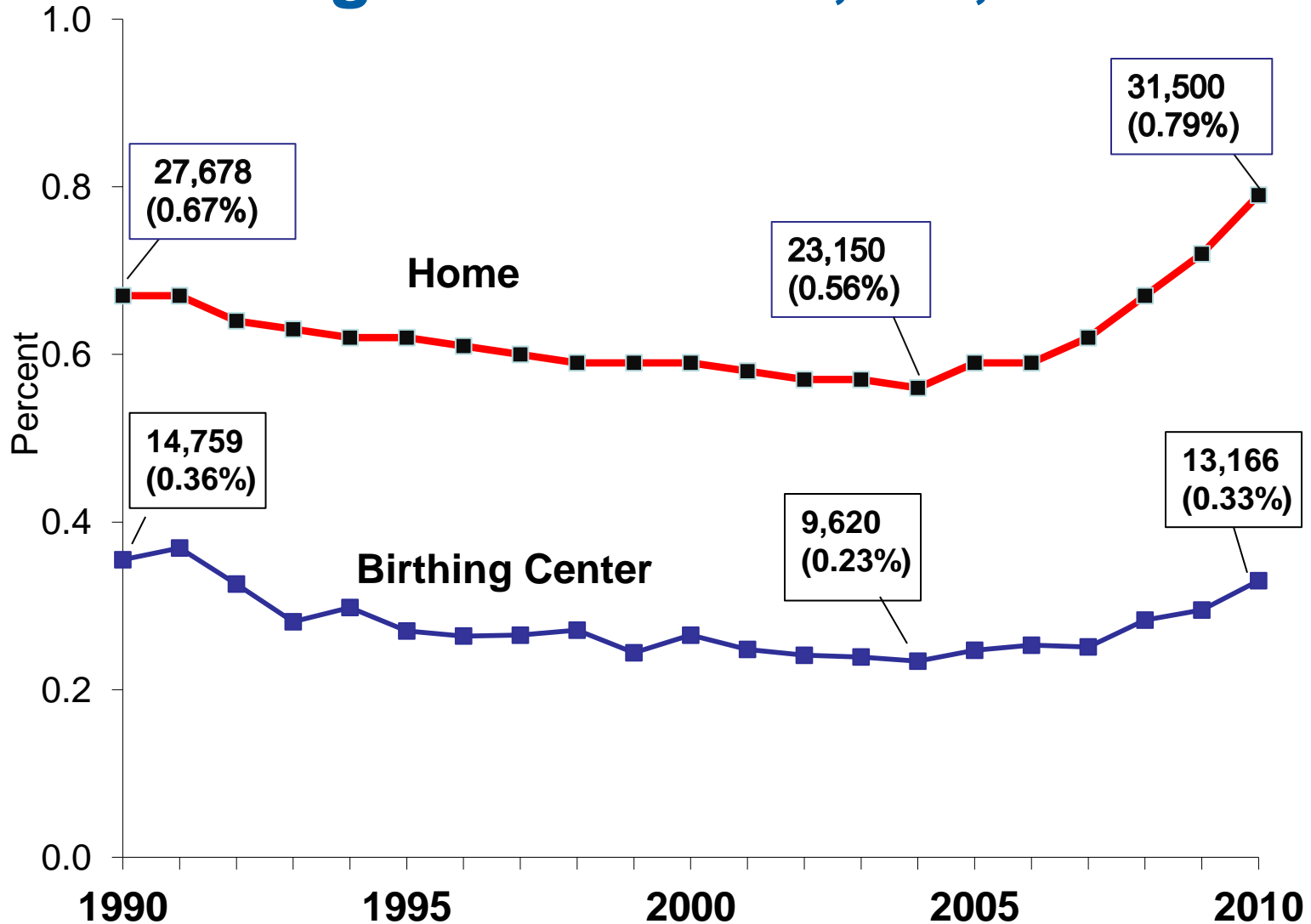
SOURCE: Birth certificate data from the National Vital Statistics System

# Percent of out-of-hospital births by place of birth, US, 2010



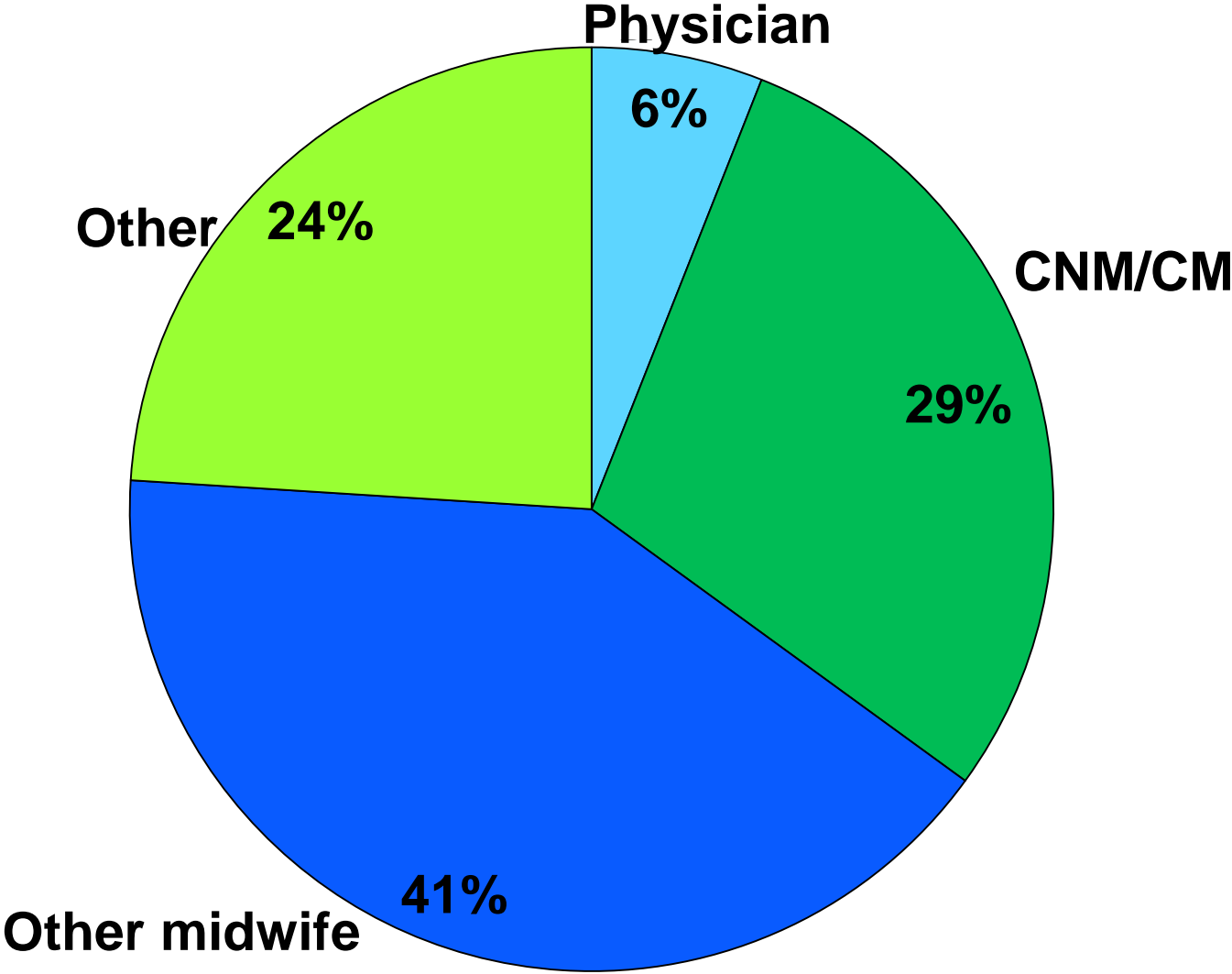
Source: Birth certificate data from the National Vital Statistics System.

# Number and percent of home and birthing center births, US, 1990-2010



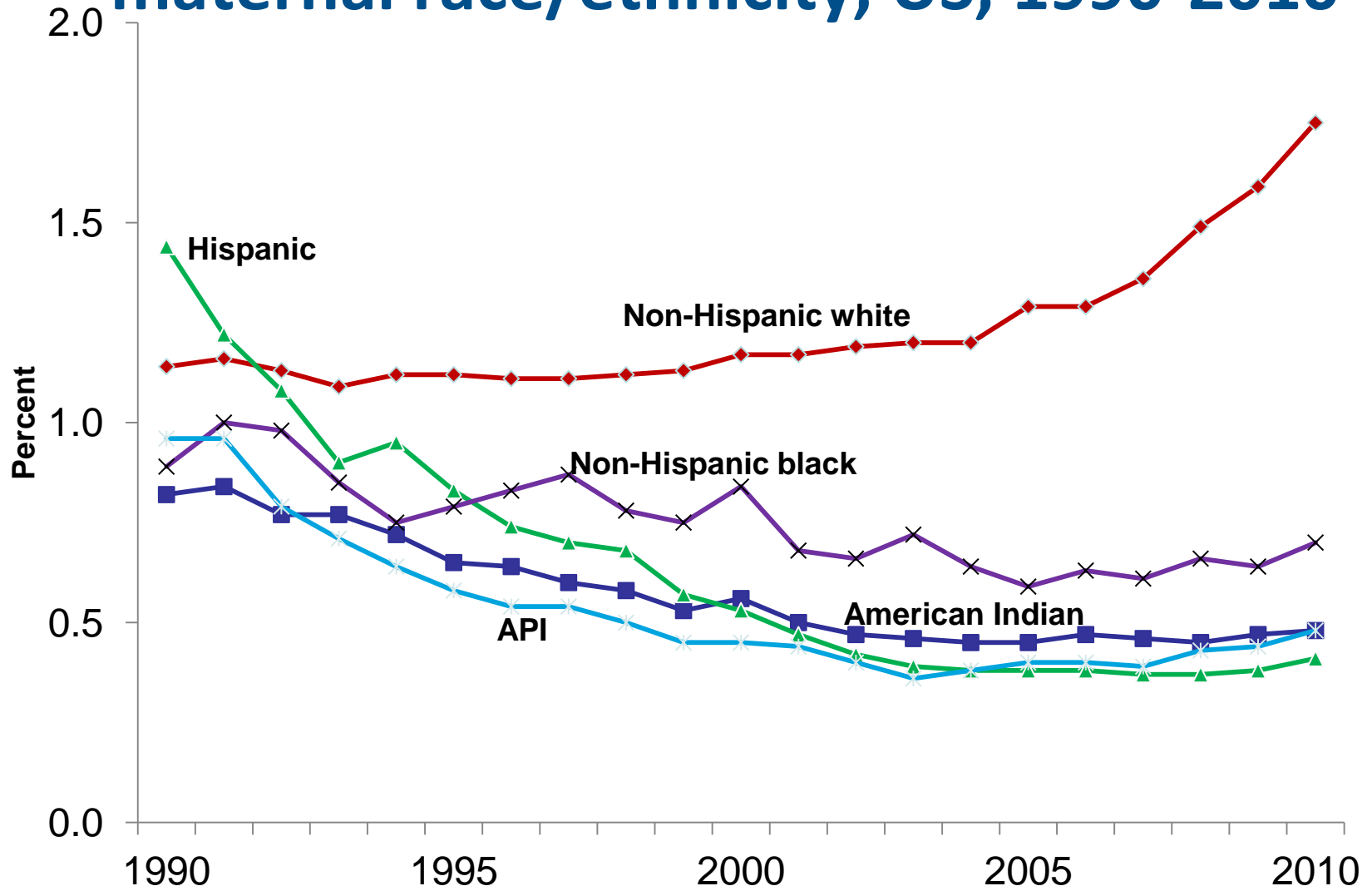
Source: Birth certificate data from the National Vital Statistics System.

# Percent of out-of-hospital births by birth attendant, US, 2010



Source: Birth certificate data from the National Vital Statistics System.

# Percent of out-of-hospital births by maternal race/ethnicity, US, 1990-2010

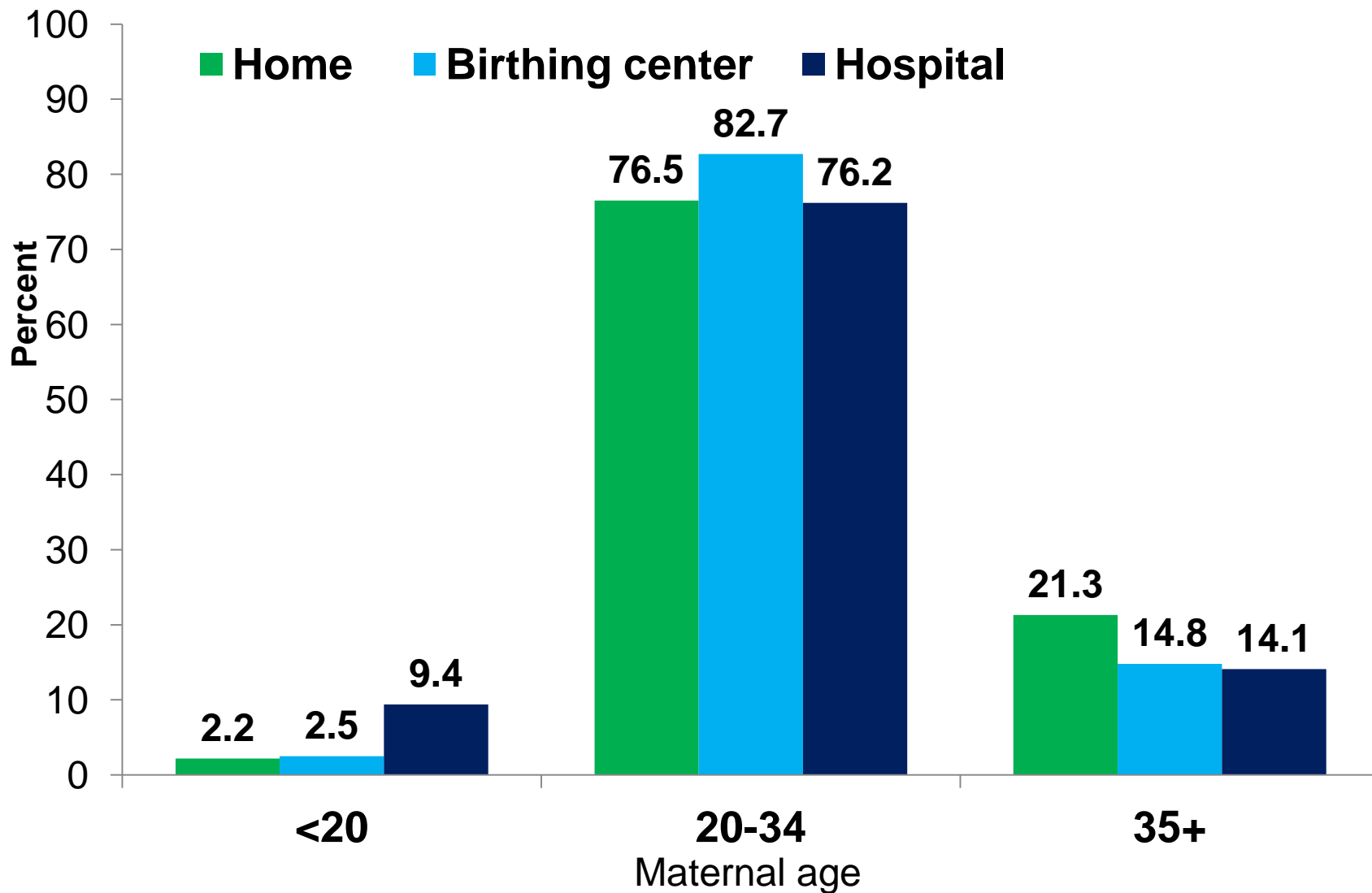


Notes: Non-Hispanic white, Non-Hispanic black and Hispanic data exclude New Hampshire in 1990-92 and Oklahoma in 1990, as these states did not report Hispanic origin on their birth certificates for those years. API denotes Asian or Pacific Islander. Source: Birth certificate data from the National Vital Statistics System.



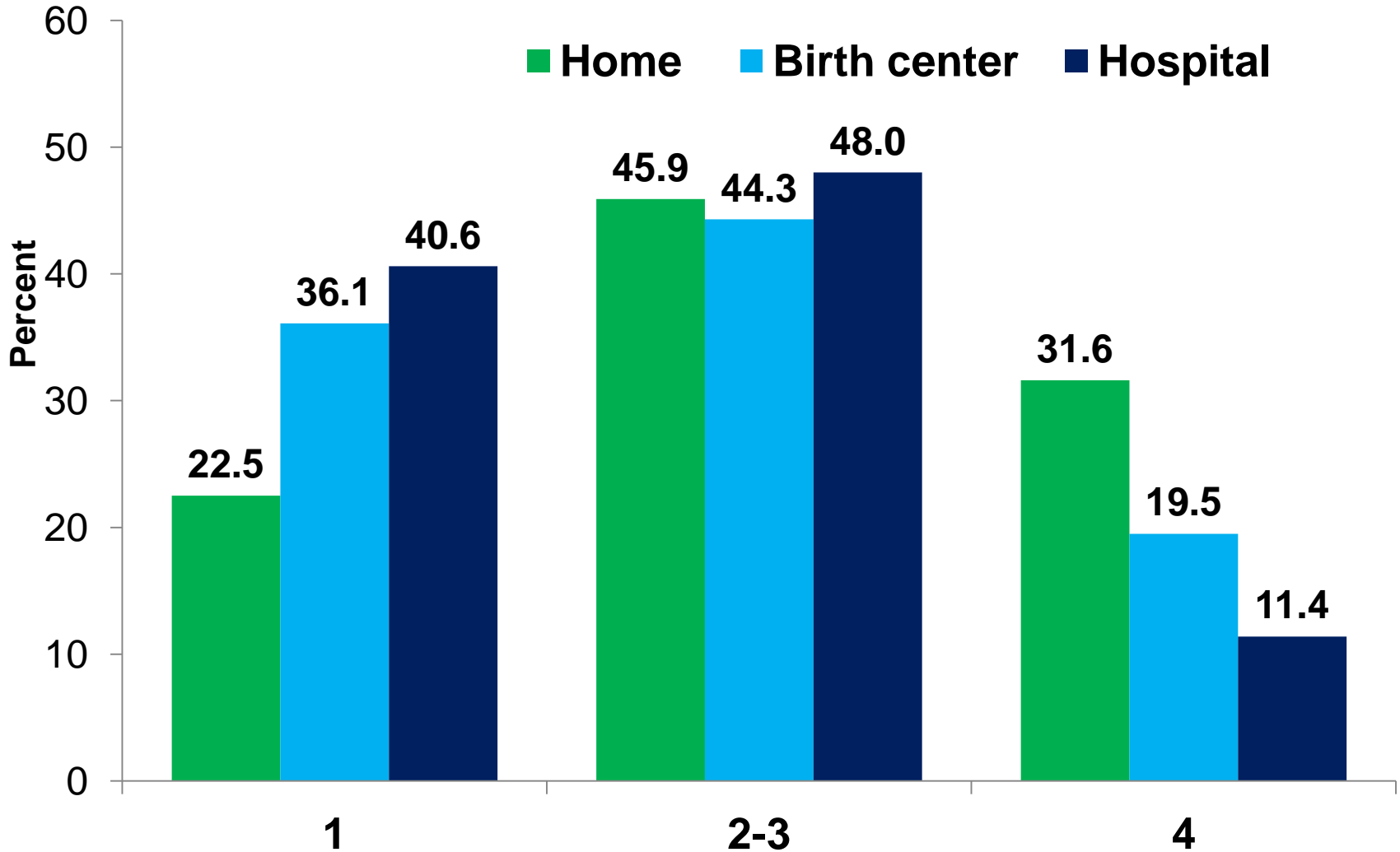
# **Percent Distribution of Home, Birth Center and Hospital Births by Characteristics**

# Percent distribution of home, birth center, and hospital births by maternal age, US, 2010



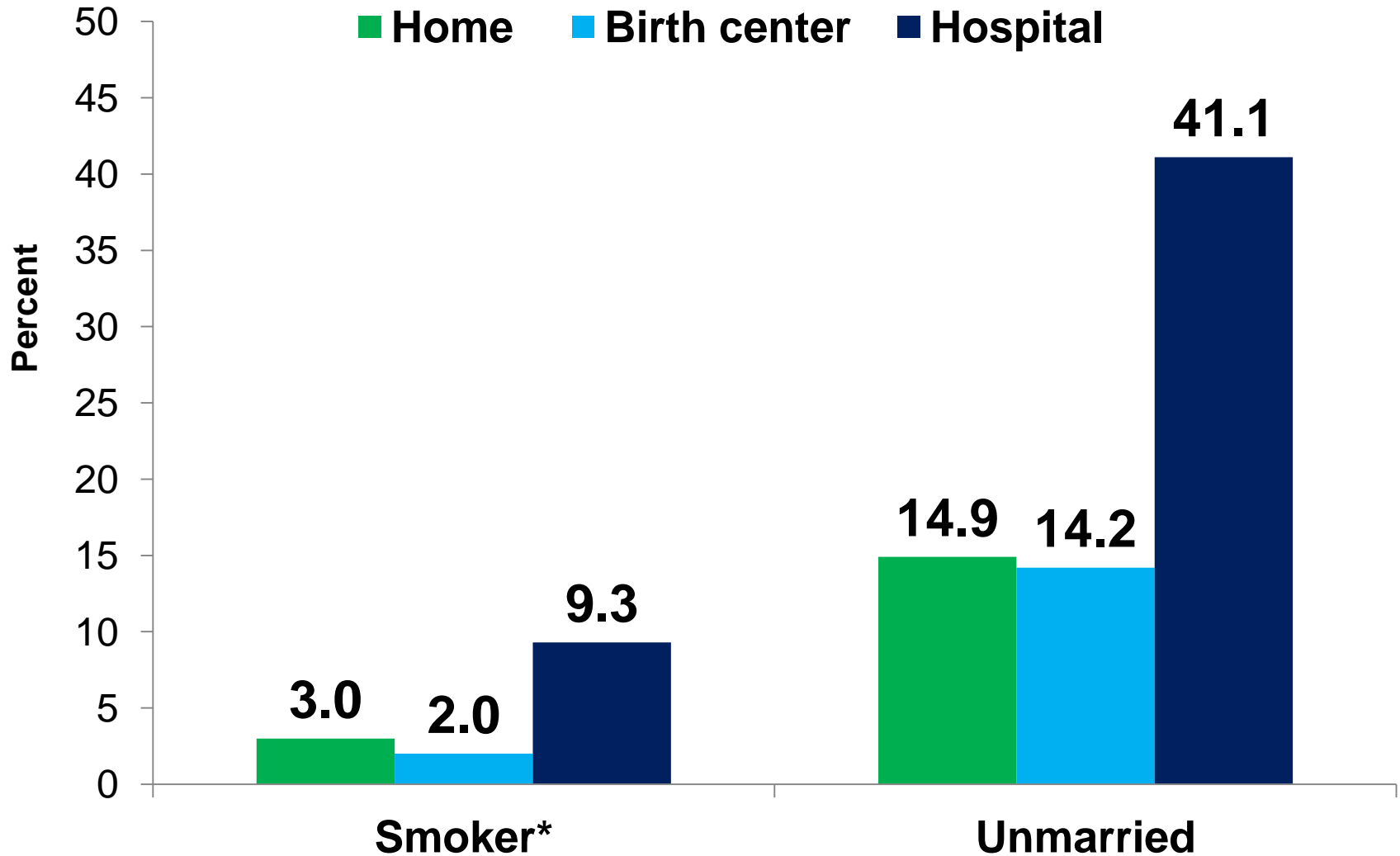
Source: Birth certificate data from the National Vital Statistics System.

# Percent of home, birth center and hospital births by live birth order, US, 2010



Source: Birth certificate data from the National Vital Statistics System.

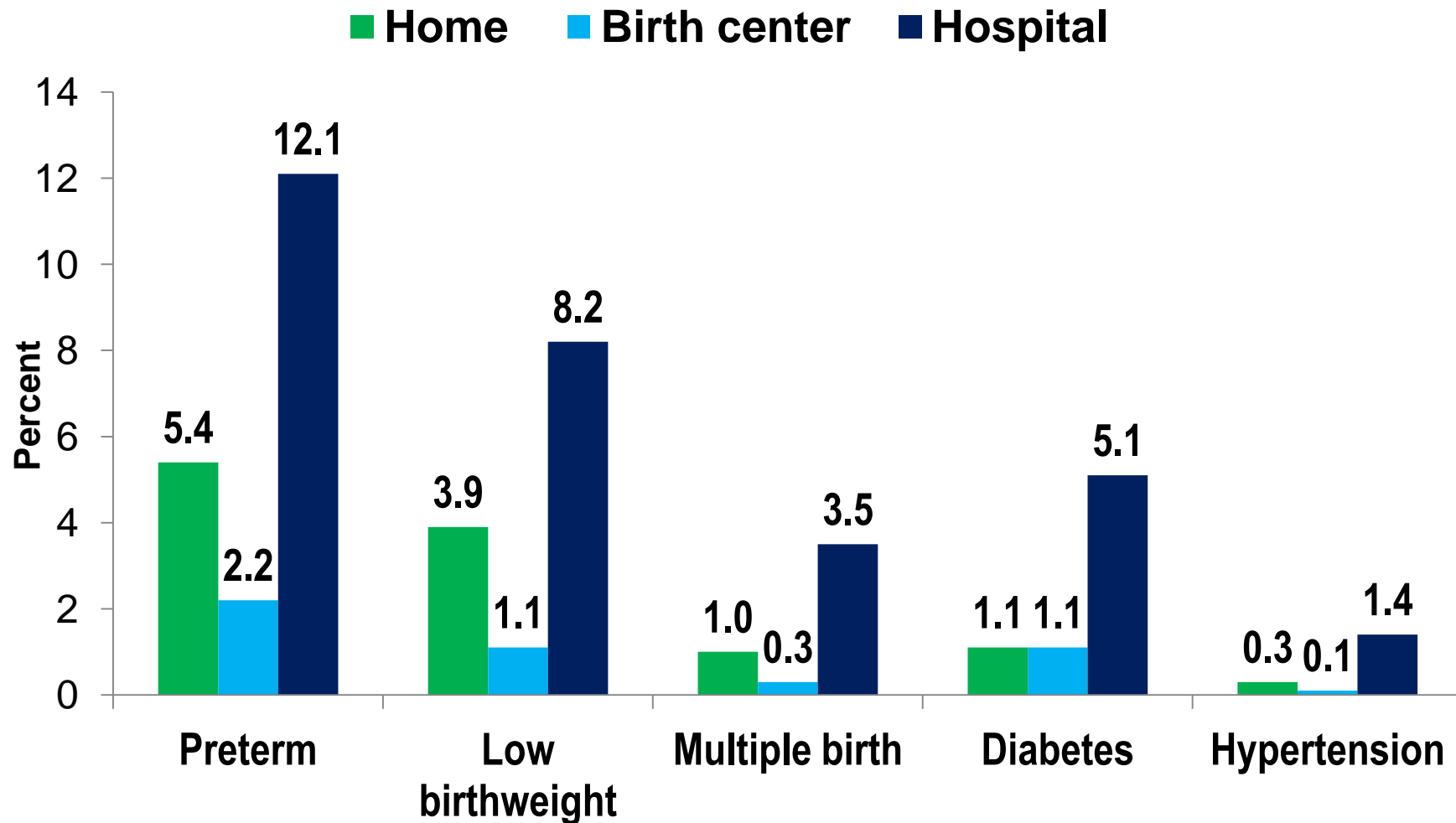
# Percent of home, birth center, and hospital births to smokers and unmarried women, 2010



\* Data reported from 30 states and DC.

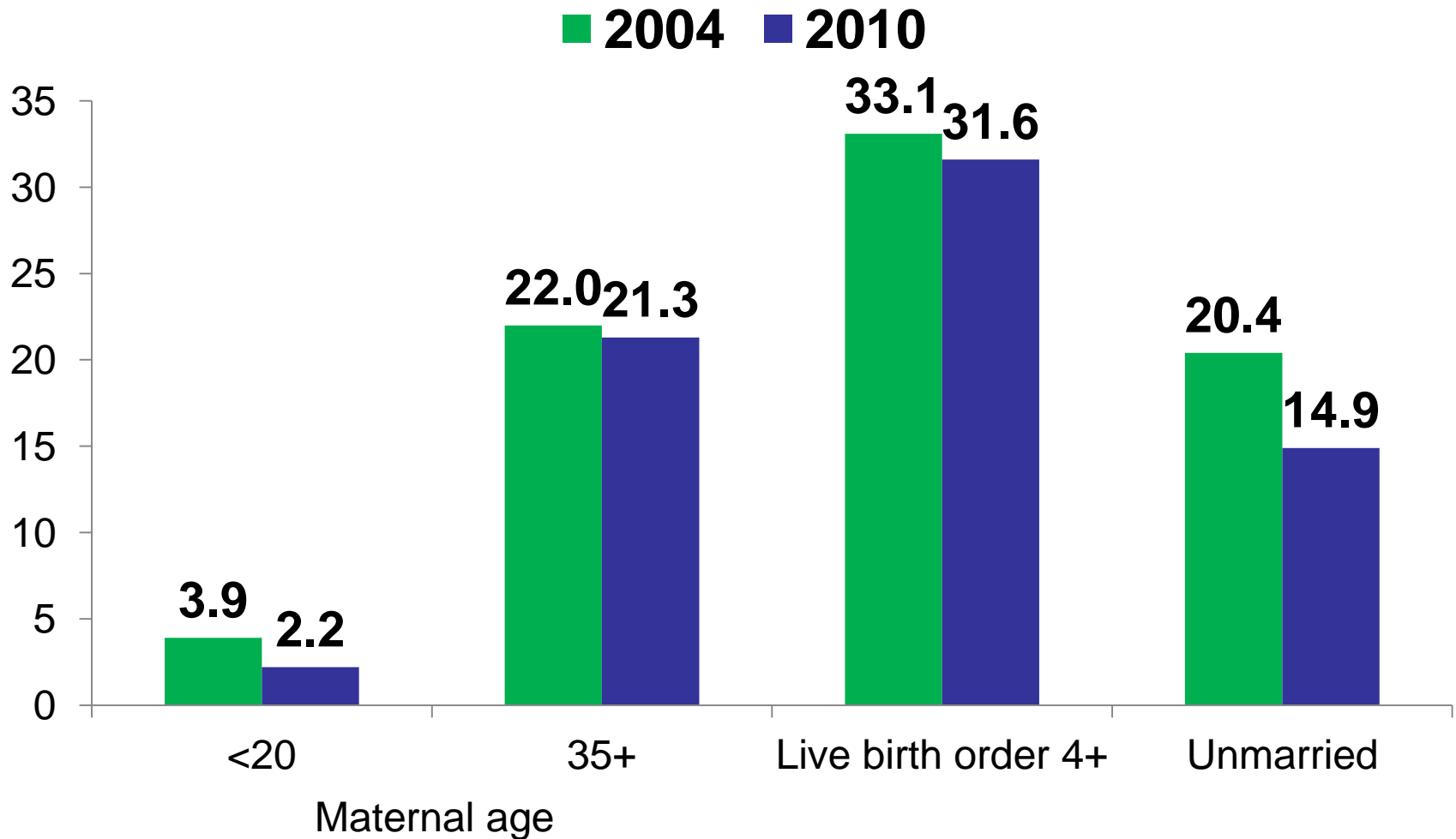
Source: Birth certificate data from the National Vital Statistics System.

# Percent of home, birth center, and hospital births with selected medical risk factors, US, 2010

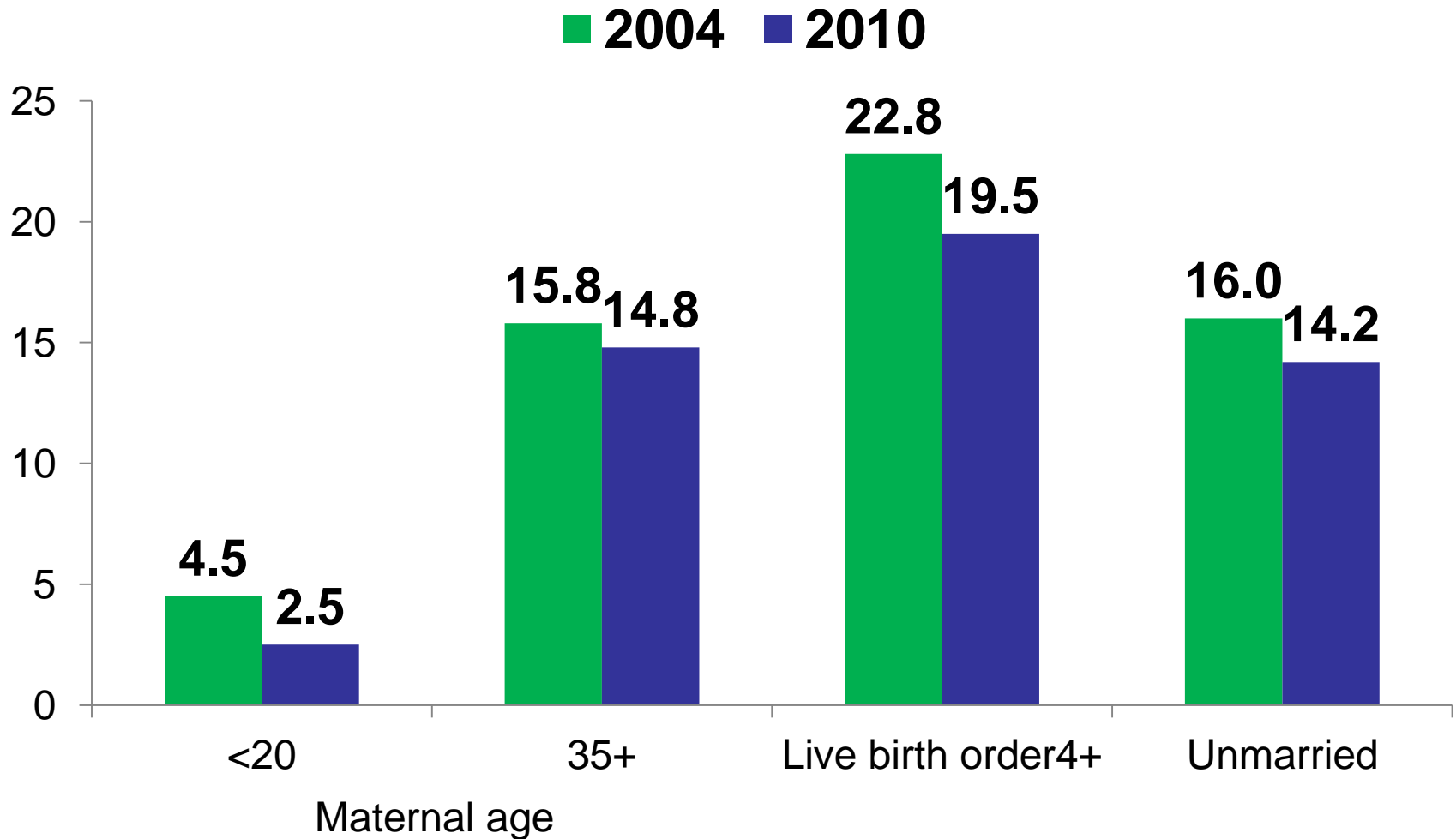


Source: Birth certificate data from the National Vital Statistics System.

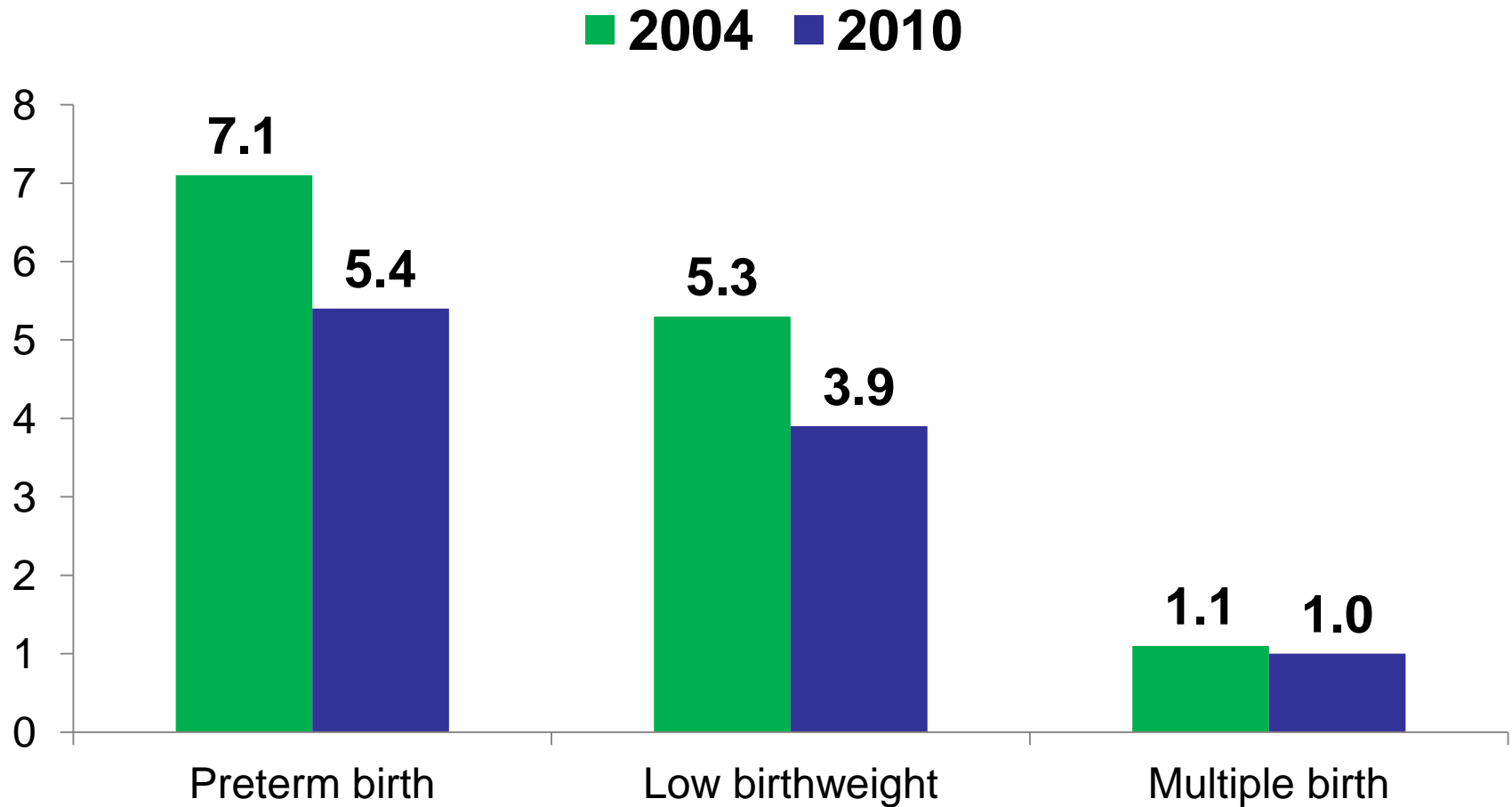
# Percent of home births with selected demographic risk factors, US, 2004 and 2010



# Percent of birth center births with selected demographic risk factors, US, 2004 and 2010



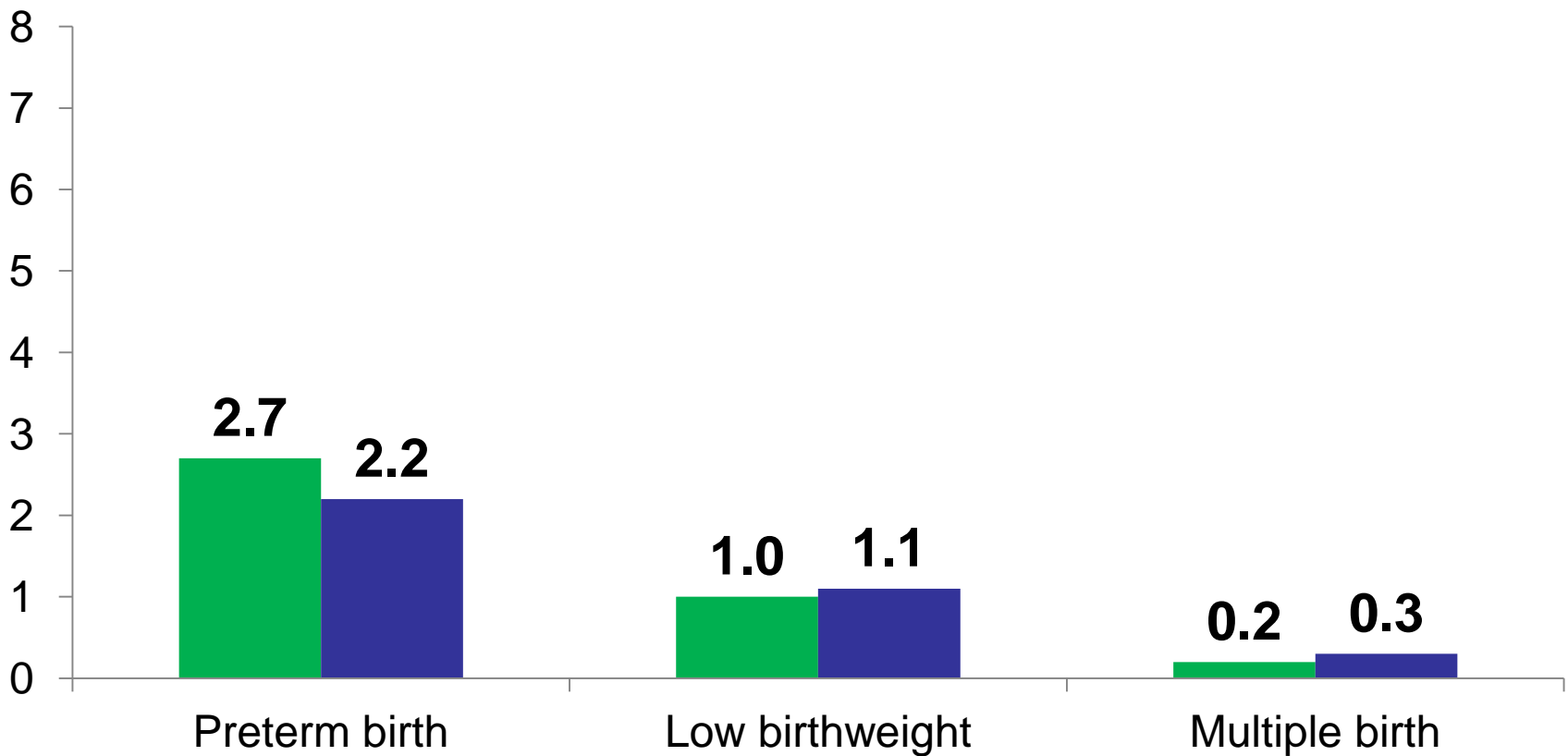
# Percent of home births with selected medical risk factors, US, 2004 and 2010





# Percent of birth center births with selected medical risk factors, US, 2004 and 2010

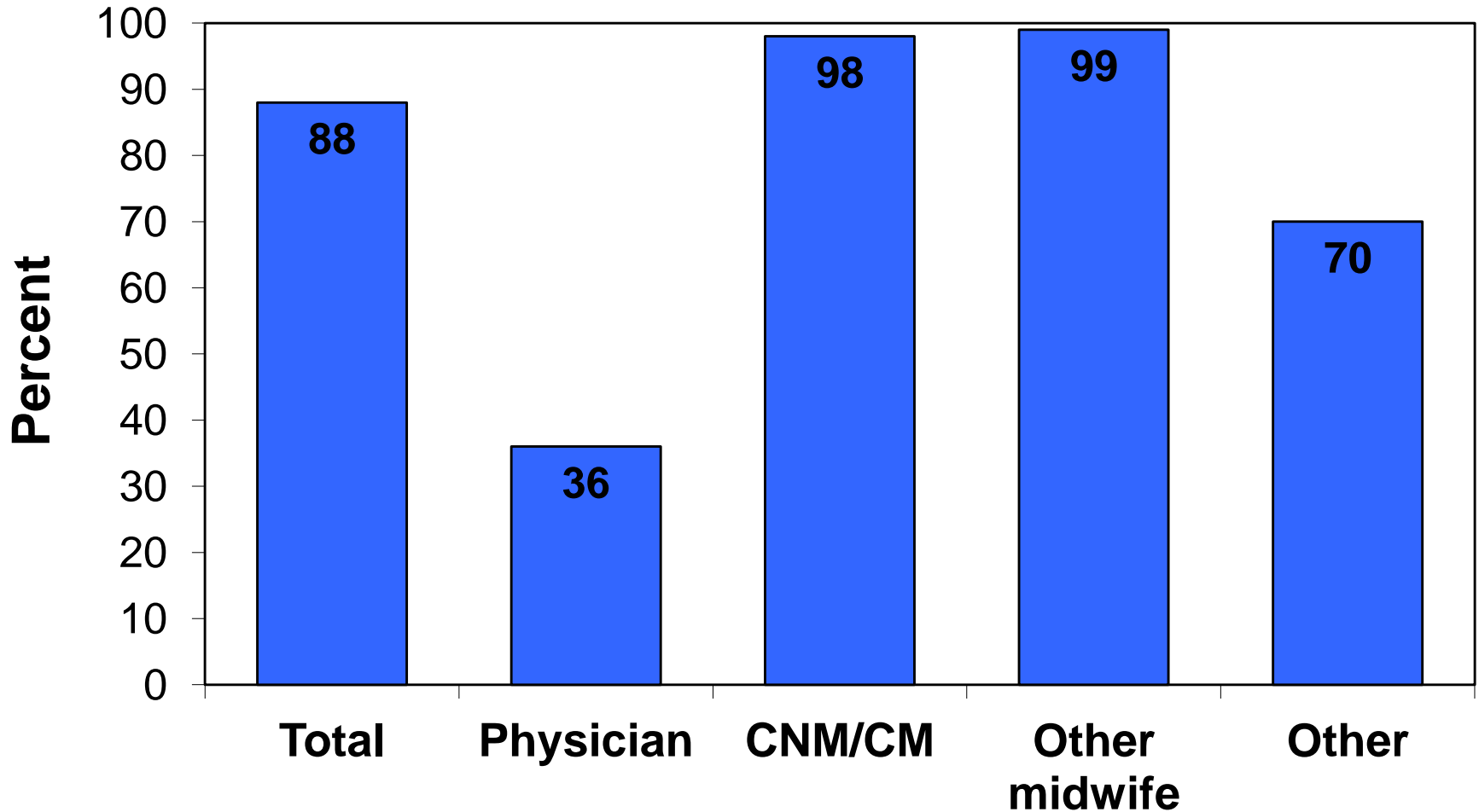
■ 2004 ■ 2010



# Planning status of home birth

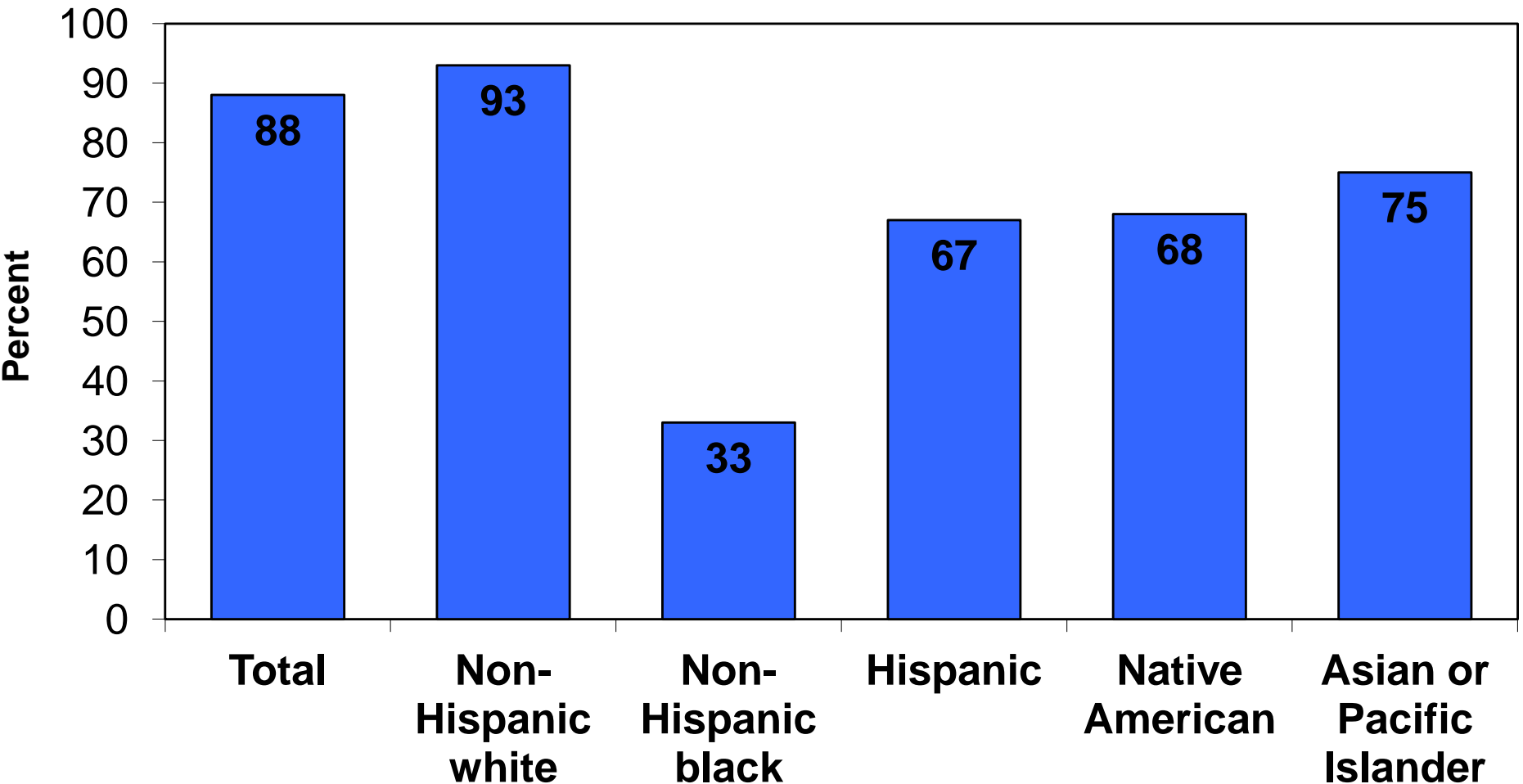
- Important indicator of risk for home births
- Unplanned home births:
  - may represent an emergency situation (precipitous labor, couldn't get to the hospital)
  - may be at higher risk for poor birth outcomes, with the birth taking place in an environment unprepared for a delivery.
- Planning status of home birth reported by 31 states and DC (representing 60% of US births) in 2010

# Percent of home births that were planned, by care provider, 31 States and DC, 2010



NOTE: Not stated planning status excluded before percent computation.  
SOURCE: Birth certificate data from the National vital statistics system.

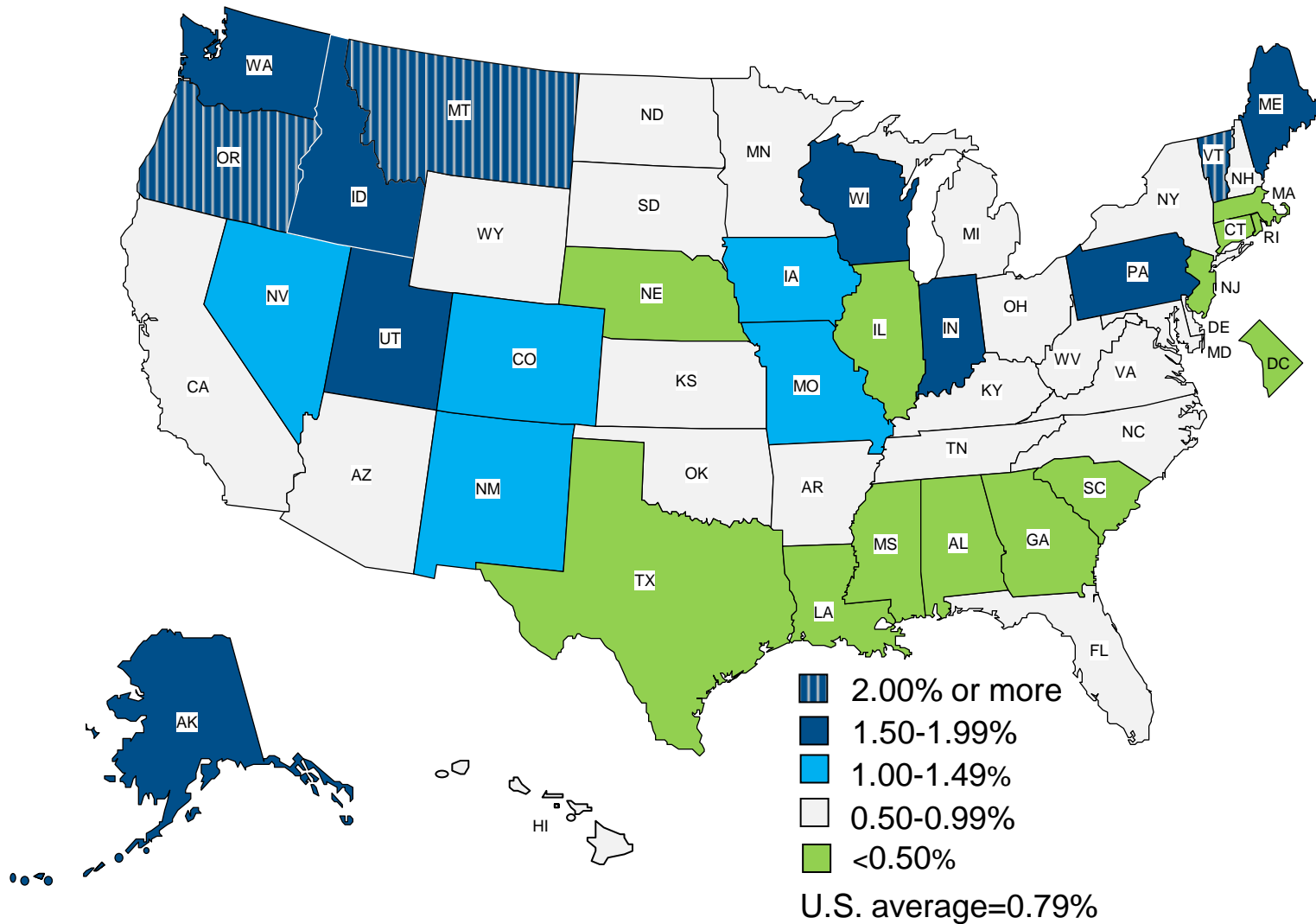
# Percent of home births that were planned by maternal race/ethnicity, 31 States and DC, 2010



NOTE: Not stated planning status excluded before percent computation.  
SOURCE: Birth certificate data from the National Vital Statistics System.

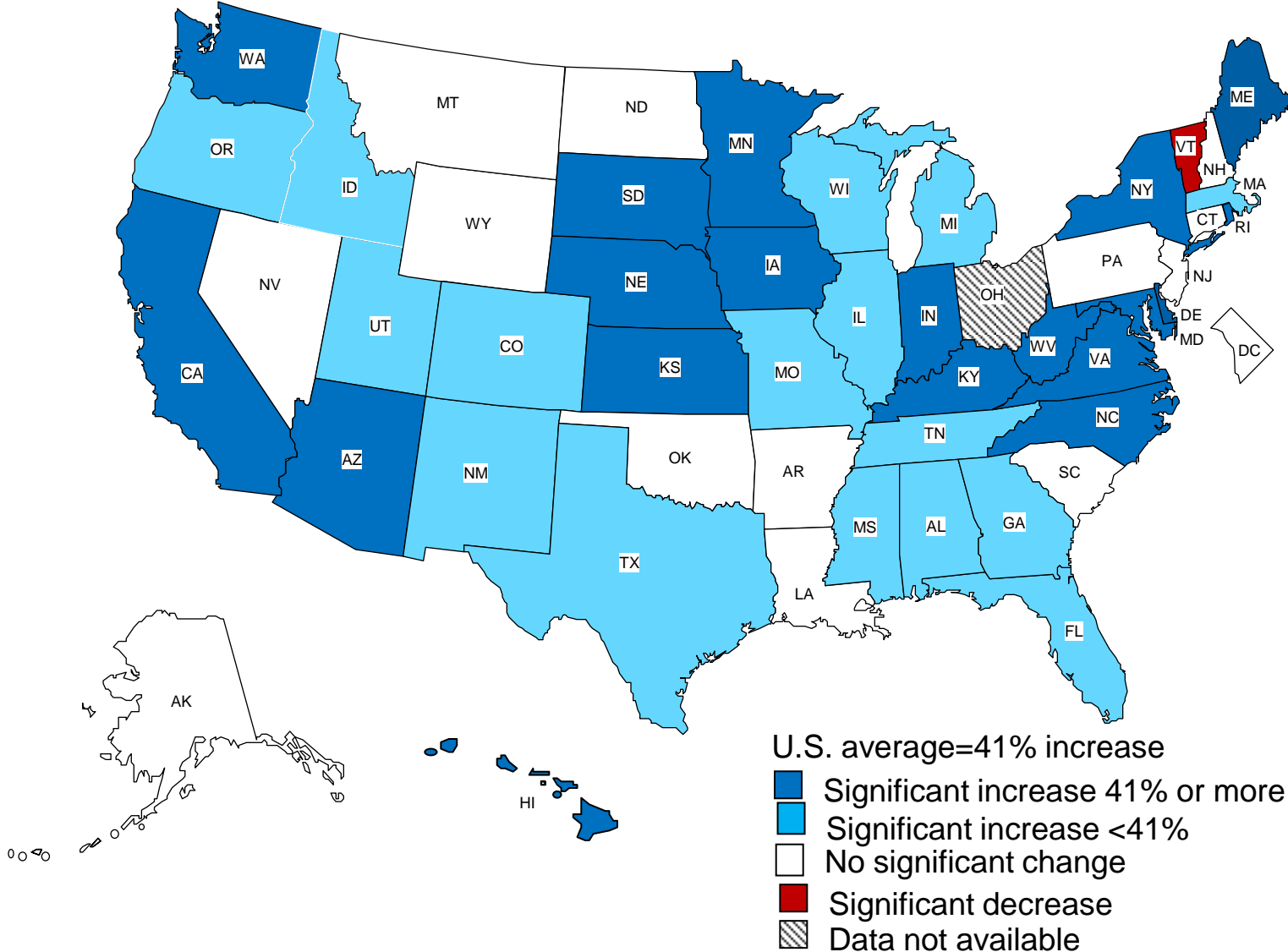
# Geographic Differences

# Percent of home births, 2010



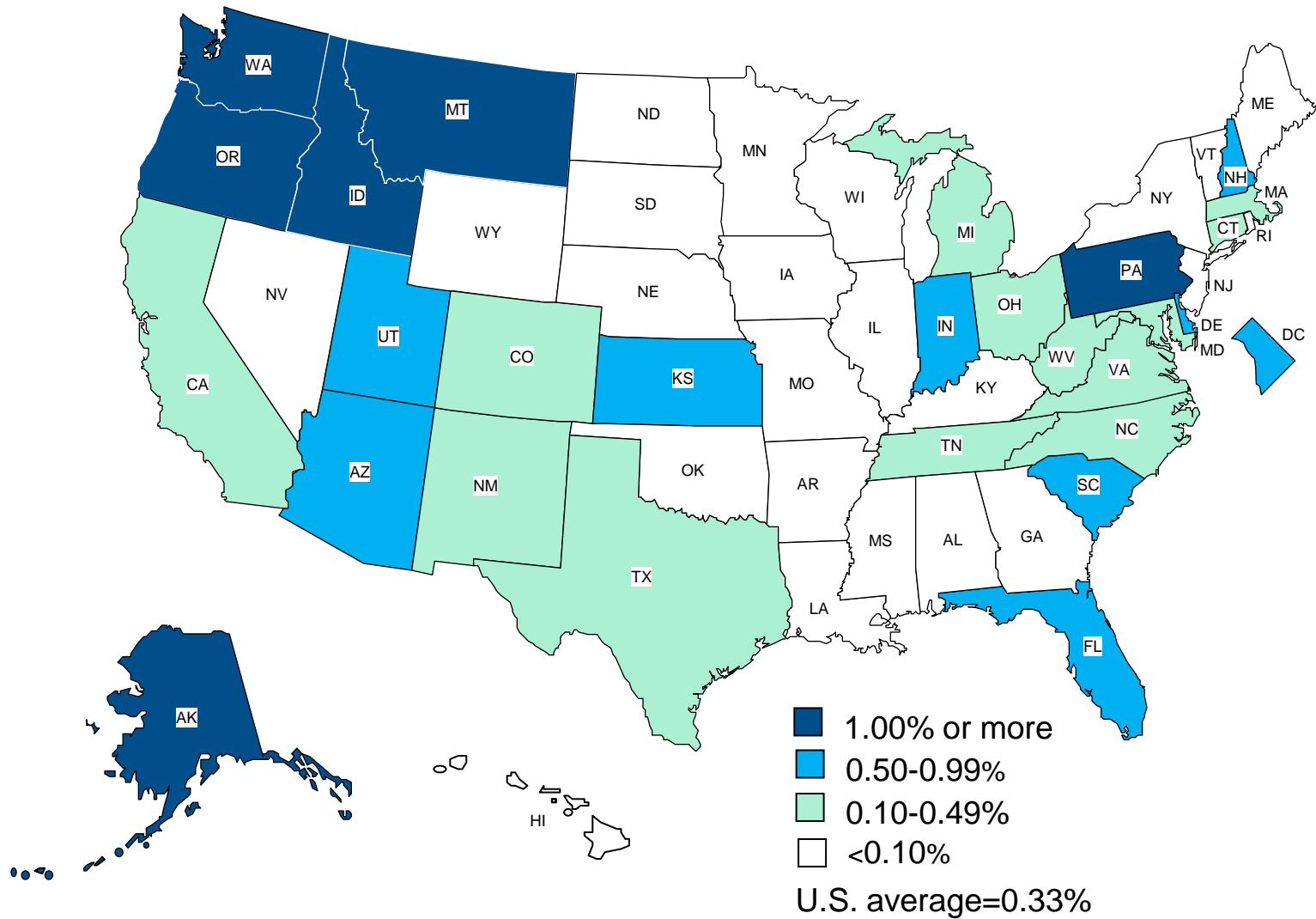
Source: Birth certificate data from the National Vital Statistics System.

# Change in percentage of home births 2004-2010



Source: Birth certificate data from the National Vital Statistics System.

# Percent of birth center births, 2010



Source: Birth certificate data from the National Vital Statistics System.



# Summary

- After a gradual decline from 1990-2004, the percent of total out-of-hospital, home, and birthing center births increased rapidly from 2004-2010. The increase was widespread and involved states from every region of the country.
- In 2010, 1.2% of US births were out-of-hospital births.
- 90% of the increase in out-of-hospital births from 2004-2010 was due to increases for non-Hispanic white women.
- In 2010, 1 in 57 births to non-Hispanic white women were out-of-hospital births.
- In 2010, 88% of home births in 31 states and DC were planned. For non-Hispanic white women, 93% were planned.
- Out-of-hospital births were more prevalent (>2.5% of births) in the Pacific Northwest, Alaska, and Pennsylvania.

# Summary (cont.)

- Home and birth center births have a lower risk profile than hospital births for a variety of risk factors, including:
  - teen births
  - non-marital births
  - preterm or low birthweight births
  - multiple births
  - maternal smoking
  - hypertension and diabetes
- Relatively more out-of-hospital than hospital births were to older mothers and to those having a 4<sup>th</sup> or higher-order birth.
- The risk profile of out-of-hospital births improved from 2004-2010, suggesting that appropriate risk selection of low-risk women is occurring and improving.

Link to recent report: <http://www.cdc.gov/nchs/data/databriefs/db84.pdf>

NCHS Data Brief ■ No. 84 ■ January 2012

## Home Births in the United States, 1990–2009

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

### Key findings

- After a decline from 1990 to 2004, the percentage of U.S. births that occurred at home increased by 29%, from 0.56% of births in 2004 to 0.72% in 2009.
- For non-Hispanic white women, home births increased

Large changes in birthing patterns in the United States have occurred over the past century. In 1900, almost all U.S. births occurred outside a hospital, the vast majority of which occurred at home (1). However, this proportion fell to 44% by 1940, and to 1% by 1969, where it remained through the 1980s (2,3). The 1989 revision of the U.S. Standard Certificate of Live Birth provides additional detail for out-of-hospital births, and makes it possible to distinguish among out-of-hospital births at home, in a birthing center, or other specified location. Home births are still rare in the United States, comprising less than 1% of births, however they have been increasing since 2004 (3–5). This report examines recent trends and characteristics of home births in the United States

## Questions?

Marian MacDorman, Ph.D.  
Statistician, Reproductive Statistics Branch  
National Center for Health Statistics  
Centers for Disease Control and Prevention  
Phone: (301) 458-4356  
Email: [mfm1@cdc.gov](mailto:mfm1@cdc.gov)