

Cesarean Section & VBACs in the U.S.

Gene Declercq, PhD
Birth by the Numbers

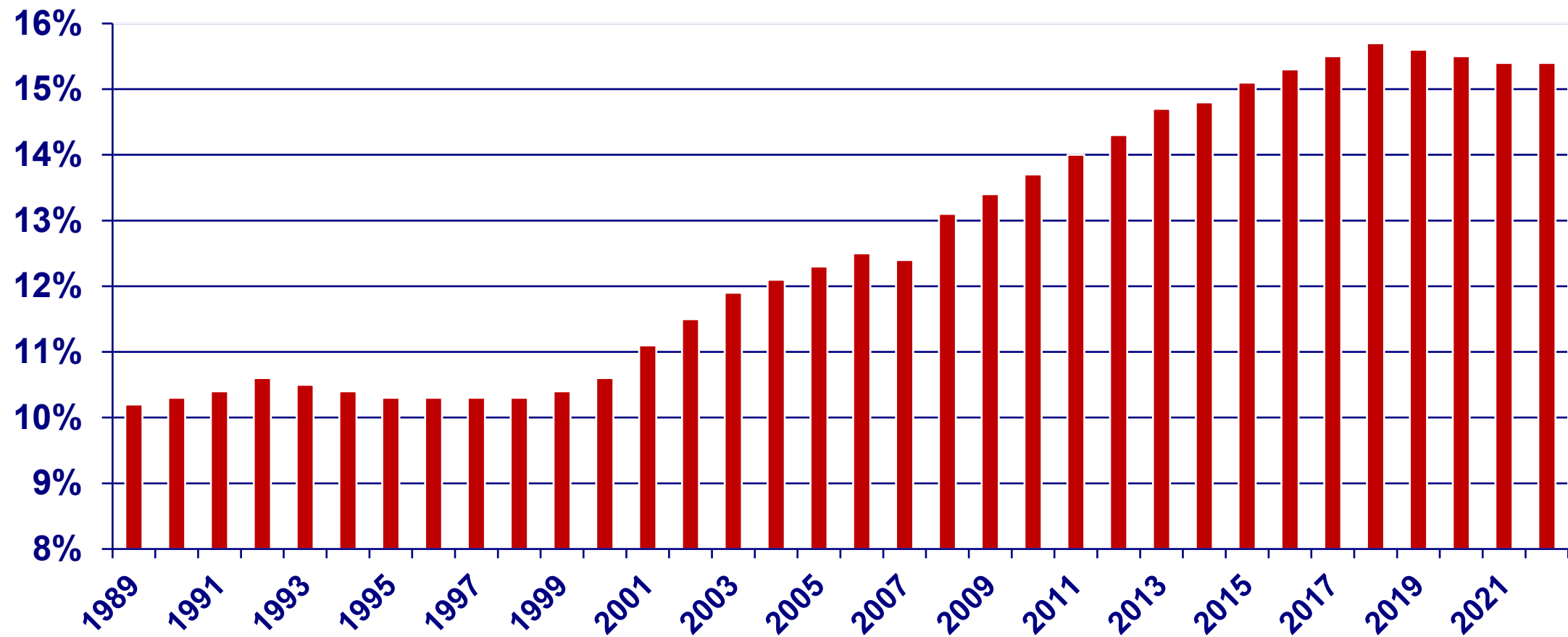
August, 2024

If you are using the pdf version, you can read commentary on the figures by clicking on the icon in the upper left corner of the figure.

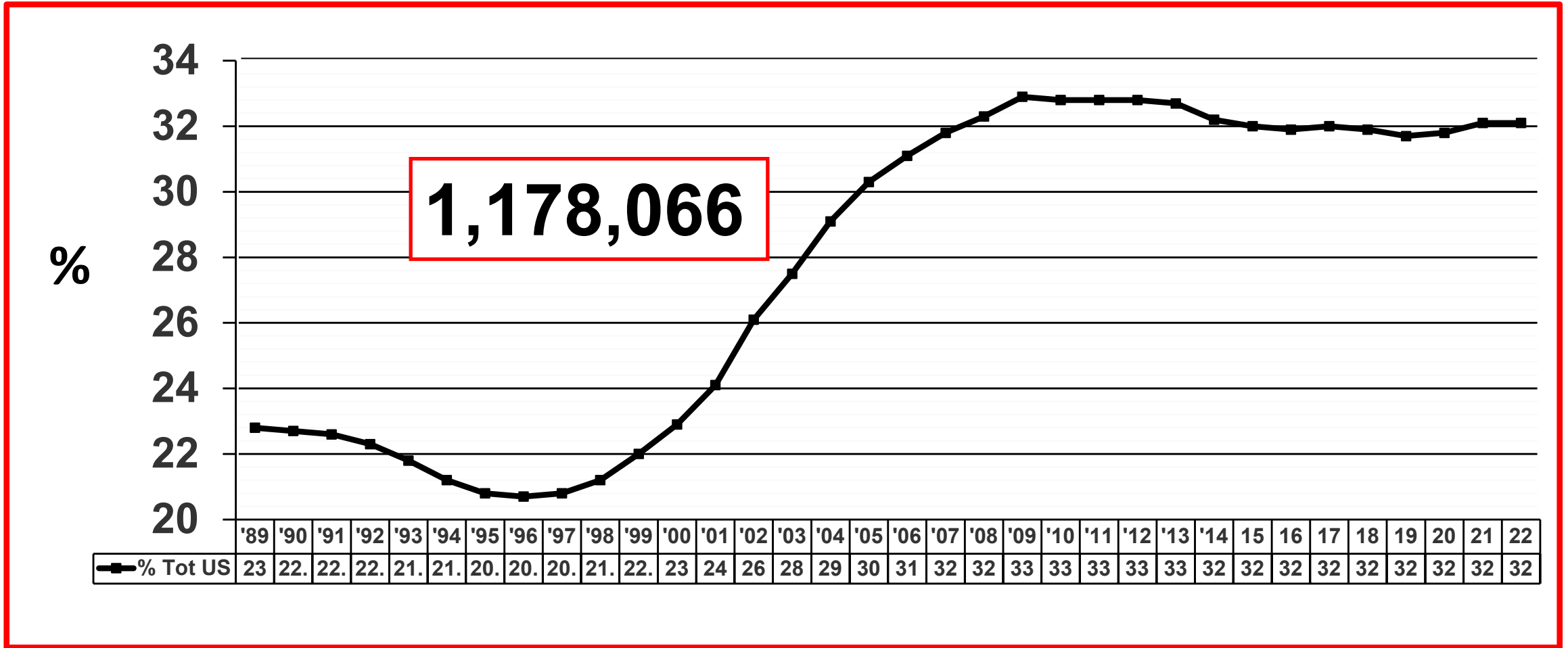
NOTE: WE include a section based on 2023 provisional data. While the provisional data is typically very close to the final official totals, **IT IS STILL PROVISIONAL AND 2022 IS THE MOST RECENT OFFICIAL DATA YEAR.**



Proportion of U.S. Women Giving Birth with a Prior Cesarean, 1989-2022

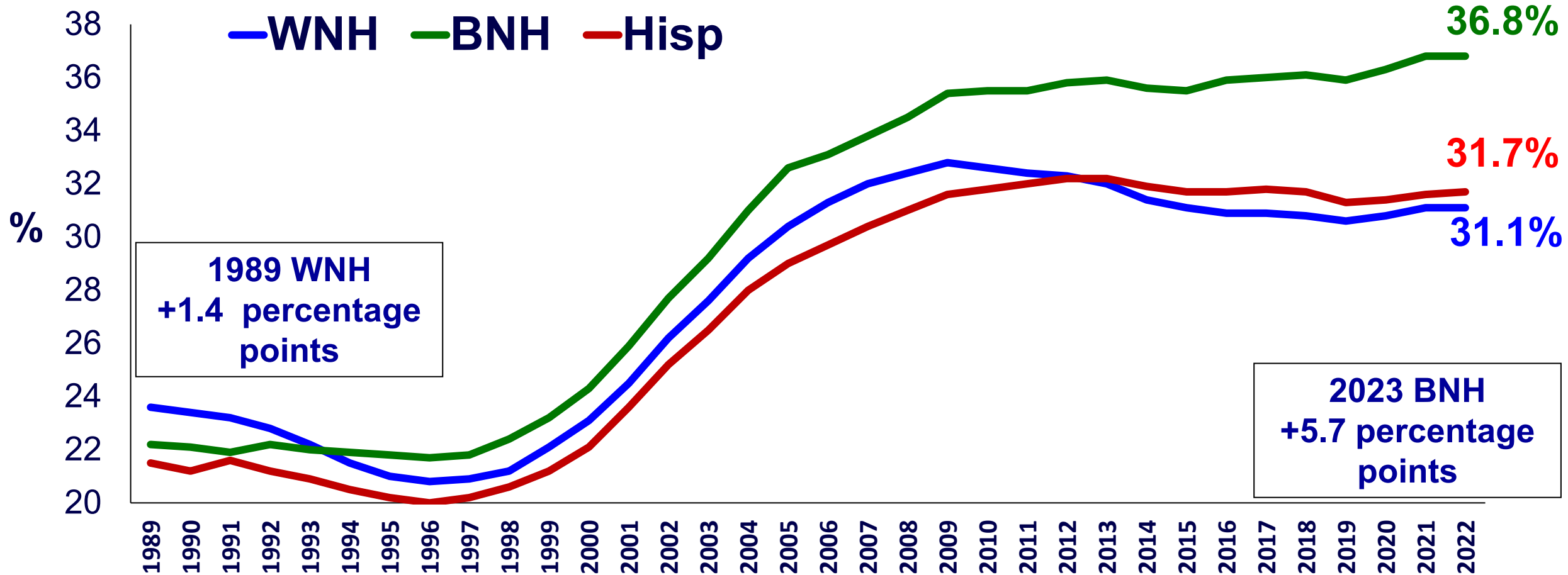


US Cesarean Rates, 1989-2022

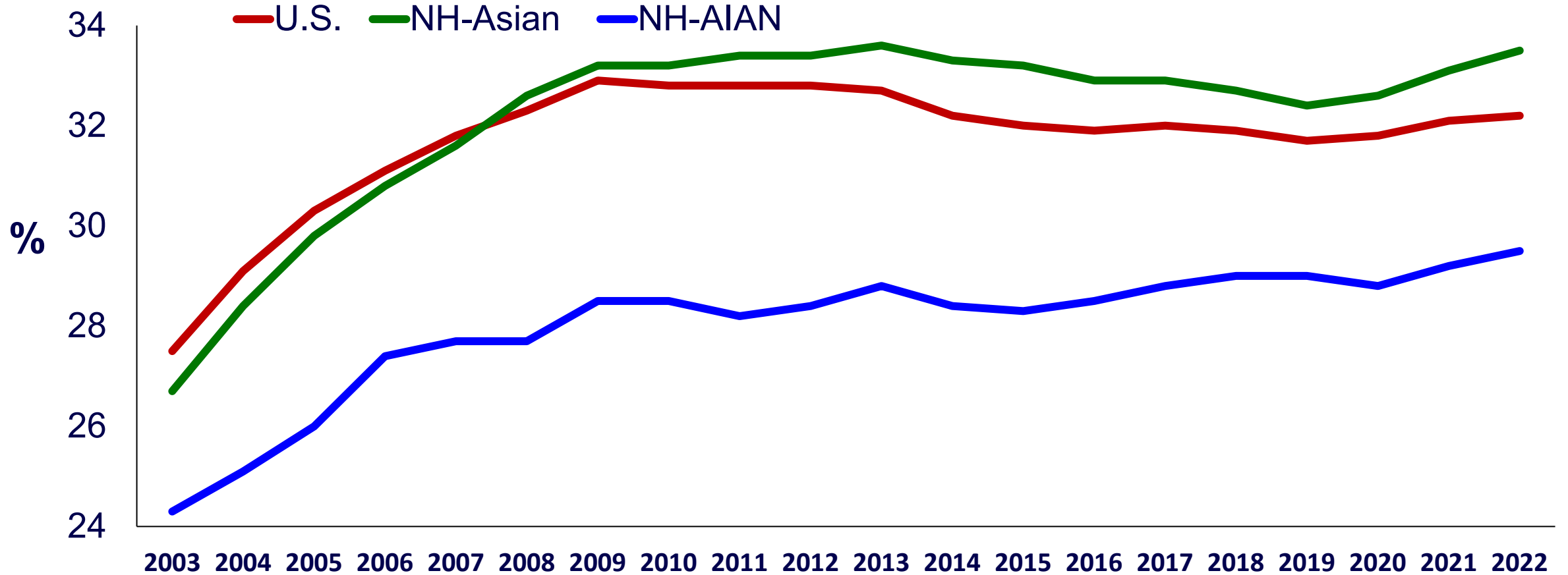


If the 2022 cesarean rate (32.1%) was the same as in 1996 (20.7%), there would have been 419,000 fewer cesareans in the U.S. in '22.

Total cesarean rates by race/ethnicity, U.S. 1989-2022

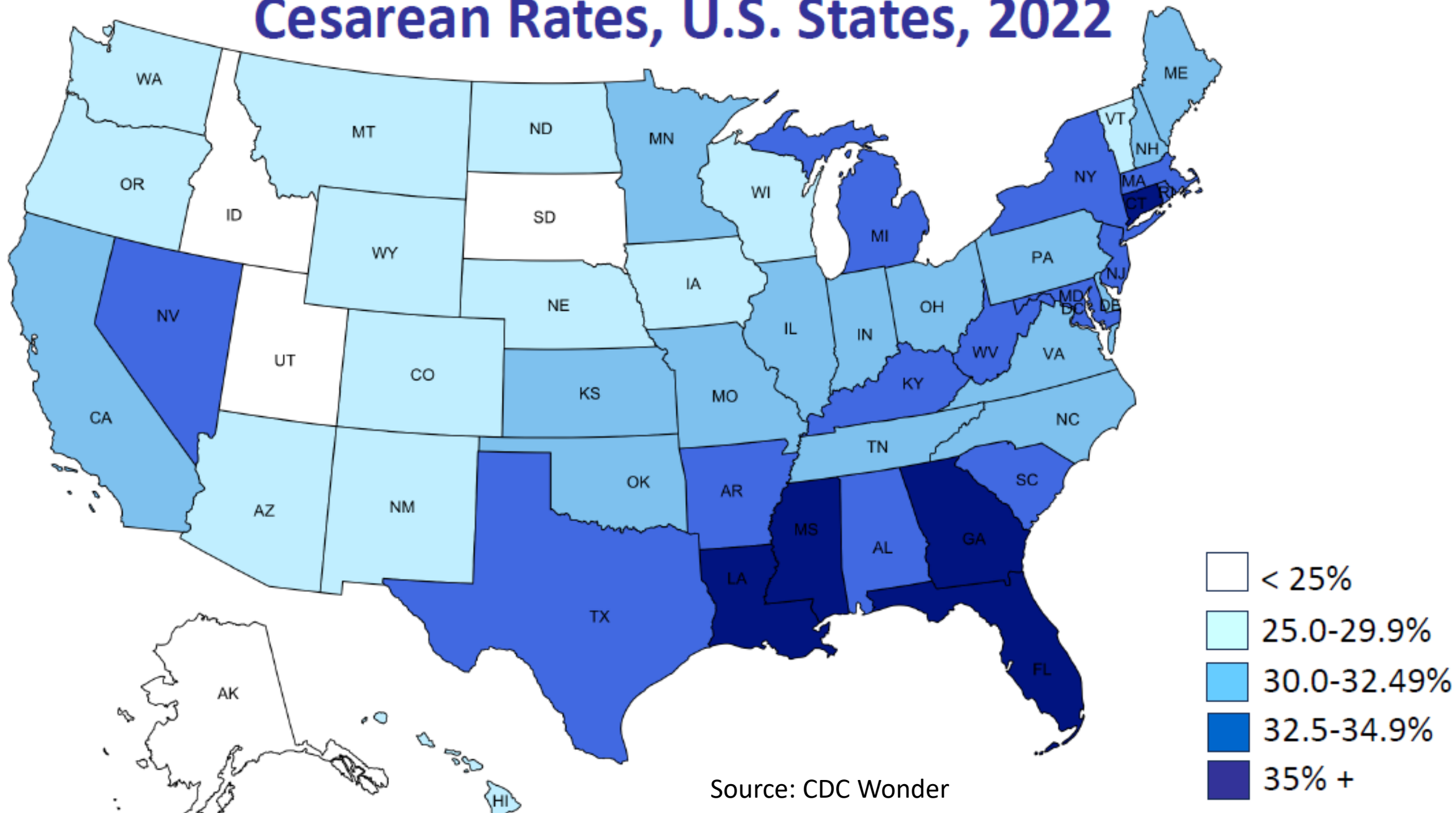


Total cesarean rates by race/ethnicity, U.S. 2003-2022



State Variations in Cesareans

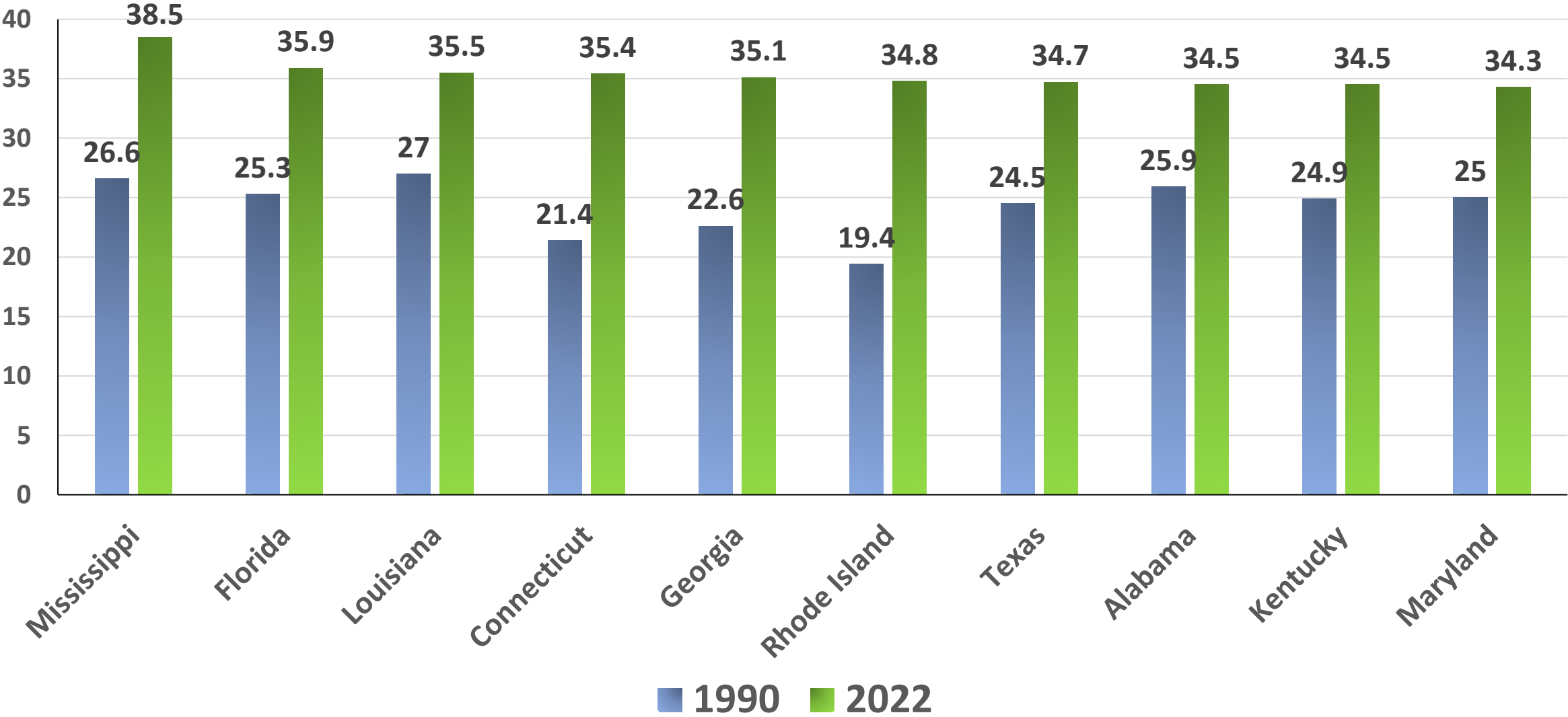
Cesarean Rates, U.S. States, 2022



Source: CDC Wonder

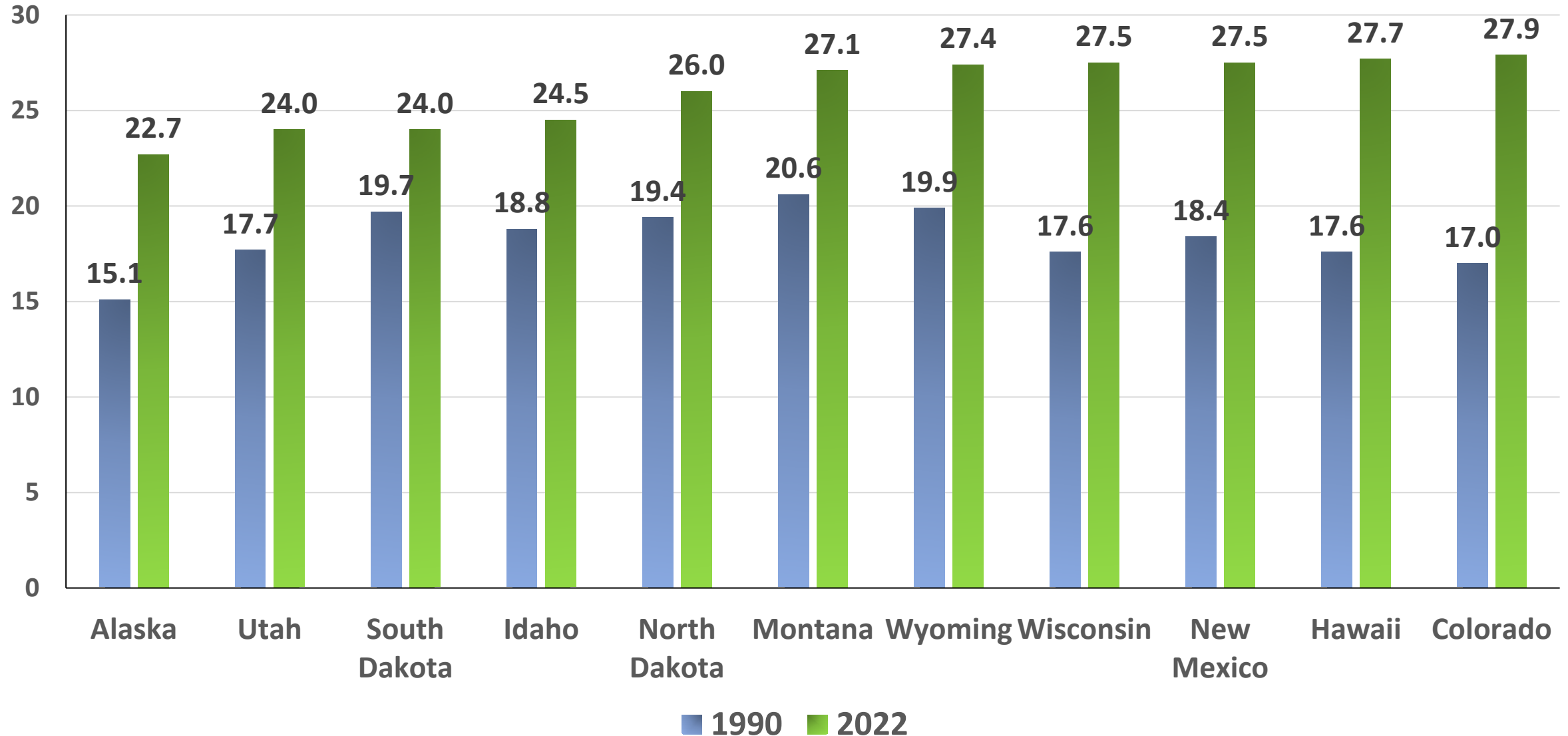


States with the Highest 2022 Cesarean Rates (%)



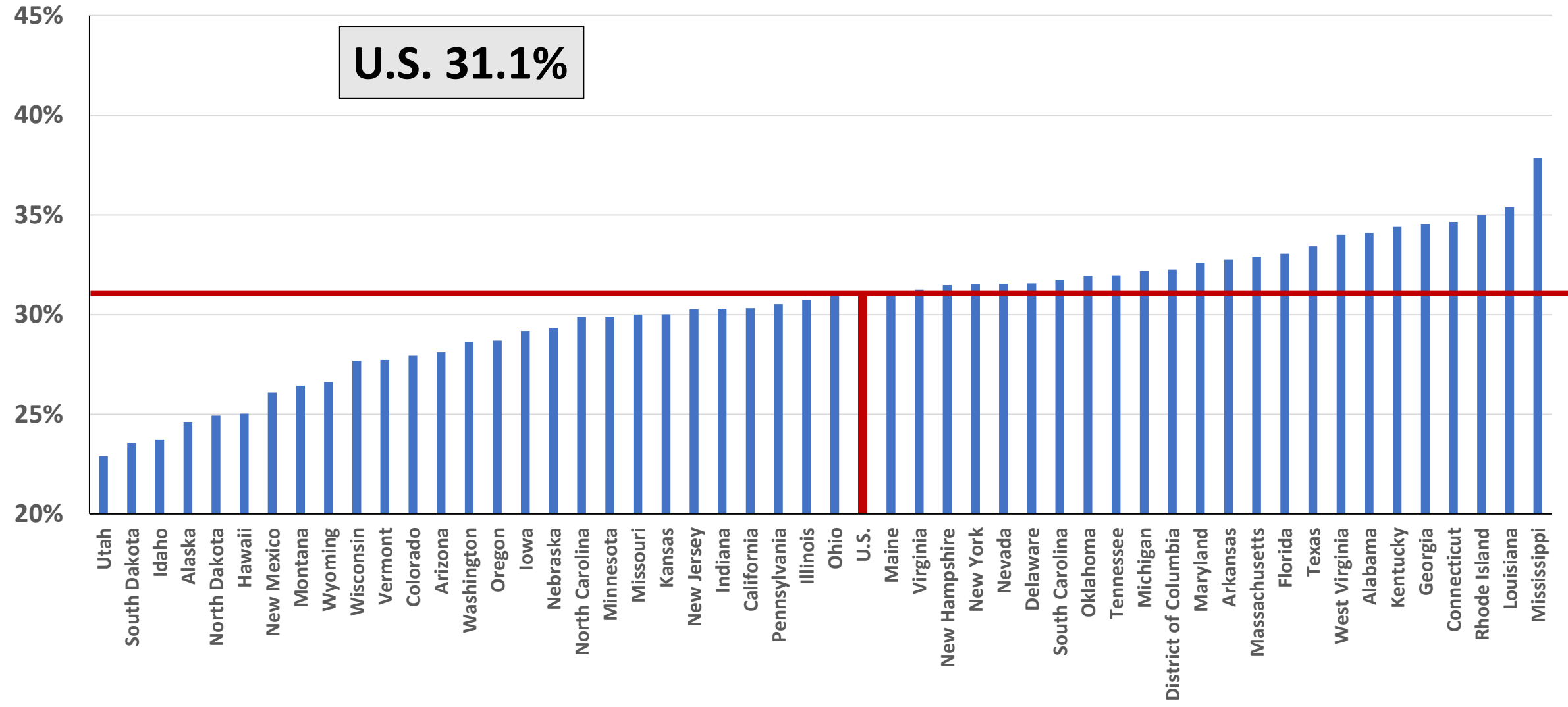
Source: CDC Wonder Birth File

States with the Lowest 2022 Cesarean Rates (%)





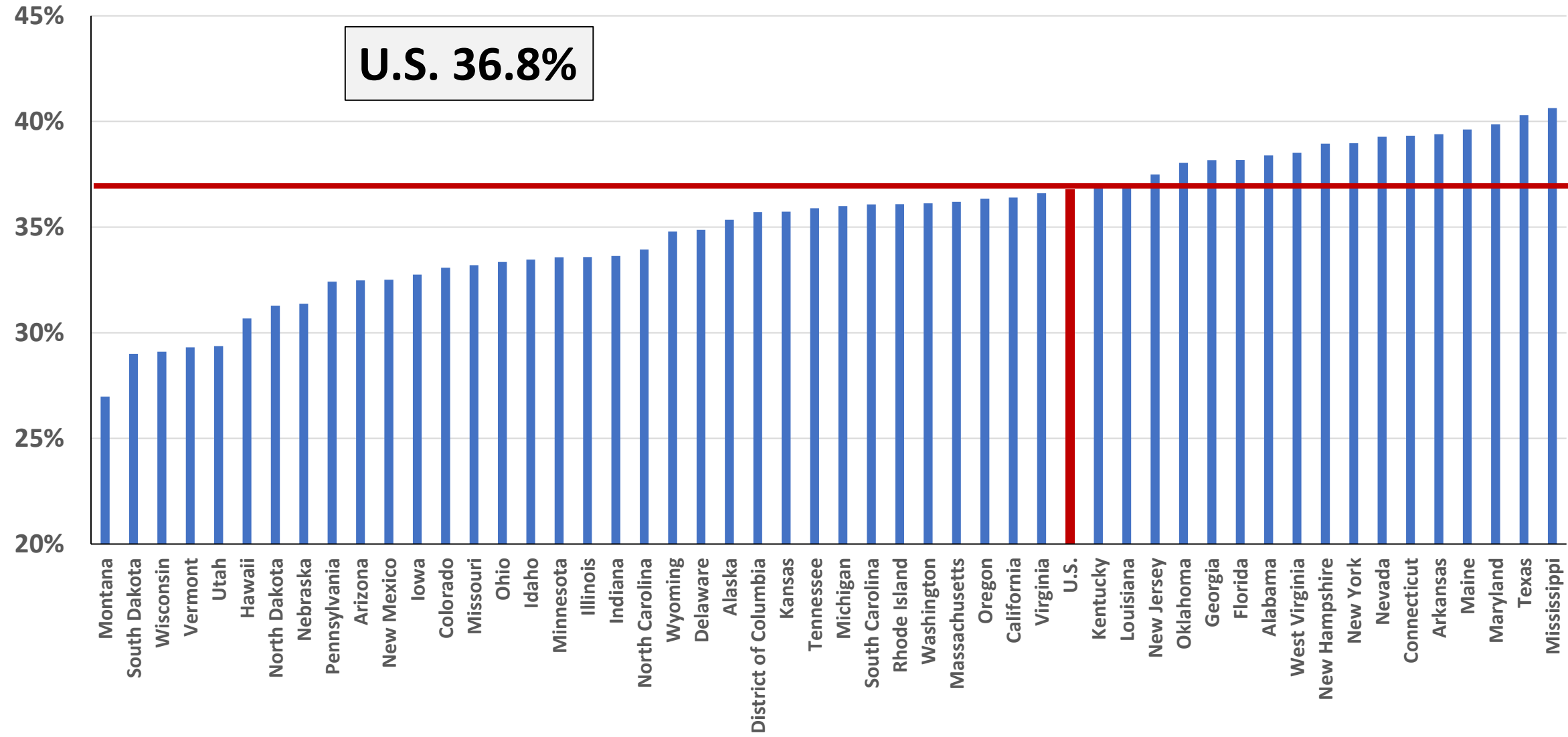
Cesarean Rates, Non-Hispanic White Women, U.S. States, 2022



U.S. 31.1%

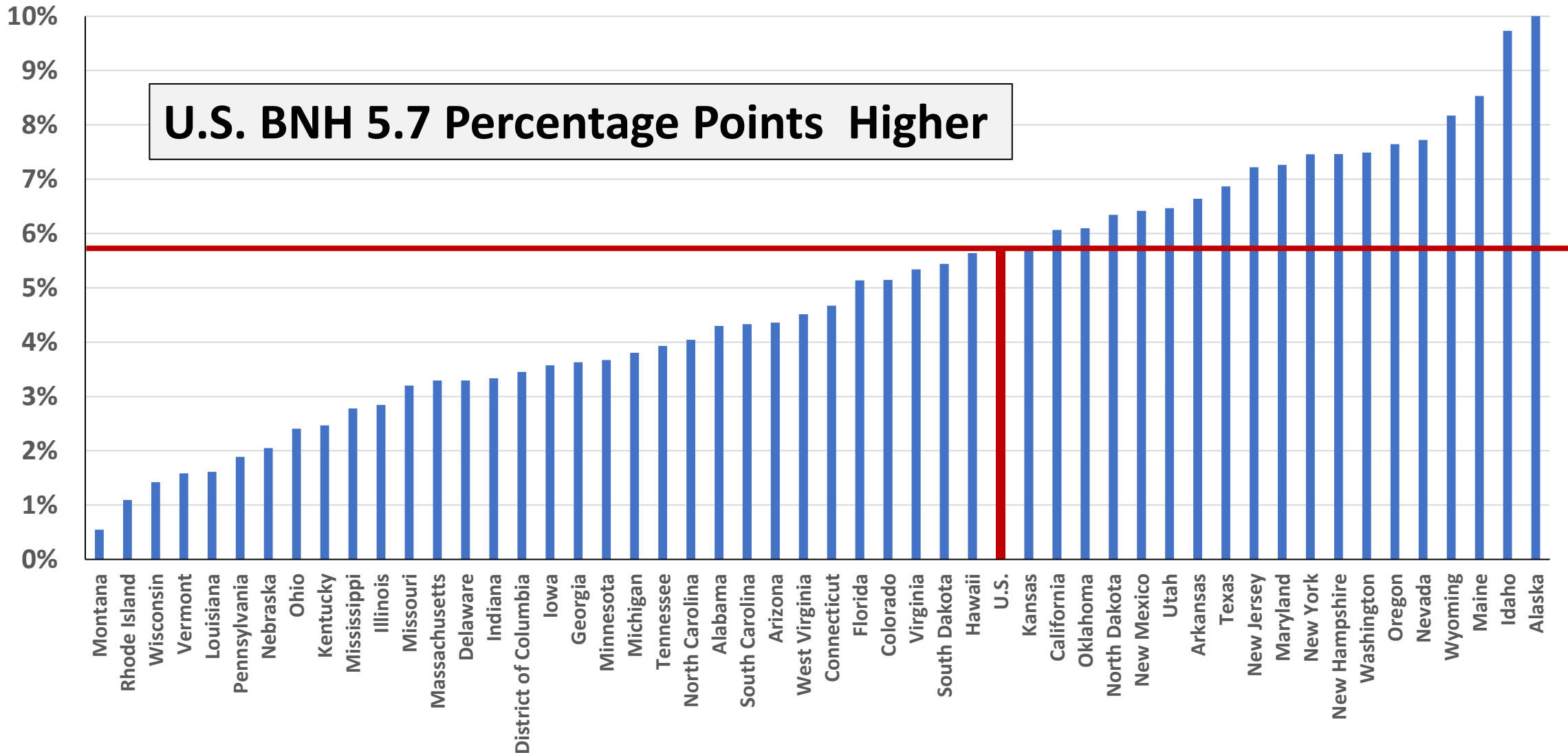


Cesarean Rates, Non-Hispanic Black Women, U.S. States, 2022





Difference between BNH & WNH Cesarean Rates, States, 2022



U.S. BNH 5.7 Percentage Points Higher



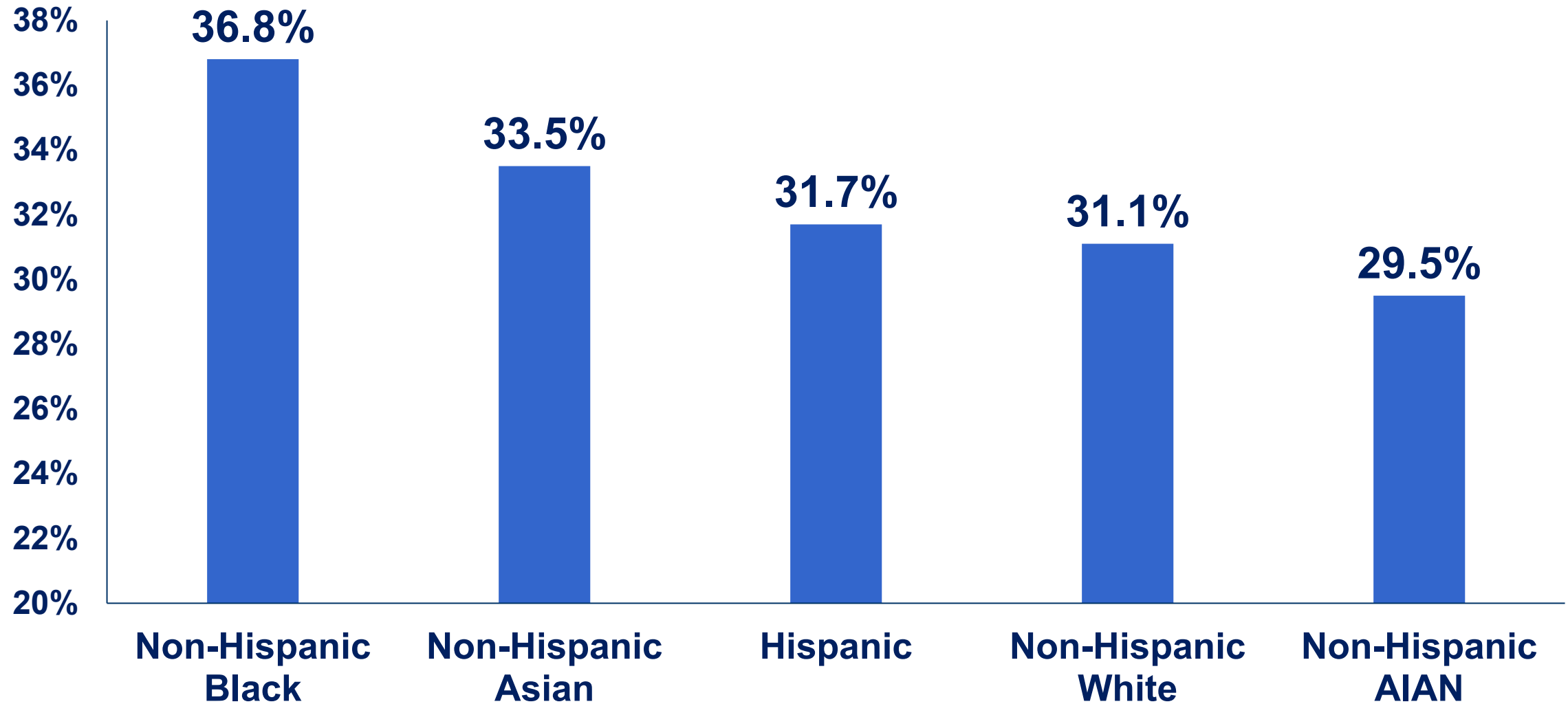
States with the Largest & Smallest Increases, 1990-2022

State	1990	2023	Absolute Change	Relative Change
Largest	%	%	Percentage Points	
Rhode Island	19.4	33.2	13.9	79.4%
Connecticut	21.4	35.0	13.6	64.5%
Nevada	19.7	33.5	13.8	67.0%
Georgia	22.6	35.8	13.2	56.2%
Minnesota	18.0	30.2	12.3	66.7%
Smallest				
Oklahoma	26.8	33.1	6.3	21.4%
Arkansas	27.7	33.8	6.1	21.1%
Idaho	18.8	24.4	5.6	30.4%
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South Dakota	19.7	24.4	4.6	21.6%

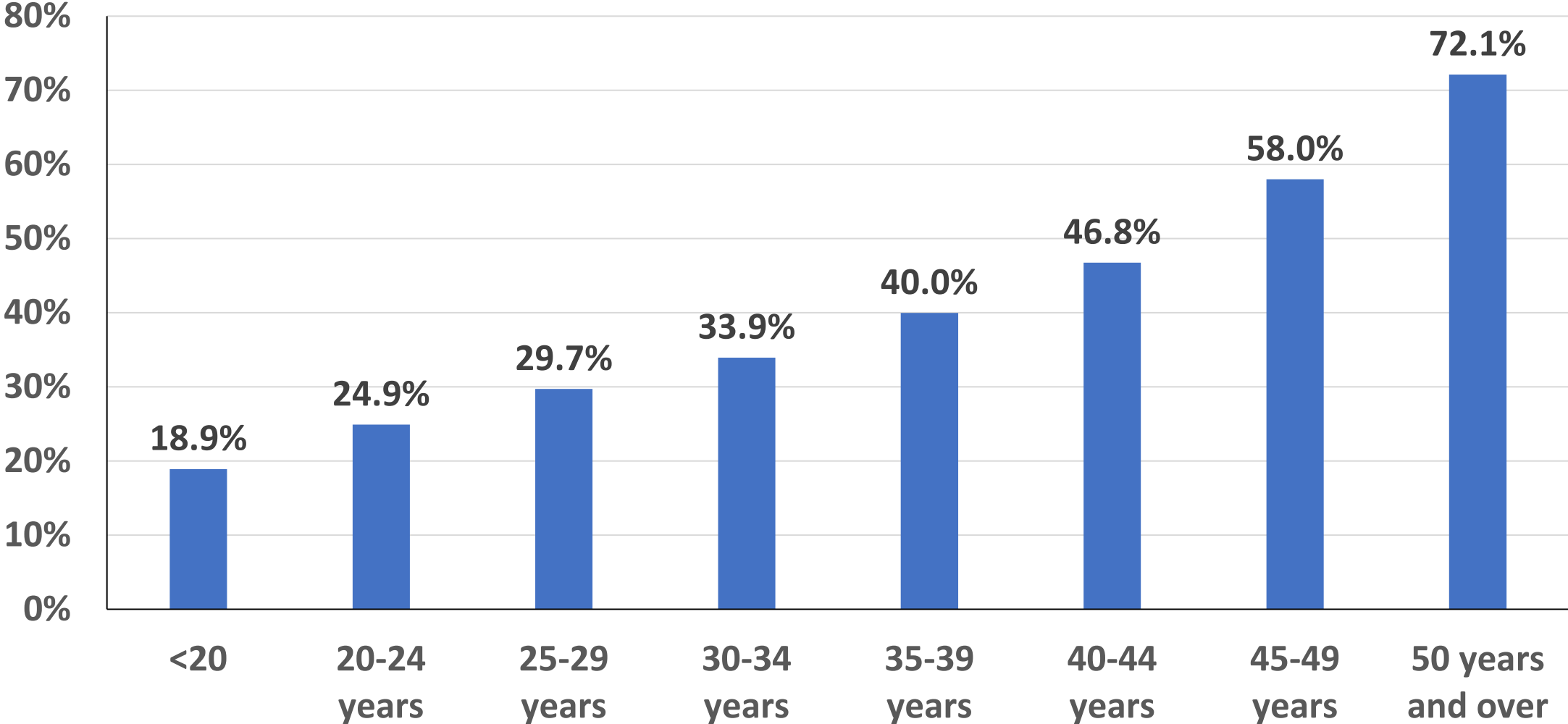
Demographics of Cesareans



2022 Cesarean Rates by Race/Ethnicity

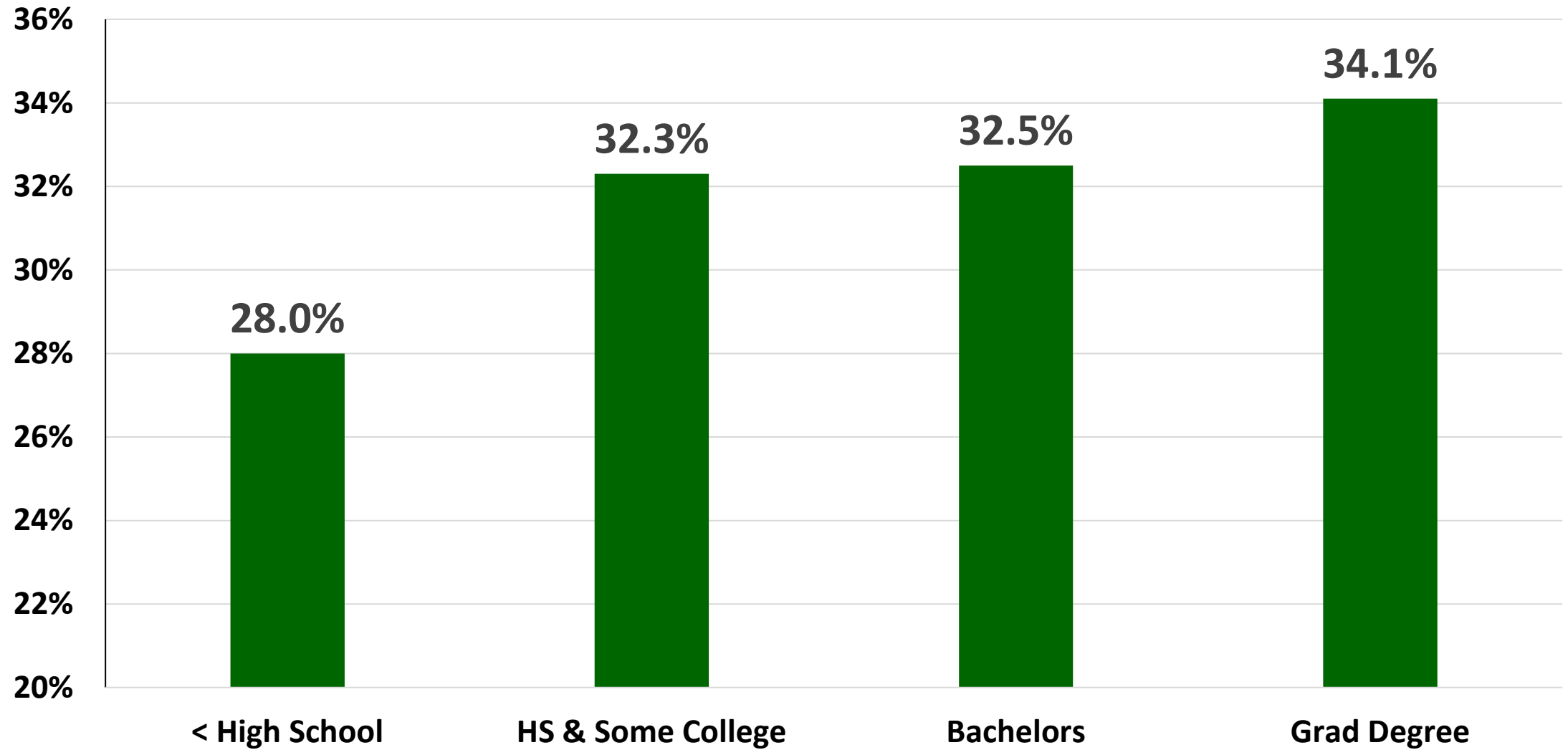


Overall Cesarean Rate by Age, U.S., 2022



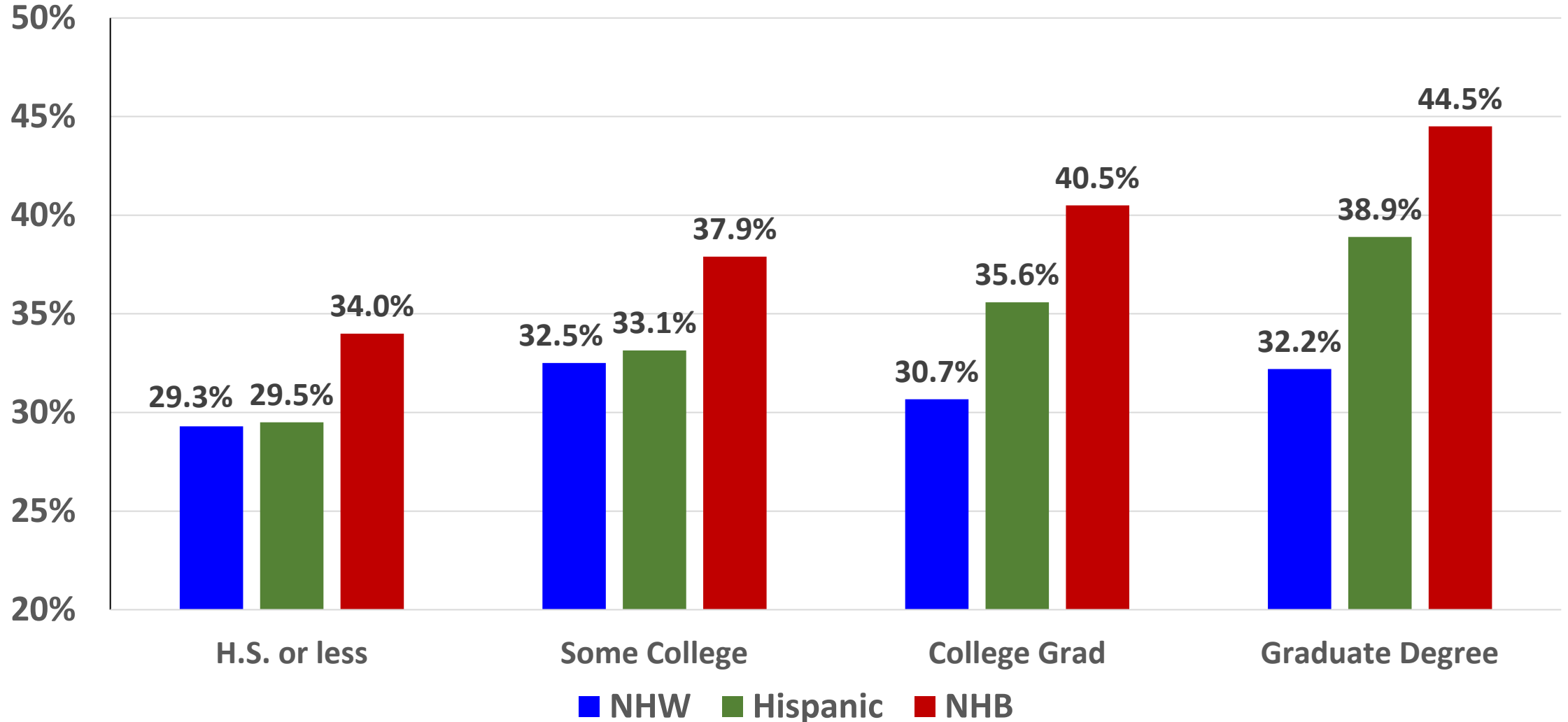
Source: CDC Wonder Birth File

Cesarean Rate by Education Status , U.S., 2022



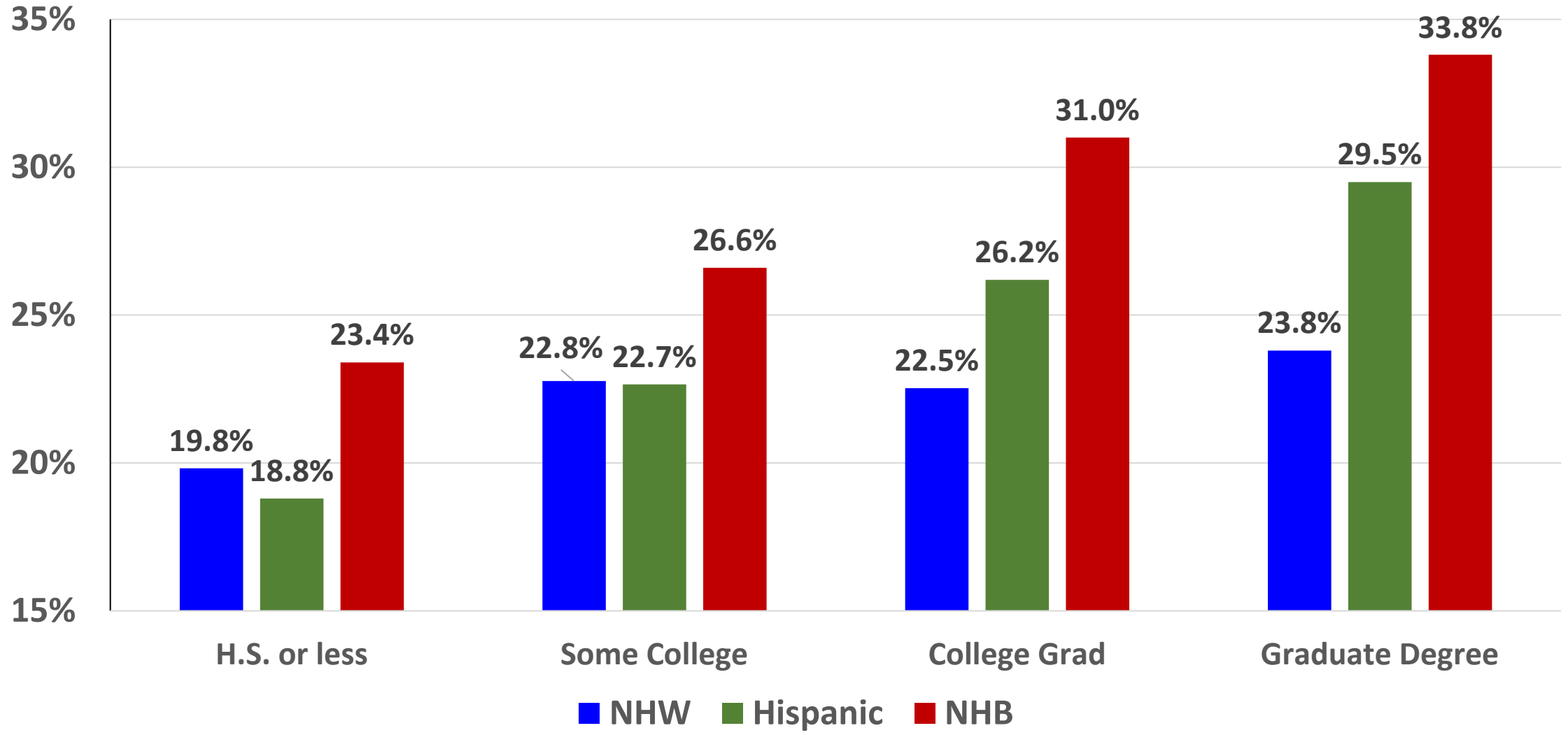


U.S. Overall Cesarean Rates by Education & Race/Ethnicity, 2022



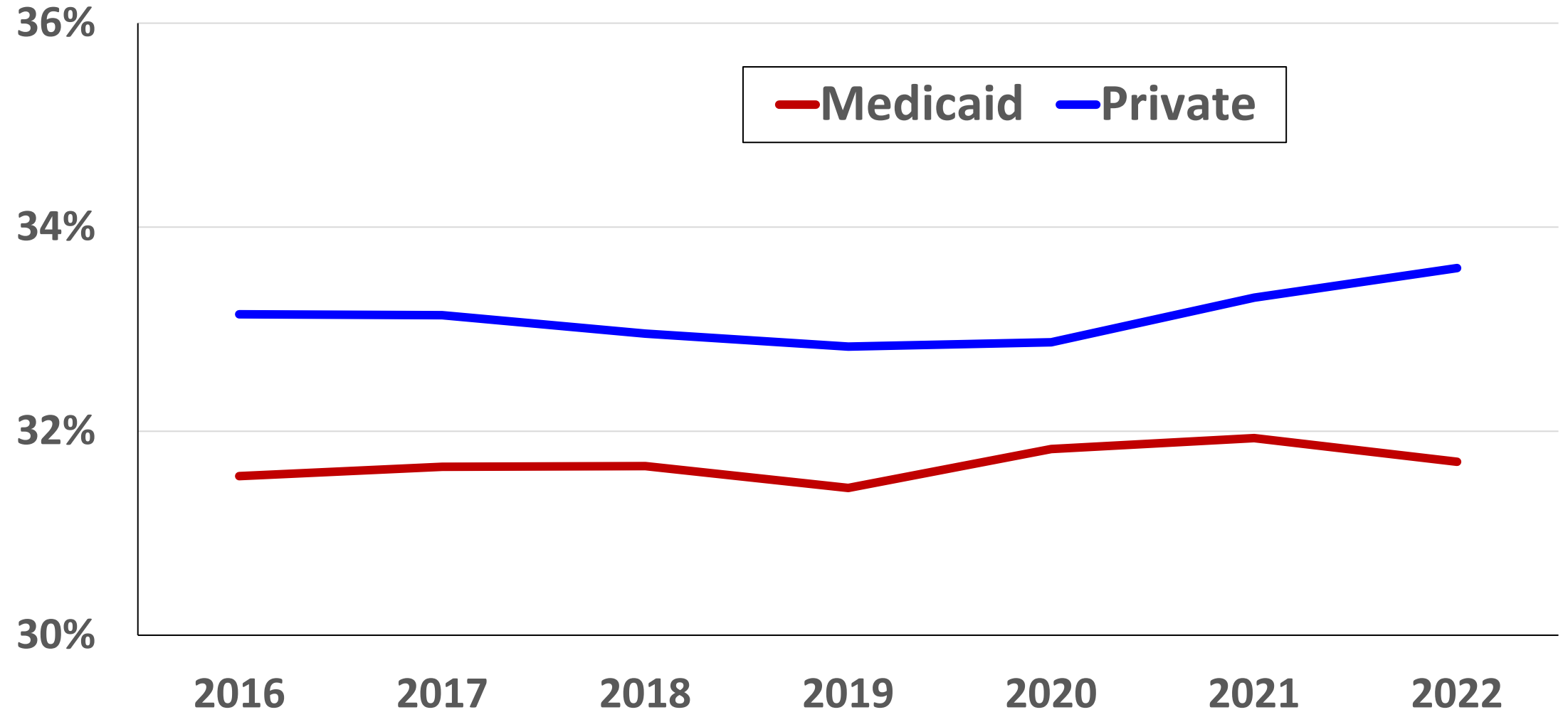


U.S. Primary Cesarean Rates by Education & Race/Ethnicity, 2022





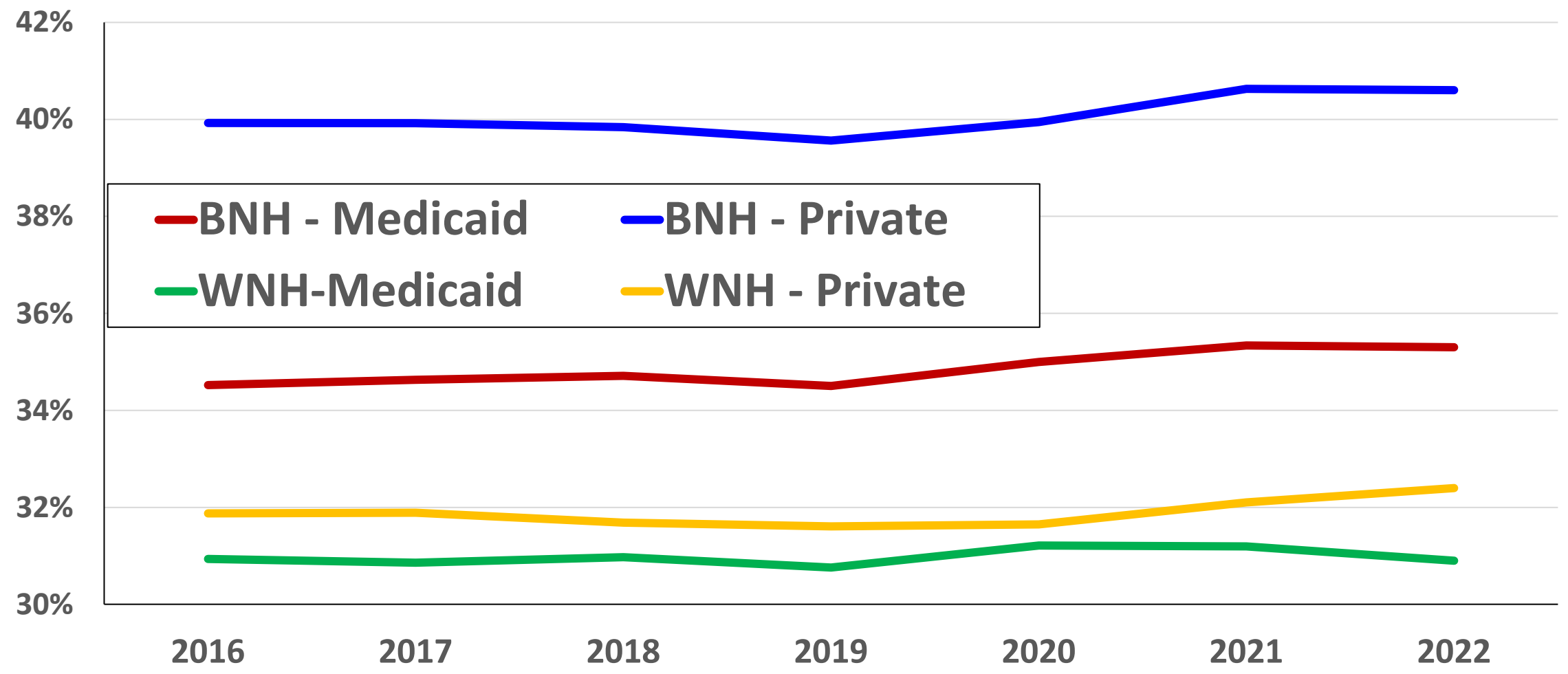
Cesarean Rates by Insurance Status, U.S., 2016-2022



Source: CDC Wonder Birth File



Cesarean Rates by Insurance Status, U.S., 2016-2022



Source: CDC Wonder Birth File

Risk and Protective Factors for Cesareans:

Is it the Women's fault ?

Spoiler alert – No

Rise in caesarean births in Scotland linked to obesity and age

Poppy Koronka
Saturday November 26 2022, 12.01am GMT, The Times



The number of emergency c-sections has increased from 7,285 to 9,359

GETTY IMAGES

Poppy Koronka
Saturday November 26 2022, 12.01am GMT, The Times

The rising number of planned caesarean births in Scotland, which has more than doubled in the past two decades, has been attributed to obese and older mothers.

Figures from Public Health Scotland showed that there were 8,884 elective c-sections in 2021, a significant increase from the 4,285 in 2001.

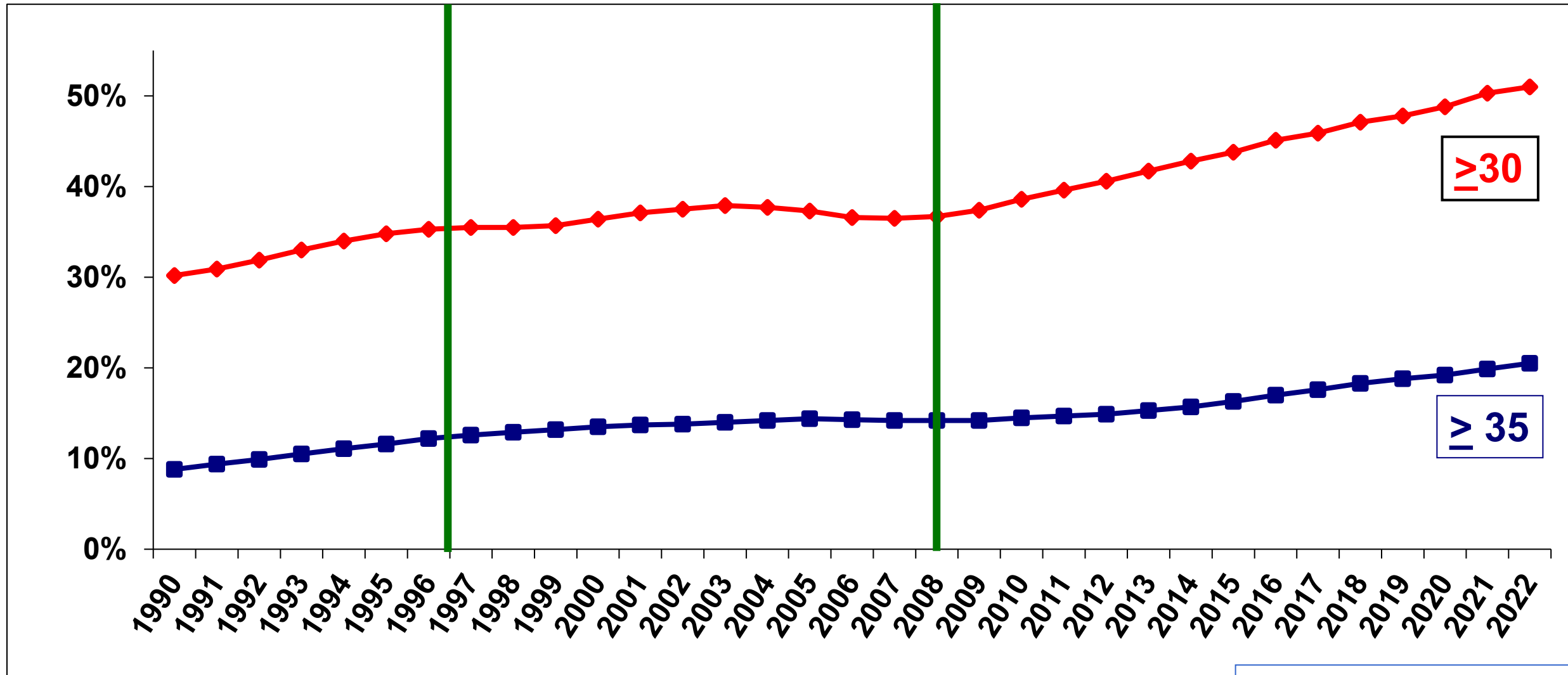


Familiar Excuses: Too Old, Too Fat, Too Sick, Maternal Request

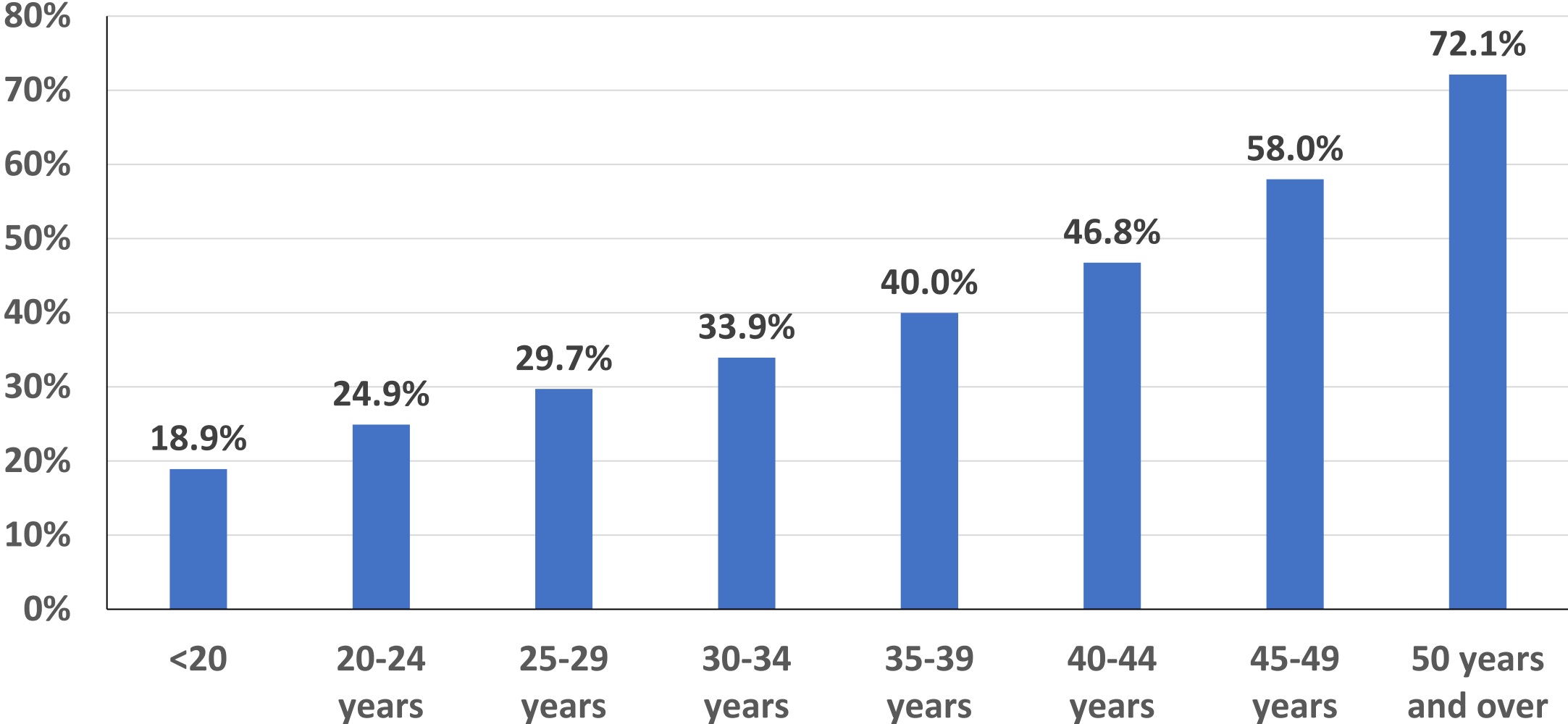
- *High cesarean rates are often blamed on women themselves – claims that they are older, less healthy, too often obese, and asking for a cesarean – hence it's their fault.*
- *There are changes in the demographics of birth, but that's not driving the cesarean rate.*

Is it older women?

Proportion of Births to Women 30+, U.S. 1990-2022



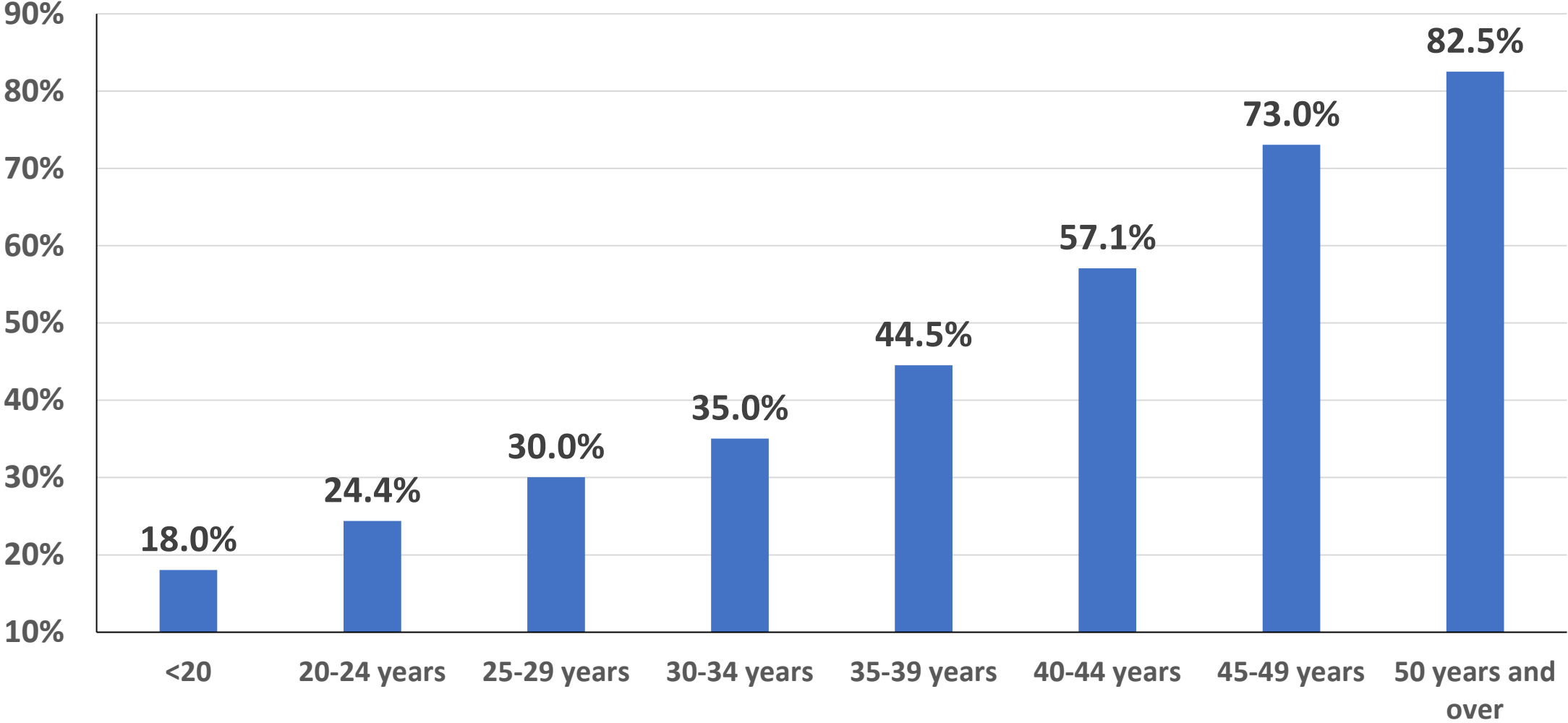
Overall Cesarean Rate by Age, U.S., 2022



Source: CDC Wonder Birth File

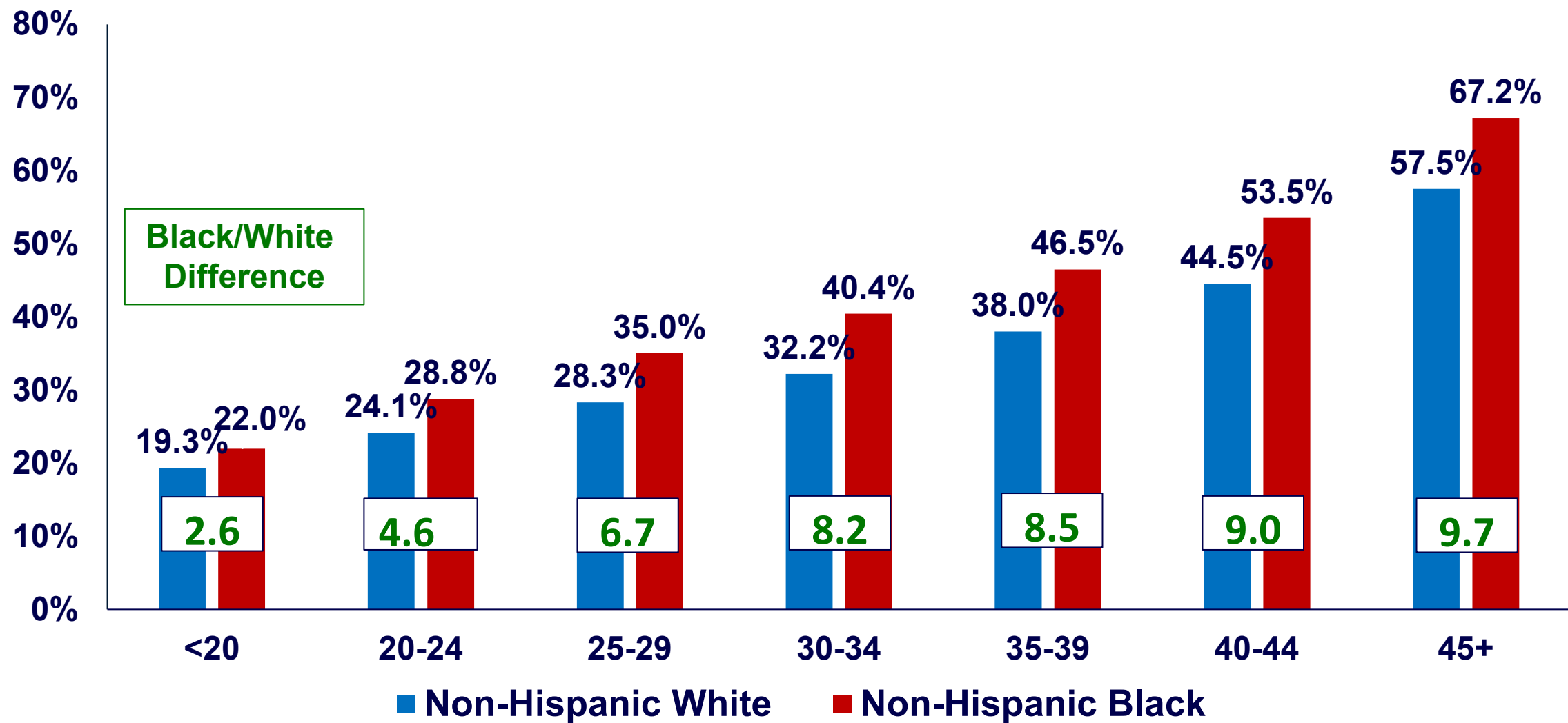


Cesarean Rate **First Births**, by Age, U.S., 2022



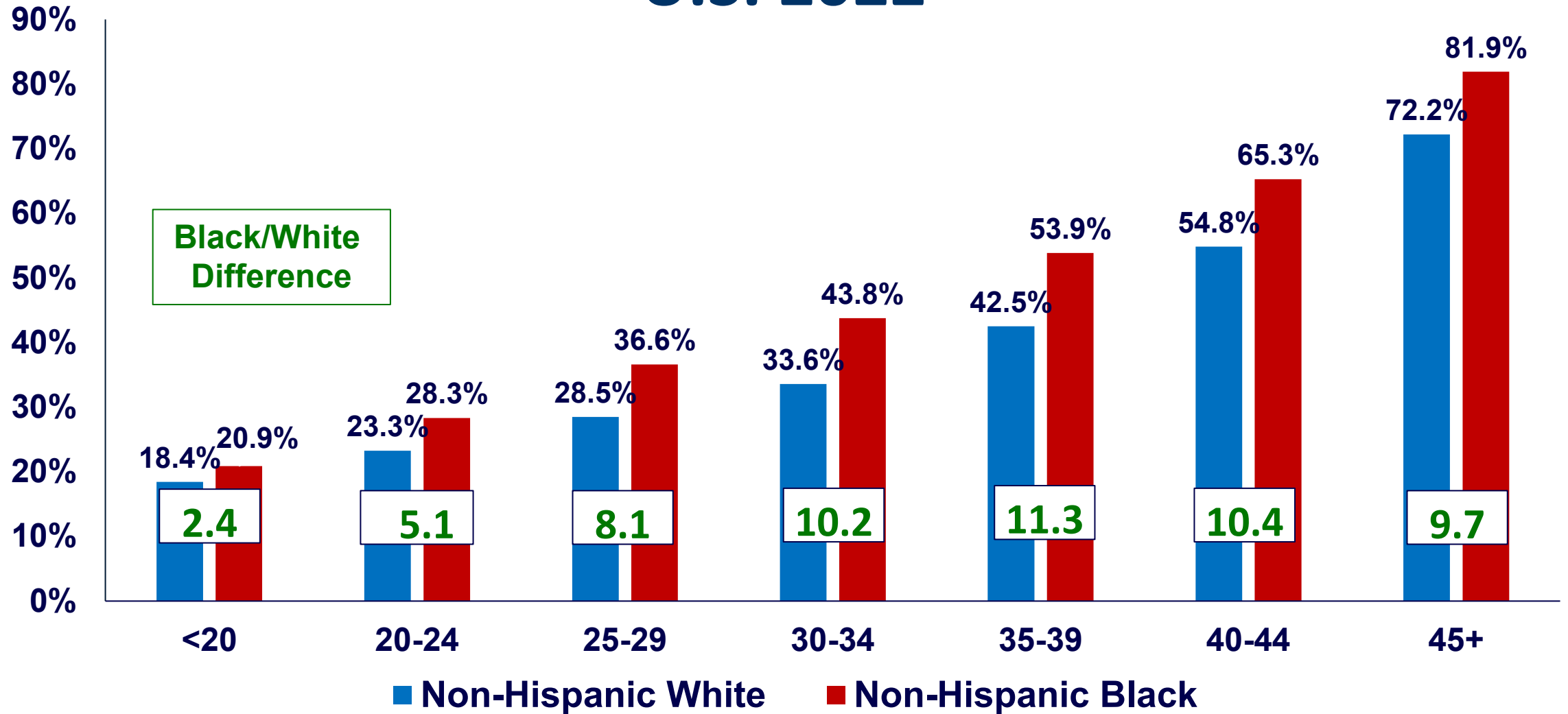
Source: CDC Wonder Birth File

Cesareans by Age & Race/Ethnicity, U.S. 2022

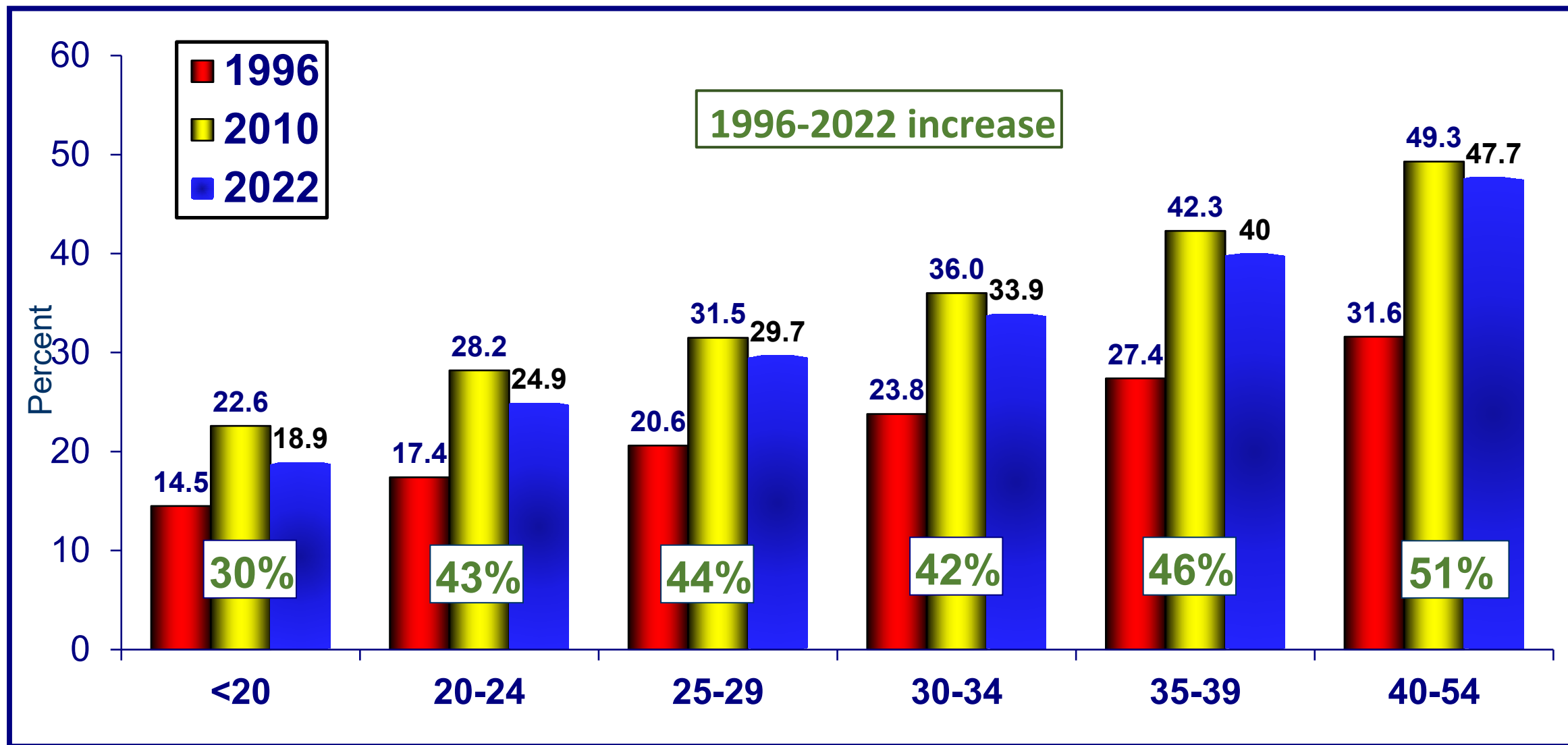




Cesareans by Age & Race/Ethnicity, **First-time mothers**, U.S. 2022



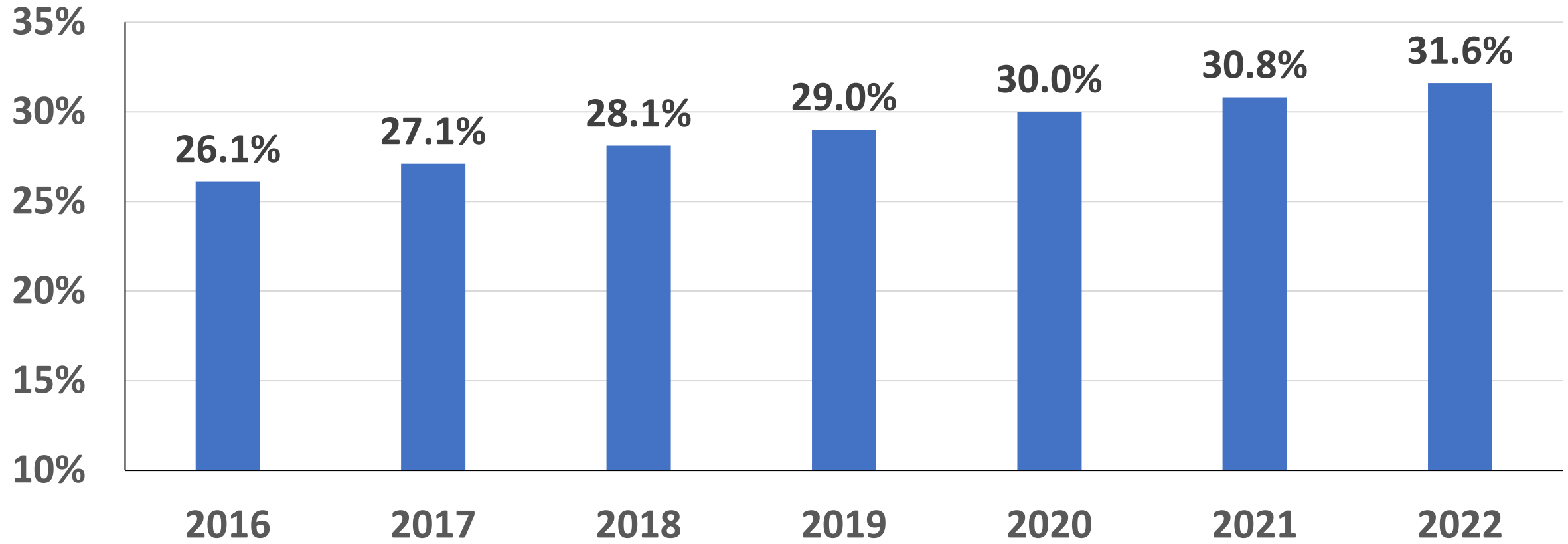
Total Cesarean Rates (per 100 births) by Age of Mother: United States, 1996, 2010 & 2022





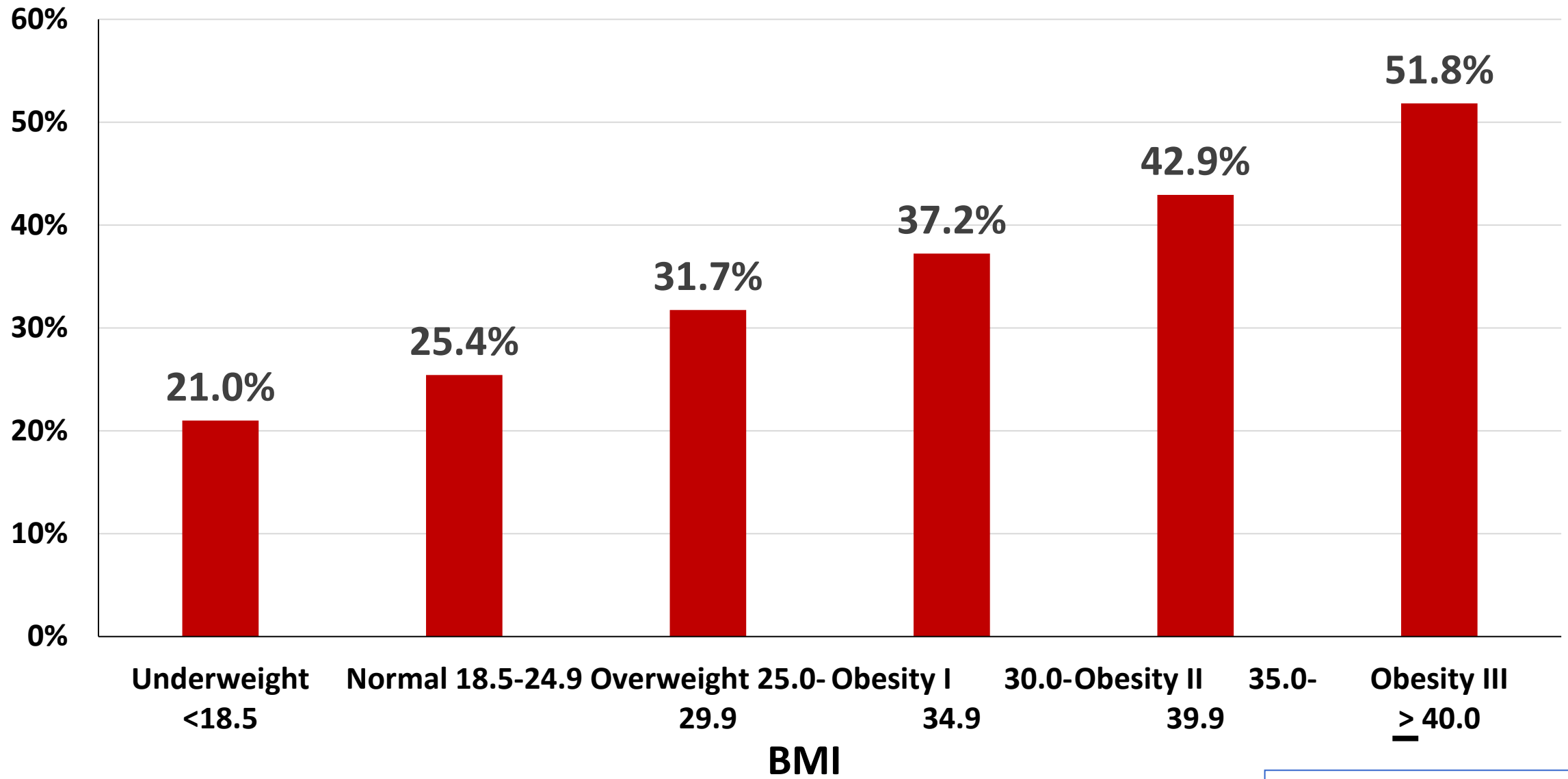
Is it obesity?

Proportion of Women with Prepregnancy BMI in 30+ (Obese), U.S., 2016-2022





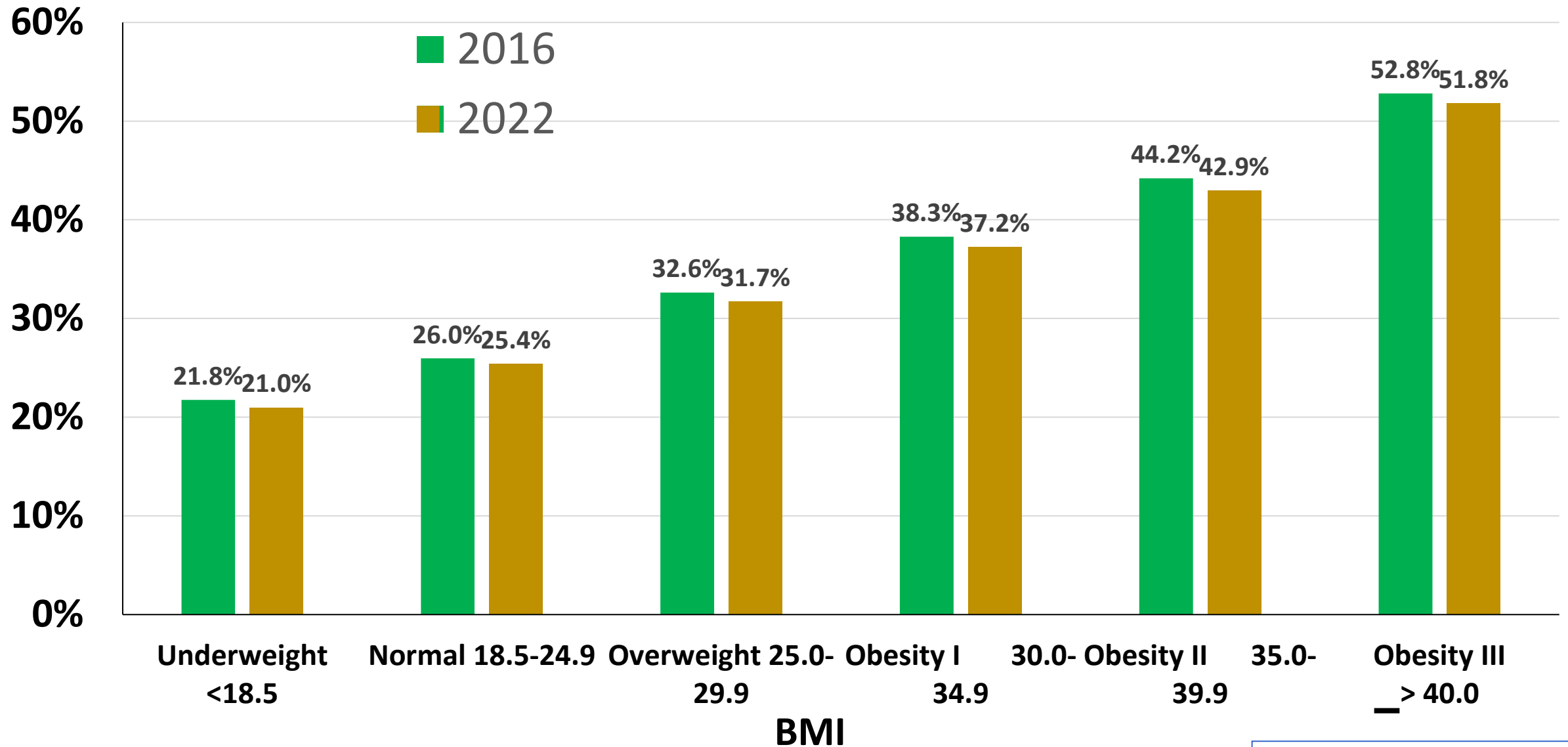
Cesarean Rates by Body Mass Index, U.S., 2022



Source: CDC Wonder Birth File

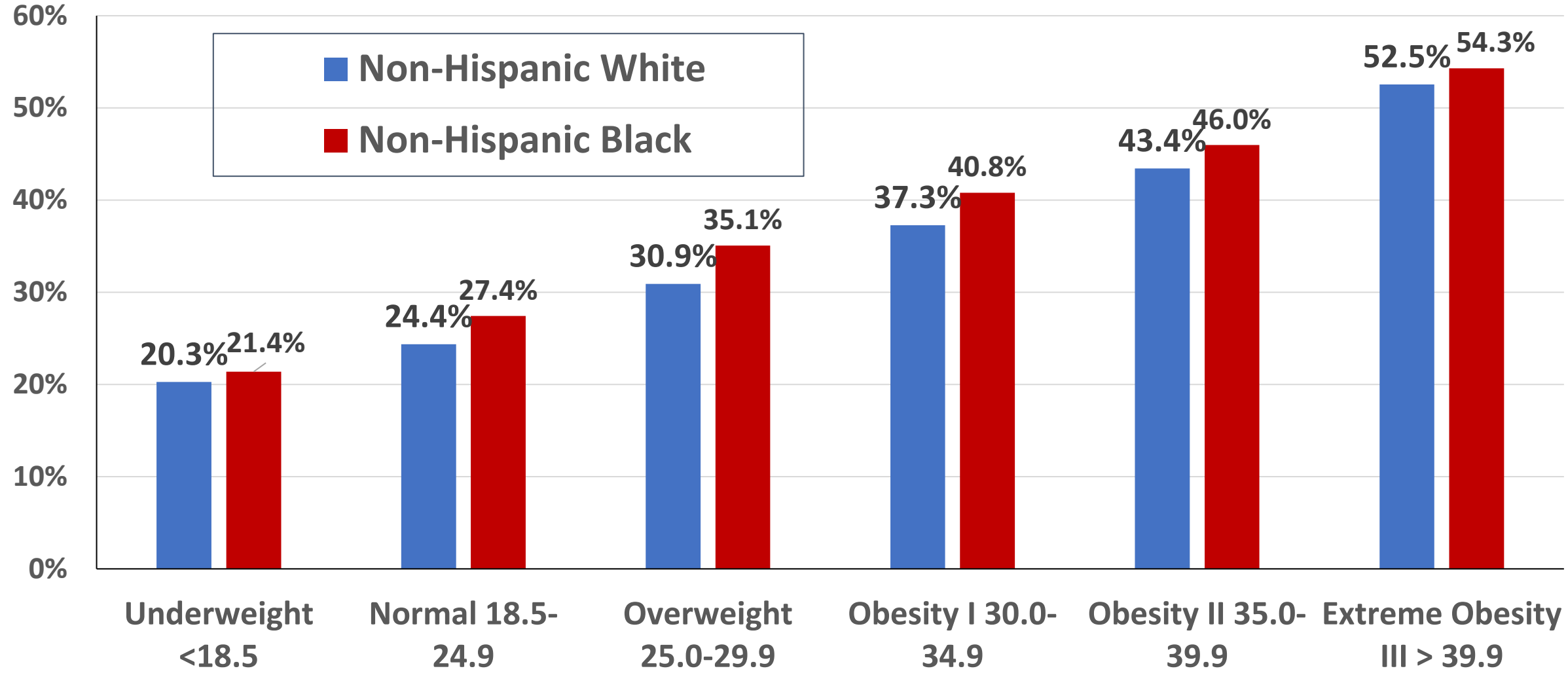


Cesarean Rates by Body Mass Index, U.S., 2016 & 2022





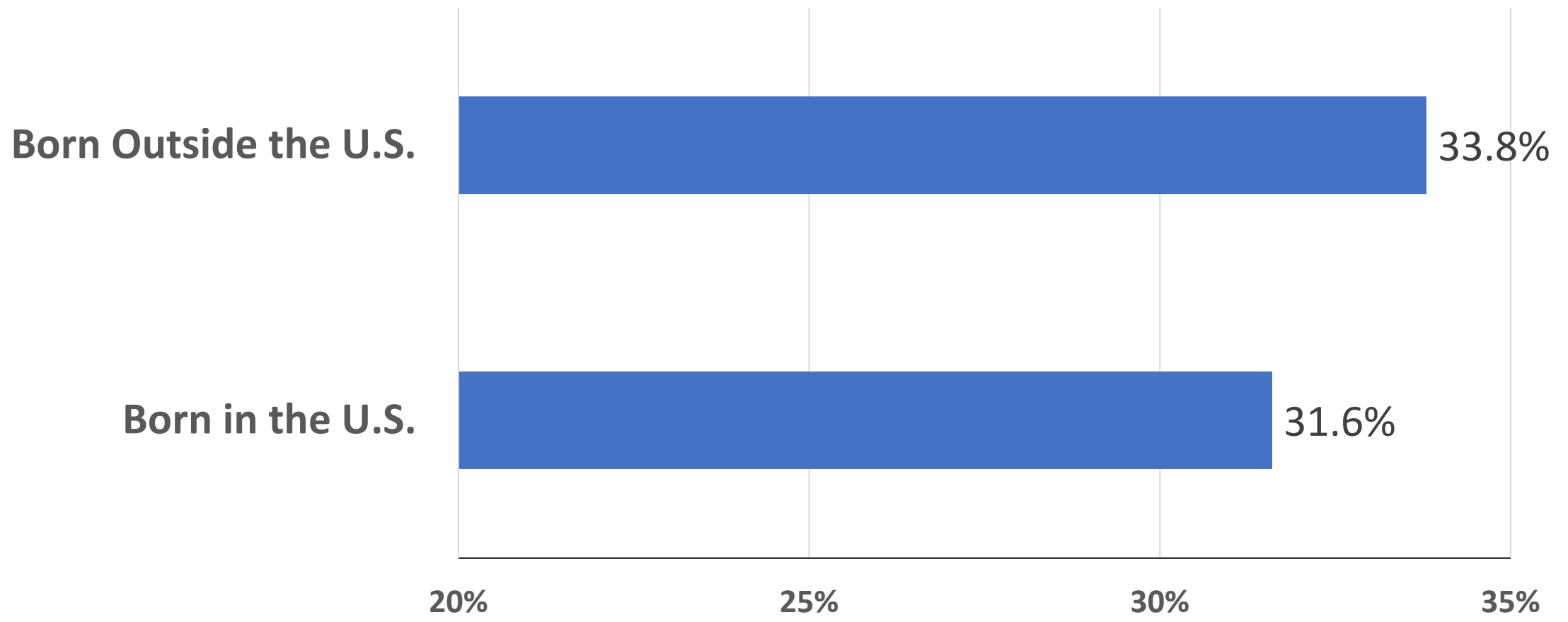
Cesarean Rates by BMI Category & Race/Ethnicity, 2022



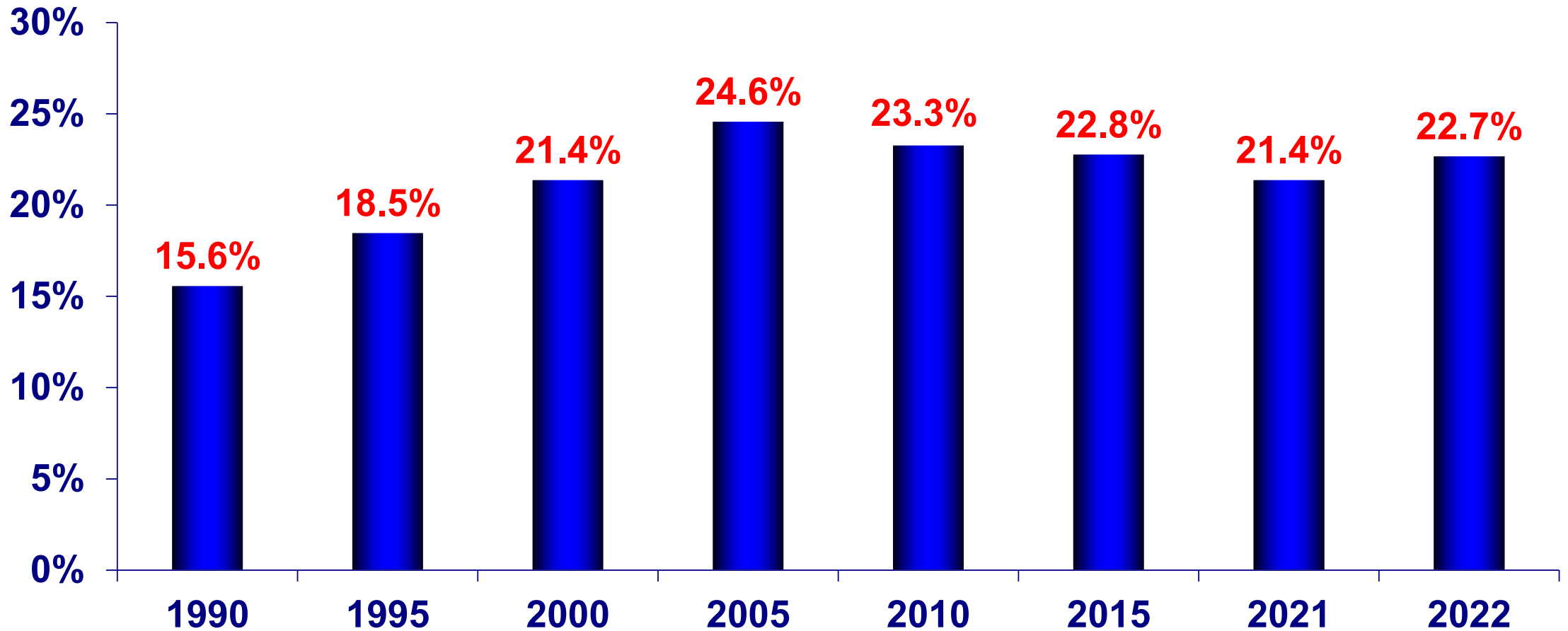


Is the cesarean rate driven by foreigners?

Cesarean Rates by Mother's Nativity, U.S., 2022



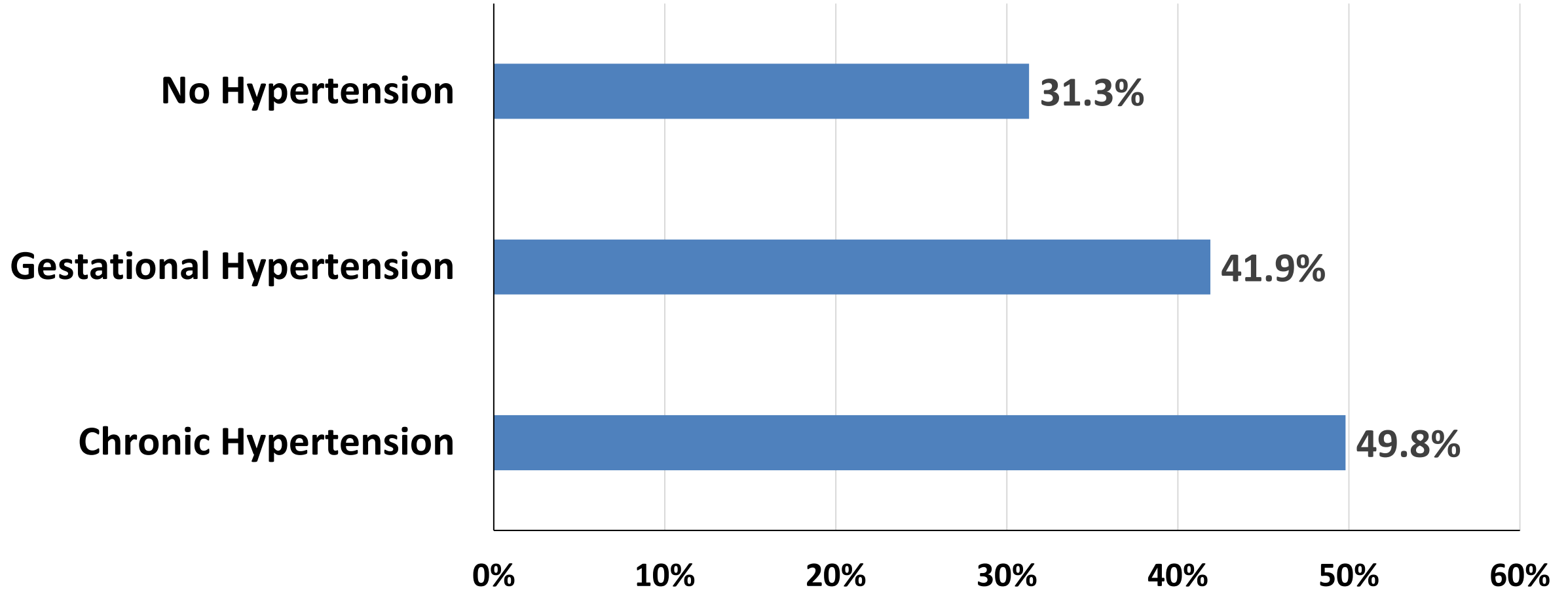
Proportion of All U.S. Births to Foreign Born Mothers, 1990-2022



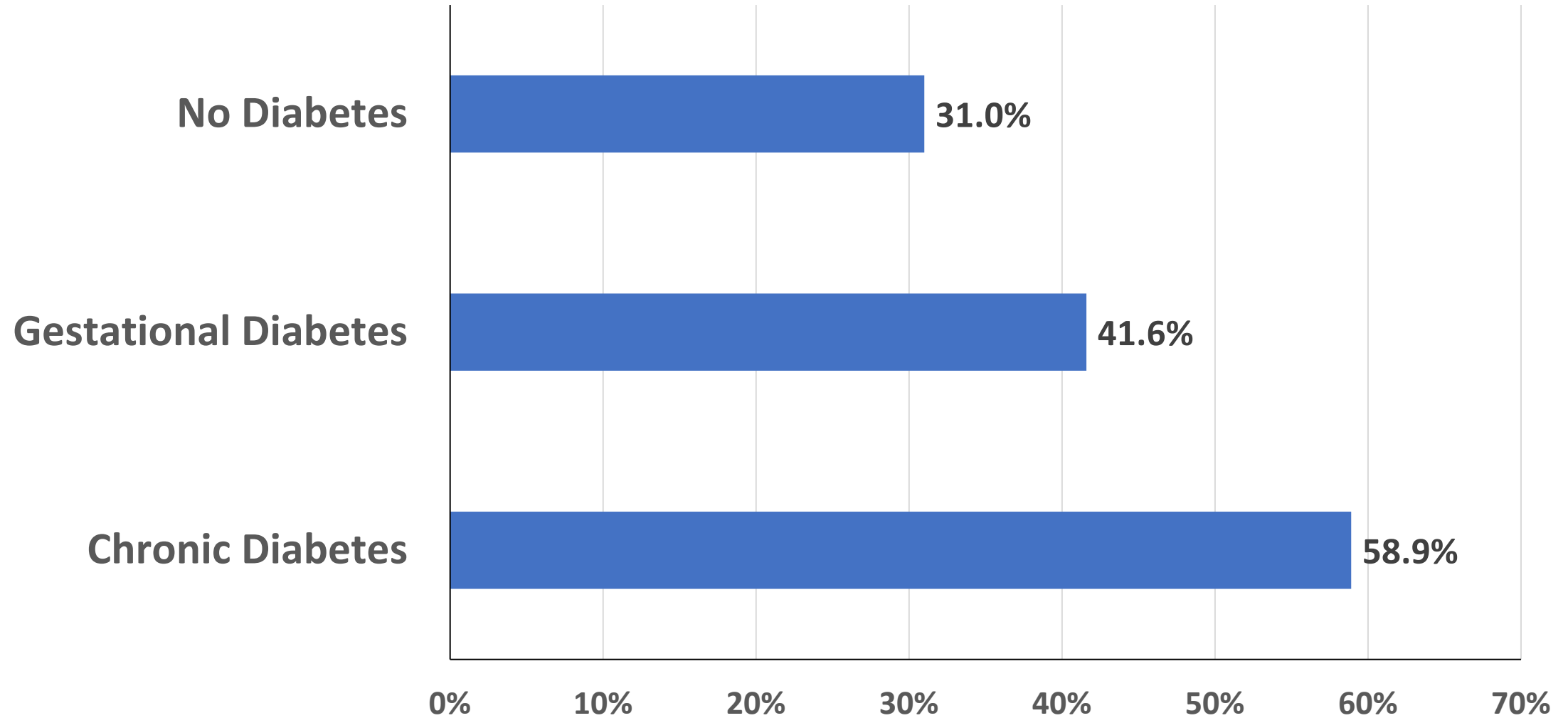
Is it maternal health?

Well, somewhat.

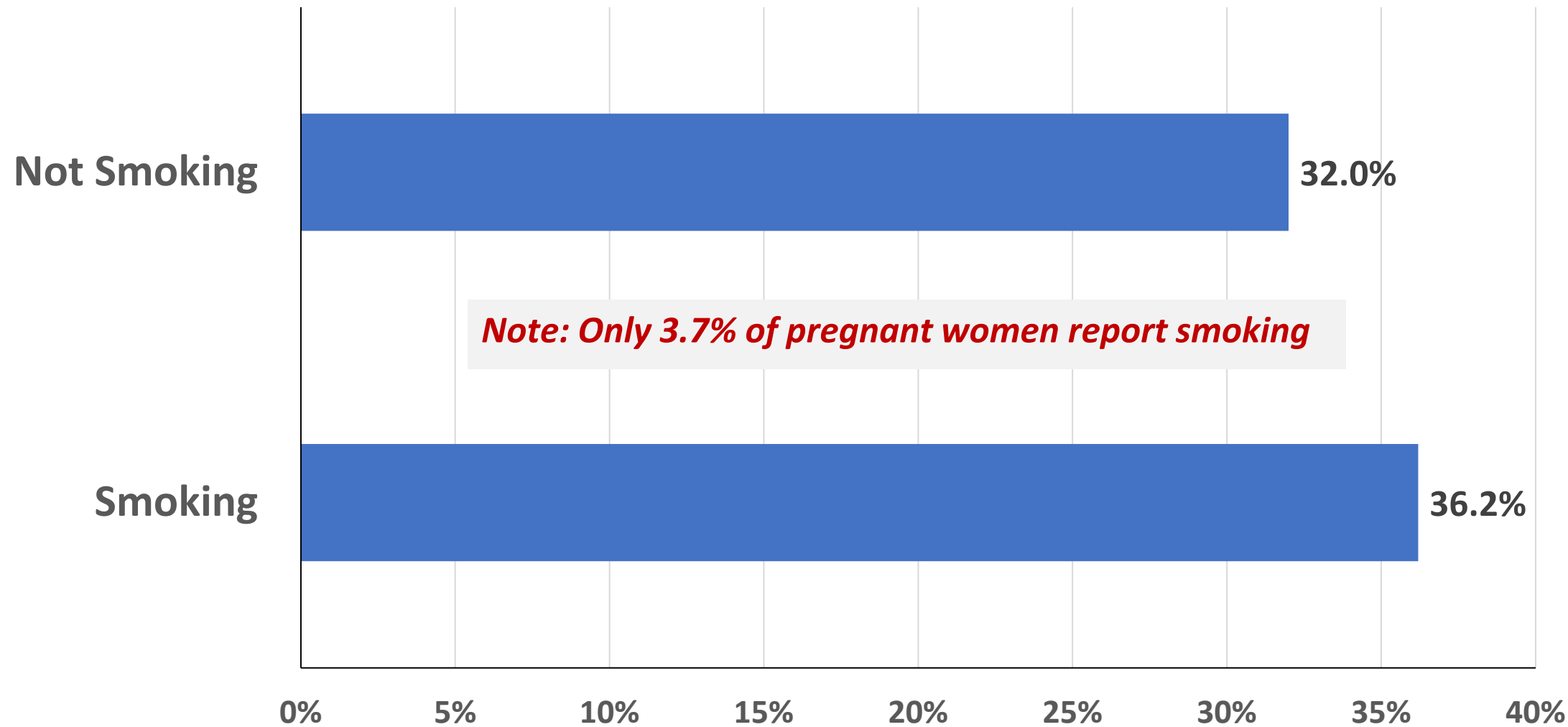
Cesarean Rates by Hypertension, 2022



Cesarean Rates by Diabetes Status, 2022



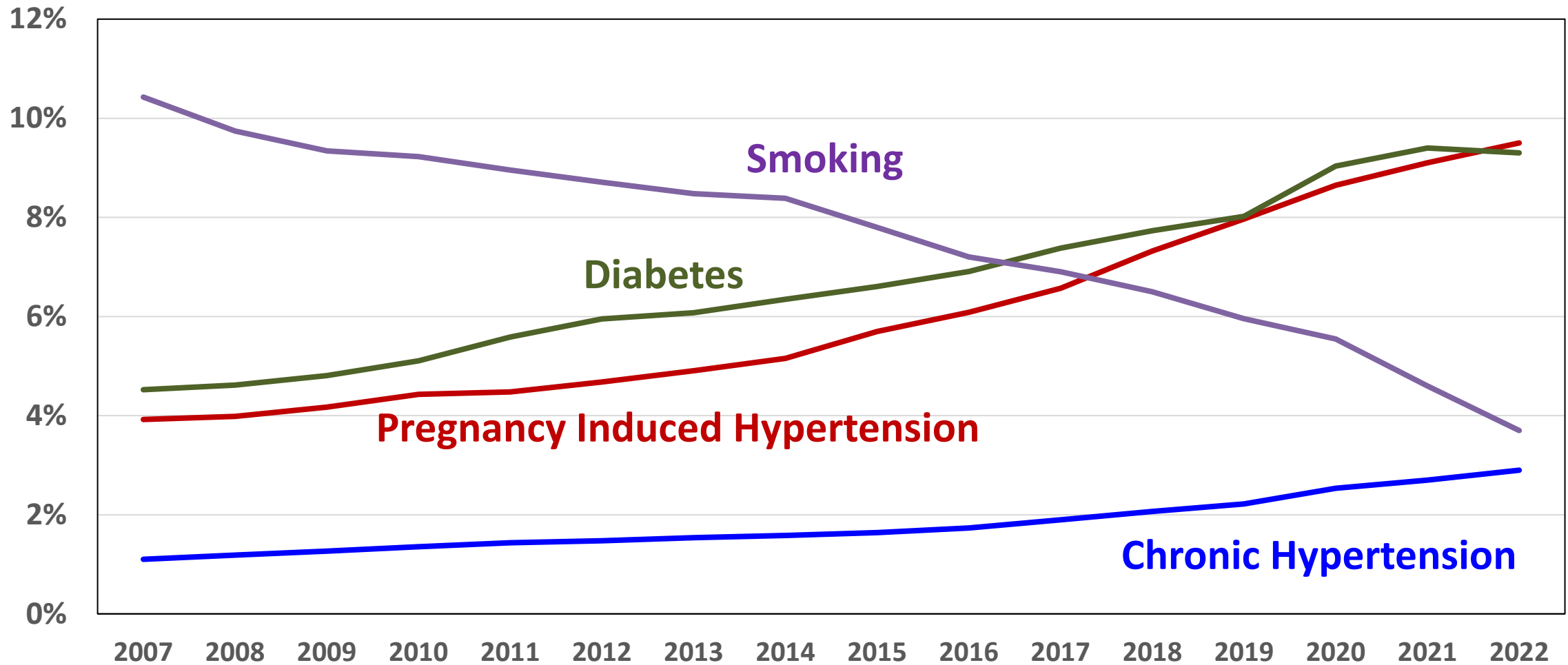
Cesarean Rates by Smoking Status, 2022





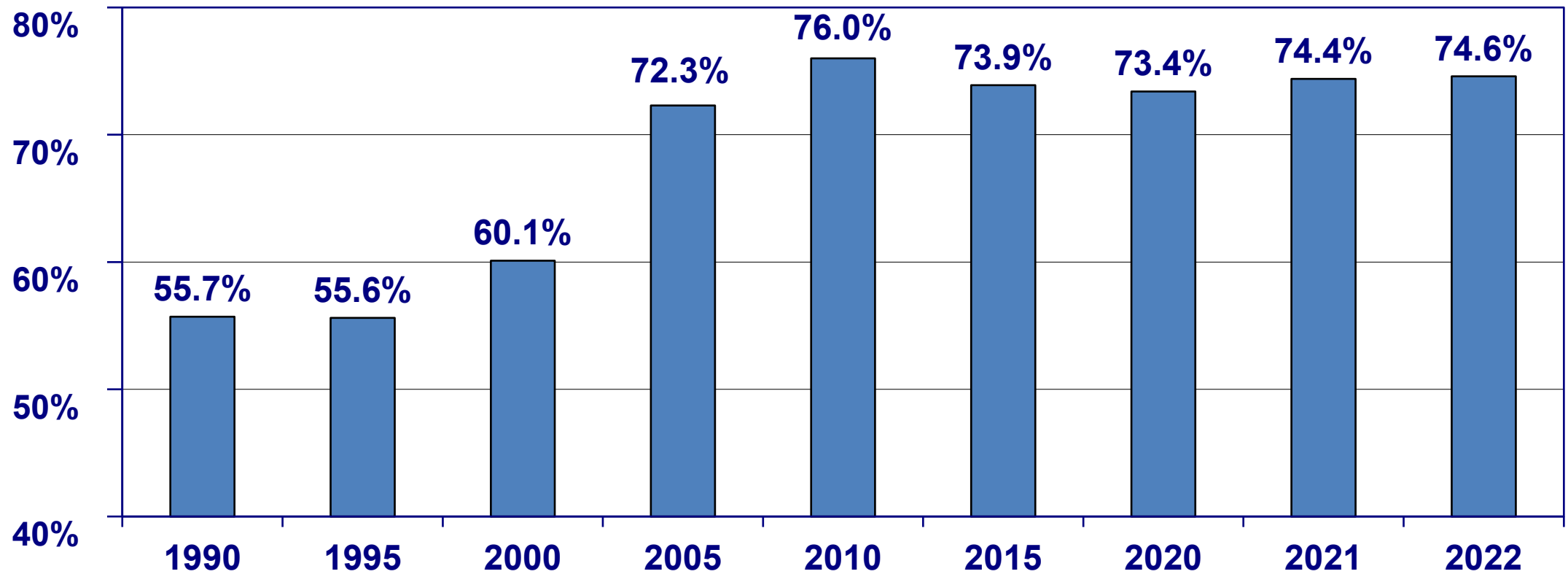
Is it Poor Health?

Maternal Risk Status and Behaviors, U.S., 2007-2022

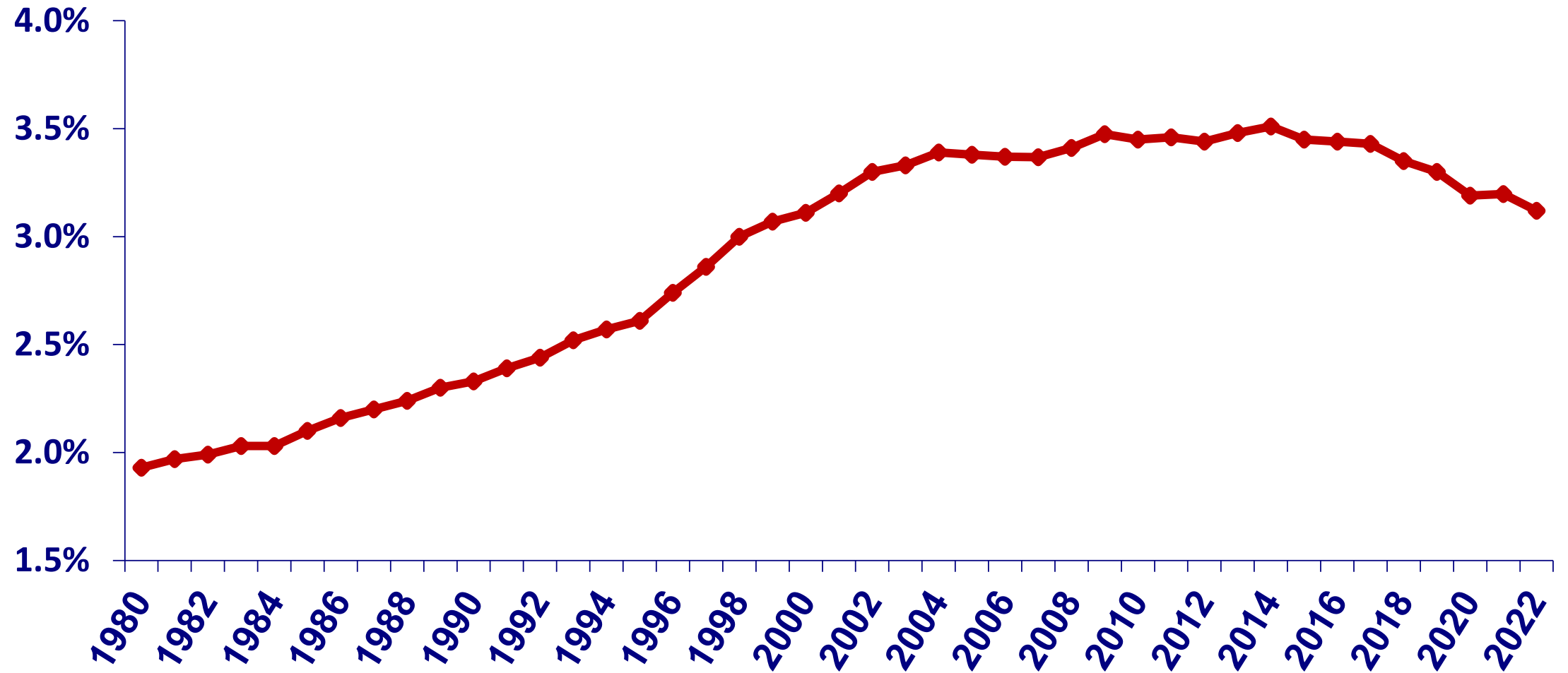


Is it IVF causing more multiple births?

Cesarean Rates for Multiple Births, U.S., 1990-2022



Rates of Multiple Births (proportion of all babies in multiple births), U.S., 1980-2022



Public Attitudes:
Are U.S. Women the
Reason for the
Increasing Cesarean
Rate?

Media attention on caesarean delivery with emphasis on “maternal request”

- “Birth by Appointment” *Washington Times* April 15, 2009
- “Choosy Mothers Choose Caesareans”
Time Magazine 4/17/08
- “More women turn to cesarean section”
Philadelphia Inquirer 3/20/05
- “Too Posh to Push? Cesarean sections have spiked dramatically” *US News and World Report*
8/5/02

Have maternal request
cesareans played a
major role in these
increases?



Listening to Mothers II

<http://www.childbirthconnection.org>

Asking Mothers about Maternal Request Cesareans

Eugene R. Declercq
Carol Sakala
Maureen P. Corry
Sandra Applebaum



Two Components to Maternal Request Primary Cesarean

1. Mother made request for planned cesarean before labor



Two Components to Maternal Request Primary Cesarean

1. Mother made request for planned cesarean before labor
2. Cesarean for no medical reason

Patient Choice Primary Cesareans

- Combining reason for cesarean and timing of decision found only 1 respondent of 252 (0.4%) had a planned primary cesarean for no medical reason. **2006**
- Combining reason for cesarean and timing of decision found only 5 respondent of 385 (1.3%) had a planned primary cesarean for no medical reason. **2016**

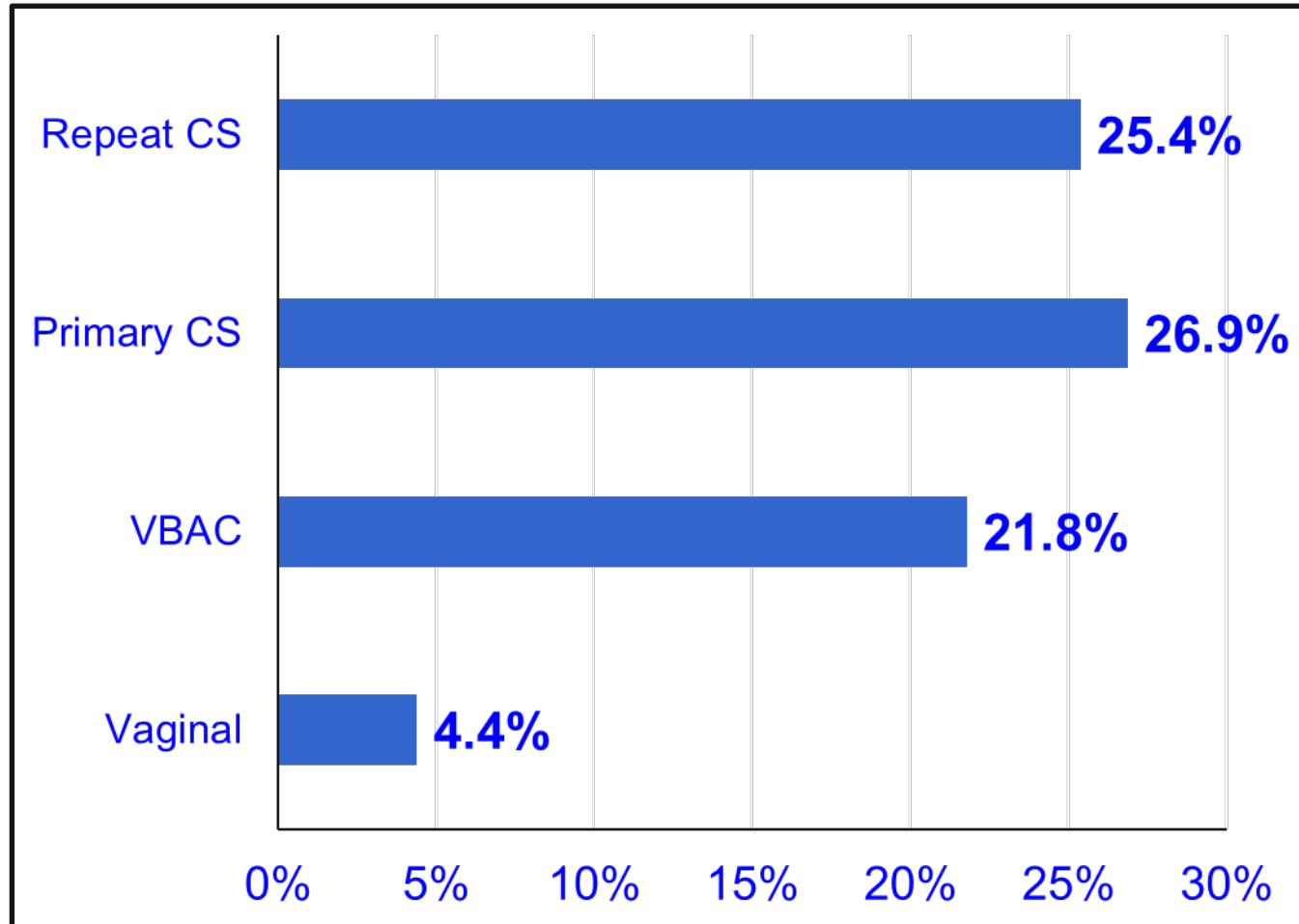
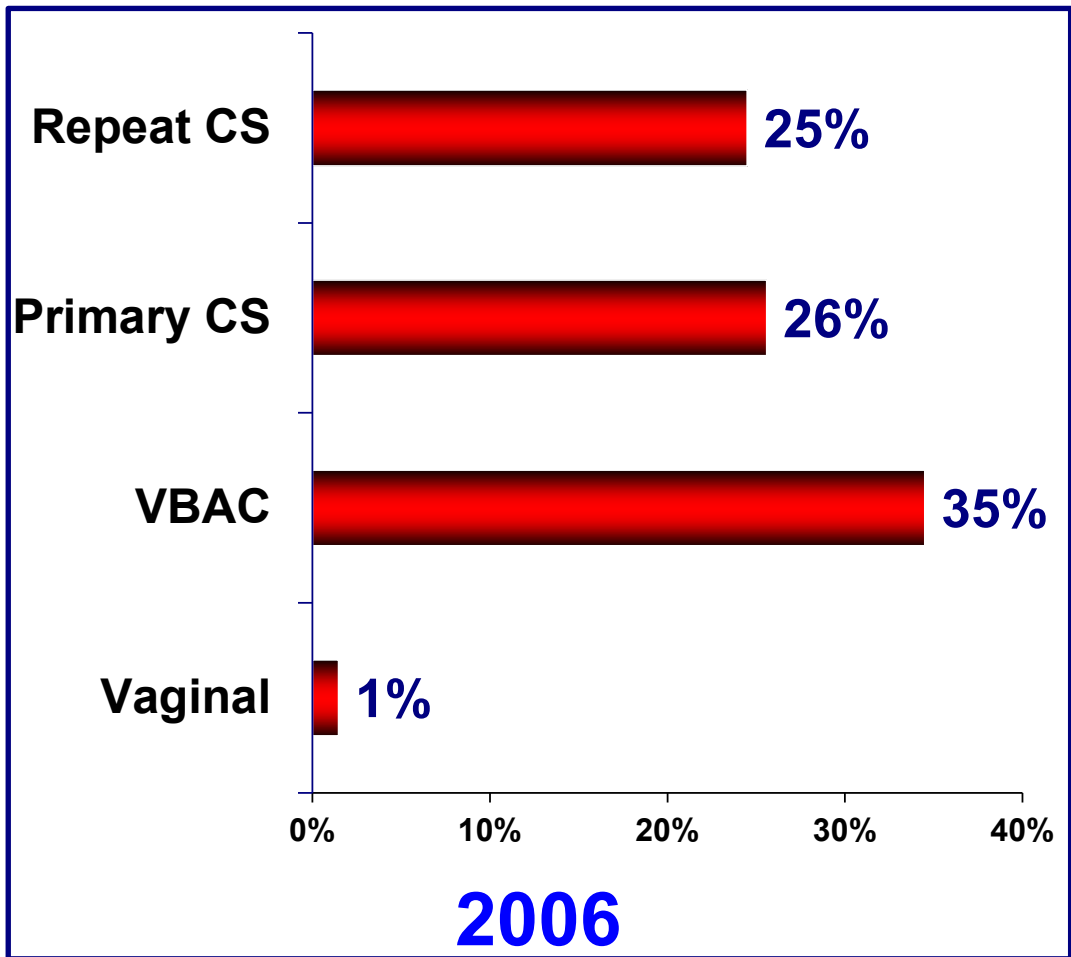
"I think that [cesarean] is... the best way ... to give birth. It is a planned way, no hassle, no pain, the baby doesn't struggle to come out, the baby is not pressed to come out ...I think that ... everybody should have the baby by cesarean section."

Studies from England, Canada and Sweden confirm very low rates of maternal request cesareans



Pressure to Accept Interventions by Method of Delivery

Did you feel pressure from any health professional to have a cesarean? % yes

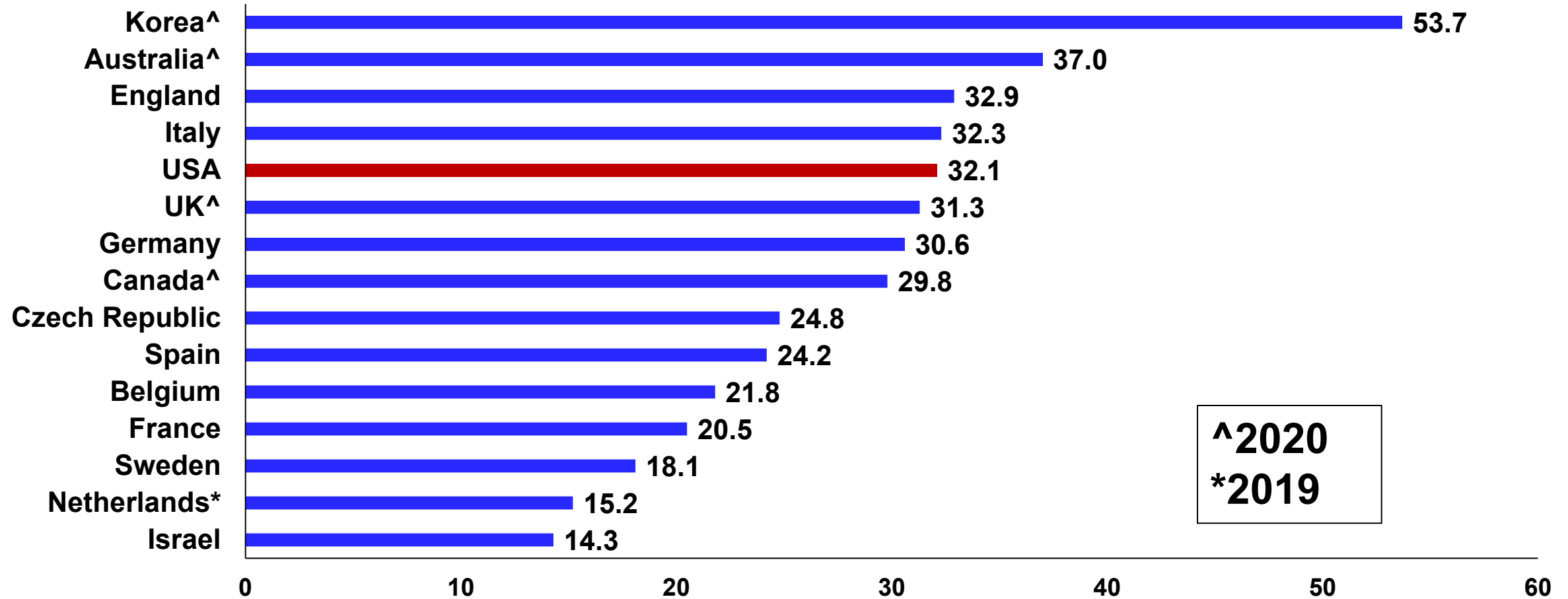


Source: Declercq et al. 2006. *Listening to Mothers II*; Sakala, et al. 2016 *Listening to Mothers in California*

2016

U.S. in Comparative Context

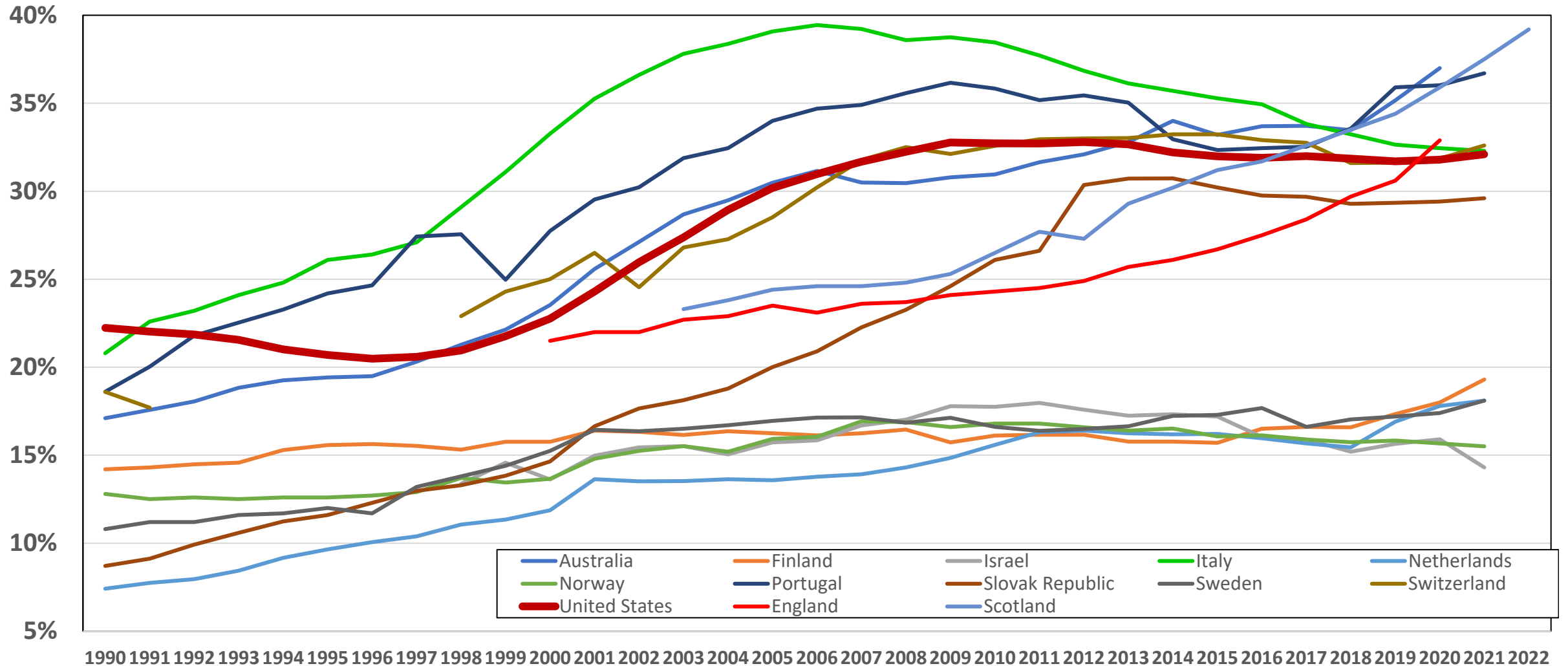
Cesarean Rates (%) in Industrialized Countries* with 100,000+ Births, 2021



Source: OECD data, 2024.

* No comparative data on cesarean rates in Japan

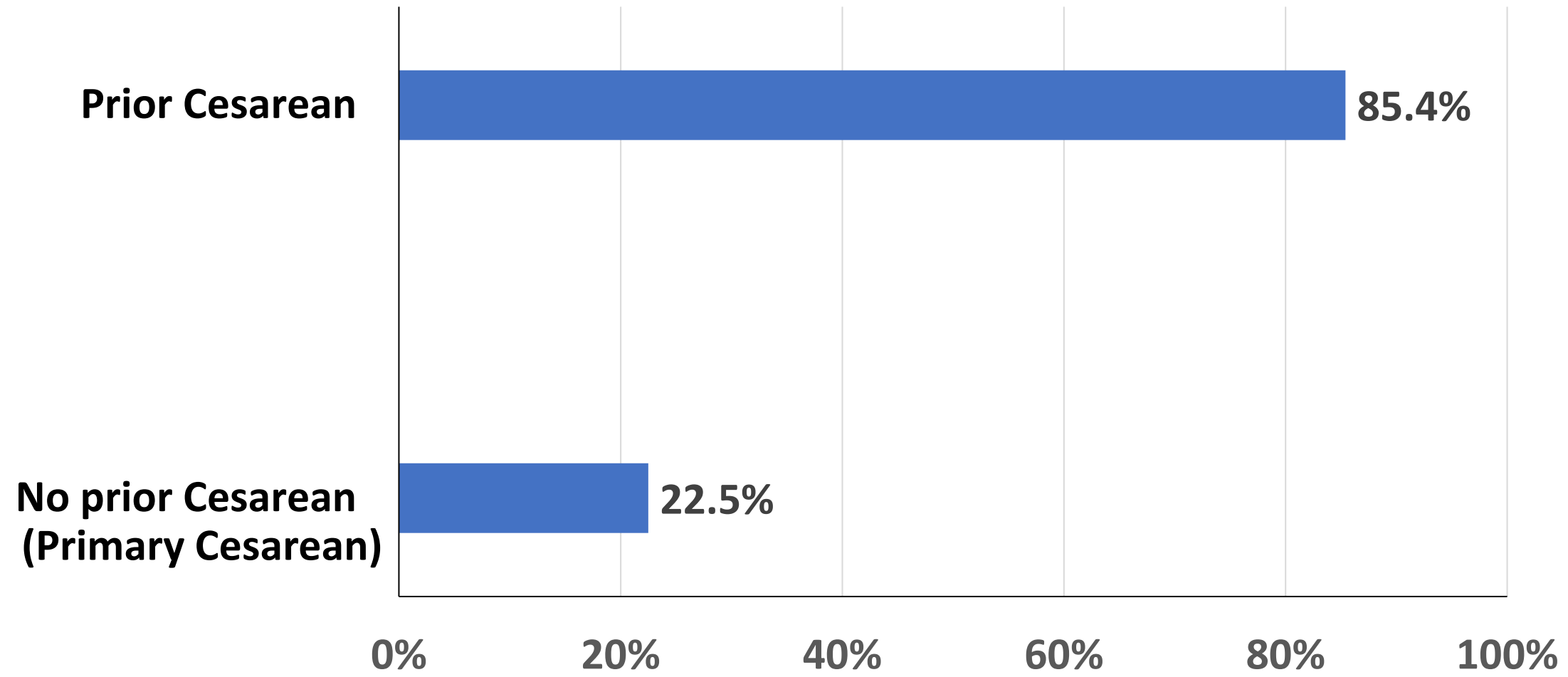
Trends in Overall Cesarean Rate 1990 – 2021, Countries with Current Highest & Lowest Rates



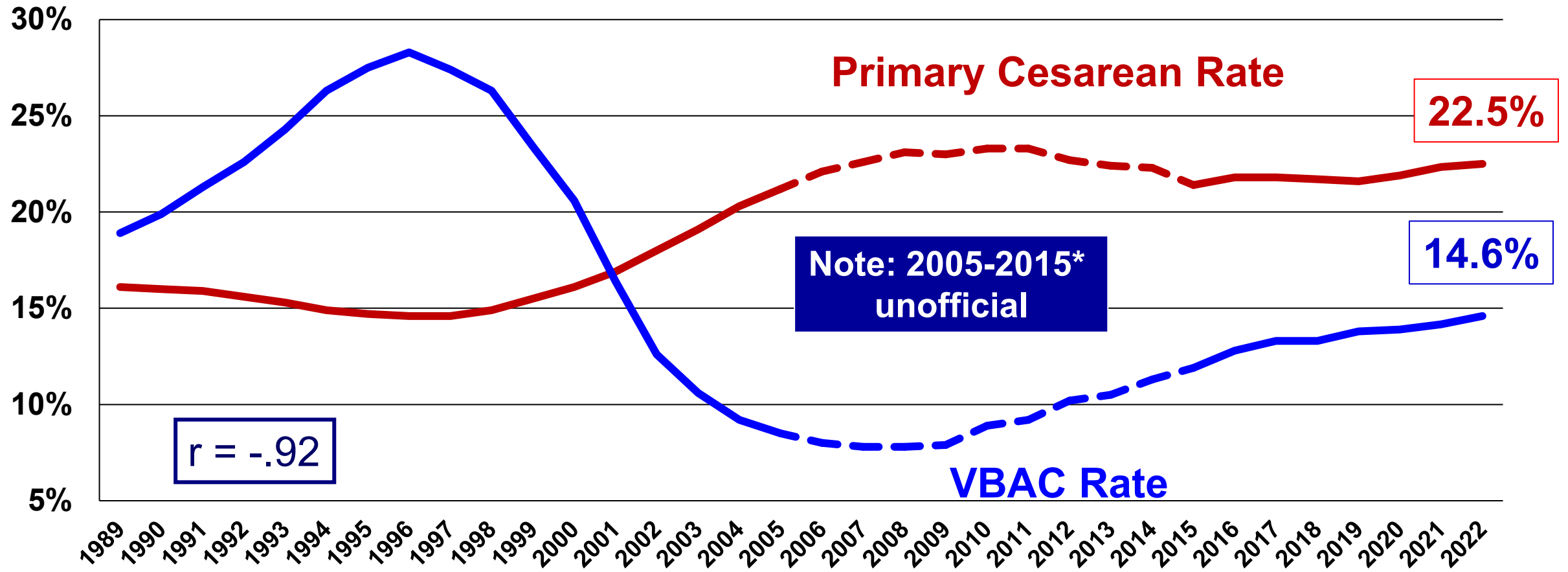
Vaginal Births after Cesareans (VBAC)



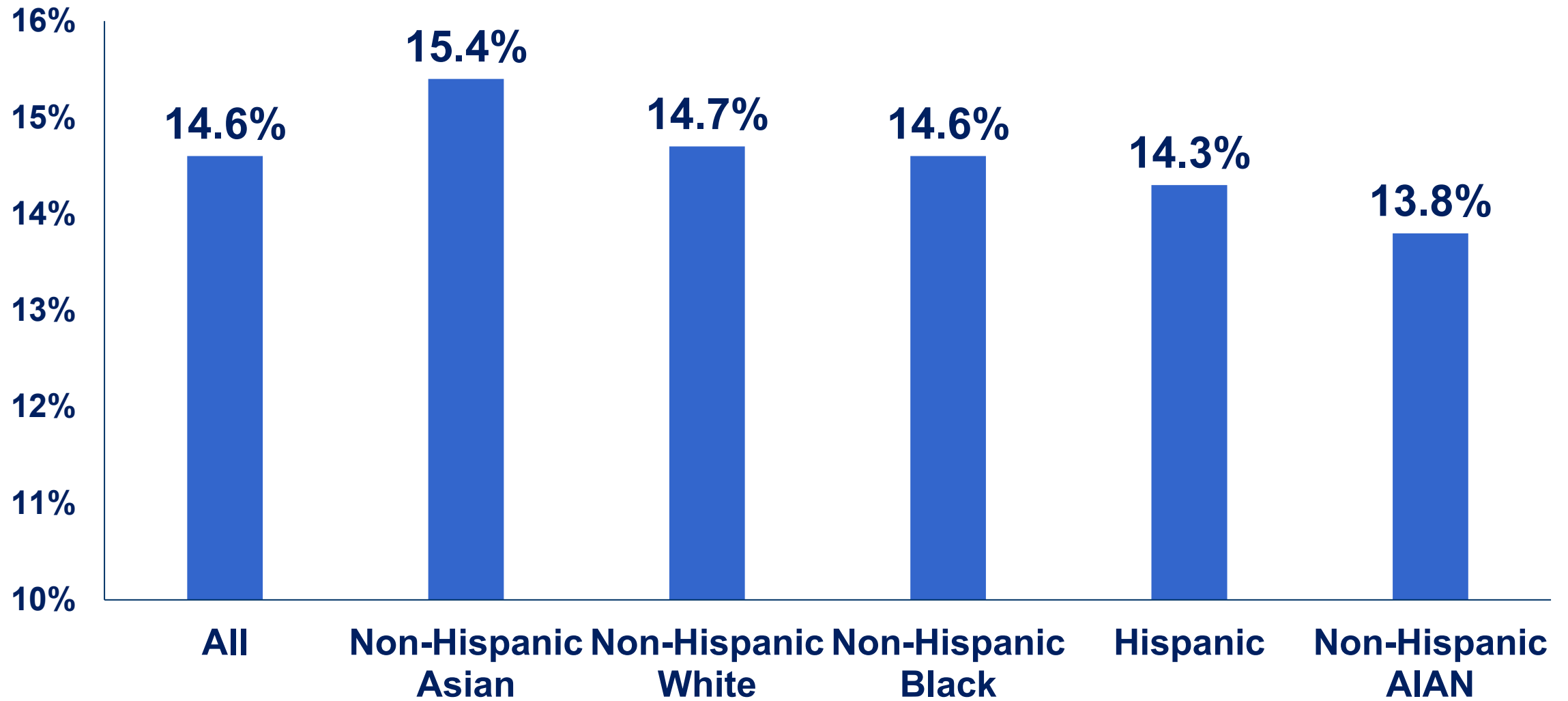
Cesarean Rate by Cesarean Section History, U.S., 2022



Primary Cesarean and VBAC Rates, U.S., 1989-2022



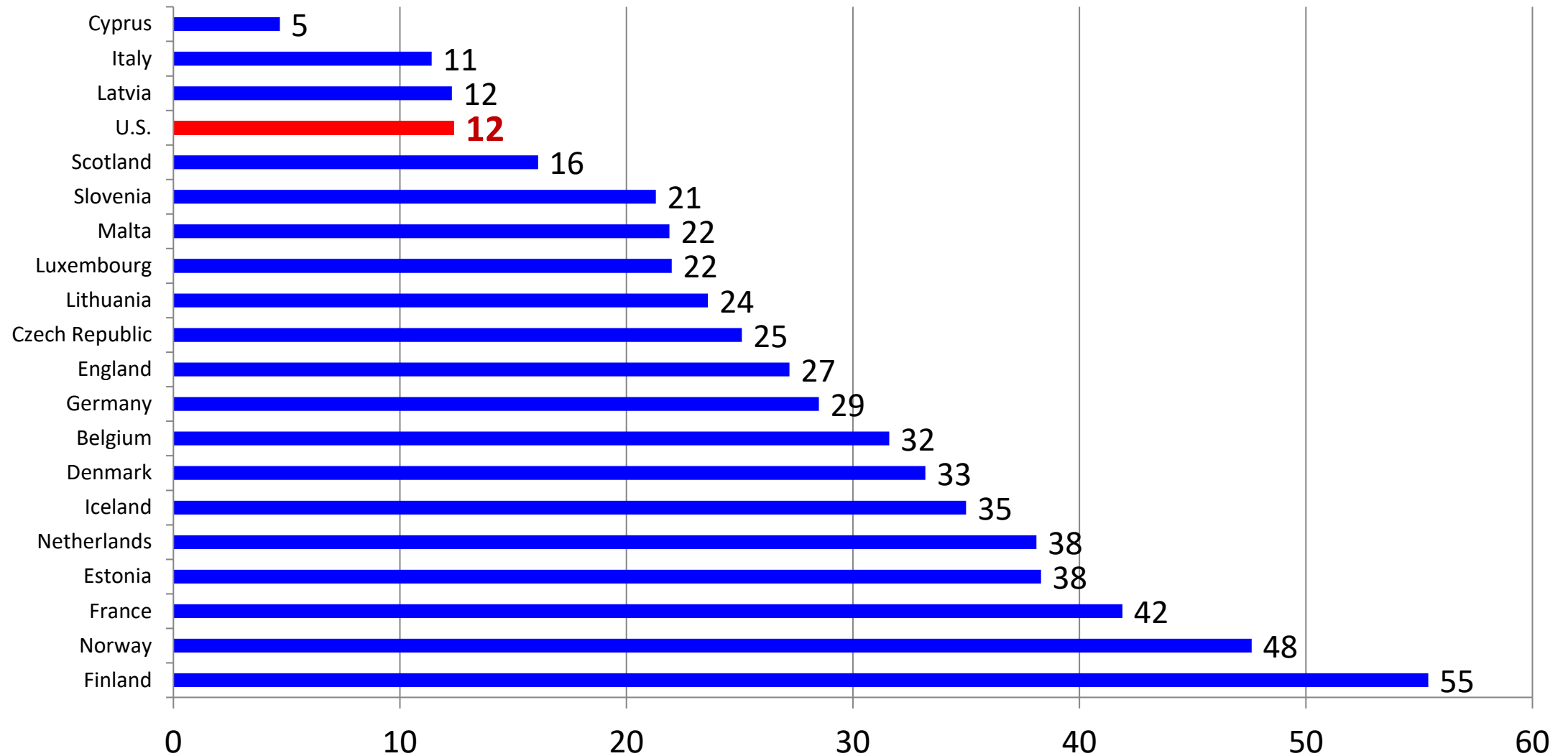
2022 VBAC Rates by Race/Ethnicity



AIAN – American Indian Alaskan Native
VBAC – vaginal birth after cesarean

BirthByTheNumbers.org

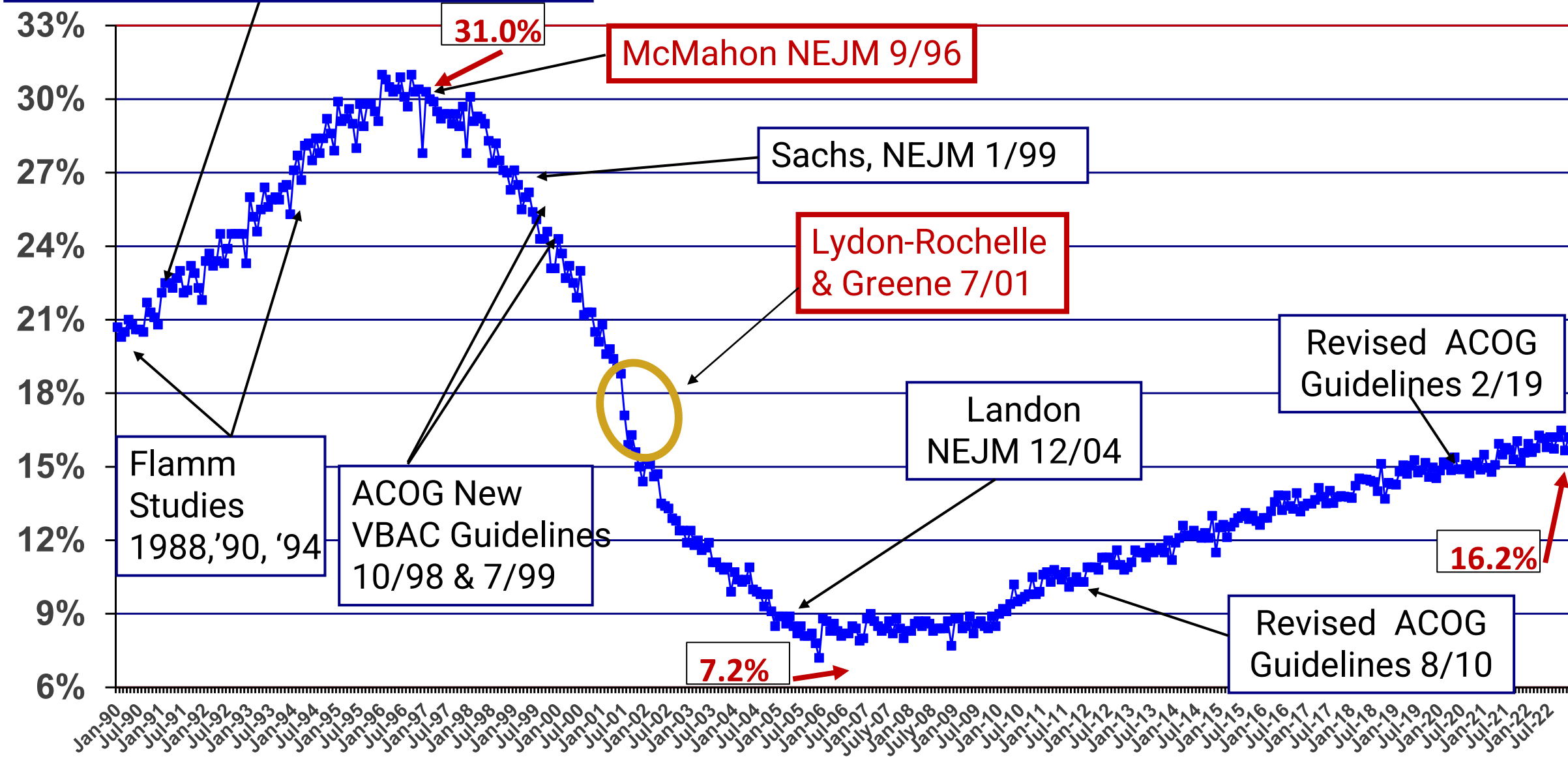
VBAC Rates Industrialized Countries, 2015



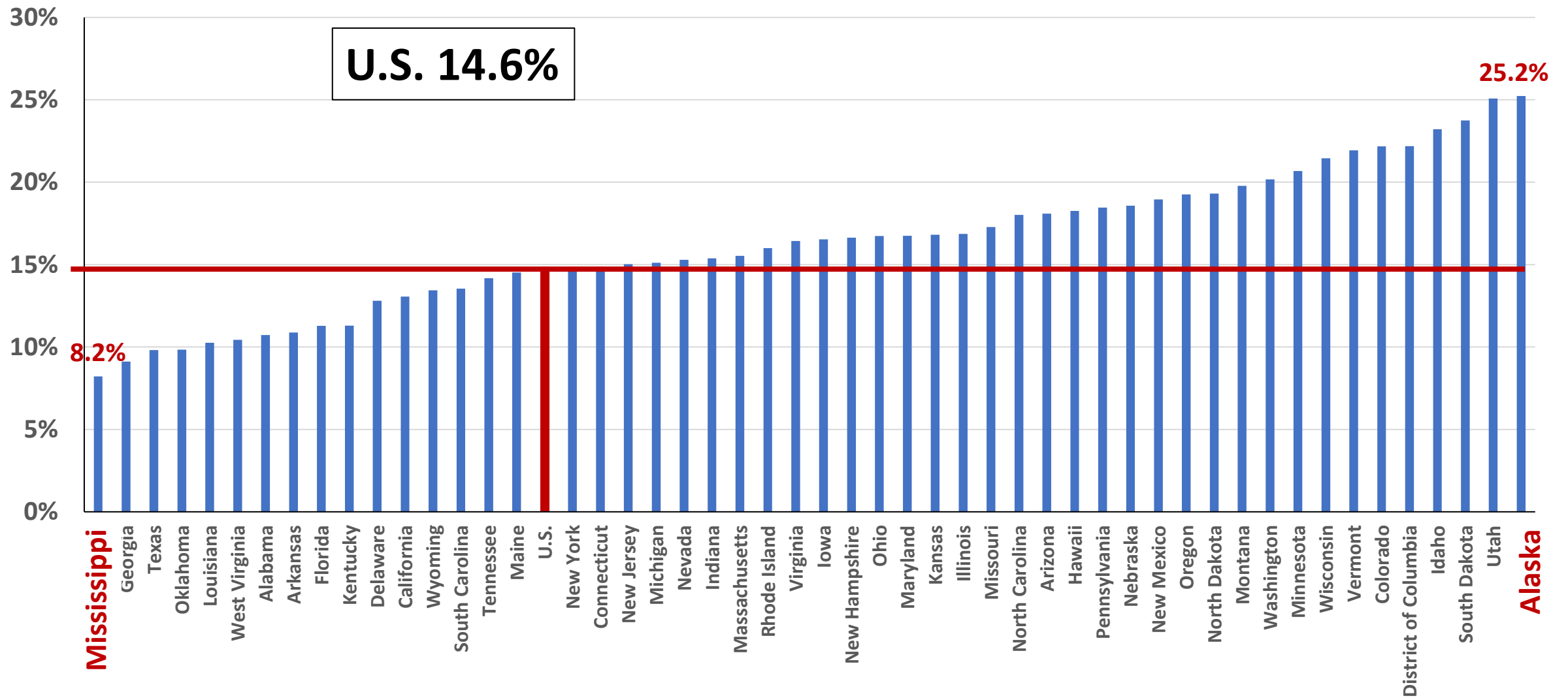
Source: Euro-Peristat Project. European Perinatal Health Report. Core indicators of the health and care of pregnant women and babies in Europe in 2015. November 2018.

% VBAC Lower Risk* Mothers, U.S., Monthly Rates, 1990-2022

ACOG guidelines encourage VBAC, 1/82 10/88 Reaffirmed 1991



VBAC Rates, U.S. States, 2022





www.birthbythenumbers.org

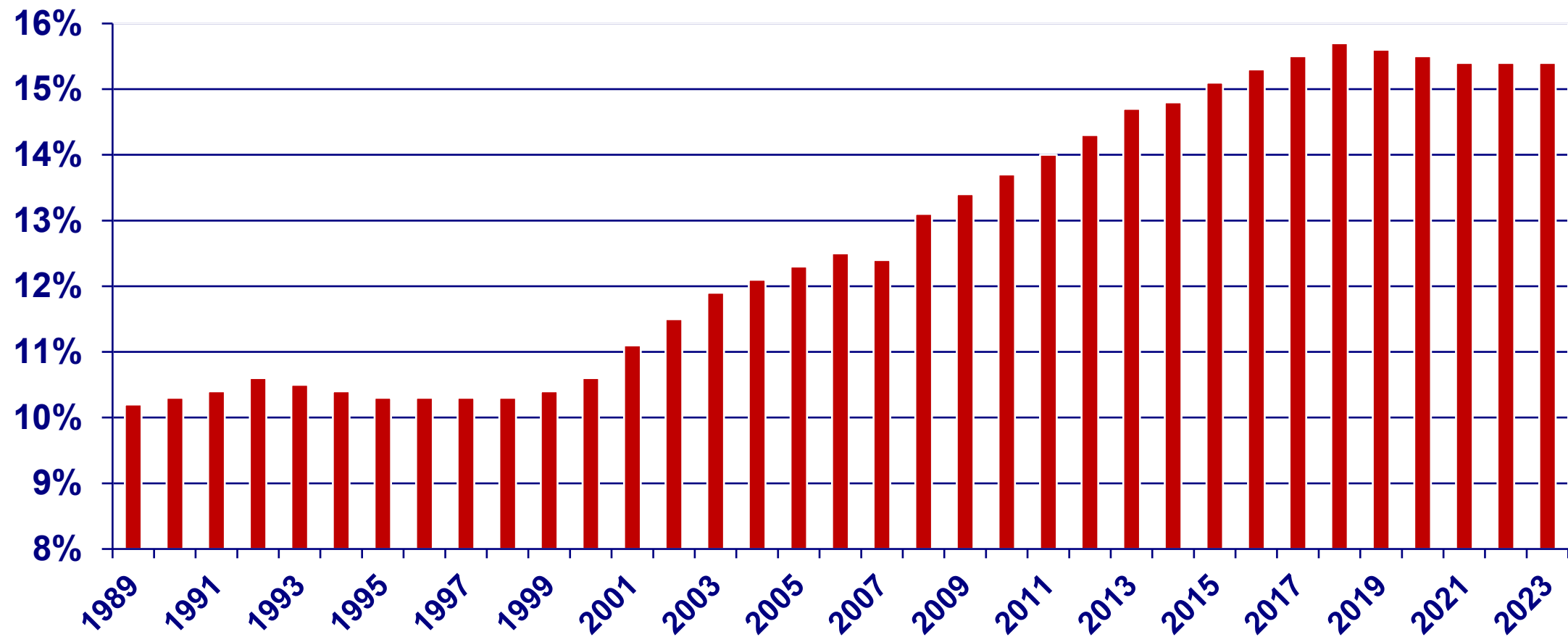
EMAIL: birthbynumbers@gmail.com

FACEBOOK: www.facebook.com/BirthByTheNumbers

Incorporating 2023 Provisional Data

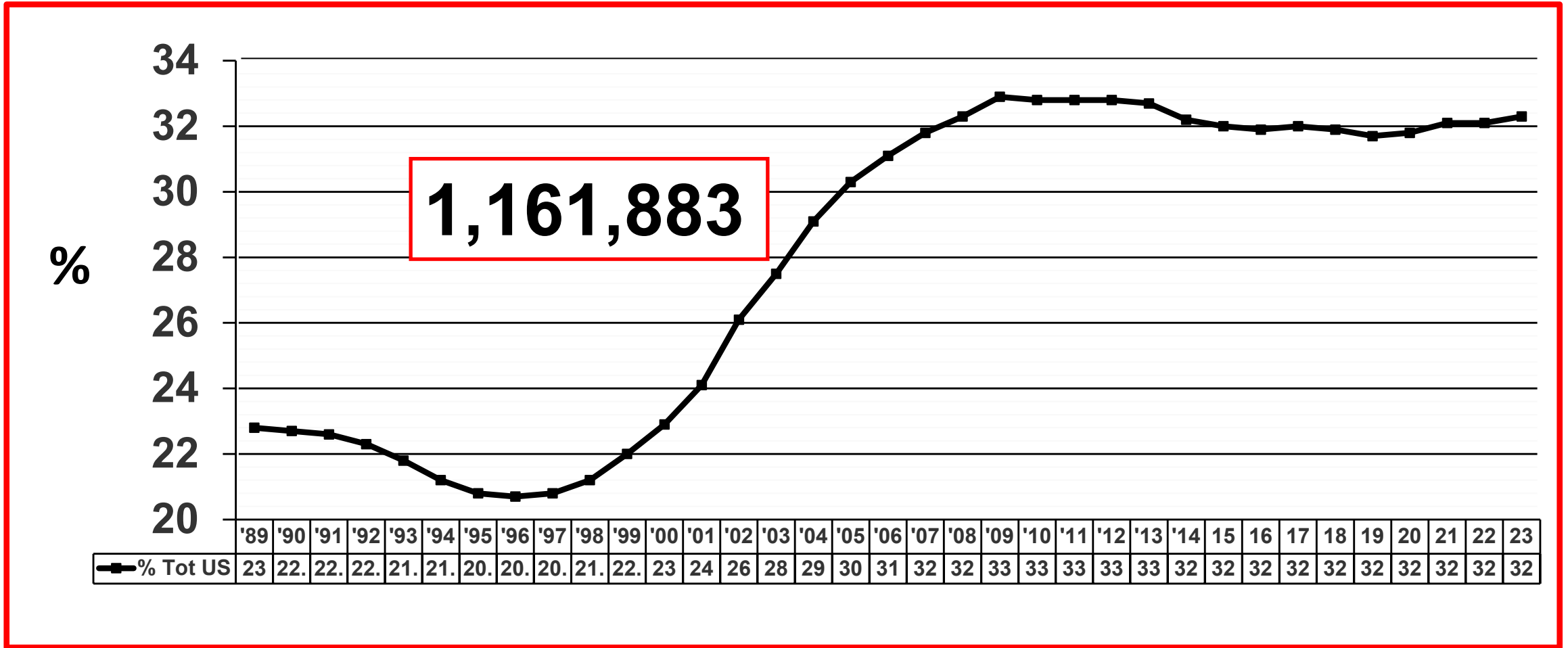


Proportion of U.S. Women Giving Birth with a Prior Cesarean, 1989-2023*



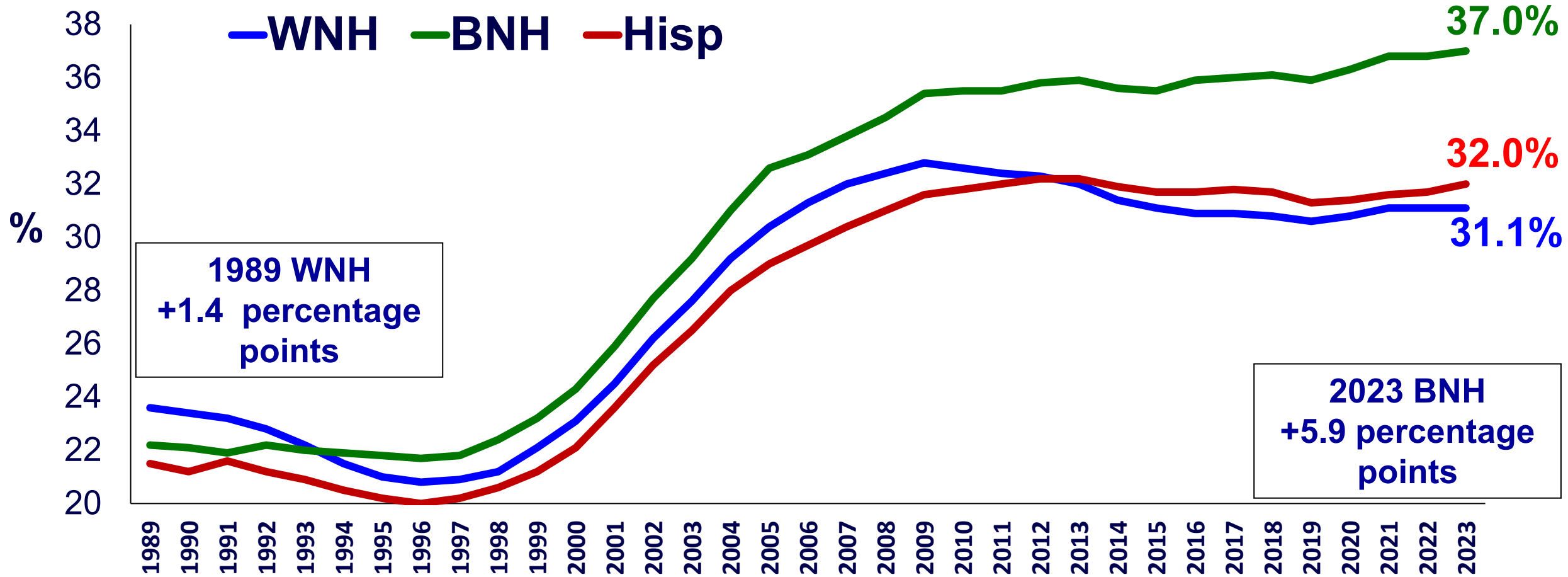
* 2023 data is provisional

US Cesarean Rates, 1989-2023*



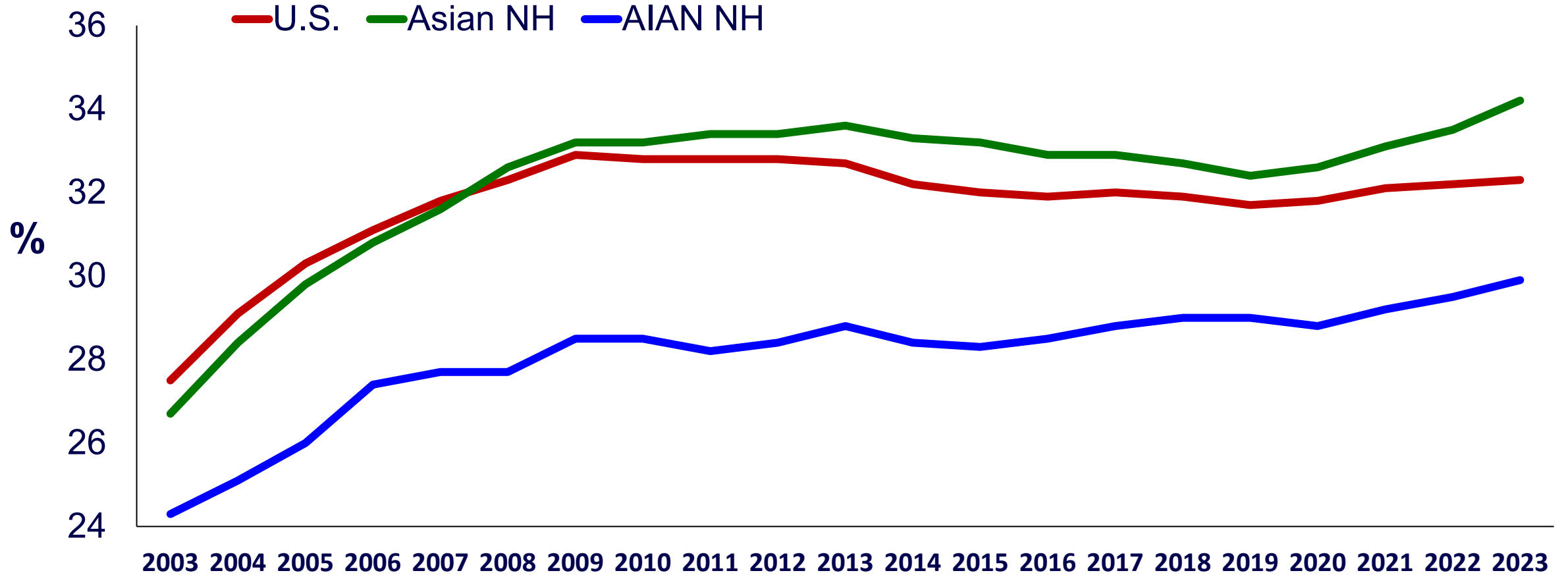
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Total cesarean rates by race/ethnicity, U.S. 1989-2023*



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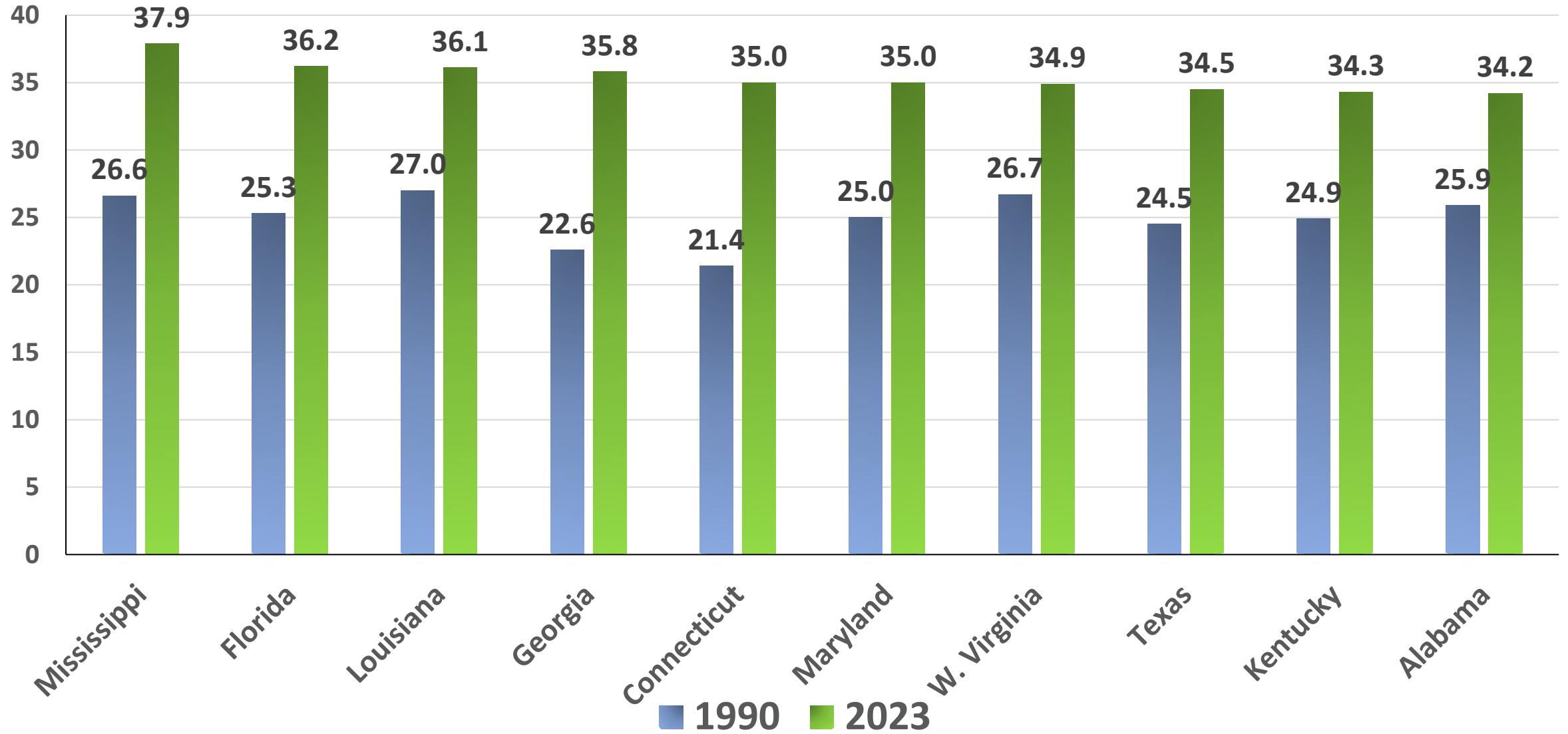
Total cesarean rates by race/ethnicity, U.S. 2003-2023*



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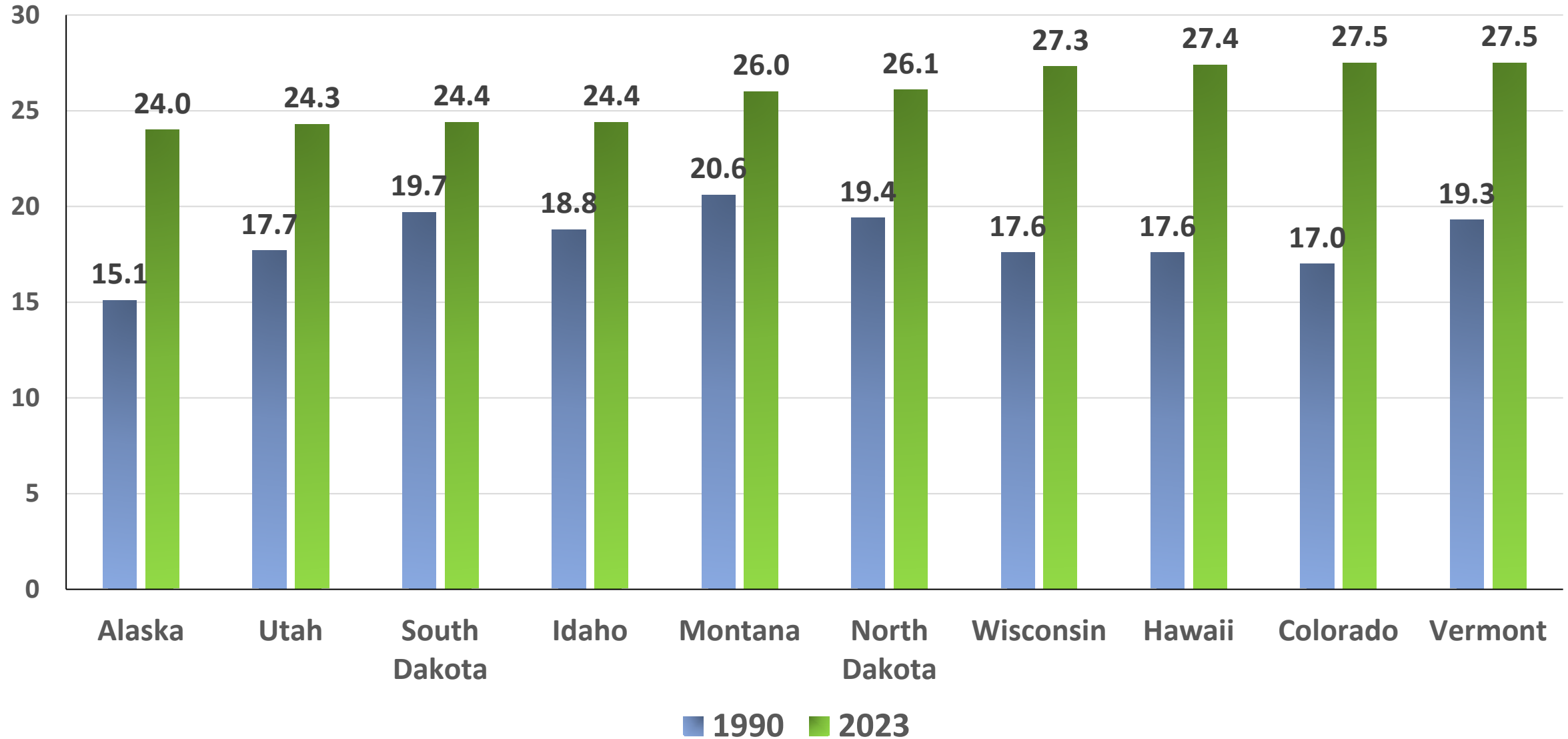


States with the Highest 2023* Cesarean Rates (%)



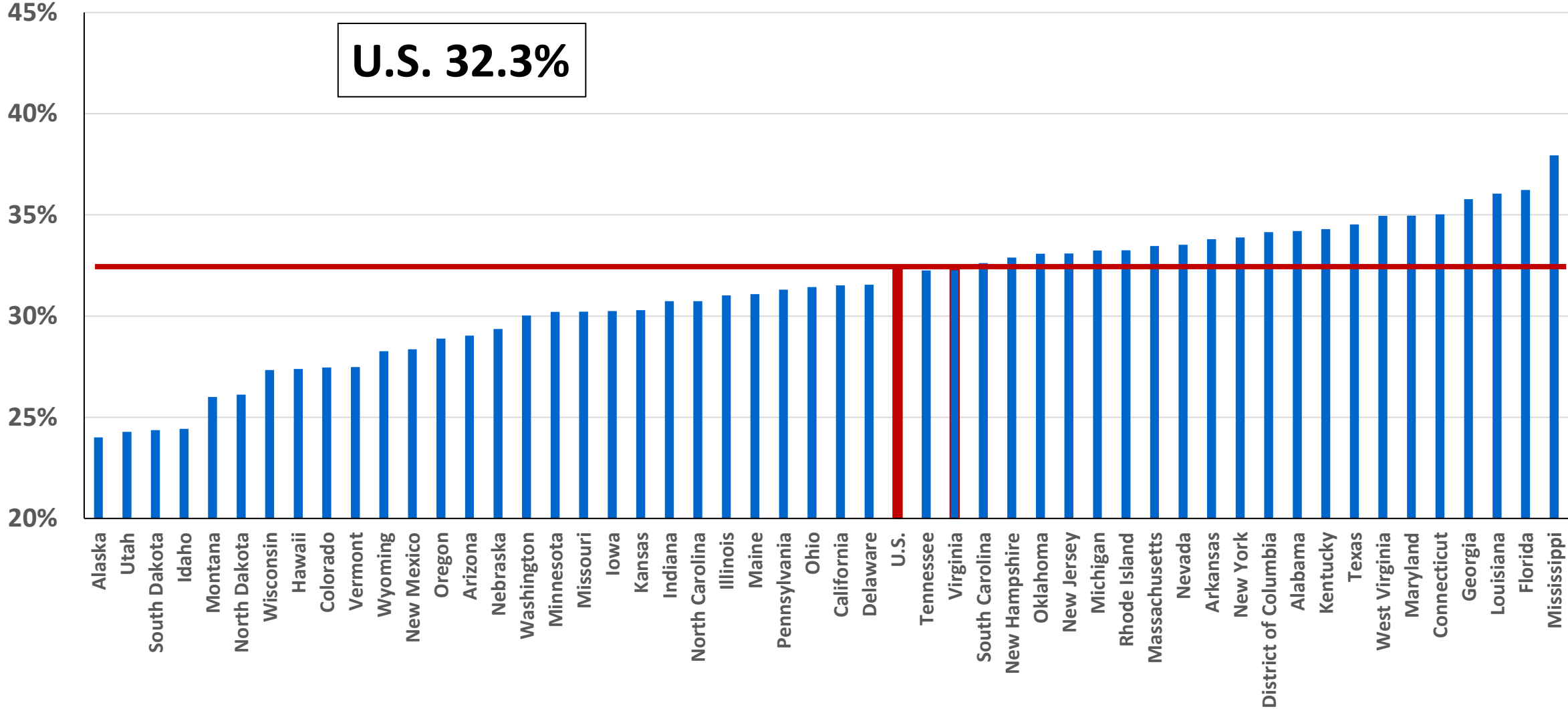
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States with the Lowest 2023* Cesarean Rates (%)



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Cesarean Rates, U.S. States, 2023*

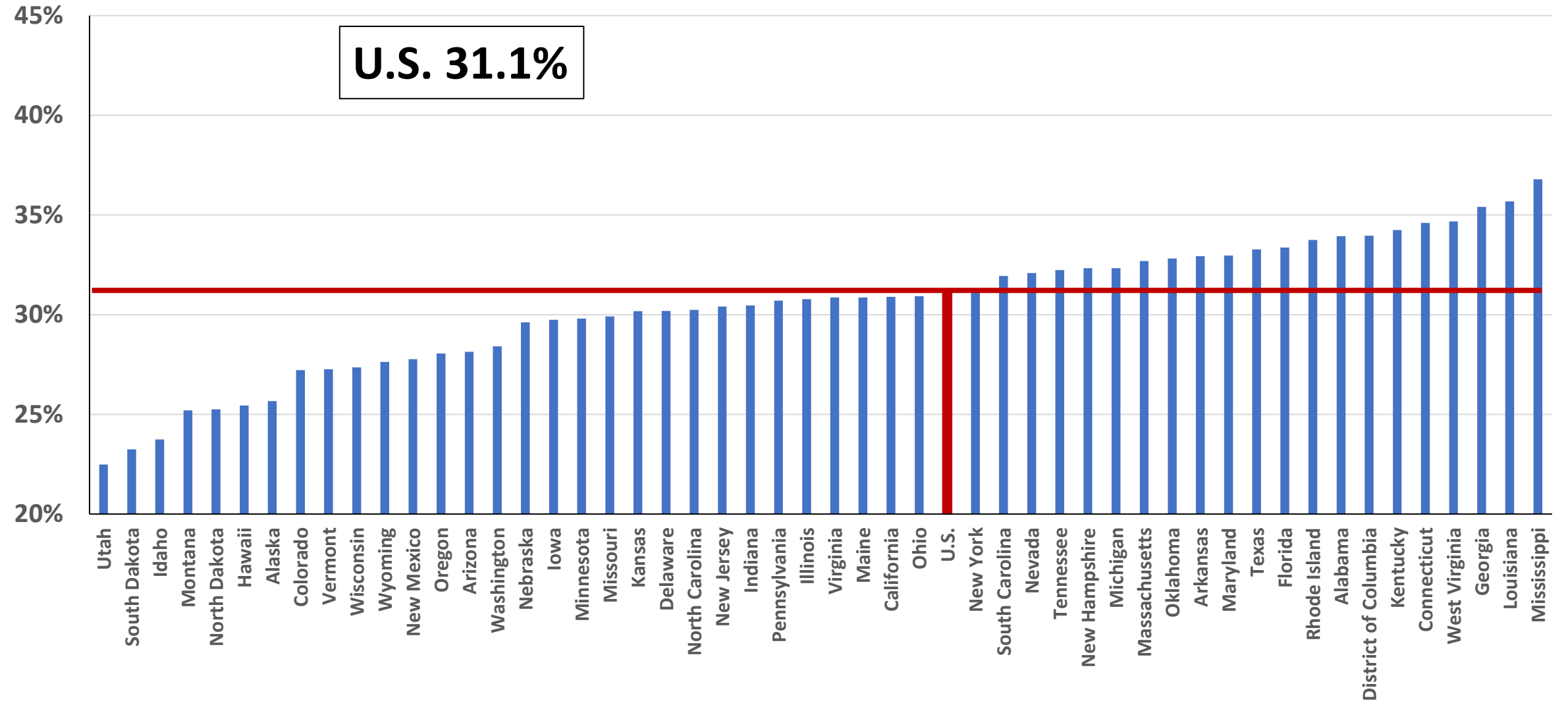


U.S. 32.3%

* 2023 data is provisional



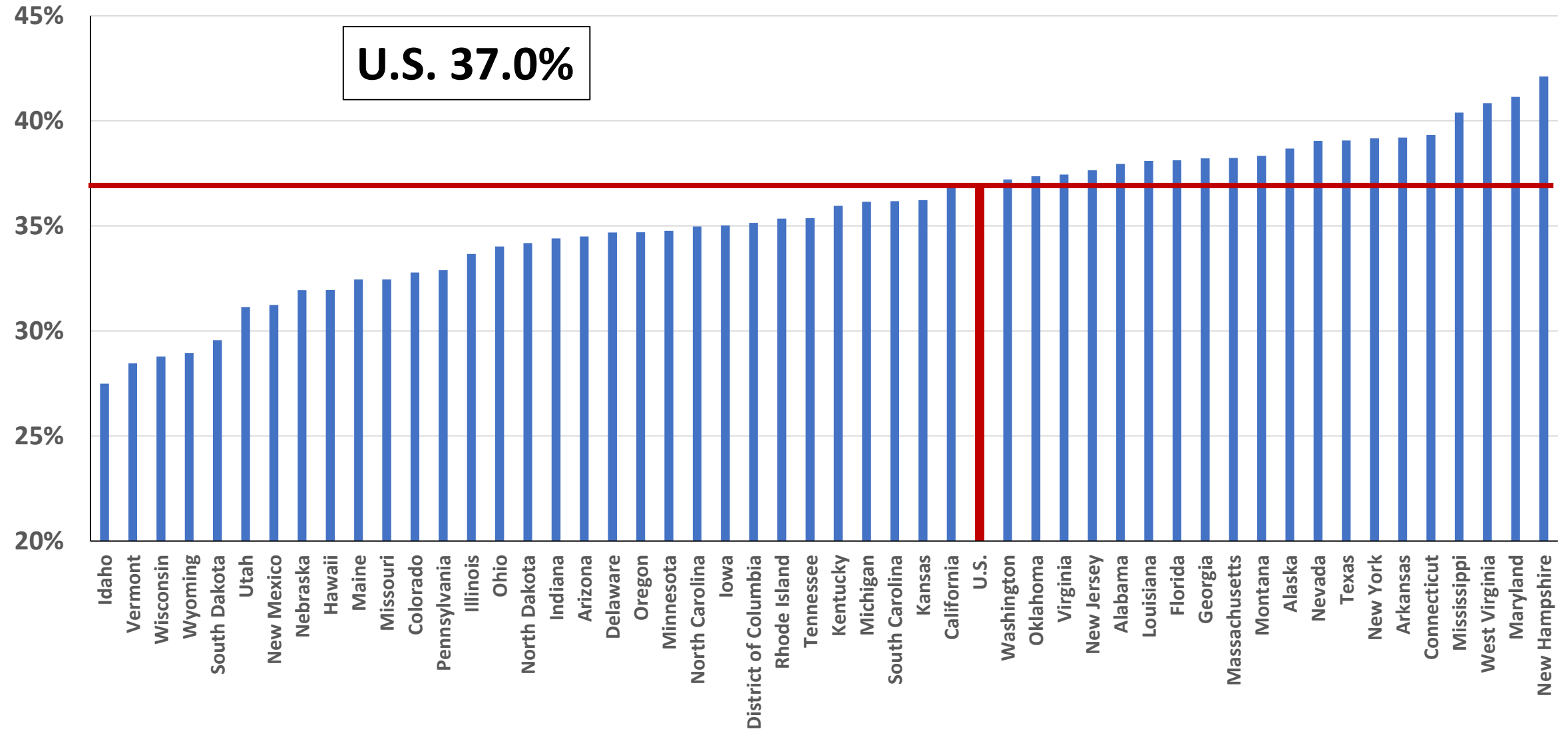
Cesarean Rates, Non-Hispanic White Women, U.S. States, 2023*



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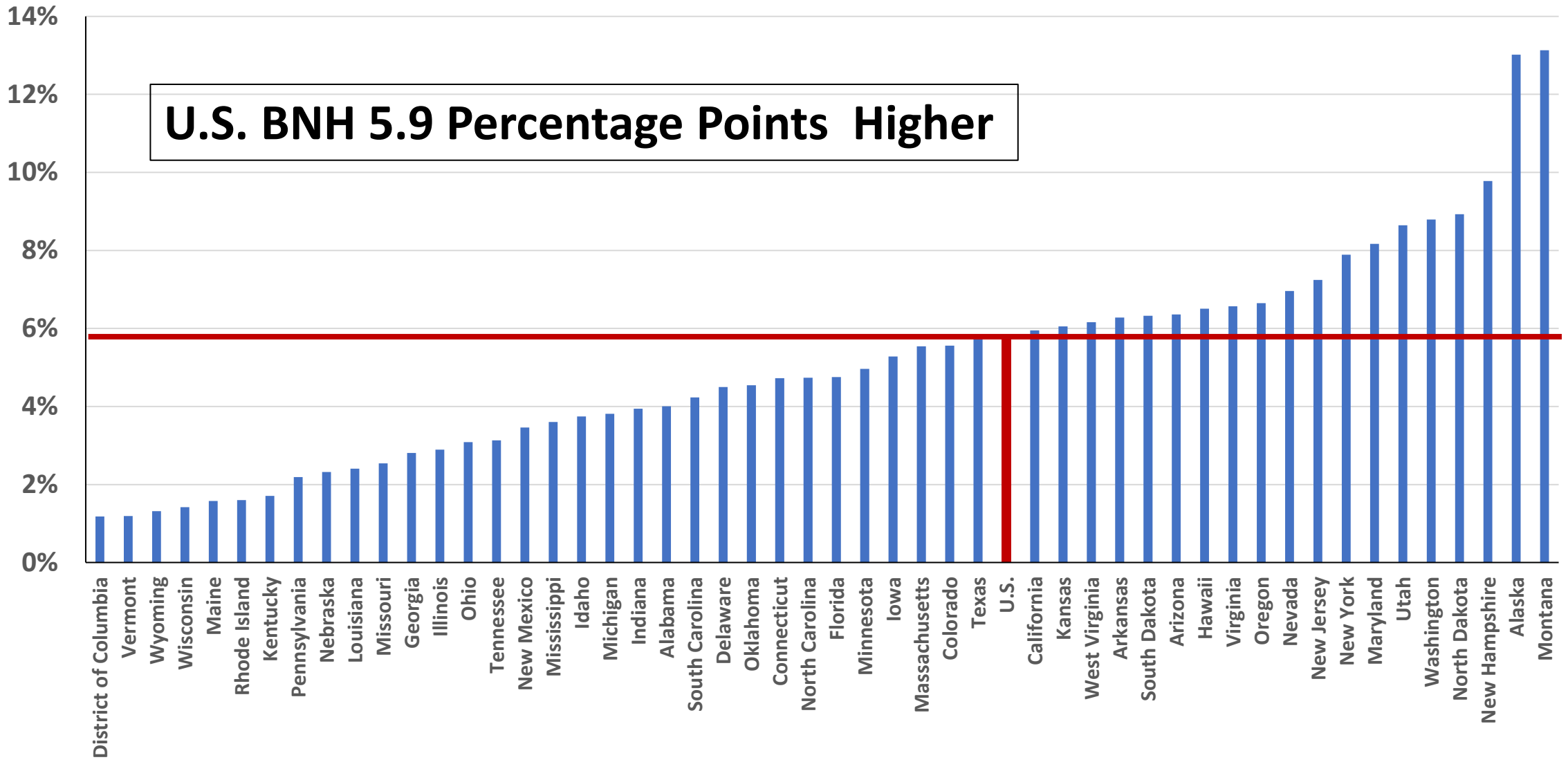
Cesarean Rates, Non-Hispanic Black Women, U.S. States, 2023*



U.S. 37.0%



Difference between BNH & WNH Cesarean Rates, States, 2023*



U.S. BNH 5.9 Percentage Points Higher

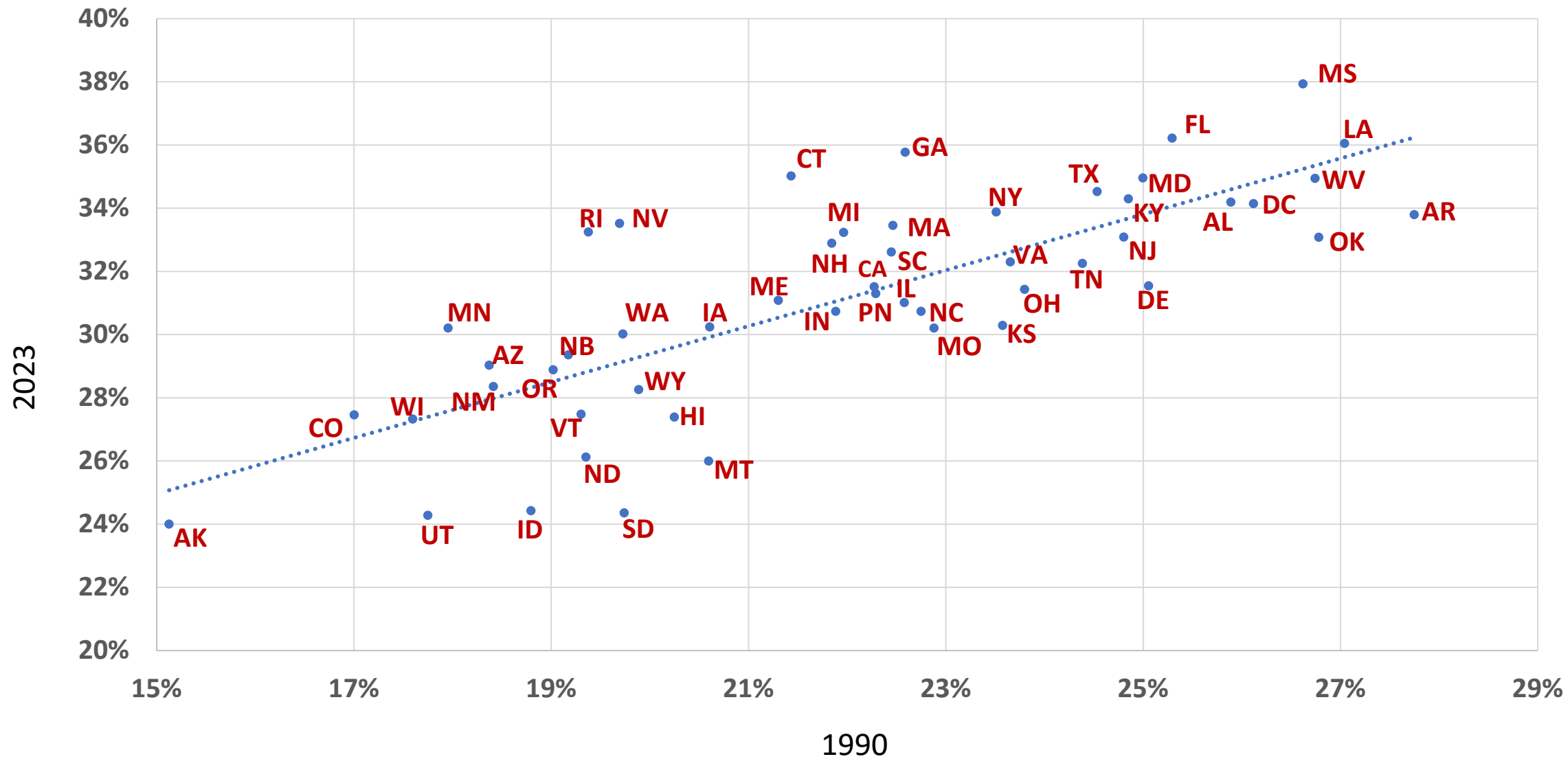


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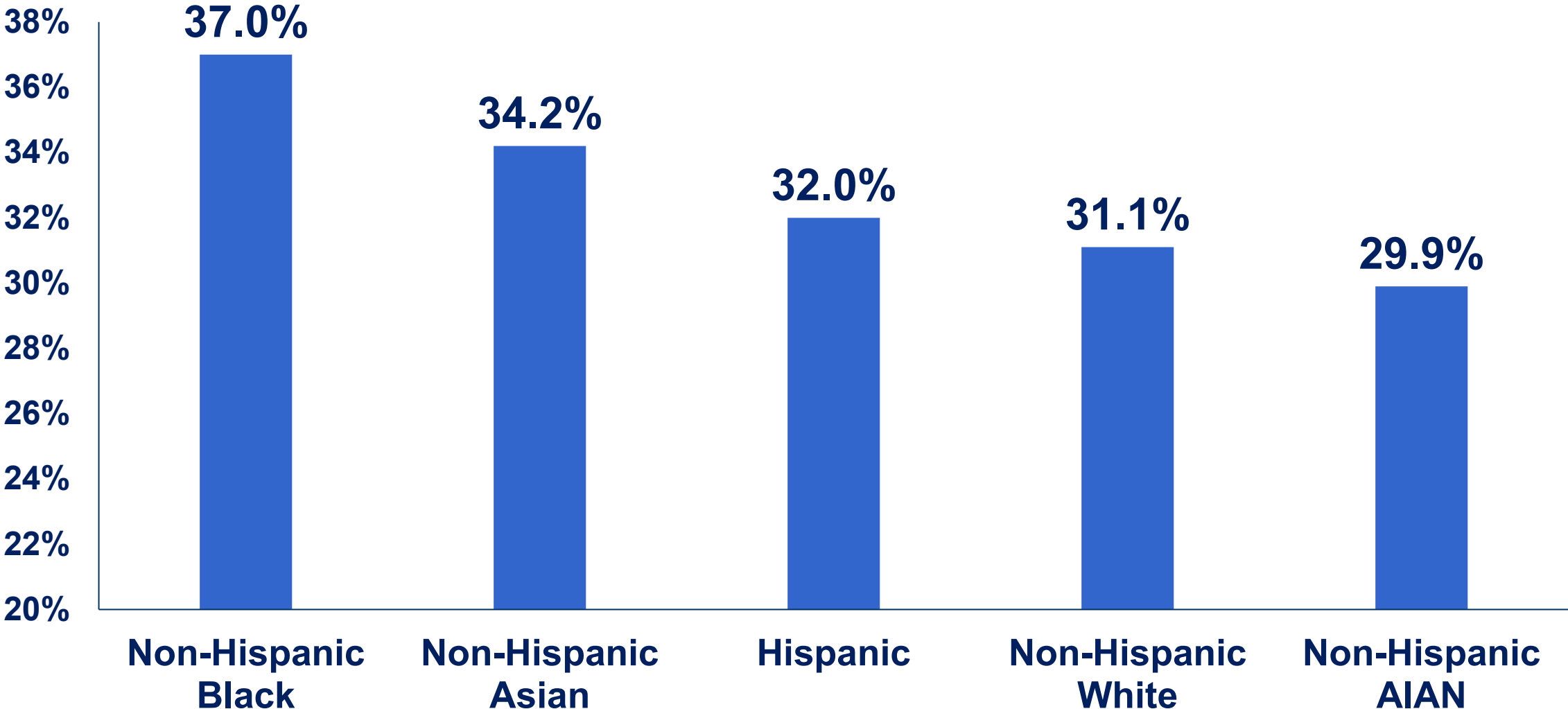
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State Cesarean Rates, 1990 and 2023





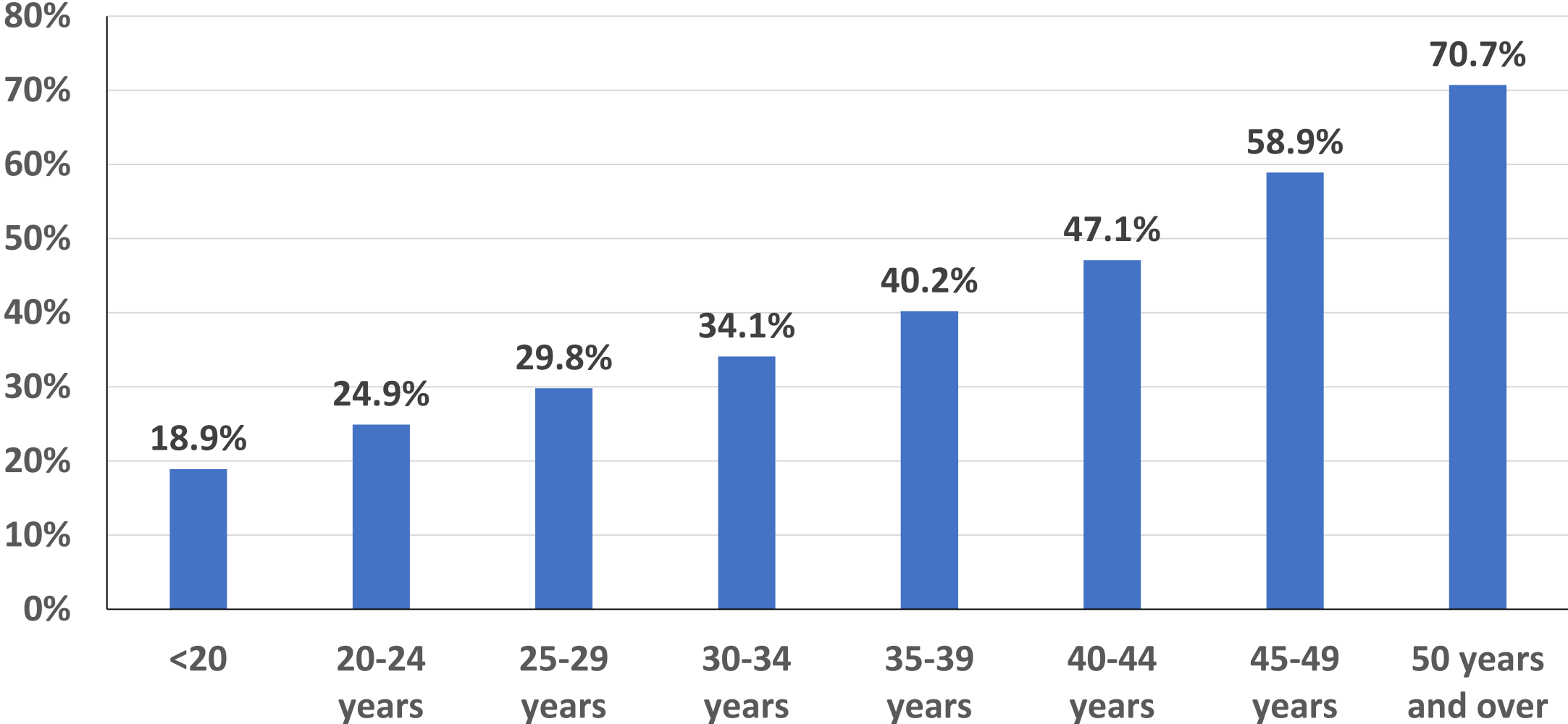
2023 Cesarean Rates* by Race/Ethnicity



Source: CDC Wonder Birth File

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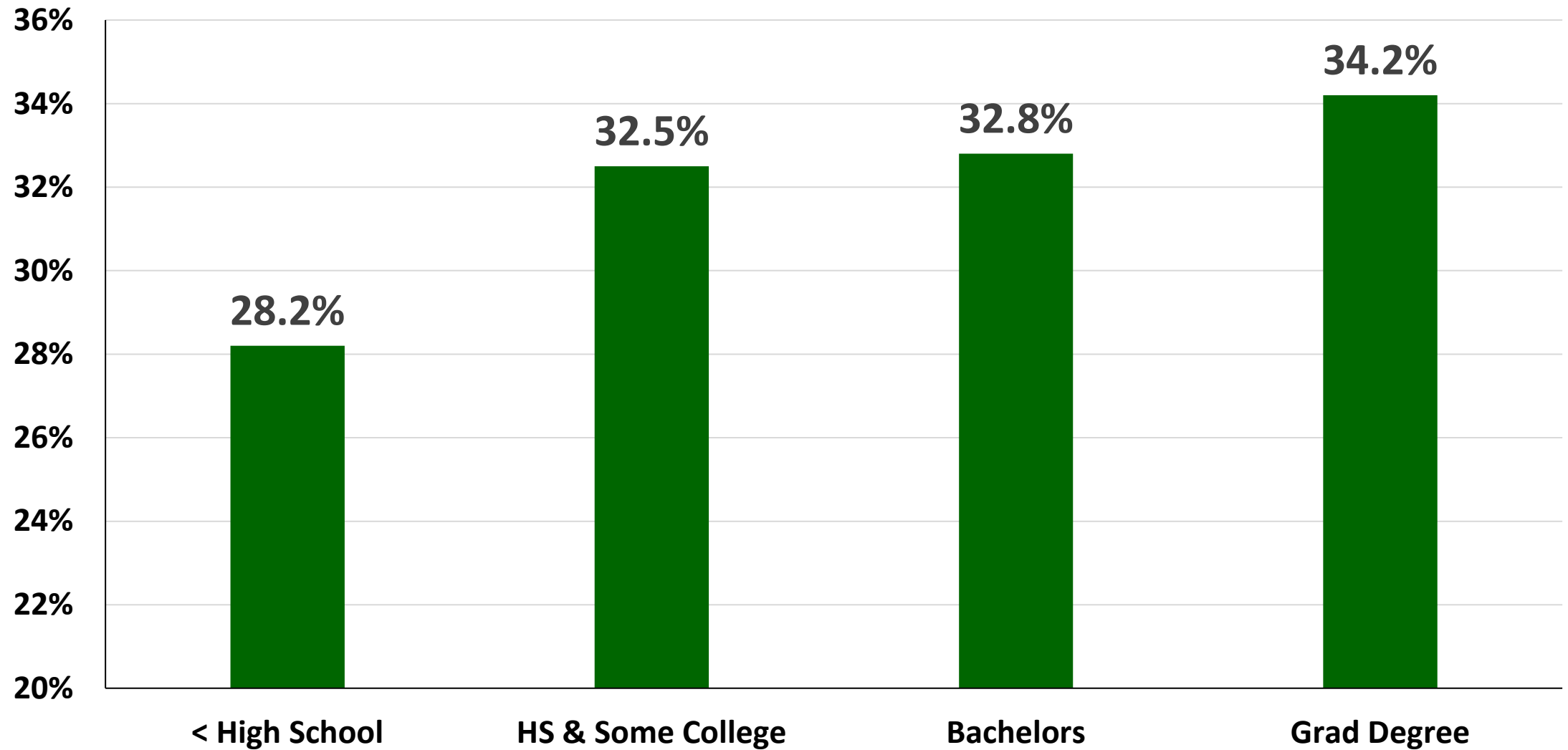
Overall Cesarean Rate by Age, U.S., 2023



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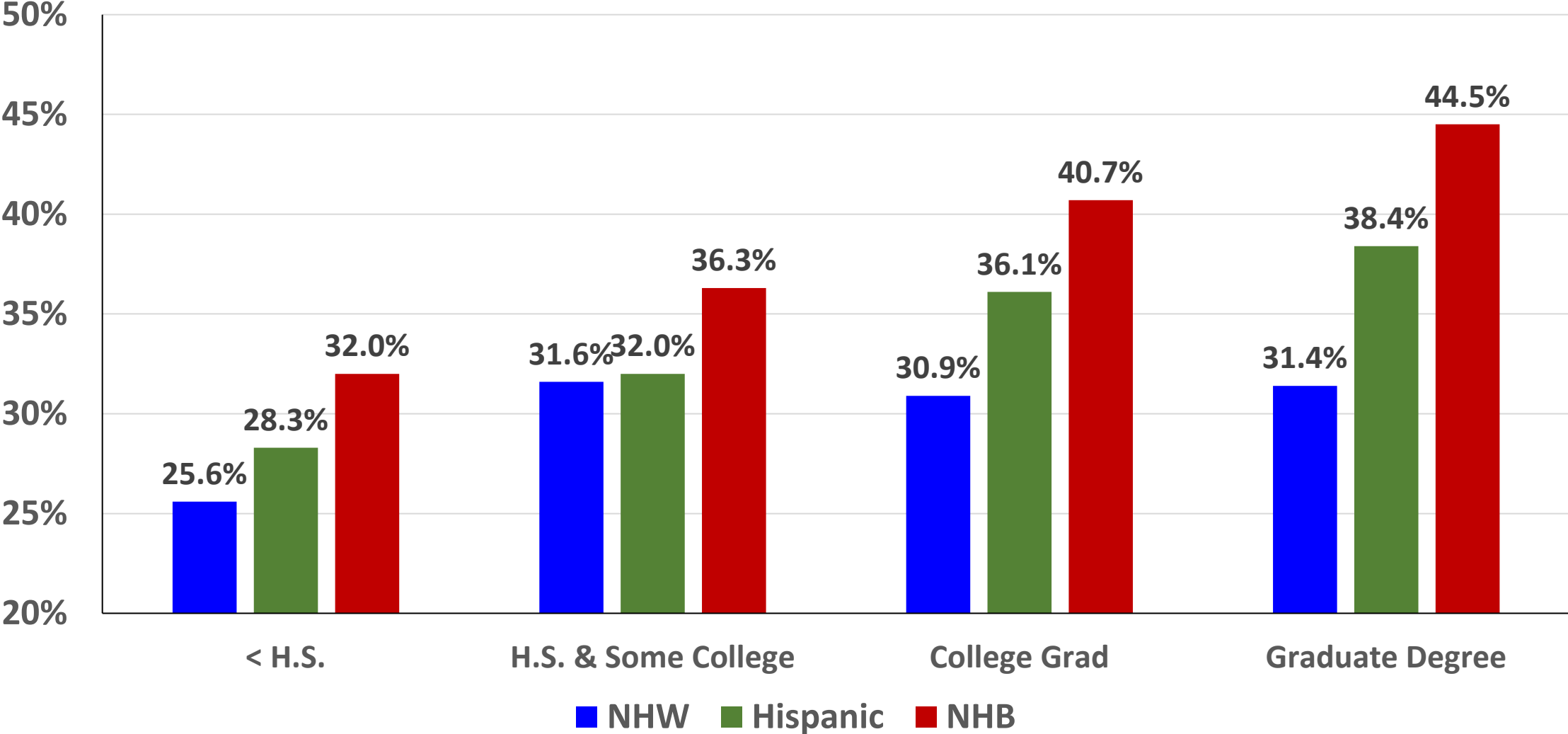
Cesarean Rate by Education Status , U.S., 2023



* 2023 data is provisional



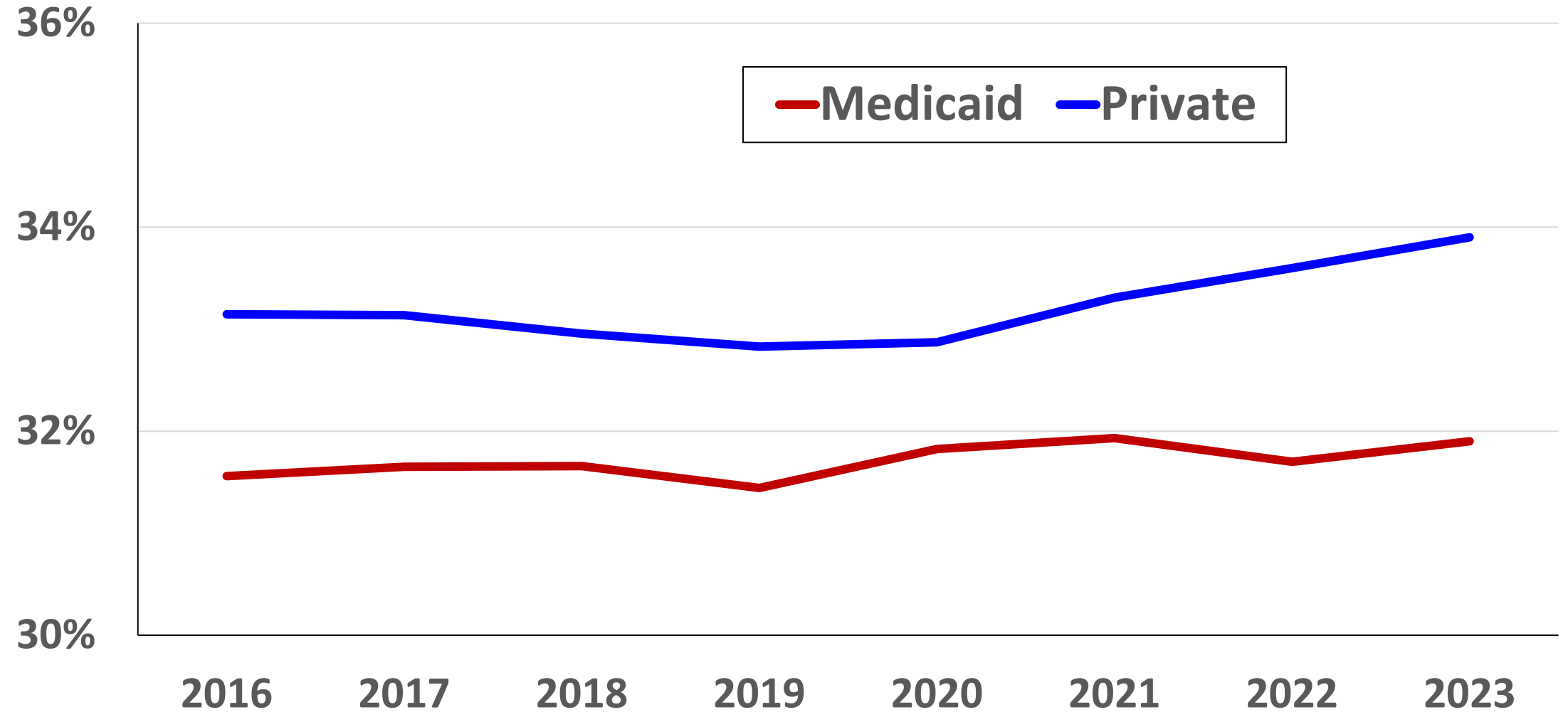
U.S. Cesarean Rates by Education & Race/Ethnicity, 2023



* 2023 data is provisional



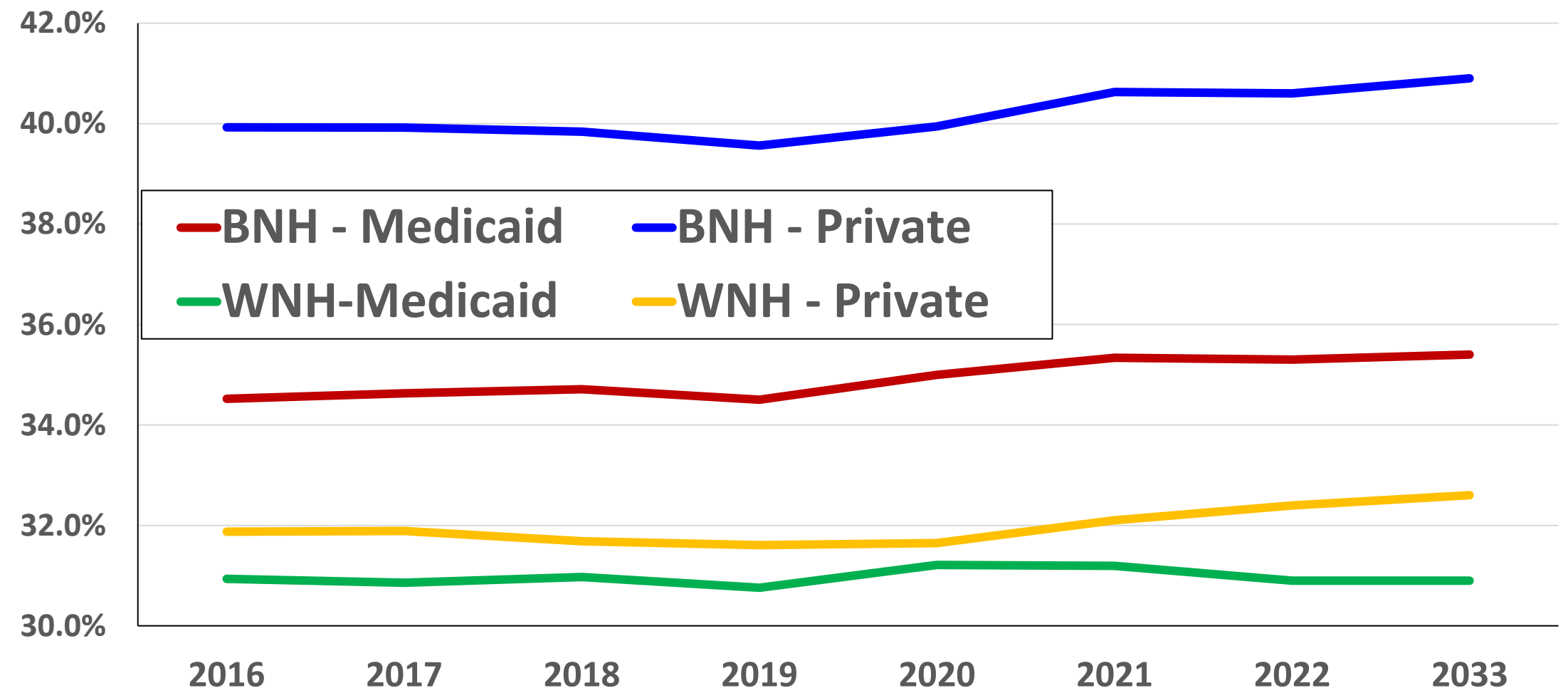
Cesarean Rates by Insurance Status, U.S., 2016-2023



* 2023 data is provisional



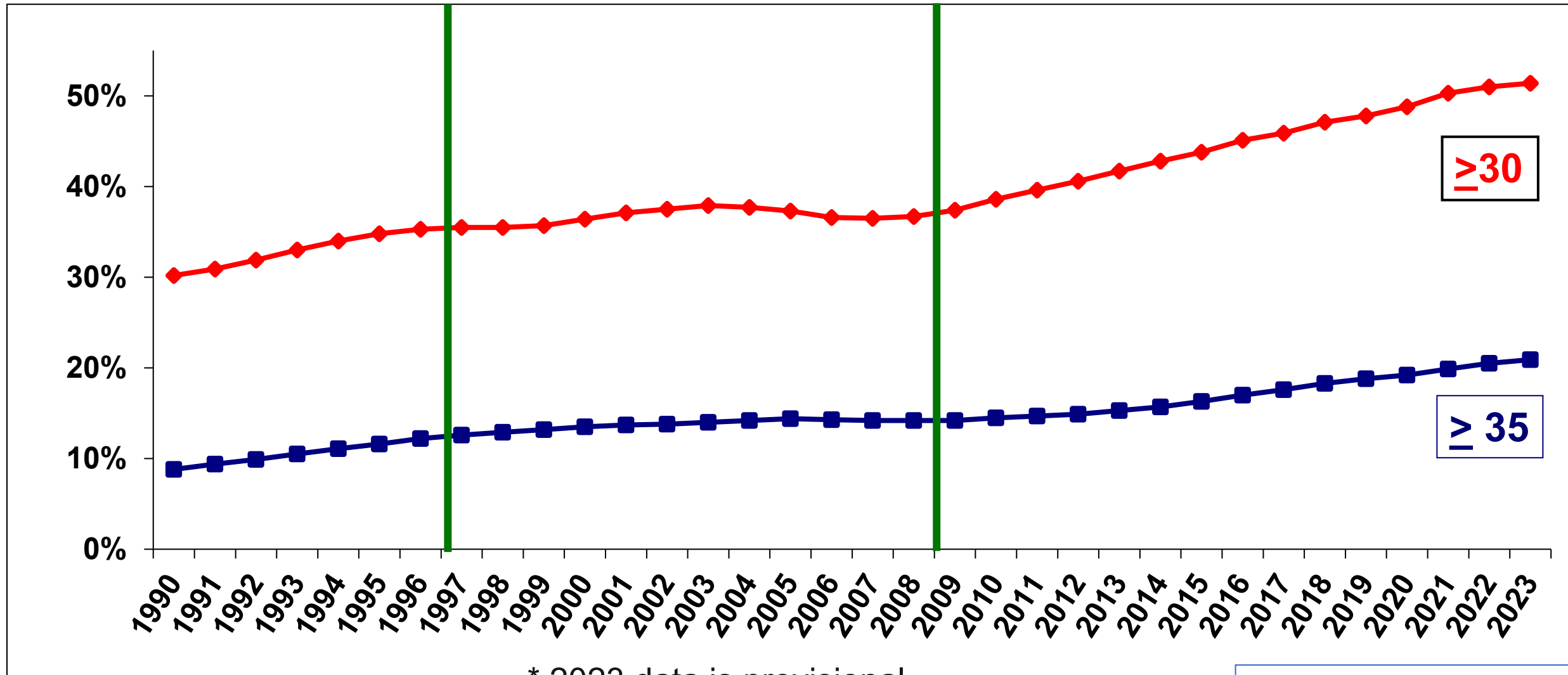
Cesarean Rates by Insurance Status, U.S., 2016-2023



* 2023 data is provisional

Is it older women?

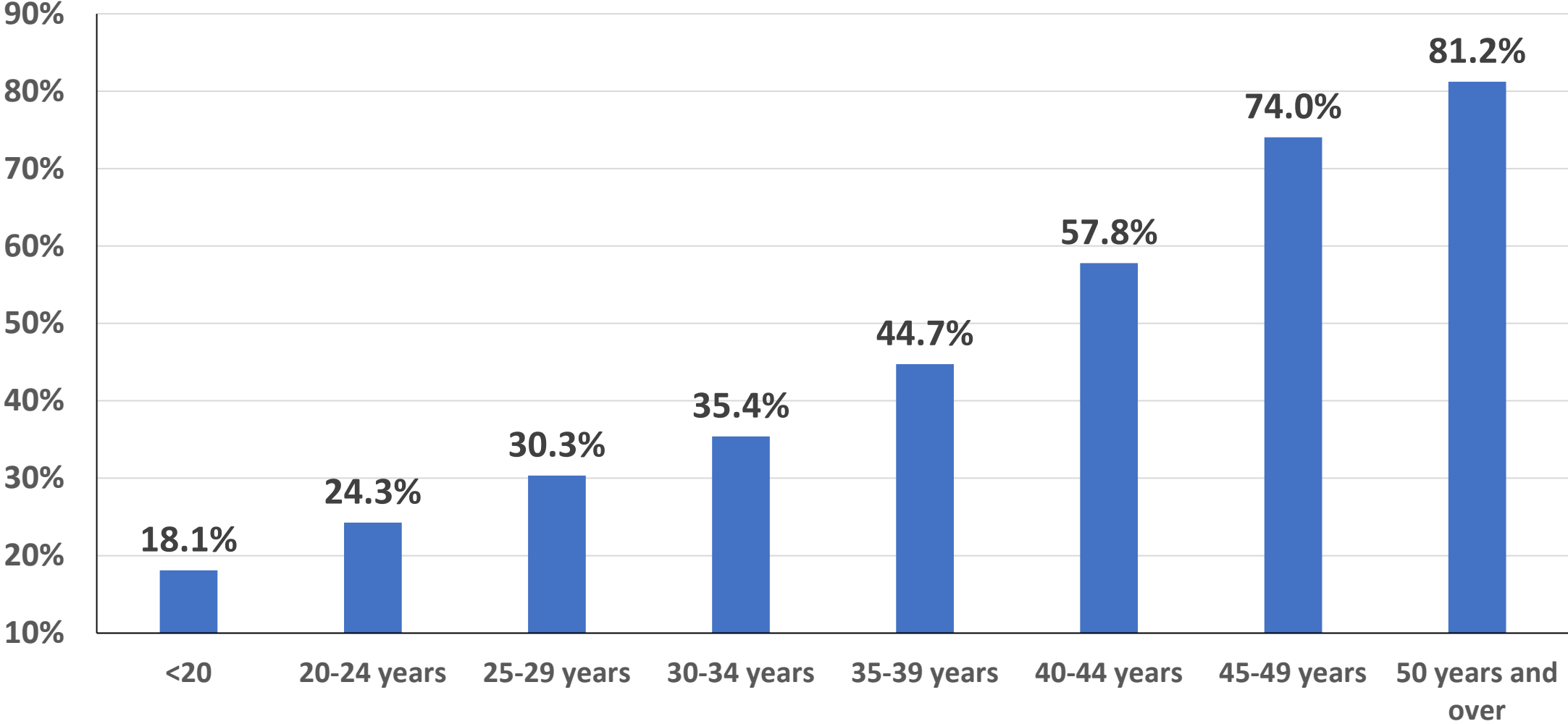
Proportion of Births to Women 30+, U.S. 1990-2023



* 2023 data is provisional



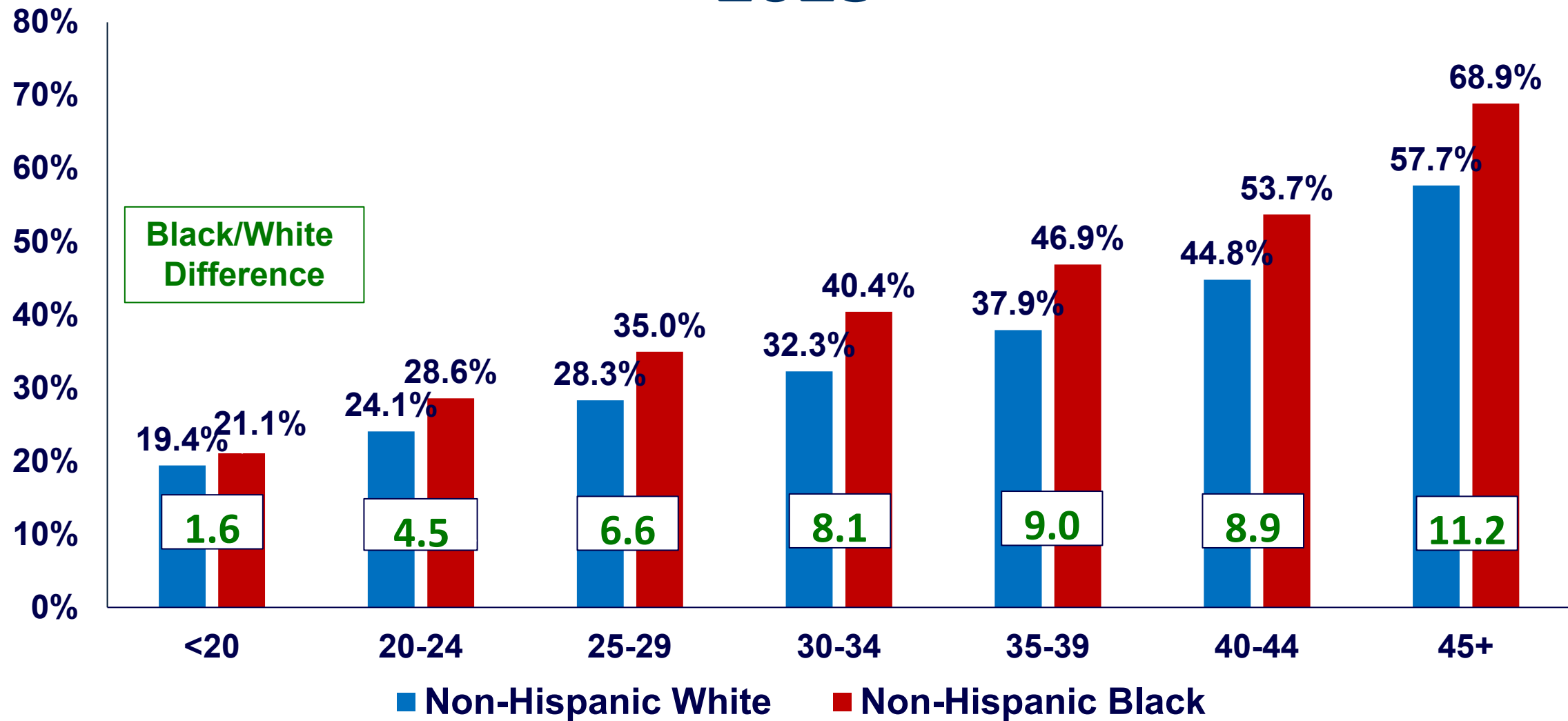
Cesarean Rate **First Births**, by Age, U.S., 2023



Source: CDC Wonder Birth File

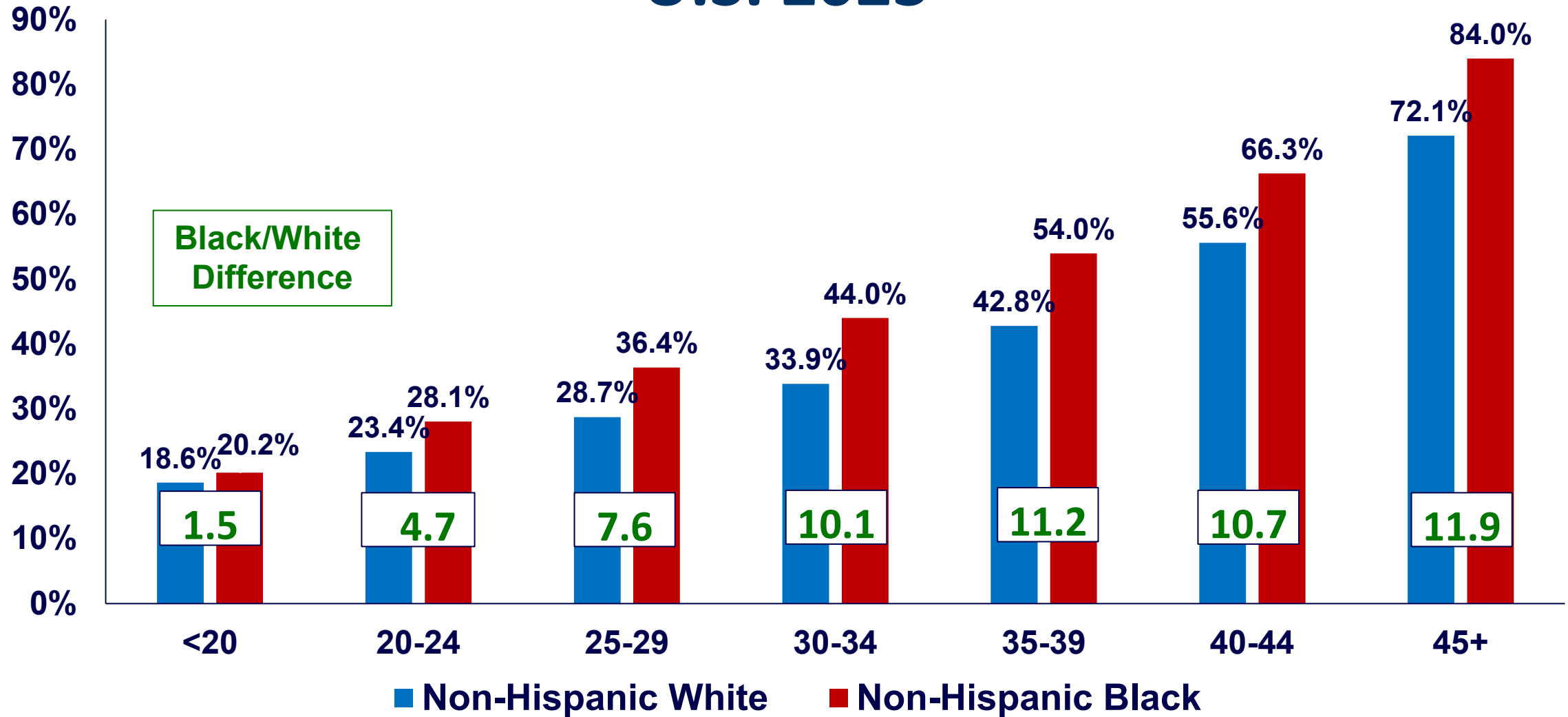
* 2023 data is provisional

Cesareans by Age & Race/Ethnicity, U.S. 2023*

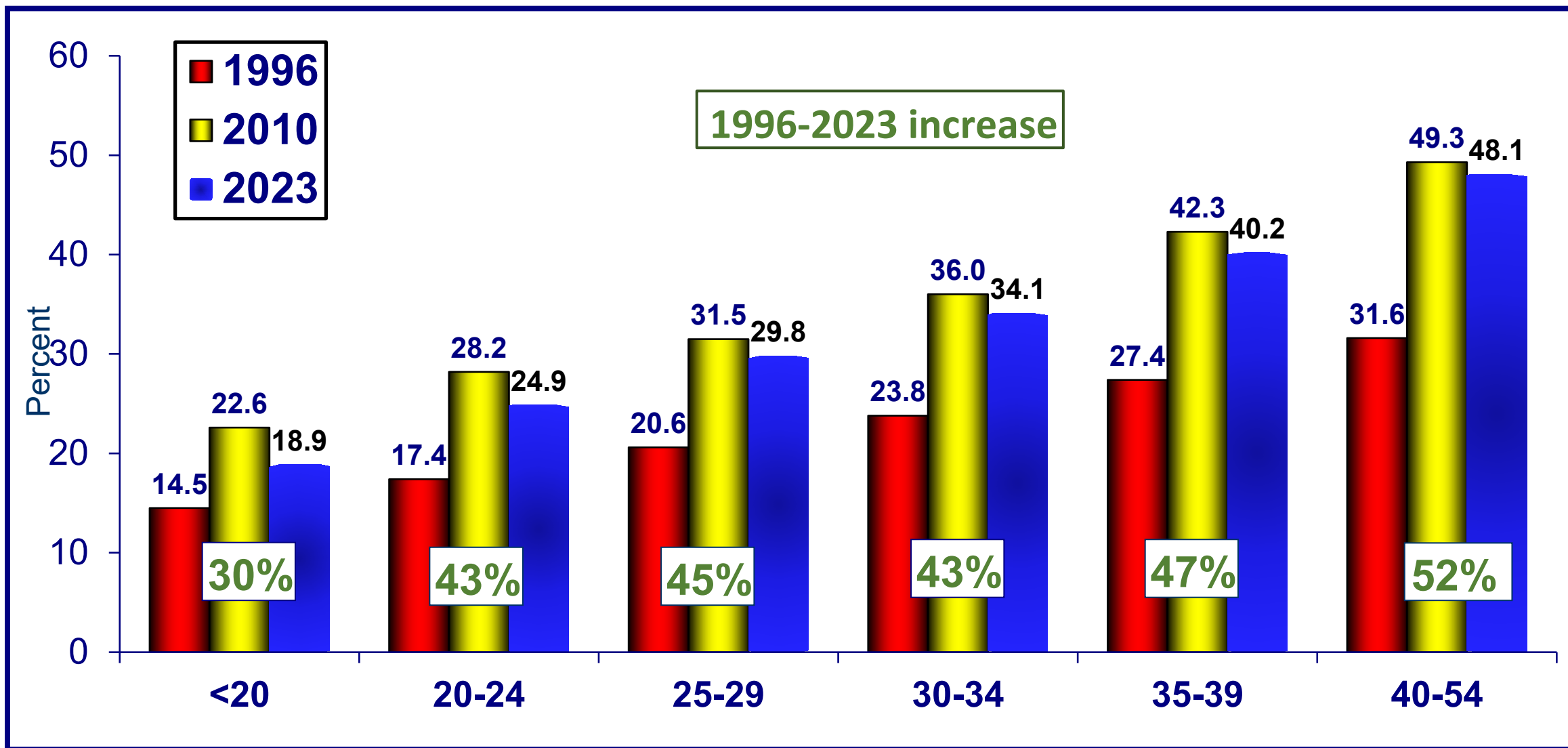




Cesareans by Age & Race/Ethnicity, **First-time mothers**, U.S. 2023



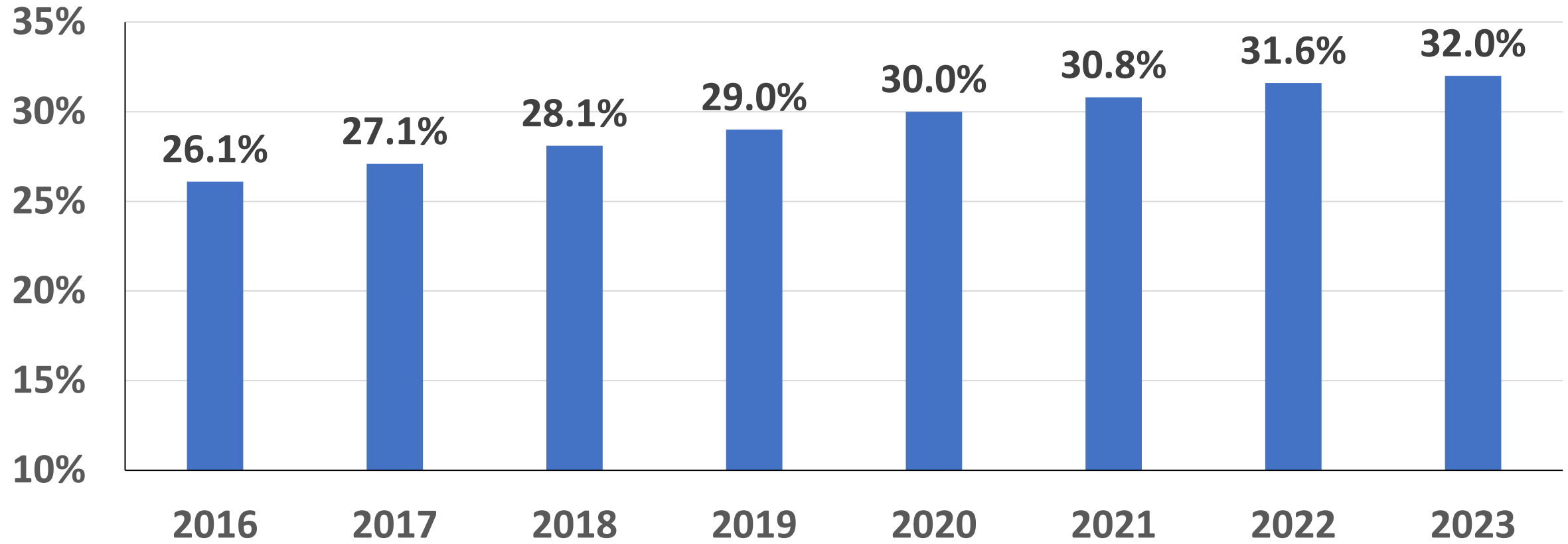
Total Cesarean Rates (per 100 births) by Age of Mother: United States, 1996, 2010 & 2023





Is it obesity?

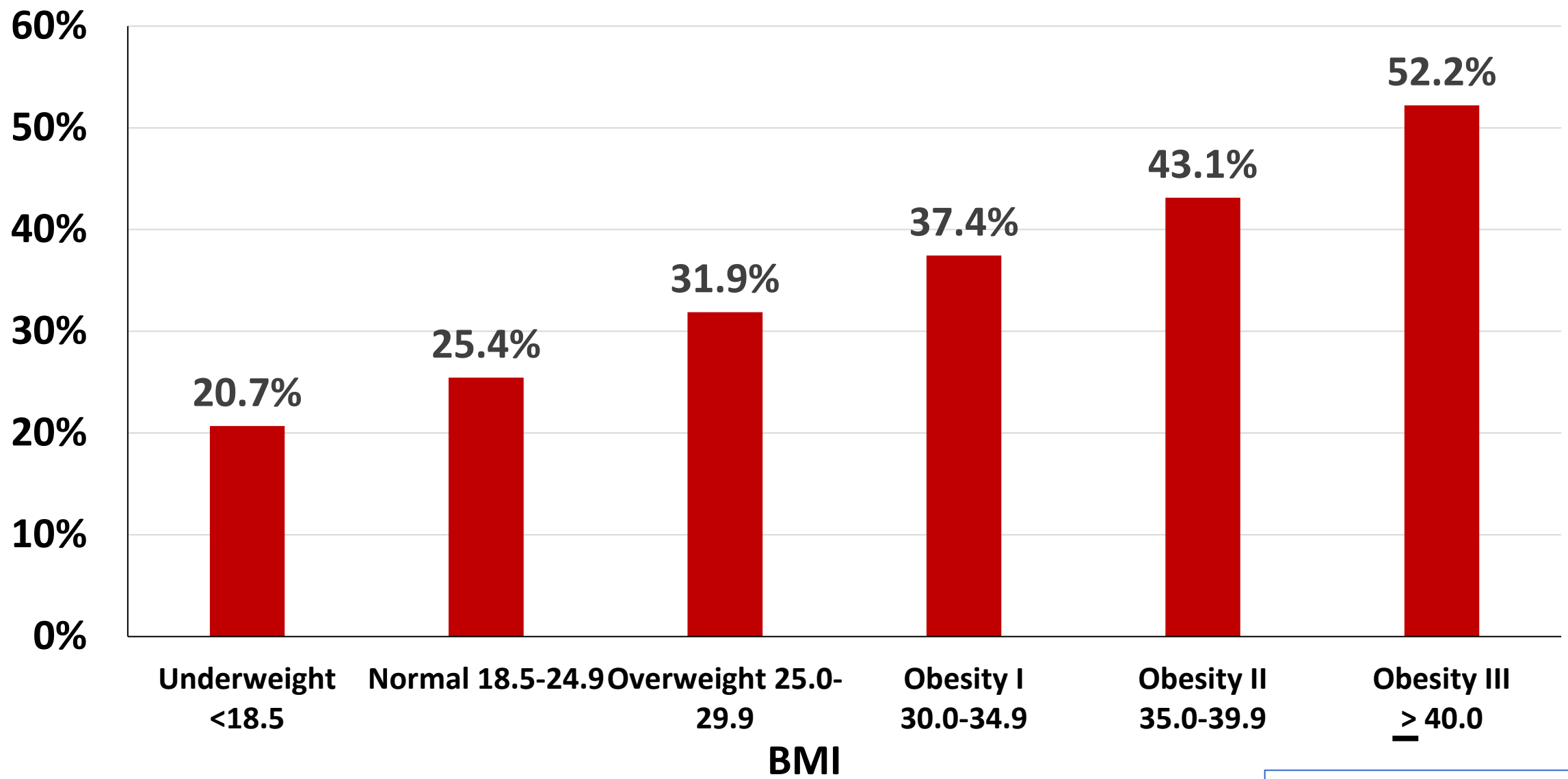
Proportion of Women with Prepregnancy BMI in 30+ (Obese), U.S., 2016-2023



* 2023 data is provisional



Cesarean Rates by Body Mass Index, U.S., 2023



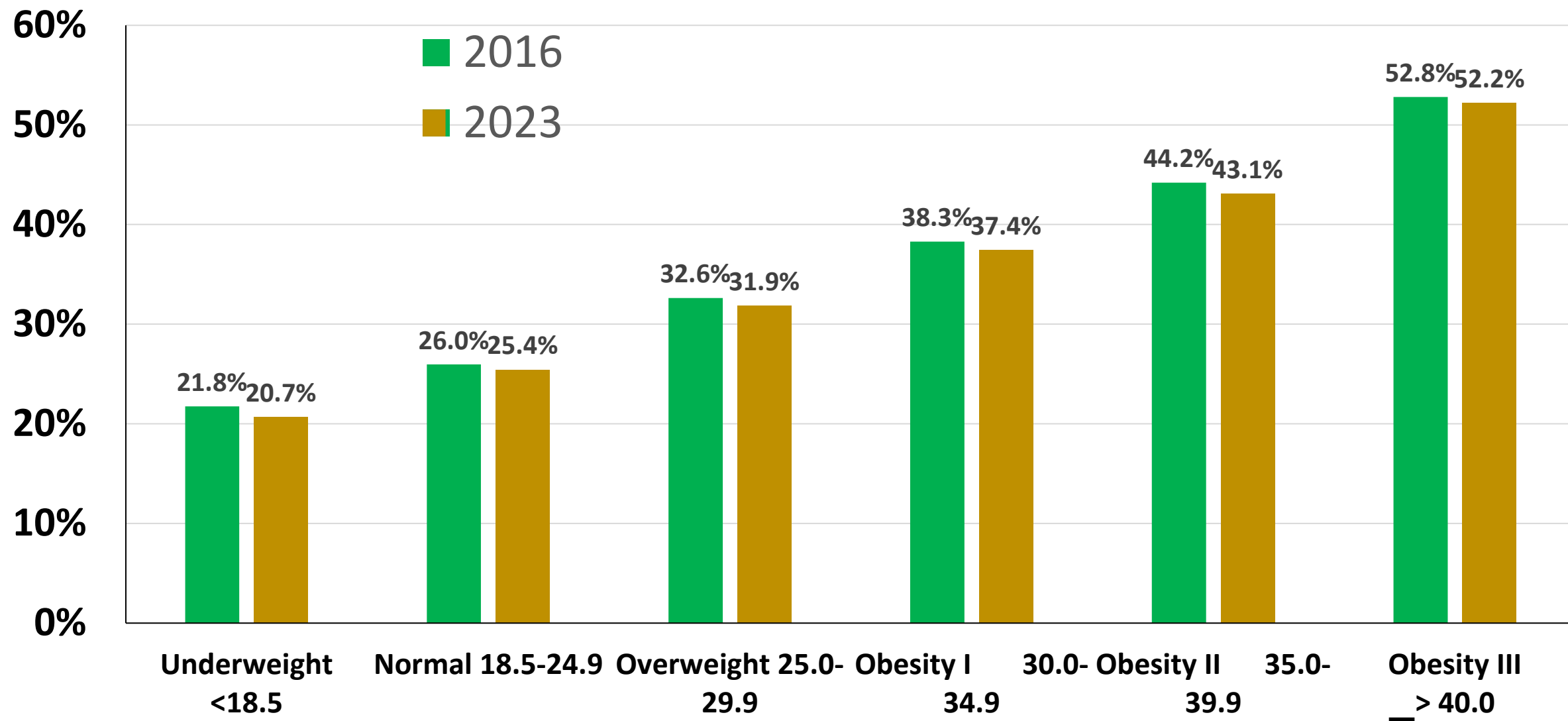
Source: CDC Wonder Birth File

* 2023 data is provisional

[BirthByTheNumbers.org](https://www.birthebythenumbers.org)



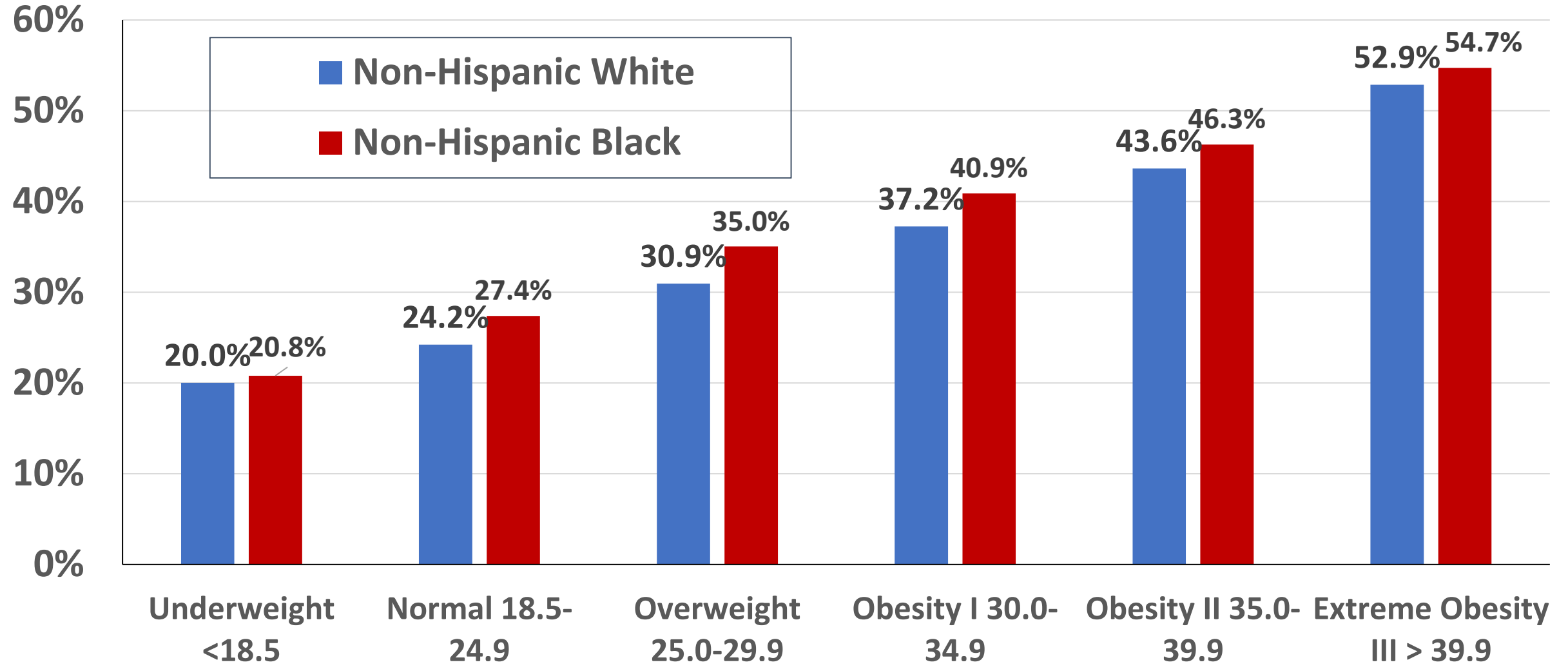
Cesarean Rates by Body Mass Index, U.S., 2016 & 2023



* 2023 data is provisional



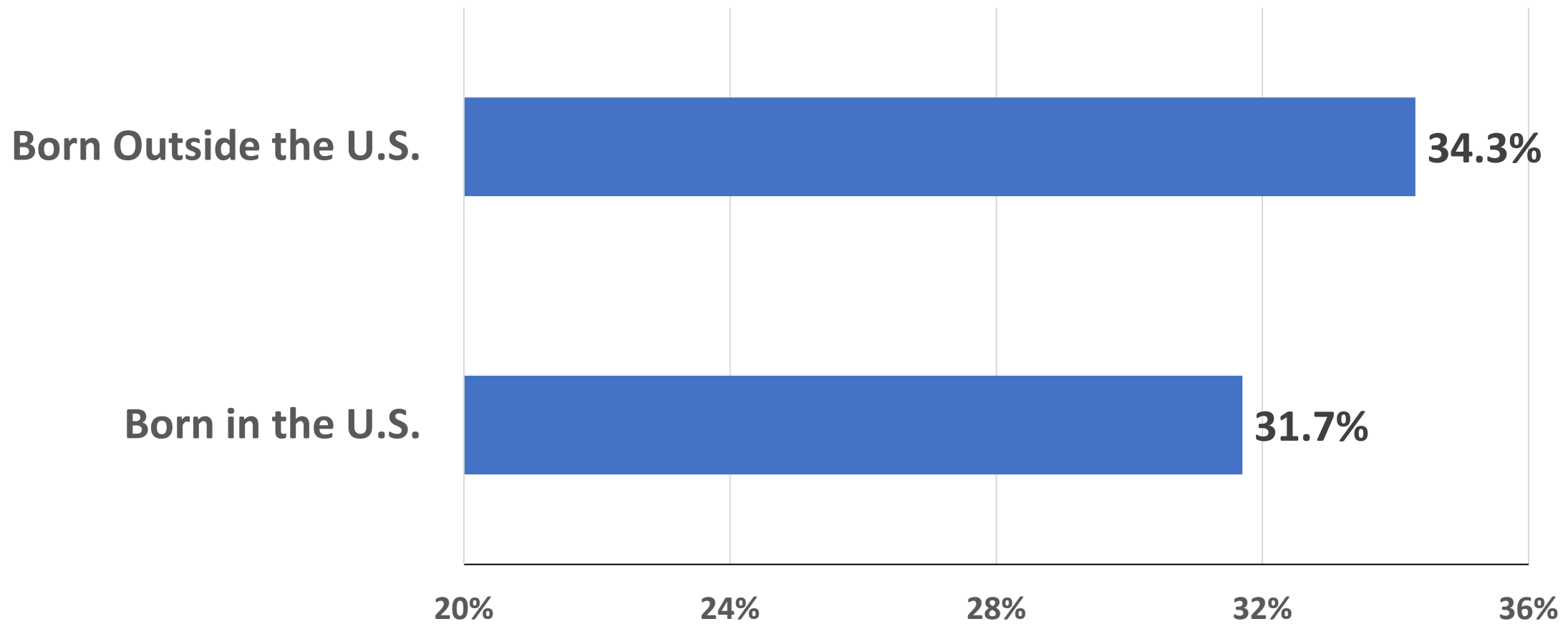
Cesarean Rates by BMI Category & Race/Ethnicity, 2023



* 2023 data is provisional

Is the cesarean rate driven by foreigners?

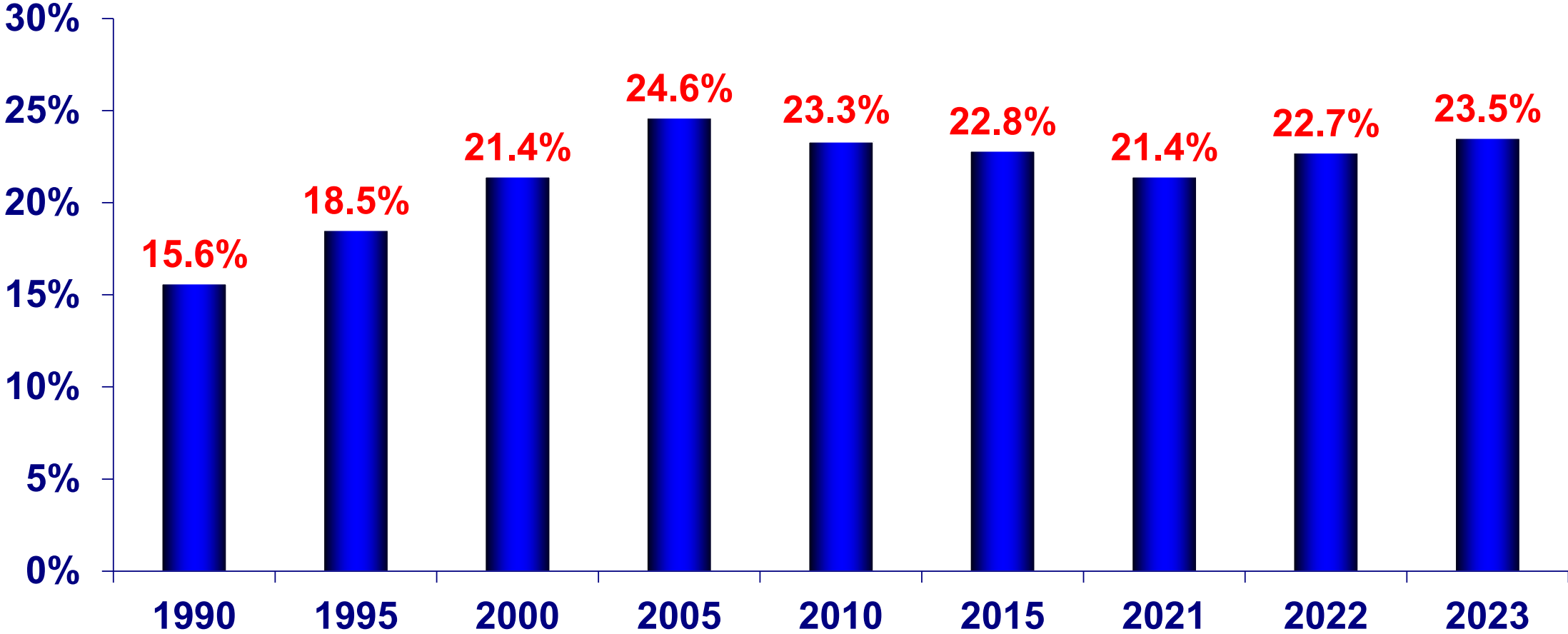
Cesarean Rates by Mother's Nativity, U.S., 2023



* 2023 data is provisional



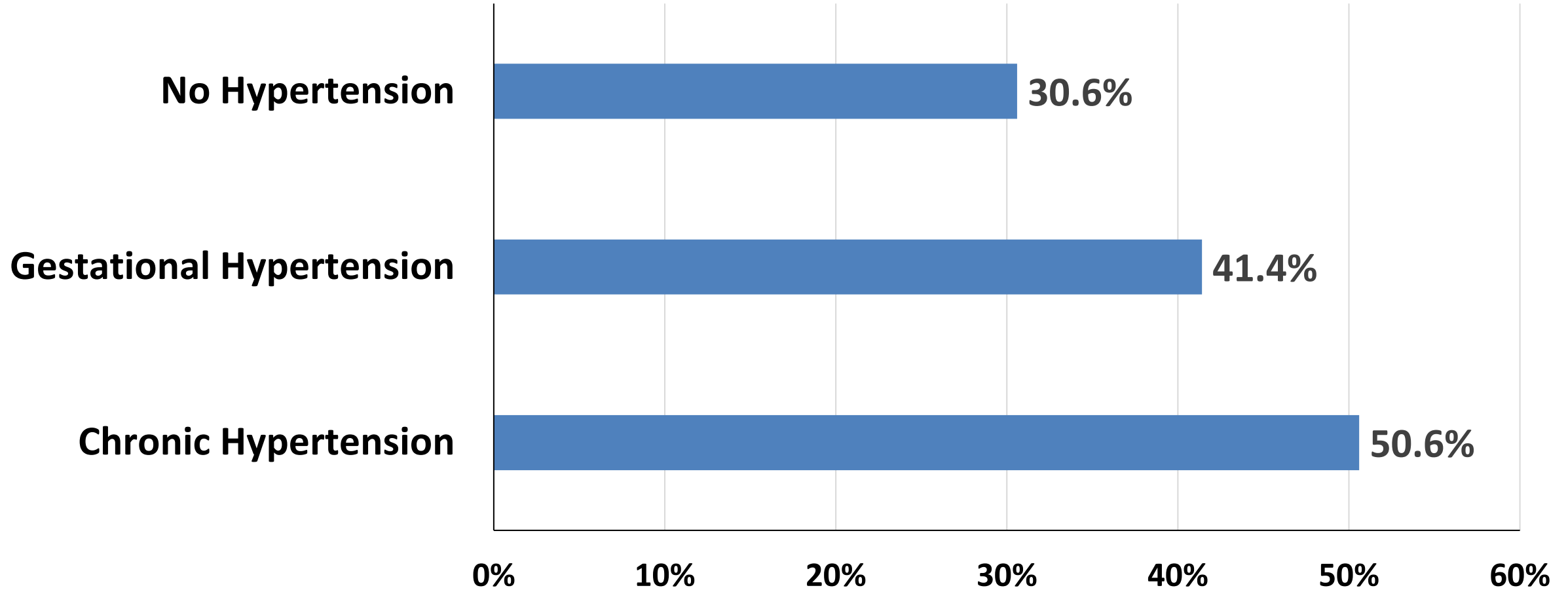
Proportion of All U.S. Births to Foreign Born Mothers, 1990-2023



Source: CDC Wonder Birth File

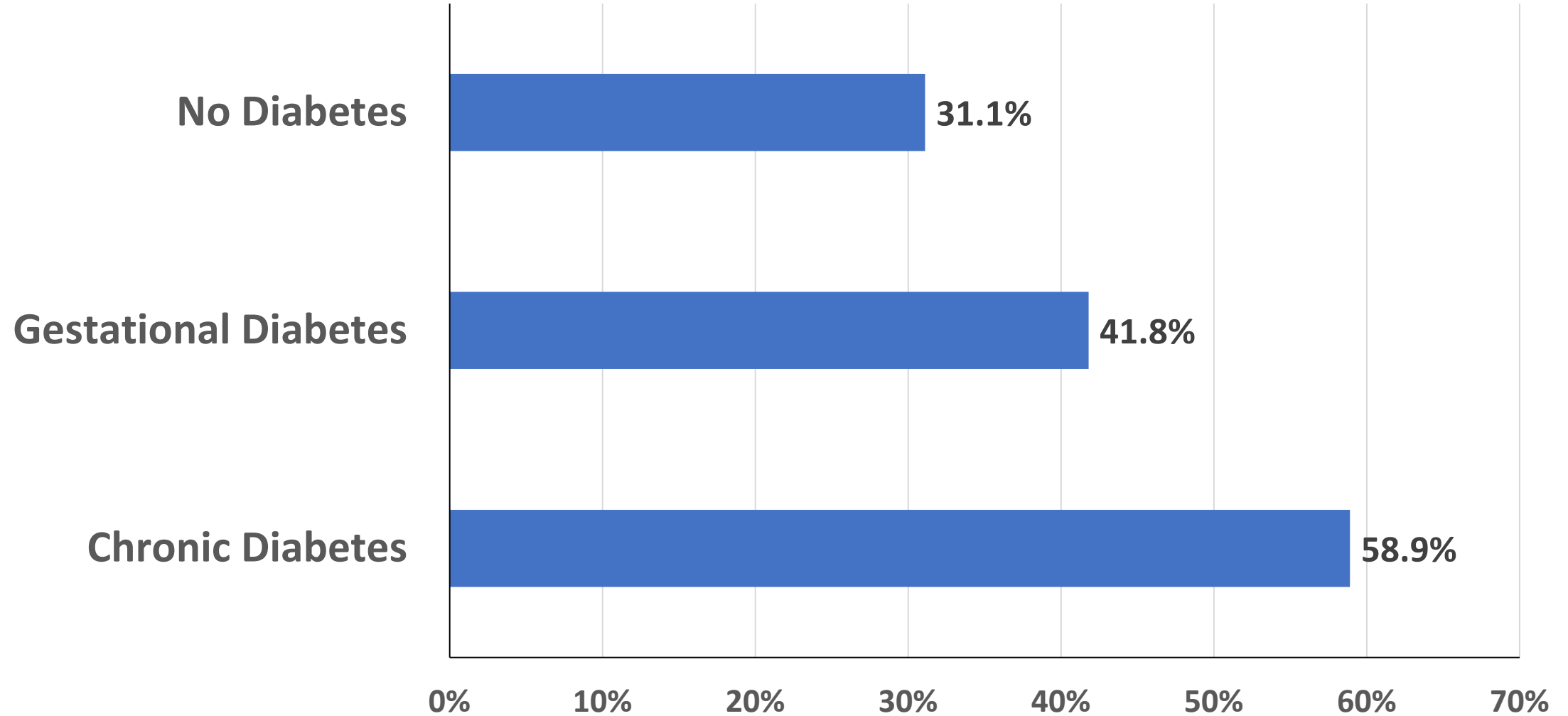
* 2023 data is provisional

Cesarean Rates by Hypertension, 2023



* 2023 data is provisional

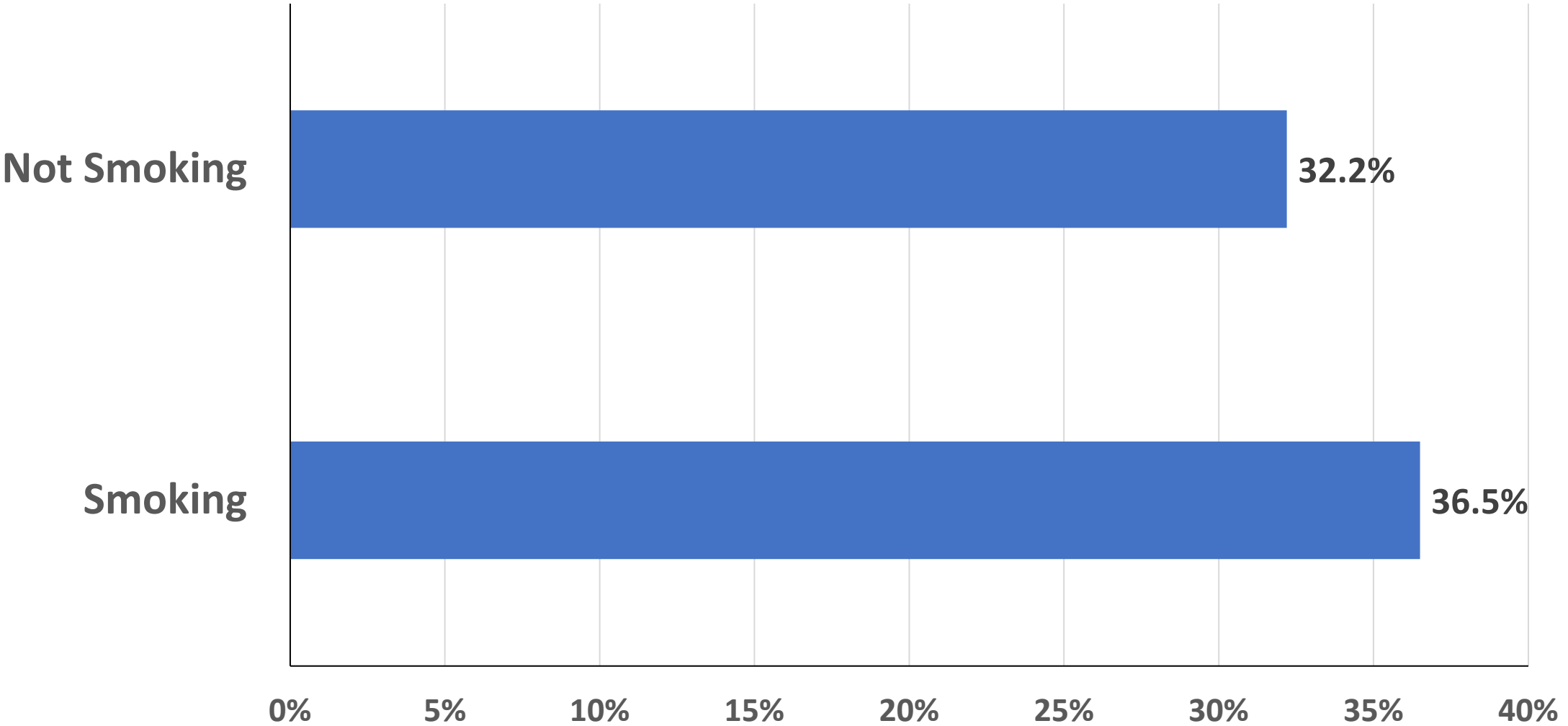
Cesarean Rates by Diabetes Status, 2023



* 2023 data is provisional



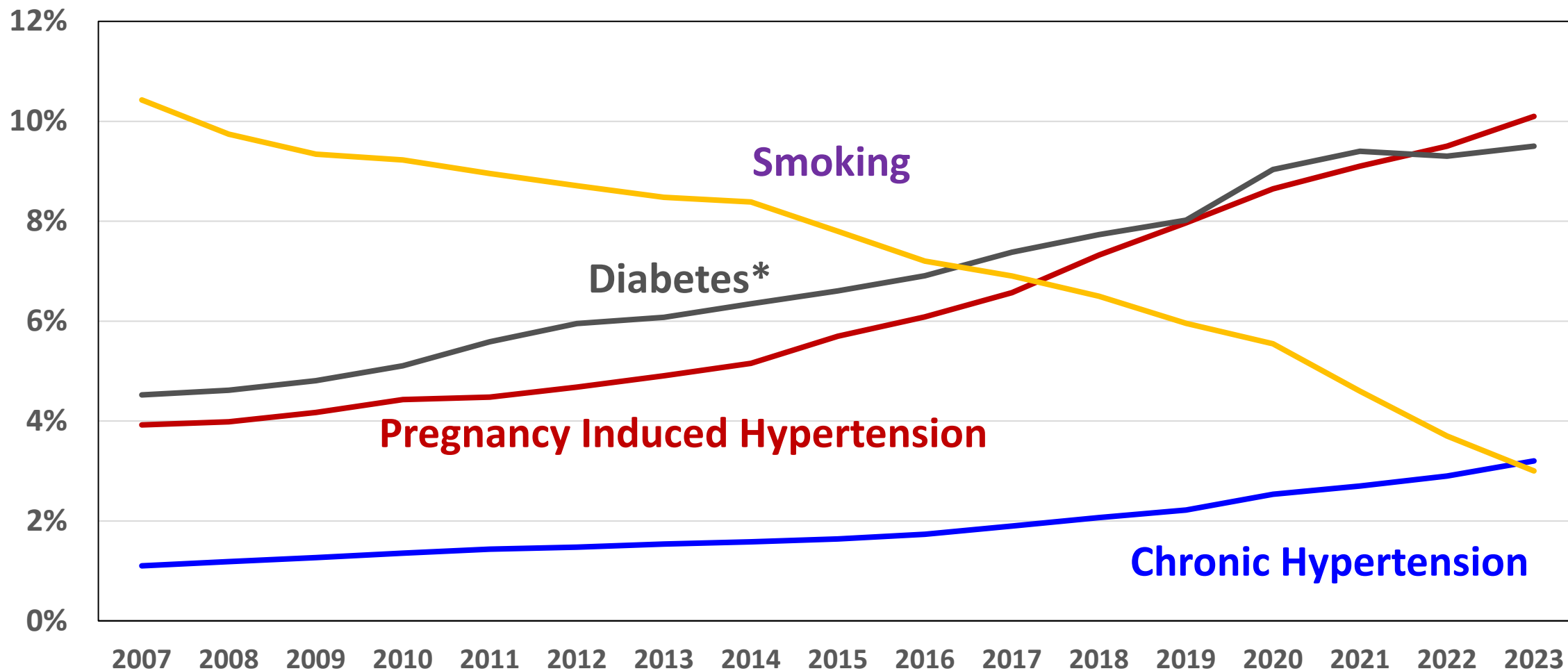
Cesarean Rates by Smoking Status, 2023





Is it Poor Health?

Maternal Risk Status and Behaviors, U.S., 2007-2023[^]



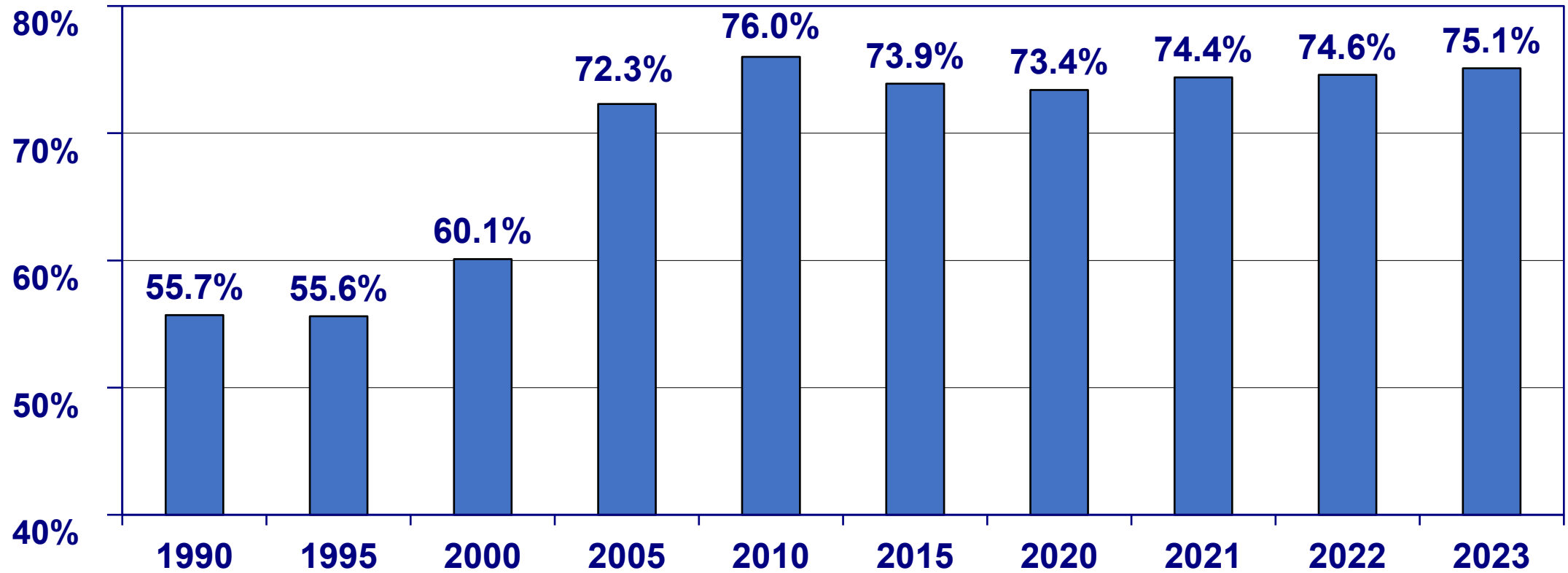
*Pre-pregnancy or gestational

[^]2023 data is provisional

[BirthByTheNumbers.org](https://www.birthebythenumbers.org)

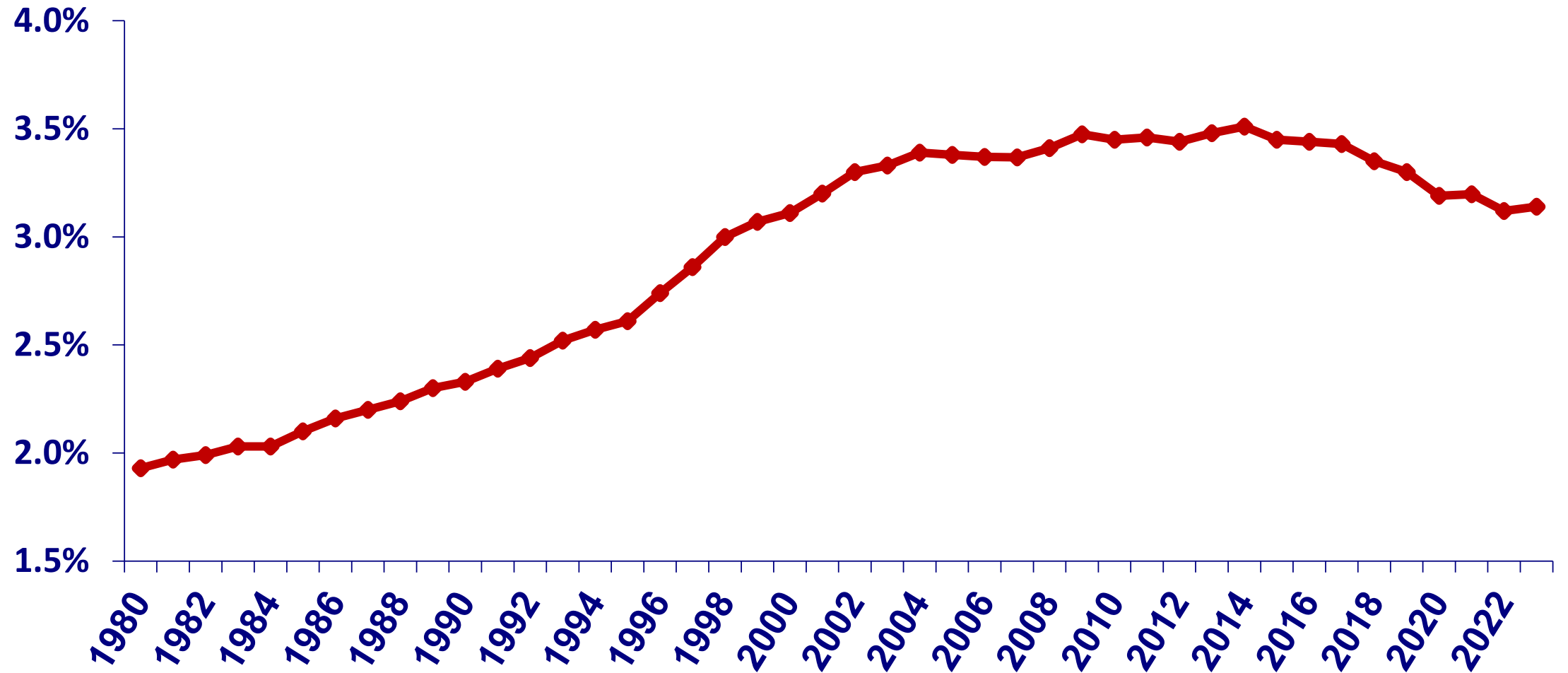
Is it IVF causing more multiple births?

Cesarean Rates for Multiple Births, U.S., 1990-2023



* 2023 data is provisional

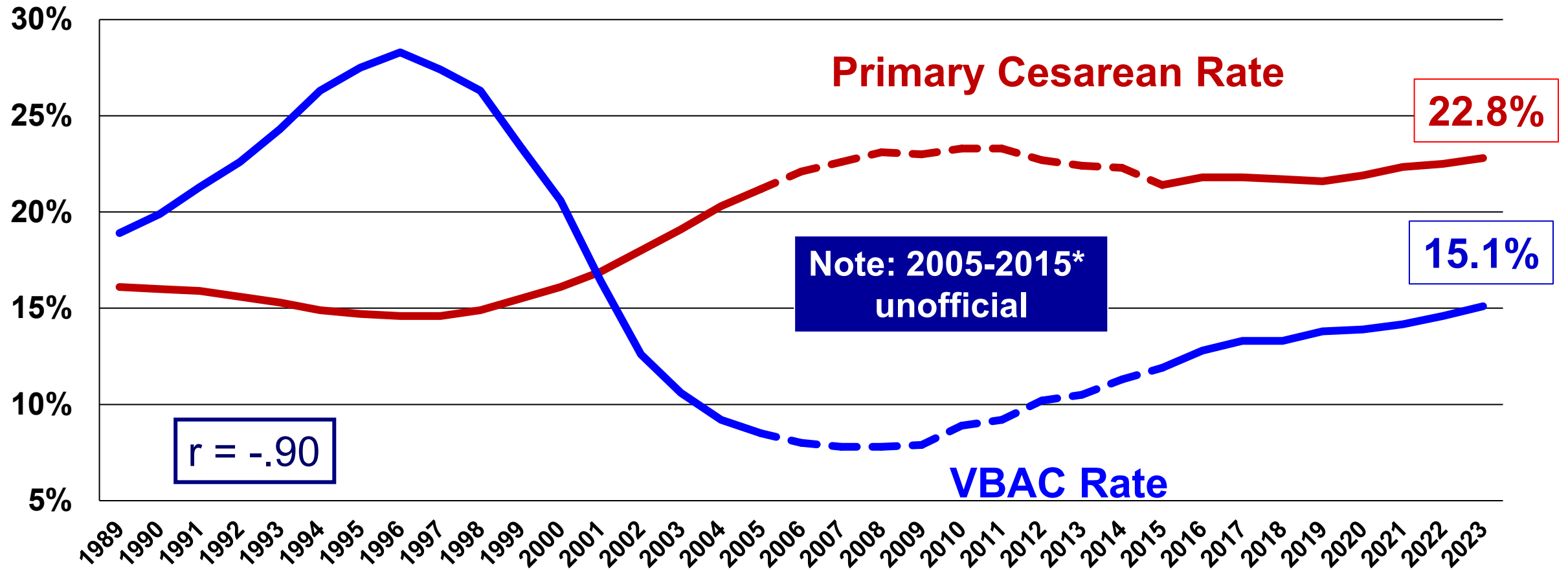
Rates of Multiple Births (proportion of all babies in multiple births), U.S., 1980-2023



* 2023 data is provisional

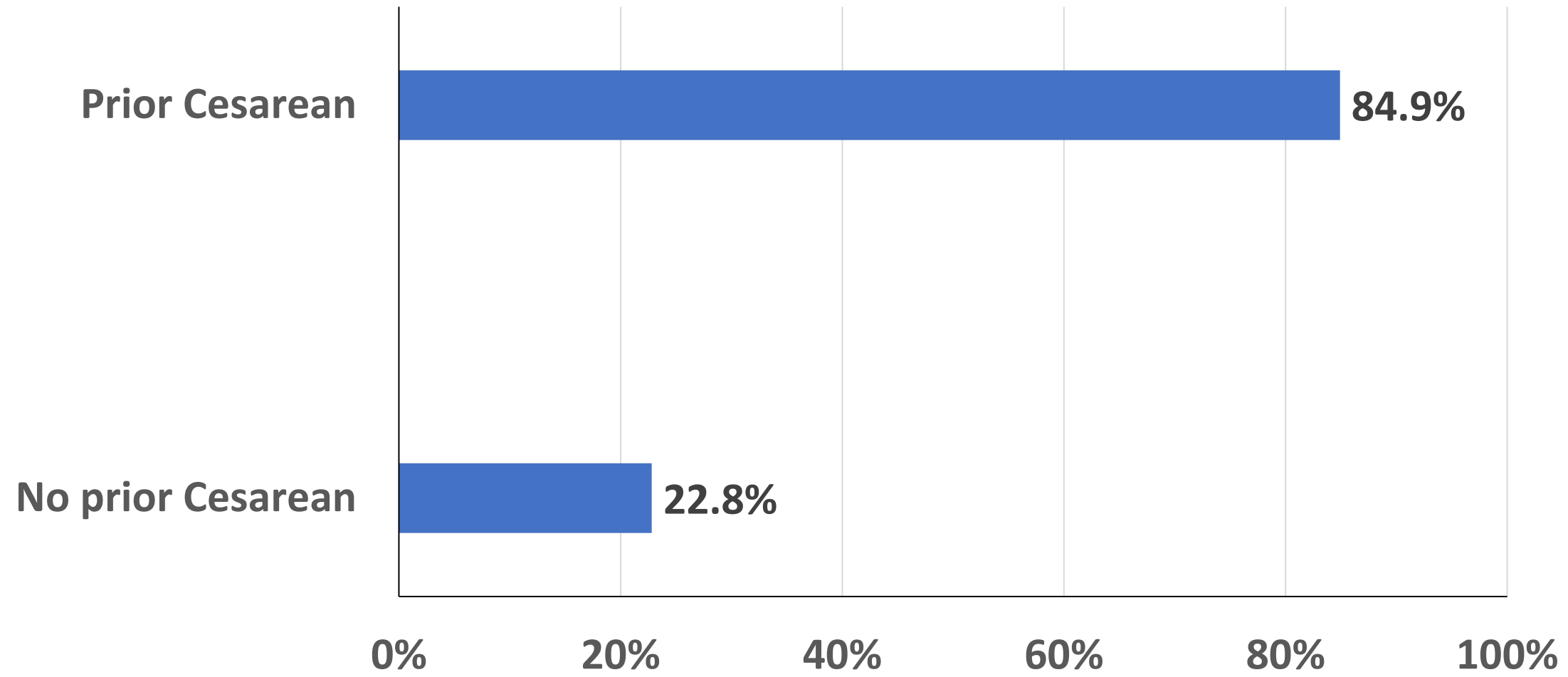
Vaginal Birth after Cesareans (VBACs) in 2023

Primary Cesarean and VBAC Rates, U.S., 1989-2023



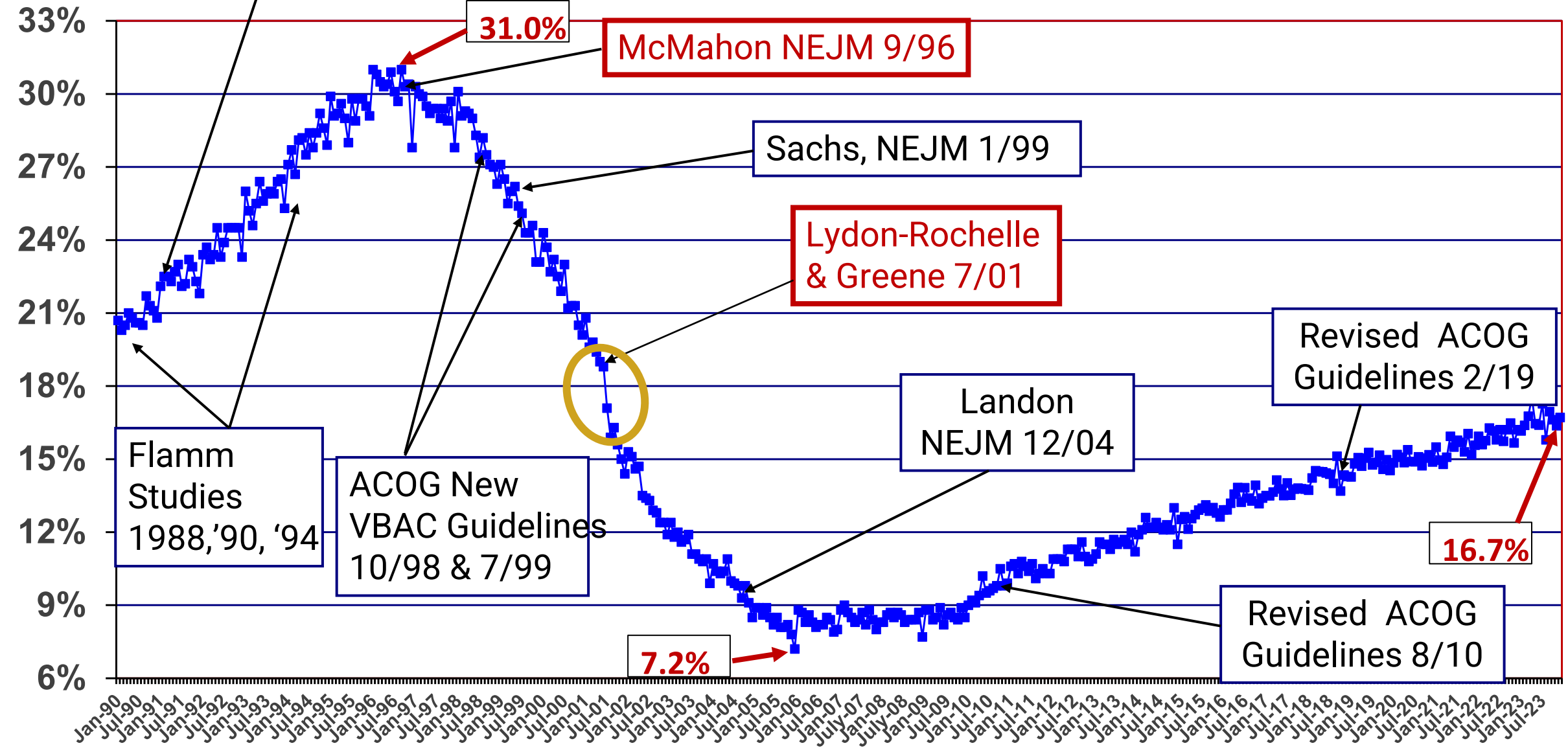


Cesarean Rate by Cesarean Section History, U.S., 2023



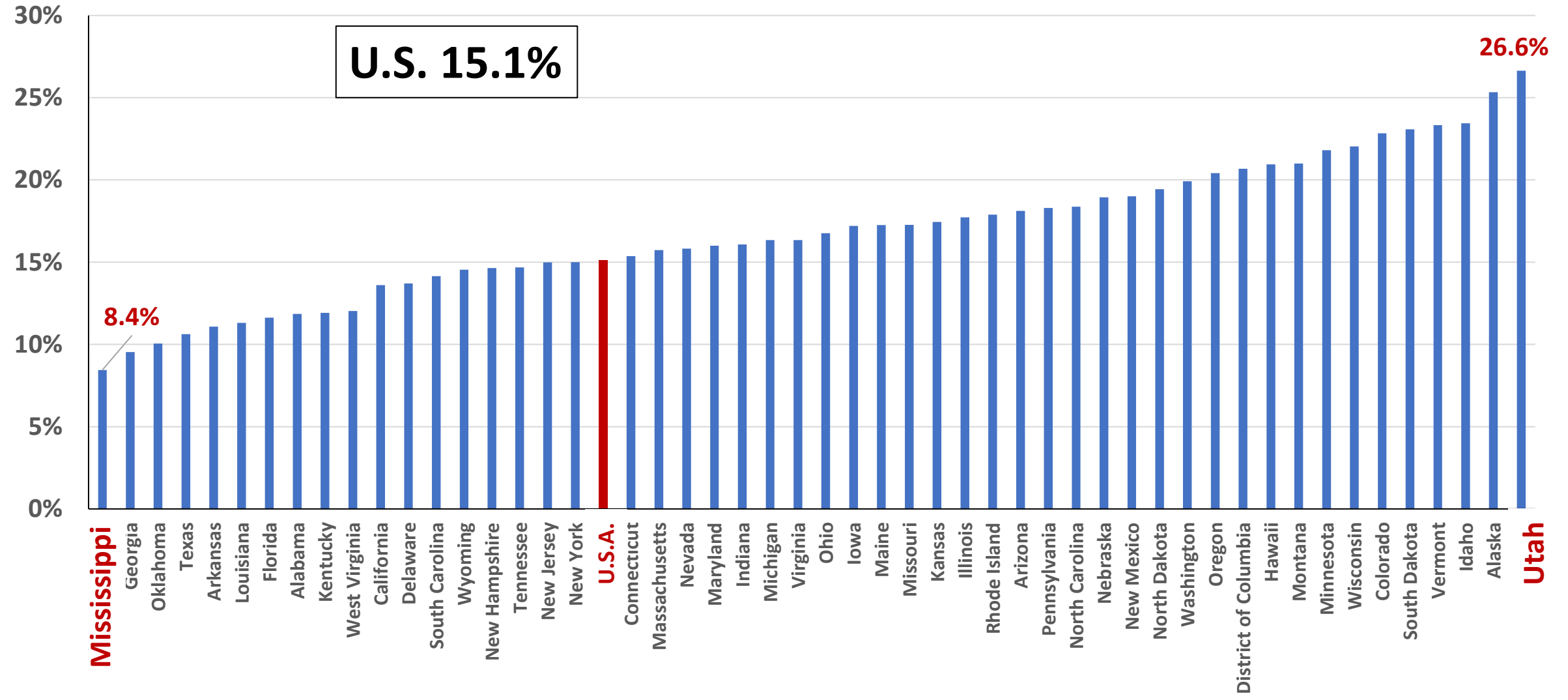
% VBAC Lower Risk* Mothers, U.S., Monthly Rates, 1990-2023

ACOG guidelines encourage VBAC, 1/82 10/88 Reaffirmed 1991





VBAC Rates, U.S. States, 2023



Source: CDC Wonder Birth File

* 2023 data is provisional