

# ***Birth By the Numbers***

## ***Fall, 2023***

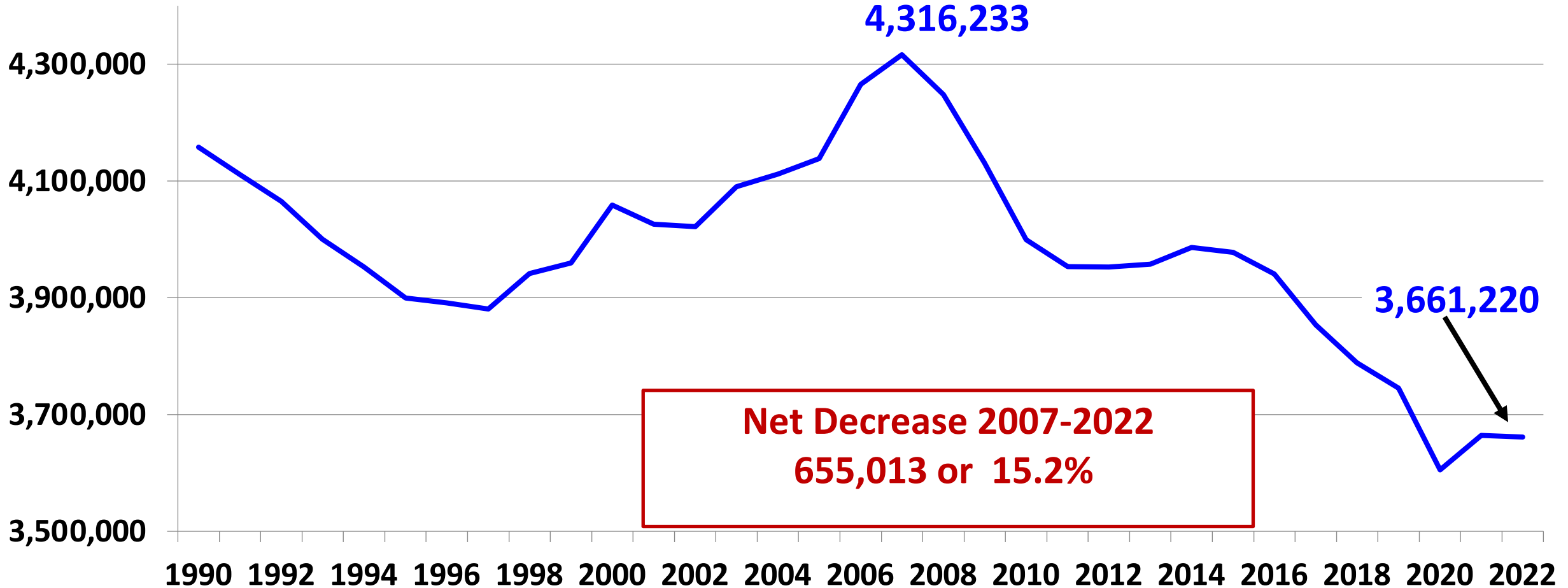
***Is there a problem with U.S.  
maternity care outcomes?***

***Gene Declercq, PhD***

***[www.birthbythenumbers.org](http://www.birthbythenumbers.org)***

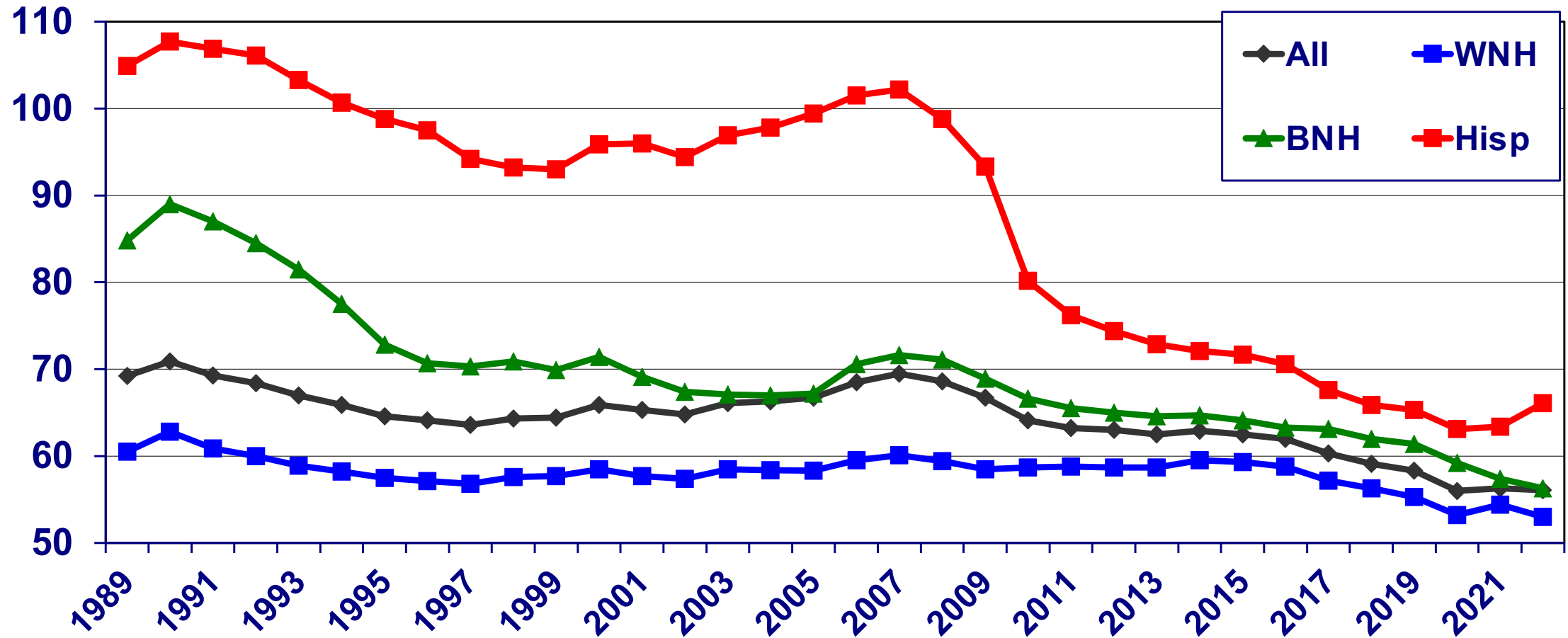
***With initial support from: The Transforming Birth Fund***

# Total U.S. Births, 1990-2022



Source: Annual NCHS Reports on Births

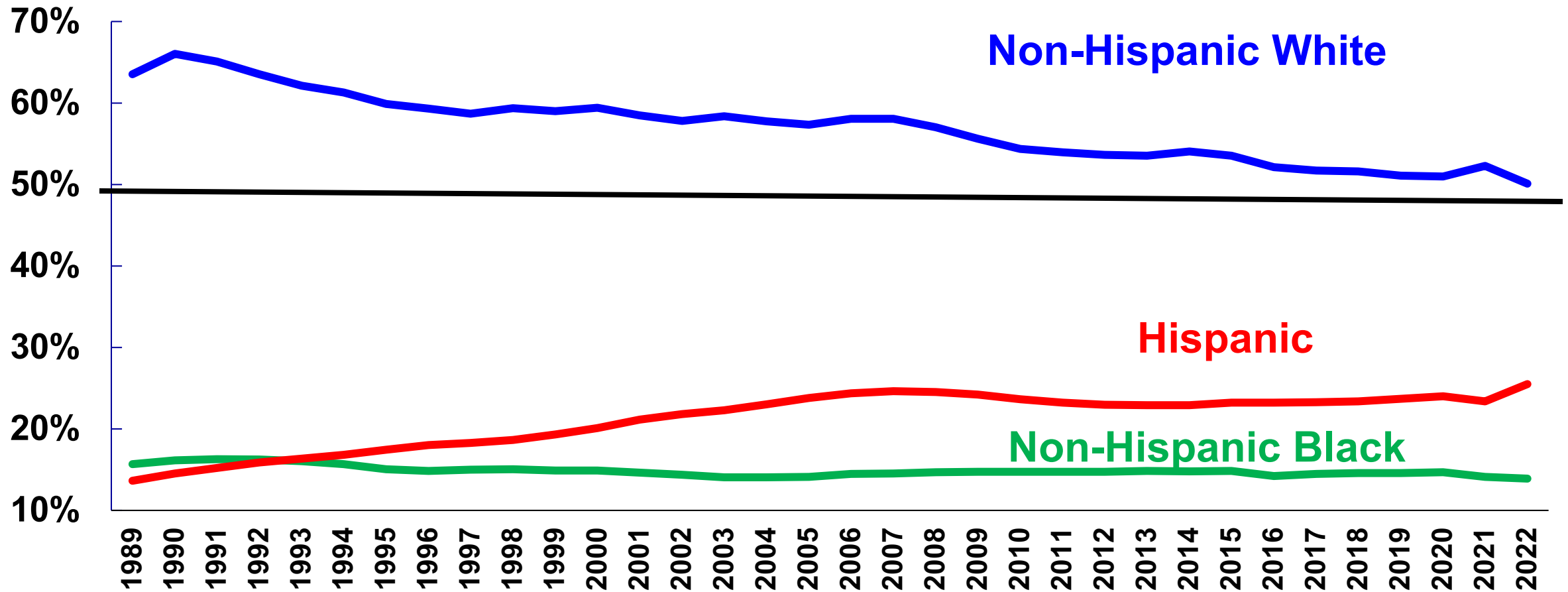
# U.S. Fertility Rates (per 1,000) by Race/Ethnicity, 1989-2022



Fertility rates computed by relating total births, regardless of age of mother, to women 15-44 years.

*Fears of a “Majority/Minority” of births are unfounded...for now*

## Proportion of all U.S. Births, 1989-2022\*

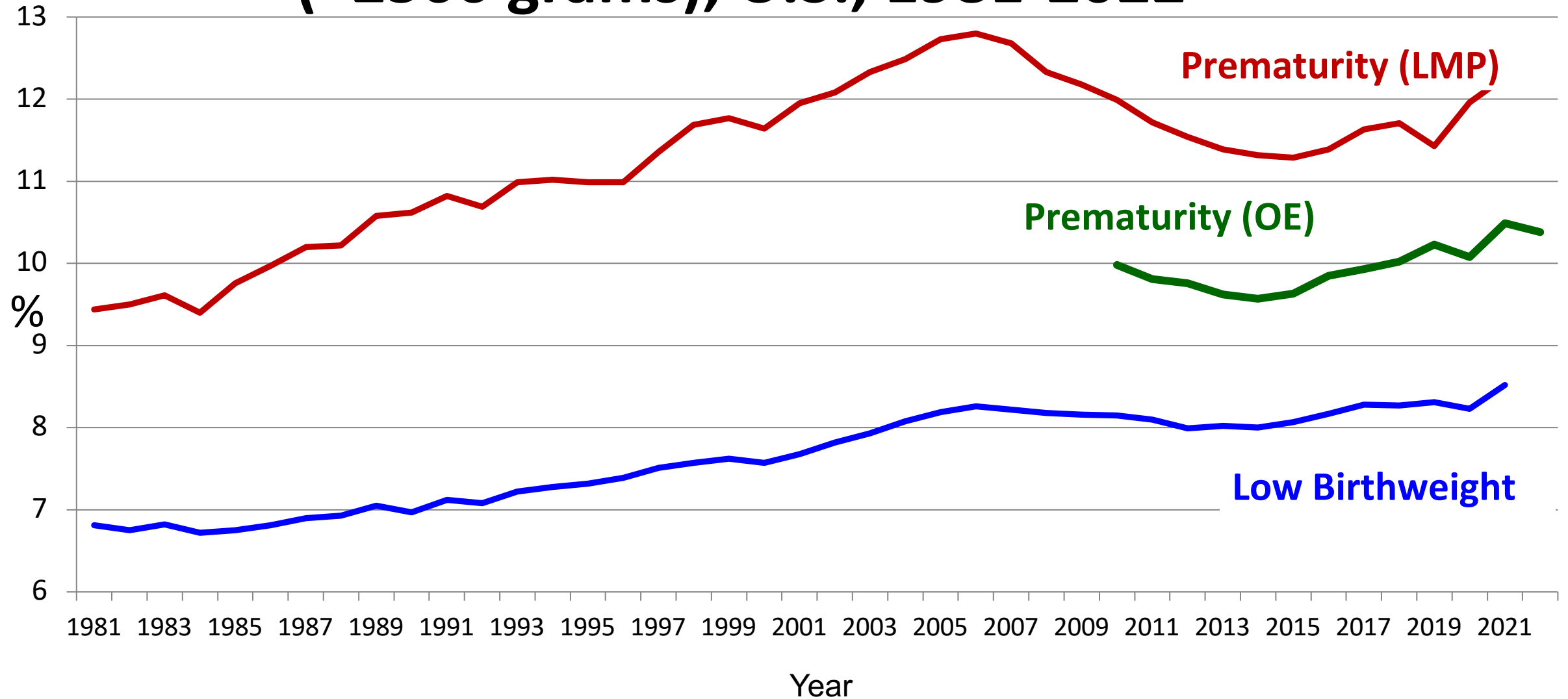


Source: Adapted from NCHS Annual Birth Reports

\*2022-provisional.

[www.BirthByTheNumbers.org](http://www.BirthByTheNumbers.org)

# Prematurity(<37 weeks) and Low Birthweight (<2500 grams), U.S., 1981-2022\*



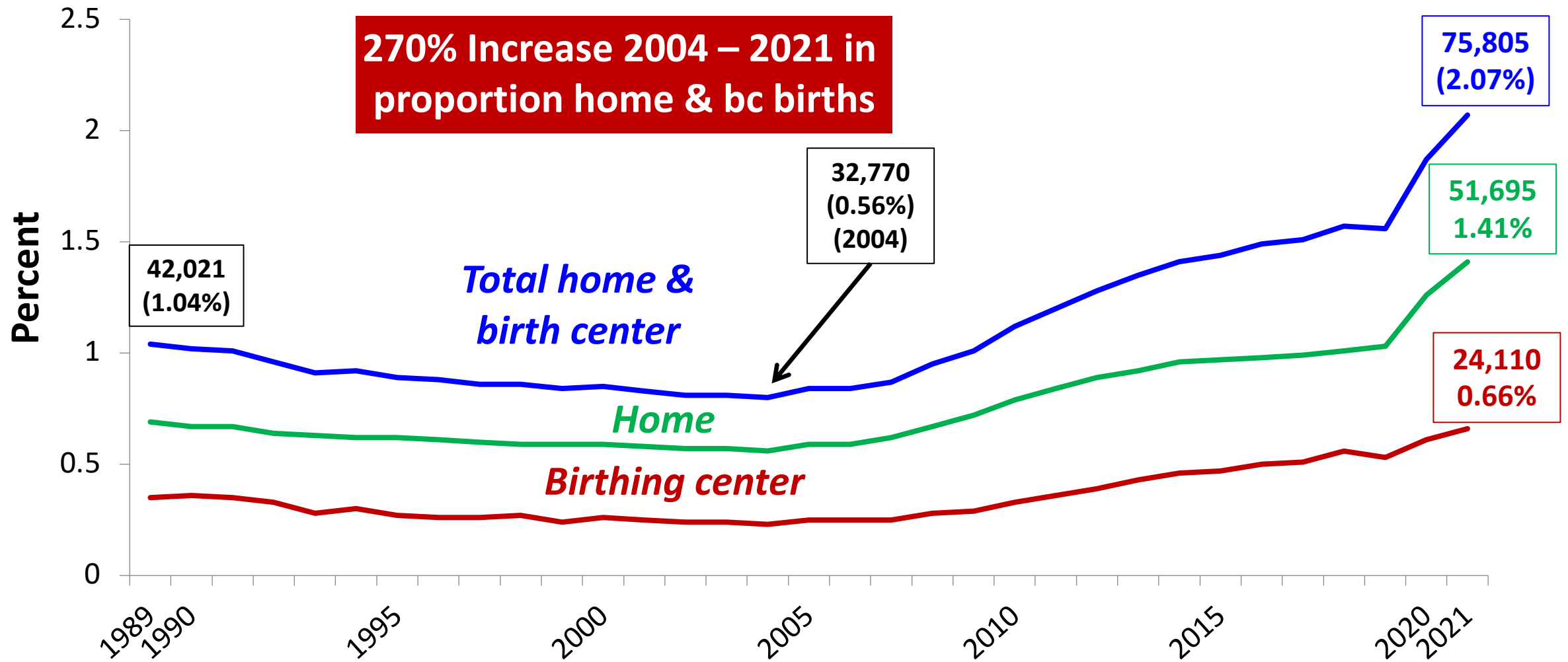
**LMP** – based on last menstrual period

**OE** – based on obstetric estimate

\*2022 preliminary

*BirthByTheNumbers.org*

# Percent of all births at home, or in a birthing center, United States, 1989-2021



*Is the U.S. really doing as  
badly as it seems in  
international  
comparisons?*

# Is the U.S. really doing that badly?

***How Do we Compare Outcomes?***

**Neonatal Mortality Rate**

***Infant Deaths in  
First 28 days  
X 1,000***

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***Live  
Births***

# Outcomes: Comparative Neonatal Mortality Rates

Rank	Country		Country		Country
1	Andorra (1)	17	Hungary	33	China
2	Belarus	18	Ireland	33	Croatia
3	Finland	19	Israel	34	Denmark
4	Montenegro	20	Italy	35	France
5	Norway	21	Latvia	36	Netherlands
6	Republic of Korea	22	Lithuania	37	New Zealand
7	Slovenia	23	Luxembourg	38	Poland
8	Sweden	24	Monaco	39	Romania
9	Australia (2)	25	Portugal	40	Saudi Arabia
10	Austria	26	Russian Federation	41	Slovakia
11	Belgium	27	Spain	42	Switzerland
12	Cuba	28	Antigua and Barbuda	43	United Kingdom
13	Cyprus	29	United States of America (3)	44	
		30			Source: WHO. World Health Statistics 2022
14	Czechia		Bahrain		
15	Germany	31	Bulgaria		
16	Greece	32	Canada		

Rank	Country	Country	Country
1	<b>Andorra (1)</b>	17	Hungary
2	Belarus	18	Ireland
3	Finland	19	Israel
4	<b>Montenegro</b>	20	Italy
5	Norway	21	Latvia
6	Republic of Korea	22	Lithuania
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10	Austria	26	Russian Federation
11	Belgium	27	Spain
12	Cuba	28	<b>Antigua and Barbuda</b>
13	Cyprus	29	<b>United States of America (3)</b>
		30	
14	Czechia		Bahrain
15	Germany	31	Bulgaria
16	Greece	32	Canada
		33	China
		33	Croatia
		34	Denmark
		35	France
		36	Netherlands
		37	New Zealand
		38	Poland
		39	Romania
		40	Saudi Arabia
		41	Slovakia
		42	Switzerland
		43	United Kingdom
		44	
			Source: WHO. <i>World Health Statistics</i> 2022

# Outcomes

**Total Births in the five countries in red background in 2020-21\* were 16,971 or thousands fewer than the 17,080 in West Virginia in 2021**

Country	2021* Births
Andorra	503
Antigua & Barbuda	1,163
Montenegro	7,703
Luxembourg	6,690
Monaco	912
<b>TOTAL</b>	<b>16,971</b>

\* Country data represents the most recent single year available ranging from 2020-21.

# What's a Fair Comparison with the US?

**In the most recent year available (2020):**

- Countries with at least 100,000 births
- Countries with a total per capita GDP of at least \$35,000 annually in US dollars.

## Defining a Set of Countries to Compare with the U.S.

<b>15 Comparison Countries</b> (SOURCE: OECD, Health Data 2020)	<b>2020 Total Births (000)</b>	<b>2020 GDP per capita U.S. \$</b>	<b>2020 % Births by Cesarean</b>
Australia	306	54,468	35.2
Belgium	114	53,090	21.4
Canada	372	48,217	28.9
Czech Republic	110	41,599	23.8
France	736	46,691	20.1
Germany	773	54,844	30.2
Israel	177	39,493	14.8
Italy	405	41,995	32.5
Japan	865	43,484	0.0
Korea	303	45,274	50.5
Netherlands	169	59,265	15.2
Spain	341	37,764	24.2
Sweden	113	55,038	17.4
United Kingdom	683	48,241	31.2
United States	3,664	64,010	31.8

# How is the U.S. doing relative to comparison countries?

## Neonatal Mortality Rate

*Infant Deaths in  
First 27 days  
X 1,000*

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*Live  
Births*

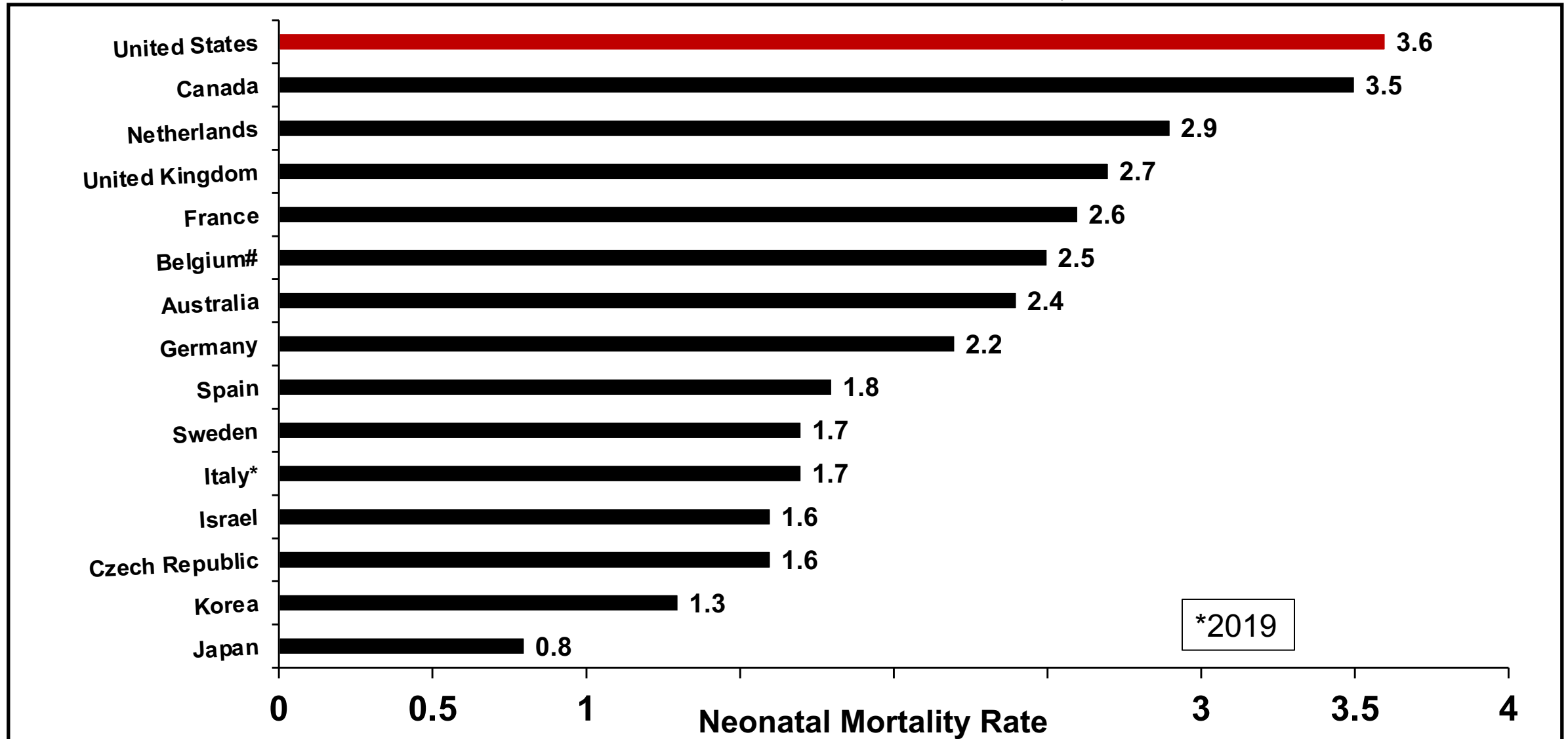
## Perinatal Mortality Rate

*Fetal deaths + deaths in  
the first week  
X 1,000*

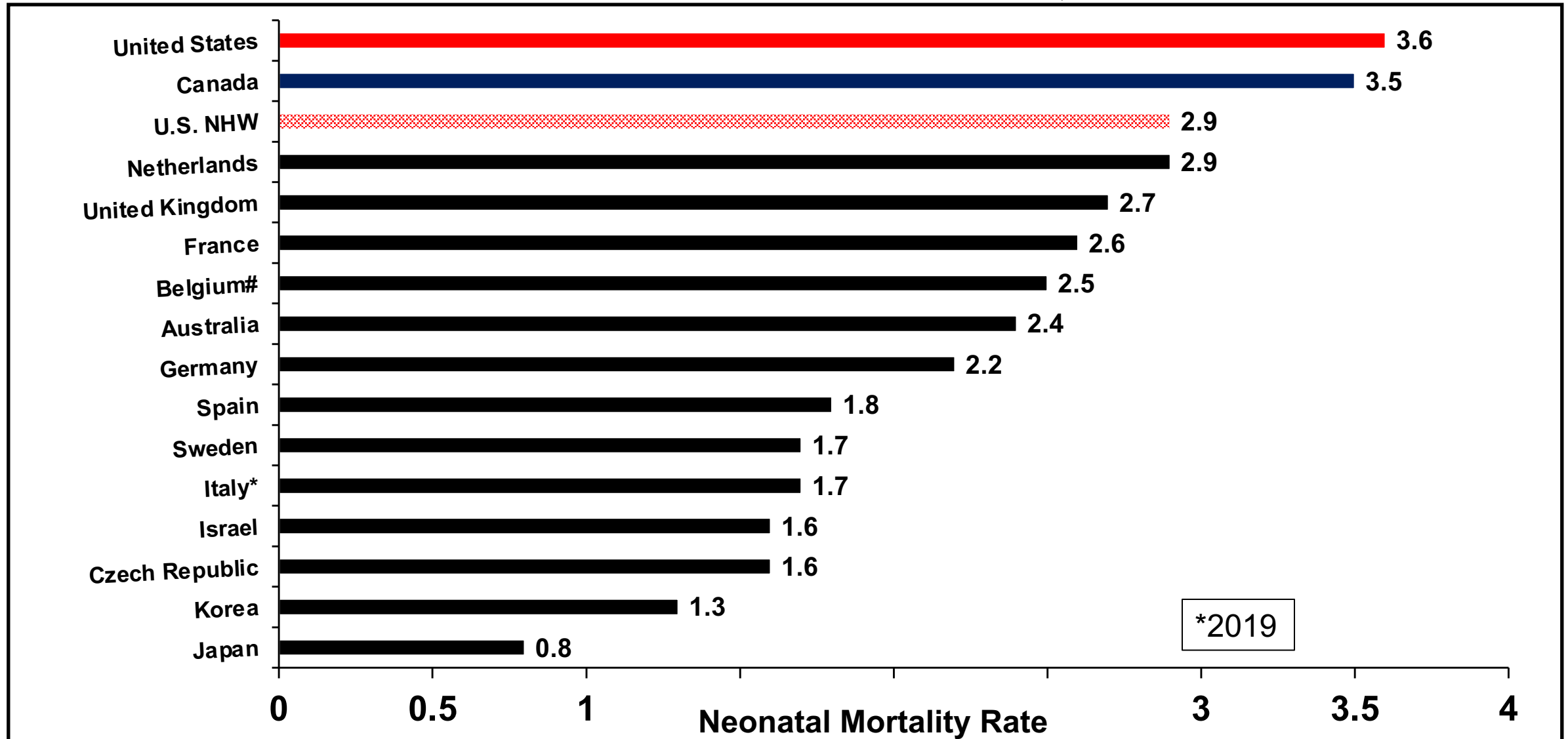
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*Live births + fetal  
deaths*

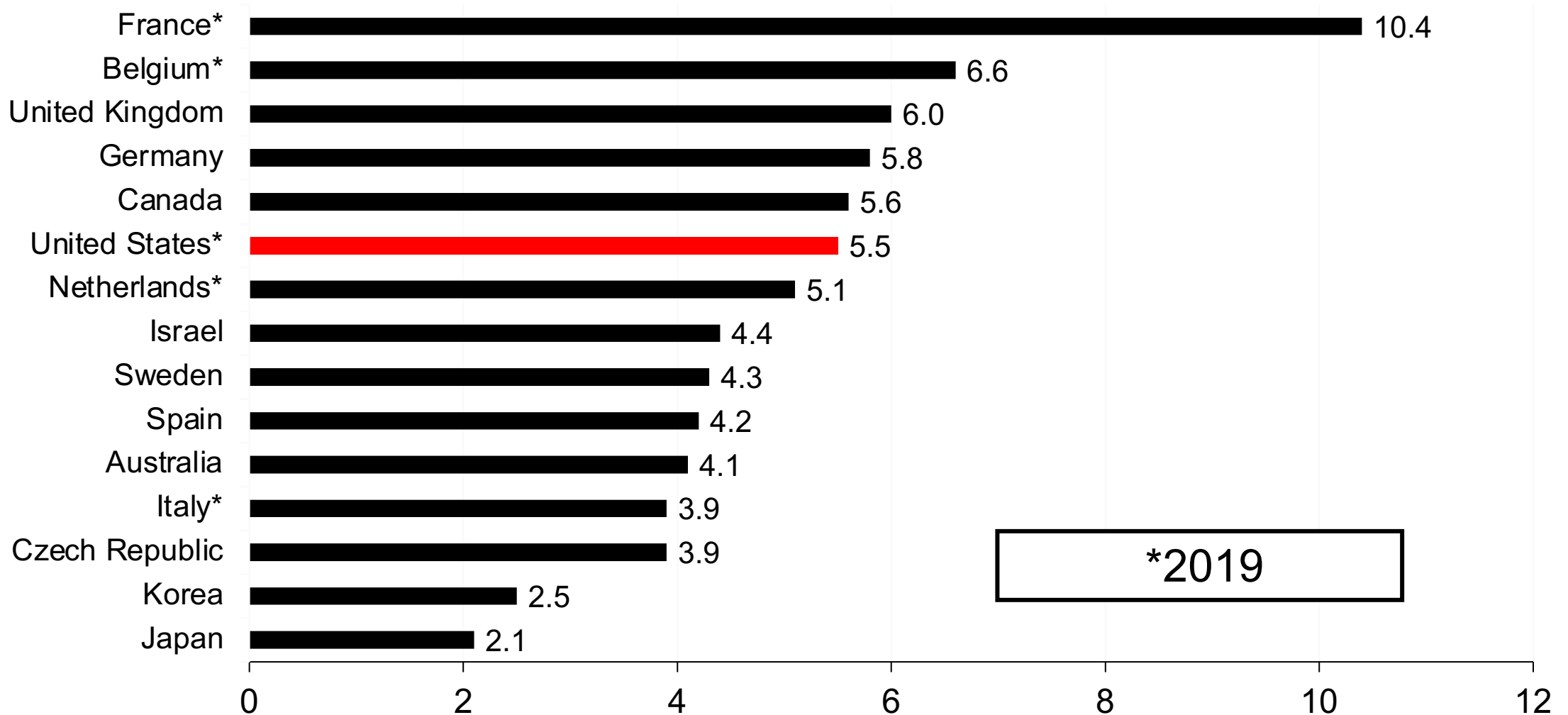
# Neonatal Mortality Rates (per 1,000 births), 2020, Industrialized Countries with 100,000+ Births



# Neonatal Mortality Rates (per 1,000 births), 2020, Industrialized Countries with 100,000+ Births



# Perinatal Mortality Rates (per 1,000 births), 2020, Industrialized Countries 100,000+ Births



# Maternal Mortality Ratios

## Maternal Mortality Ratio

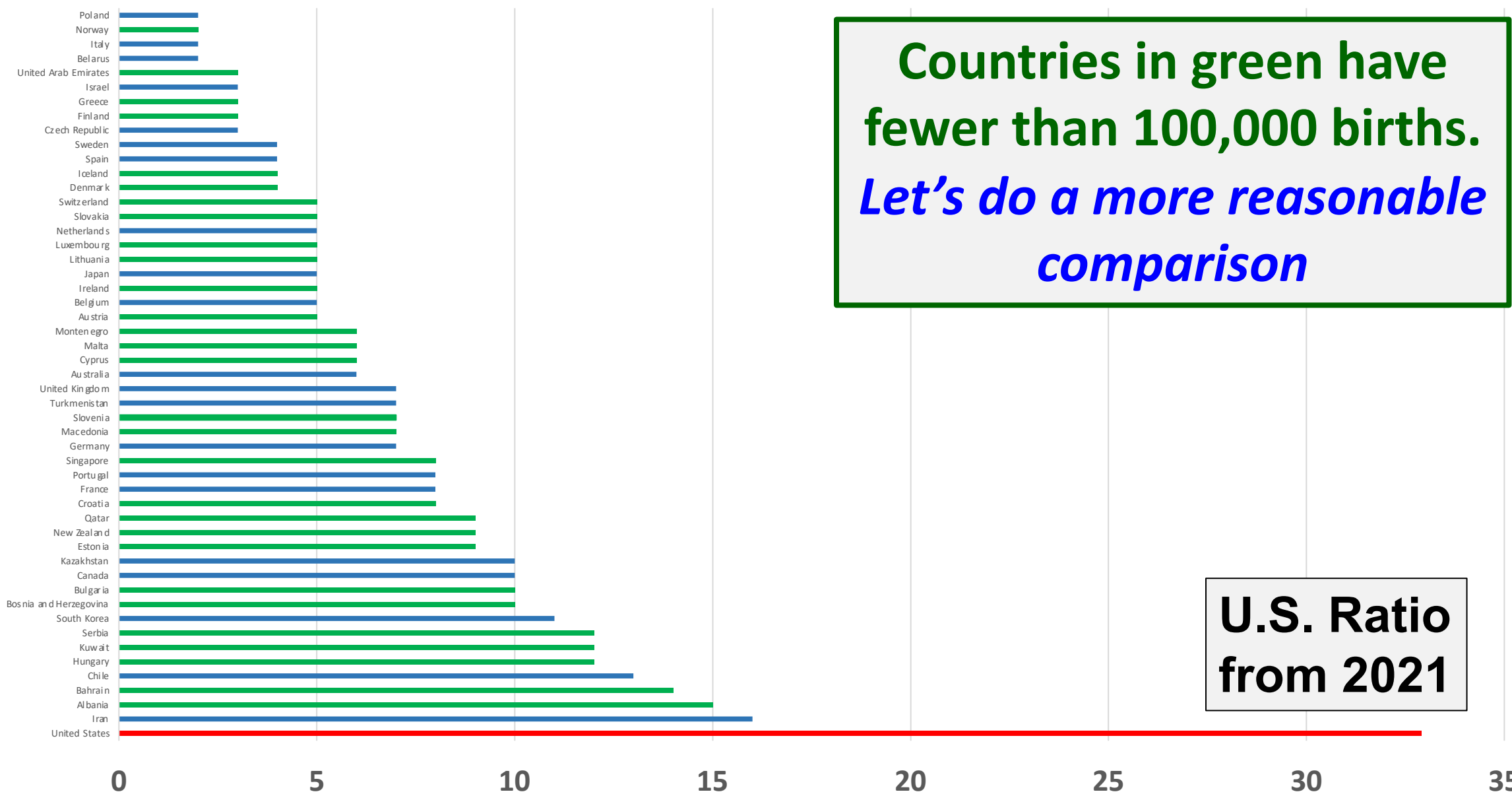
*Maternal Deaths\* all causes*  
*X 100,000*

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*Live births*

*\* Deaths in pregnancy and up to 42 days postpartum*

# Maternal Mortality Ratios (per 100,000 births), 2017-19

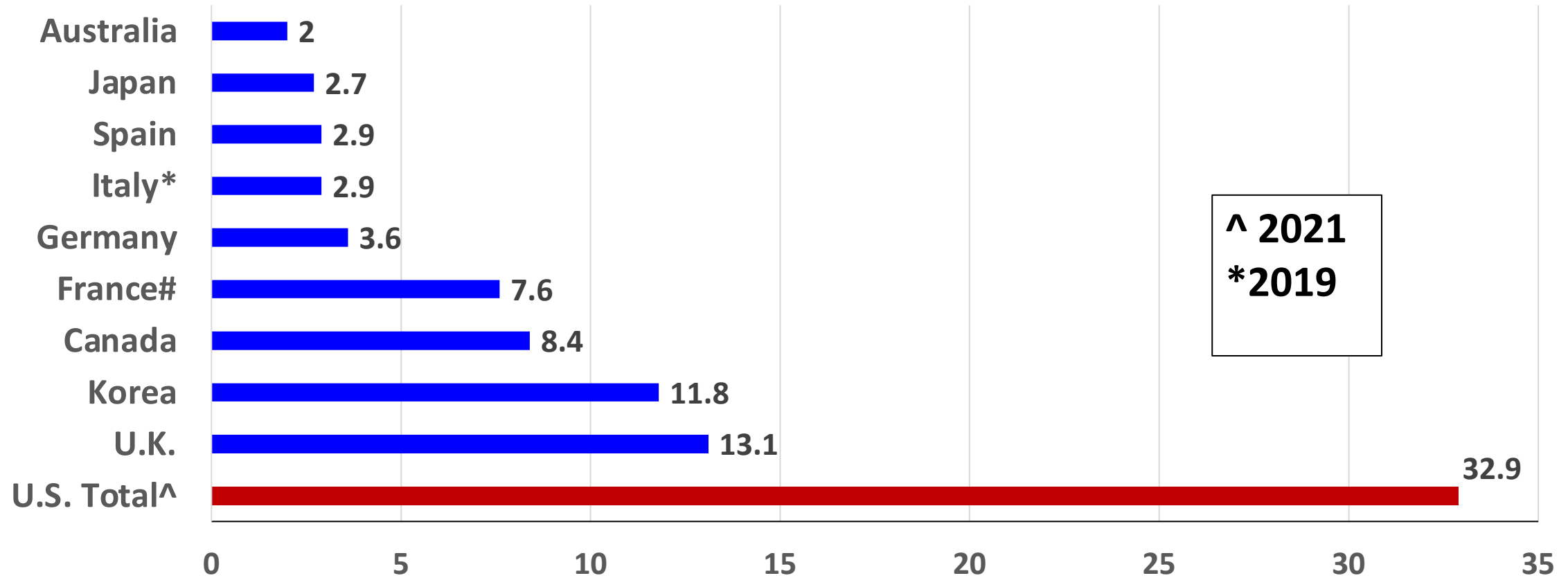


Source: WHO. *Trends In Maternal Mortality, 2000-2017*. (Geneva, 2019)

**U.S. Ratio  
from 2021**

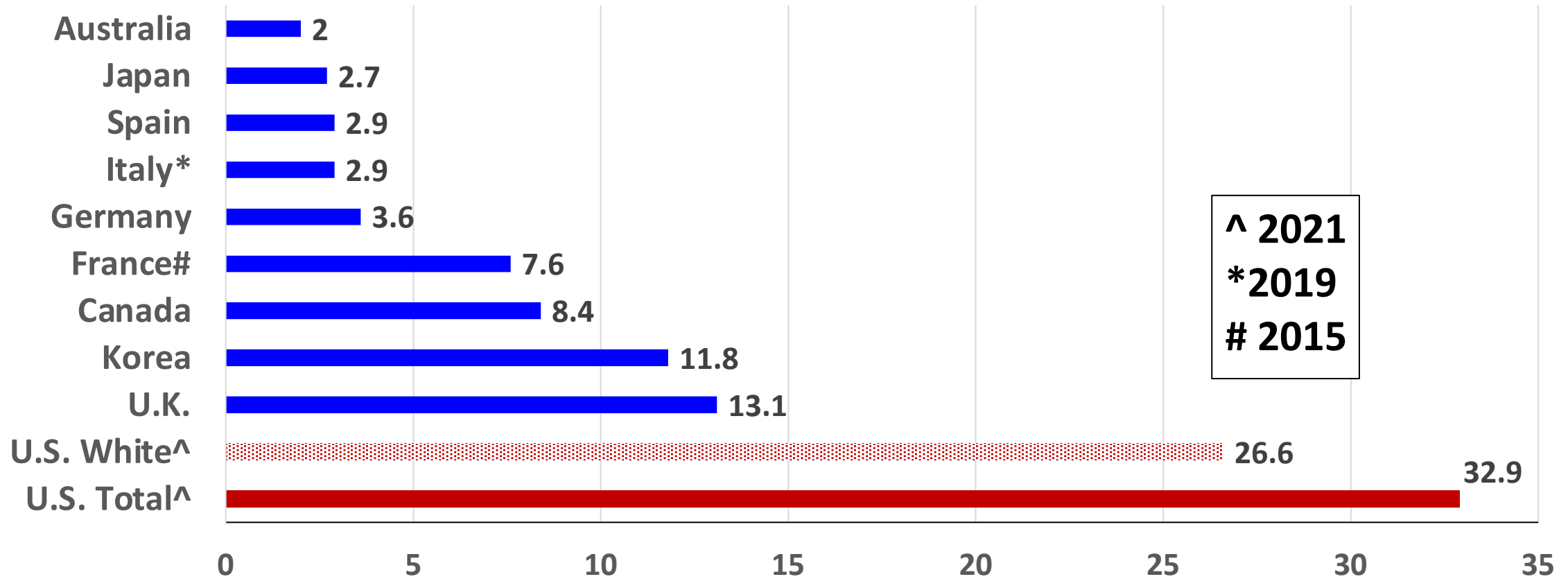
[www.birthbythenumbers.org](http://www.birthbythenumbers.org)

# U.S. Maternal Mortality Ratio (per 100,000 births ) in 2021 Compared to Industrialized Countries with 300,000+ births, 2019-2020



Source: OECD Health Data 2022 & U.S. Hoyert DL . NCHS Health E-Stats; 2/22/22.

# U.S. Maternal Mortality Ratio (per 100,000 births ) in 2021 Compared to Industrialized Countries with 300,000+ births, 2019-2020



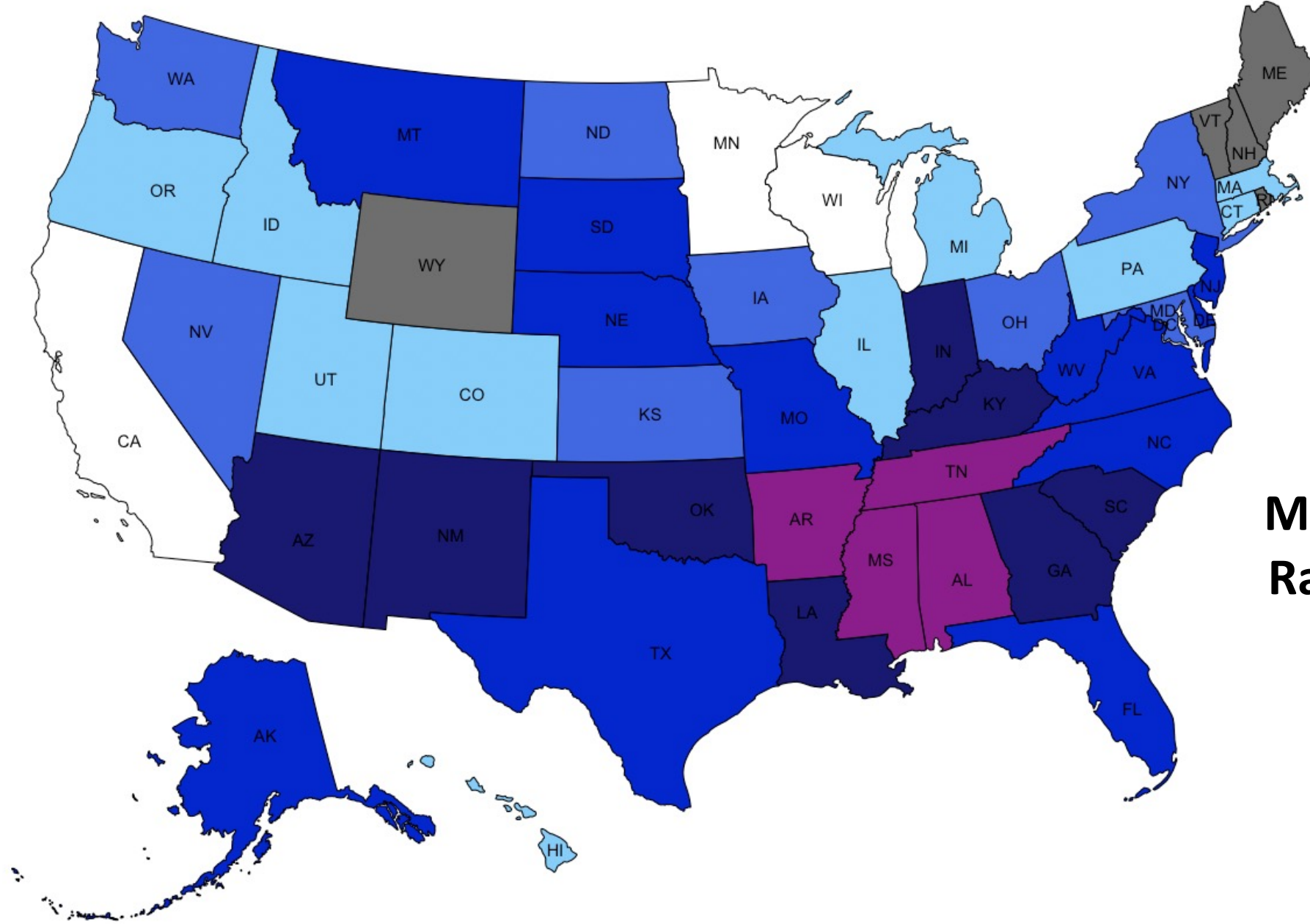
Source: OECD Health Data 2022 & U.S. Hoyert DL . NCHS Health E-Stats; 2/22/22.

## Maternal Mortality Ratio, U.S. States\*, 2018-21

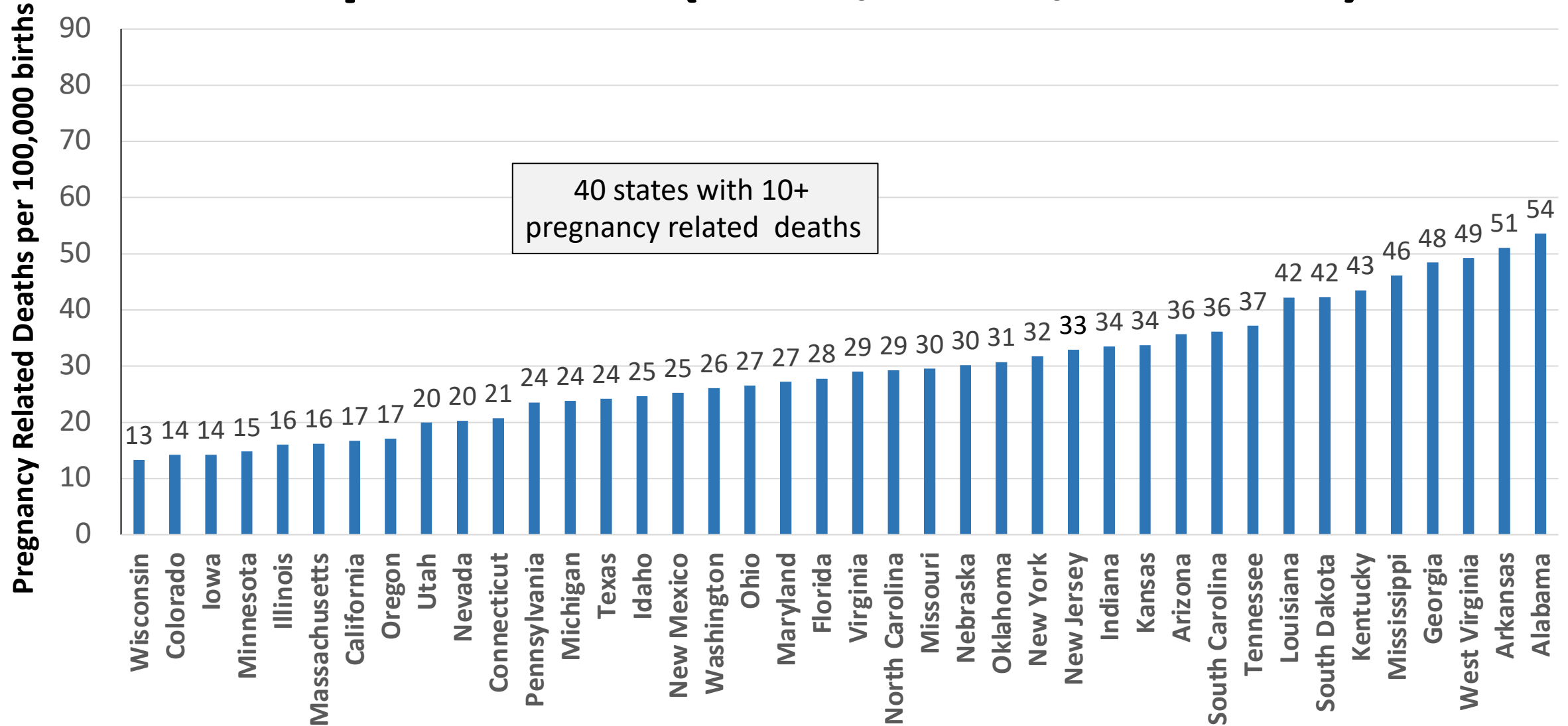
Source: CDC Wonder



\* States with < 10 maternal deaths, 2018-2021, are excluded from reporting



# Pregnancy Related Mortality# by State\*, Pre-pandemic (2018, 2019, 2020Q1)

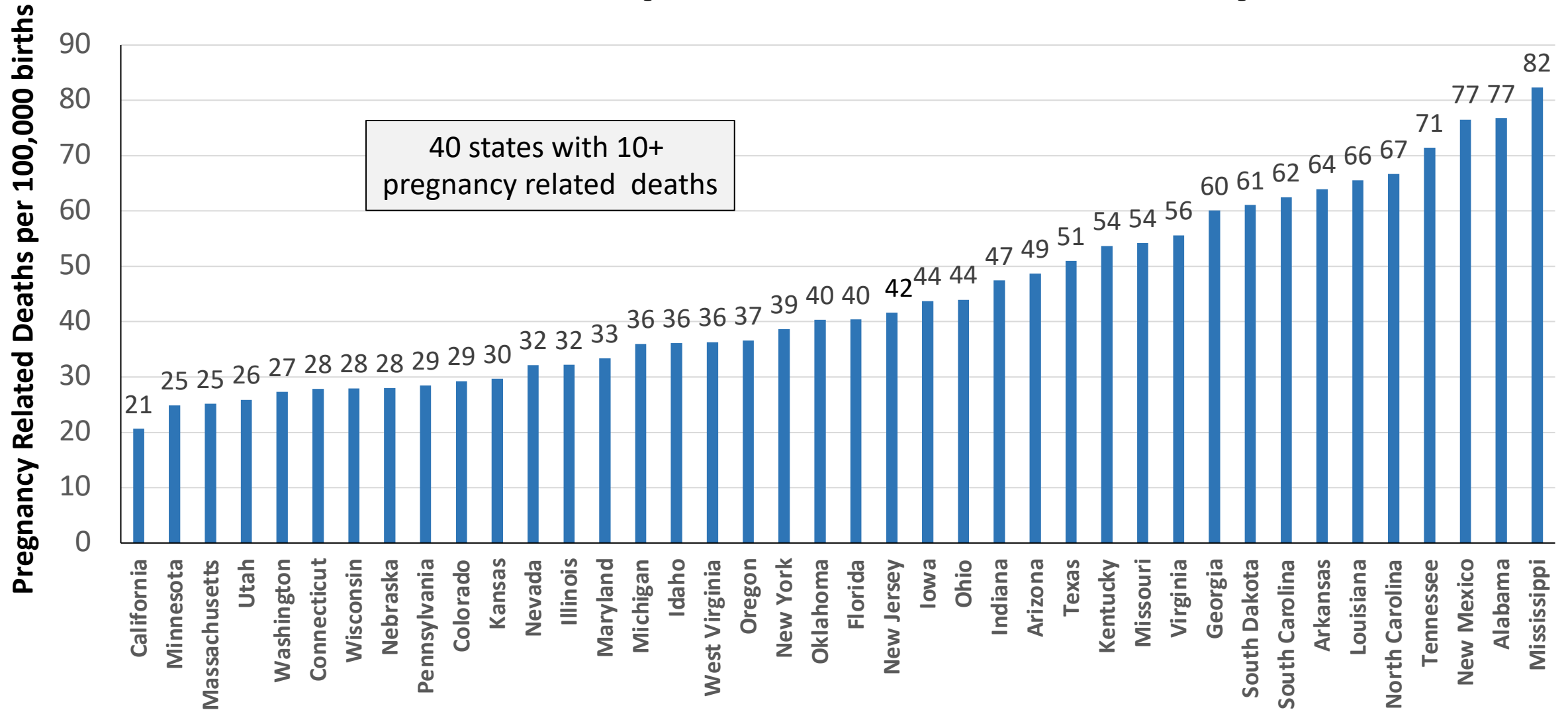


\* States with > 10 maternal deaths

# Deaths from pregnancy through 1 year postpartum

Source: CDC Wonder

# Pregnancy Related Mortality\* by State, Pandemic (2020 Q2-Q4, 2021)



\* States with > 10 maternal deaths

# Deaths from pregnancy through 1 year postpartum

Source: CDC Wonder

**Are things Getting  
Better or Worse?**

**Are things Getting  
Better or Worse?**

**Yes**

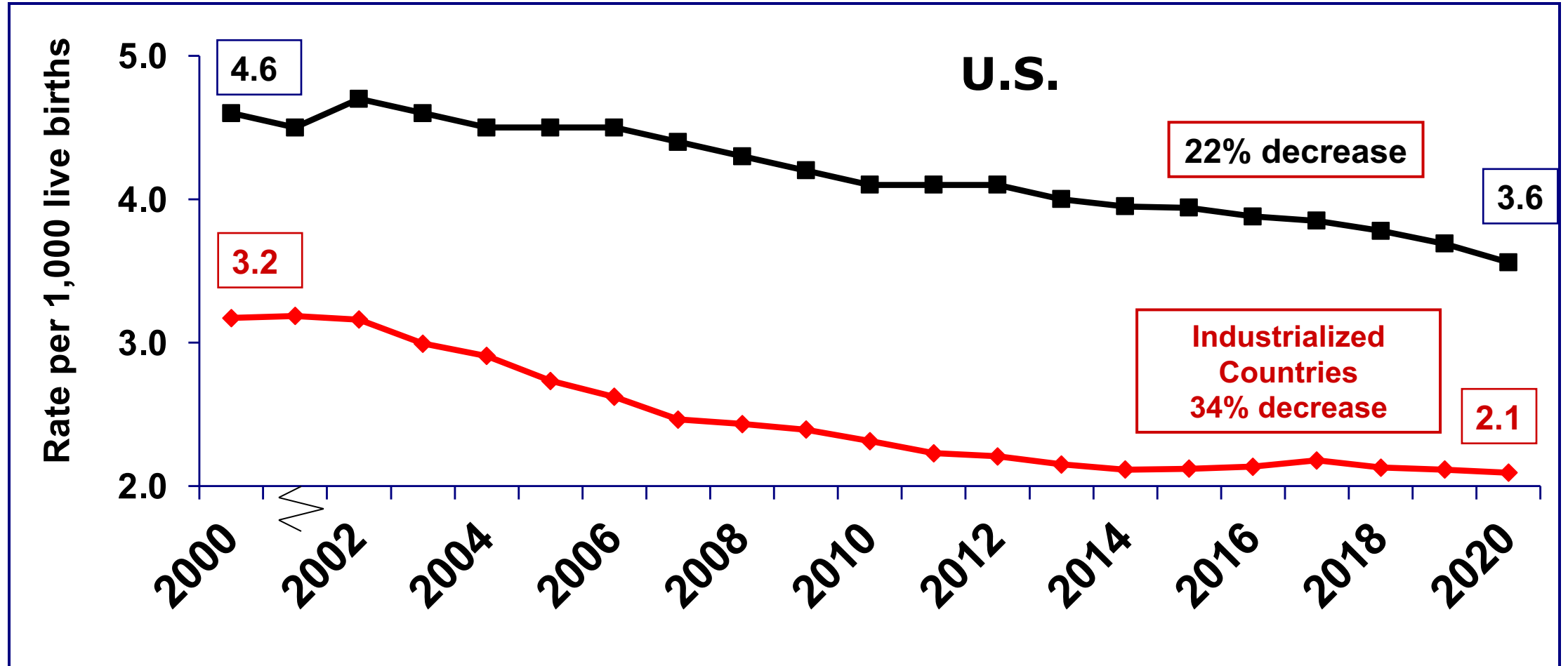
# Are things Getting Better or Worse?

**Yes**

***Things are getting better in the U.S., but at a slower pace than comparable countries***

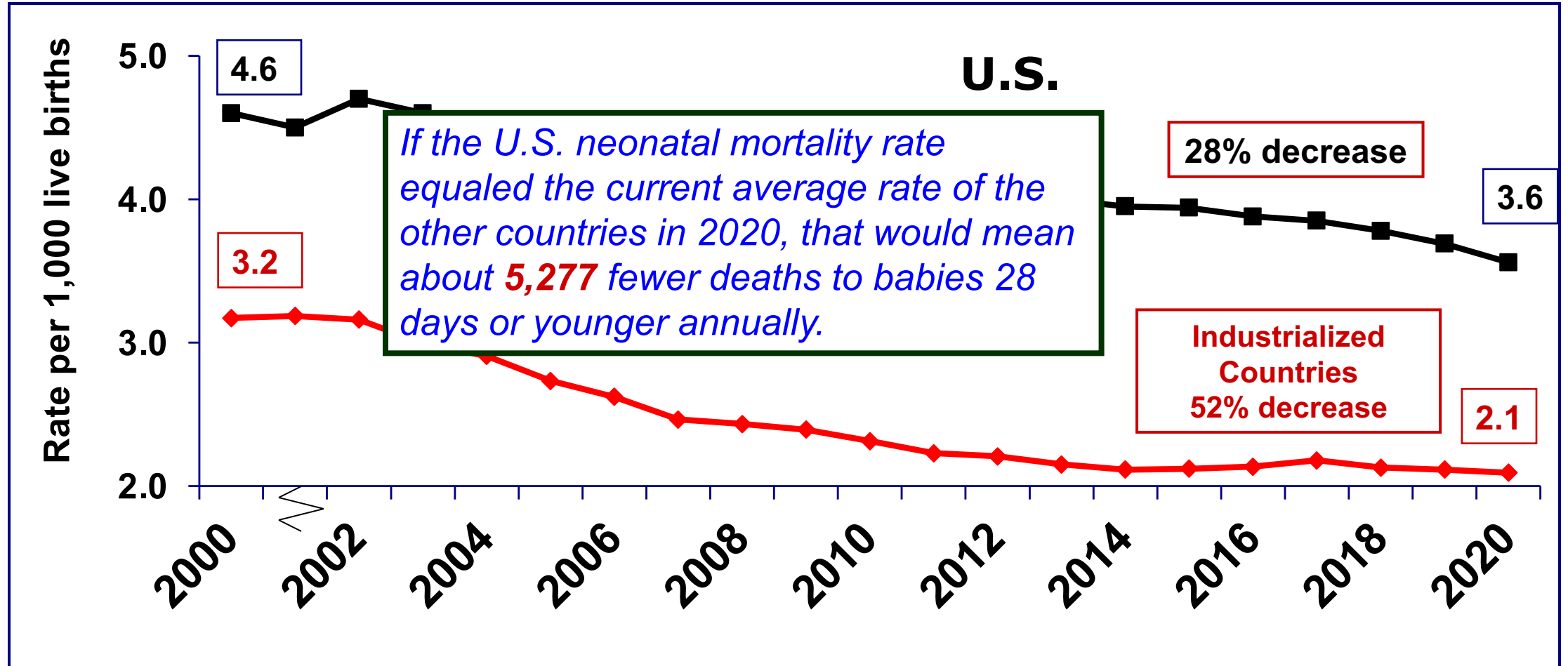
# **Examining Trends over Time**

# Neonatal Mortality Rate (per 1,000 births), 2000-2020, U.S., & Ave. for Industrialized Countries\*



\* Countries with 100,000+ births (2020): Australia, Belgium, Canada, Czech Republic, France, Germany, Israel, Italy, Japan, Netherlands, Spain, S. Korea, Sweden, U.K.

# Neonatal Mortality Rate (per 1,000 births), 2000-2020, U.S., & Ave. for Industrialized Countries\*



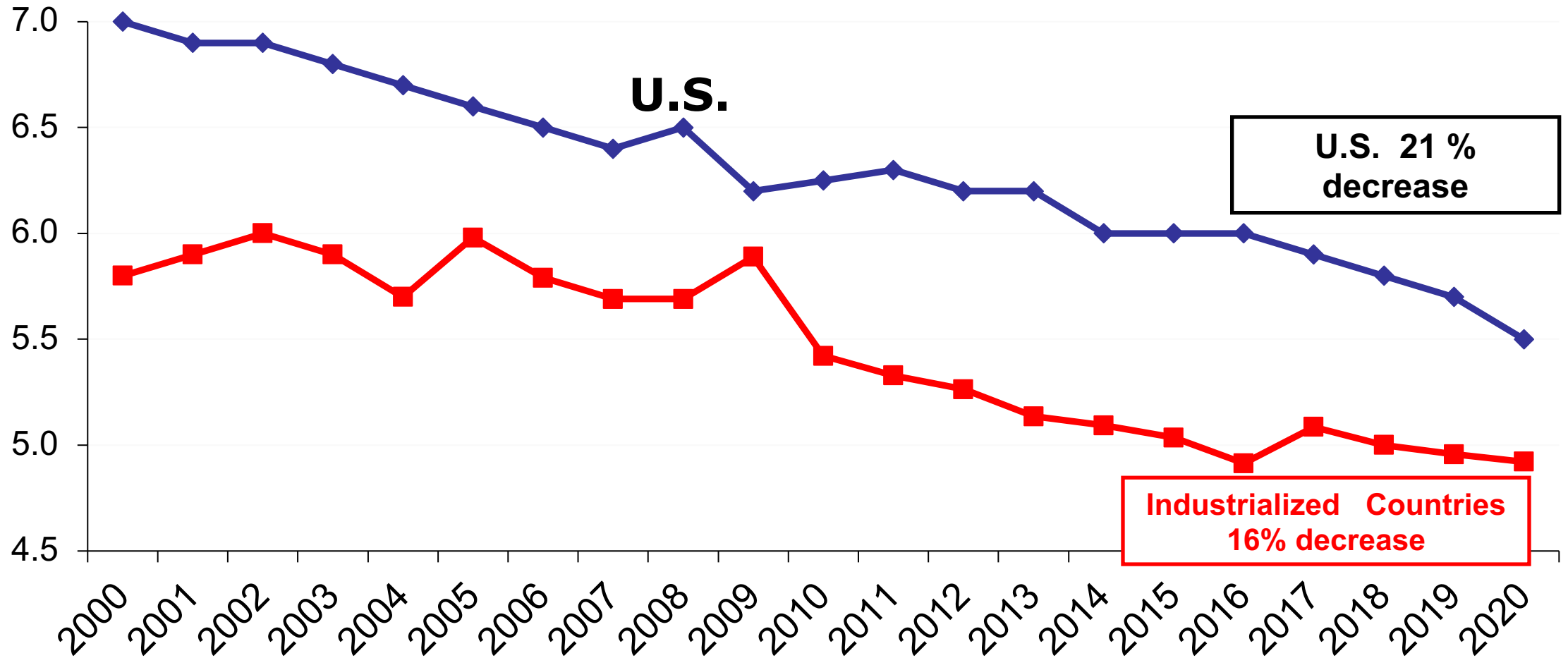
\* Countries with 100,000+ births (2017): Australia, Belgium, Canada, Czech Republic, France, Germany, Israel, Italy, Japan, Netherlands, Spain, S. Korea, Sweden, U.K.

**>110,000 fewer neonatal deaths 2000-2020**



**Capacity – 92,524**

# Perinatal Mortality Rates, 2000-2020 , U.S., & Ave. for Industrialized Countries\*



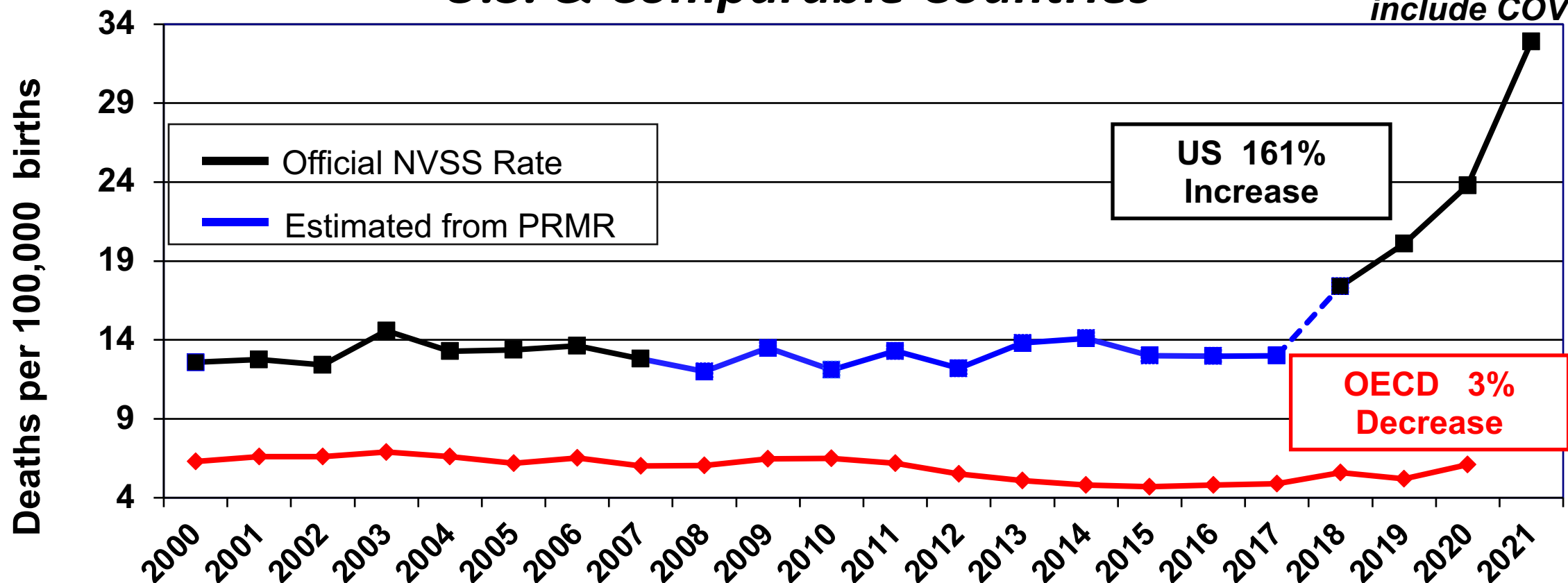
\* Countries with 100,000+ births (2020): Australia, Belgium, Canada, Czech Republic, France, Germany, Israel, Italy, Japan, Netherlands, S. Korea, Spain, Sweden, United Kingdom

# Trends for US vs Comparable Countries

*Maternal Mortality Ratio (per 100K births), 2000-2021,*

*U.S. & Comparable Countries\**

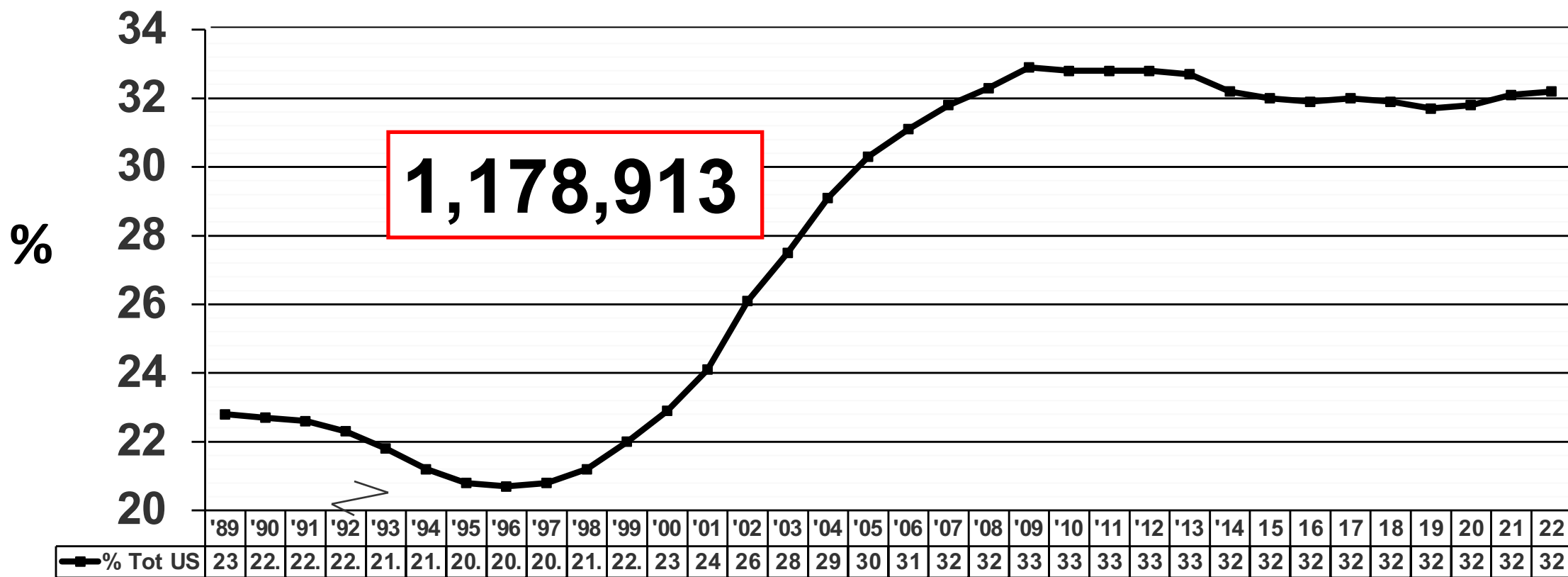
*US 2020-21 rates  
include COVID*



\* Countries with **300,000+** births (2021): Australia, Canada, France, Germany, Italy, Japan, S. Korea, Spain, United Kingdom

# **What about process?**

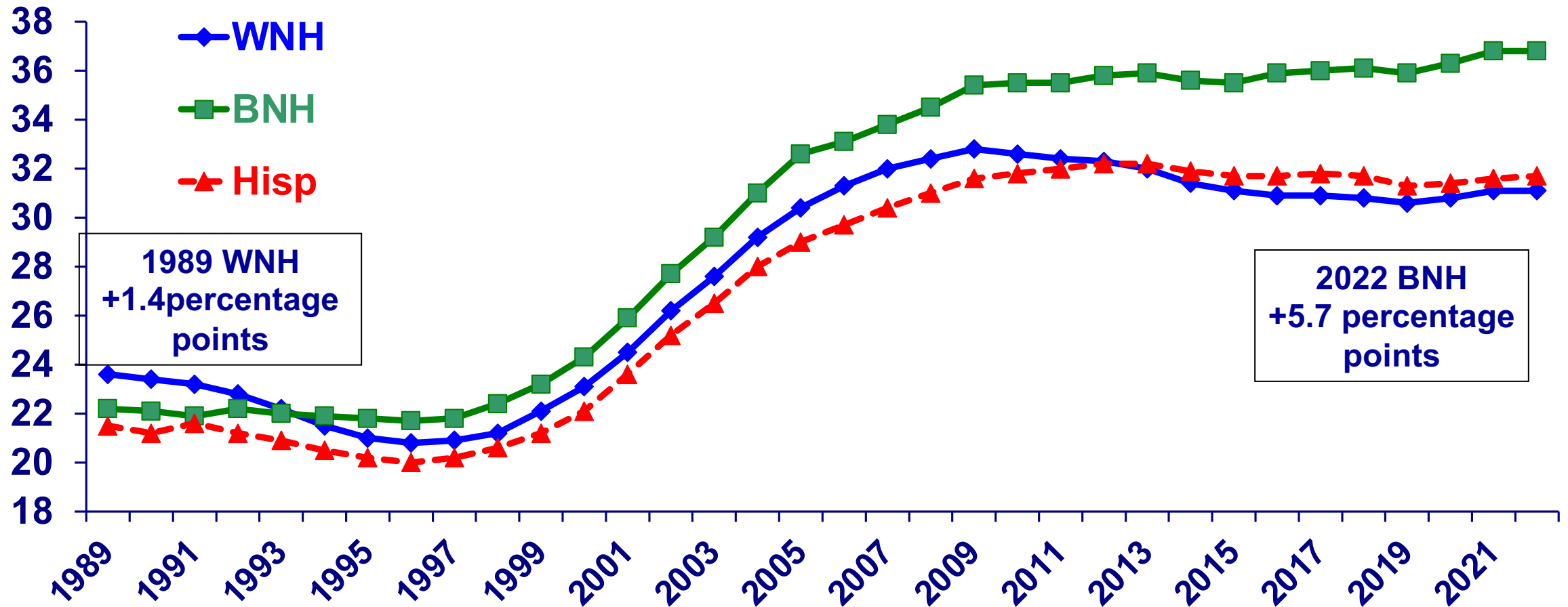
# US Cesarean Rates, 1989-2022\*



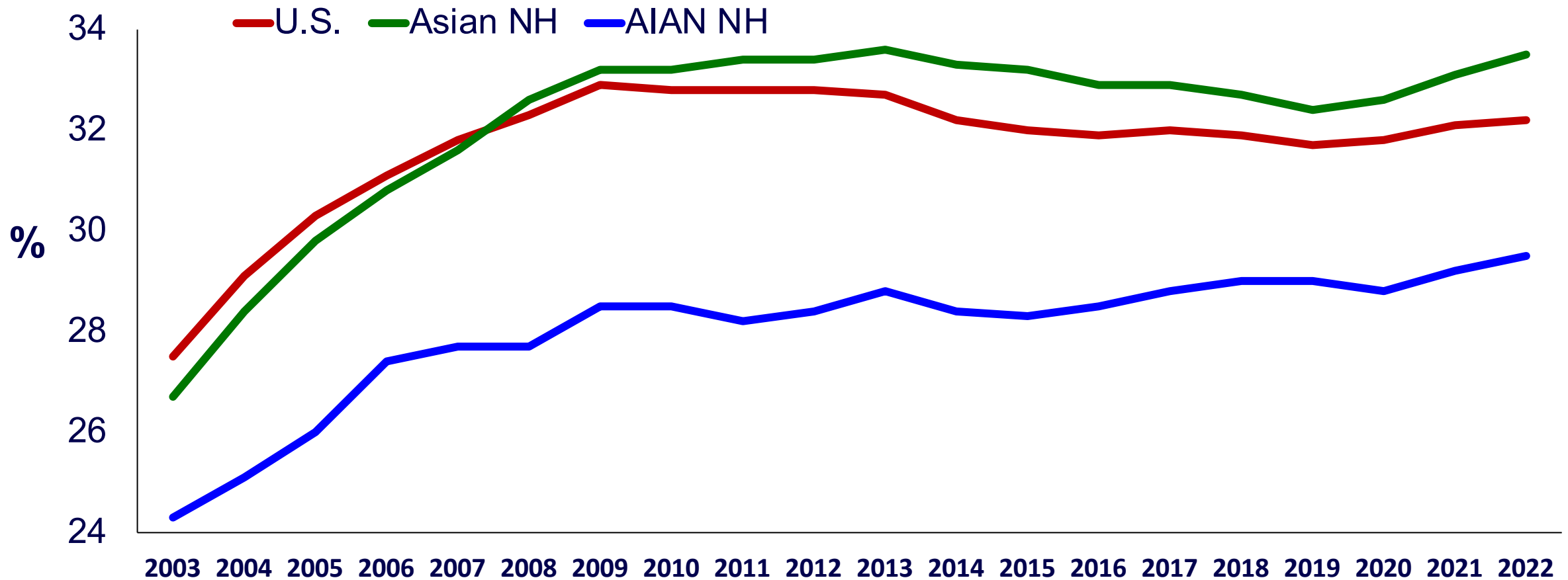
\*2022-- provisional

***If the 2022 cesarean rate (32.2%) was the same as in 1996 (20.7%), there would have been 421,000 fewer cesareans in the U.S. in '22.***

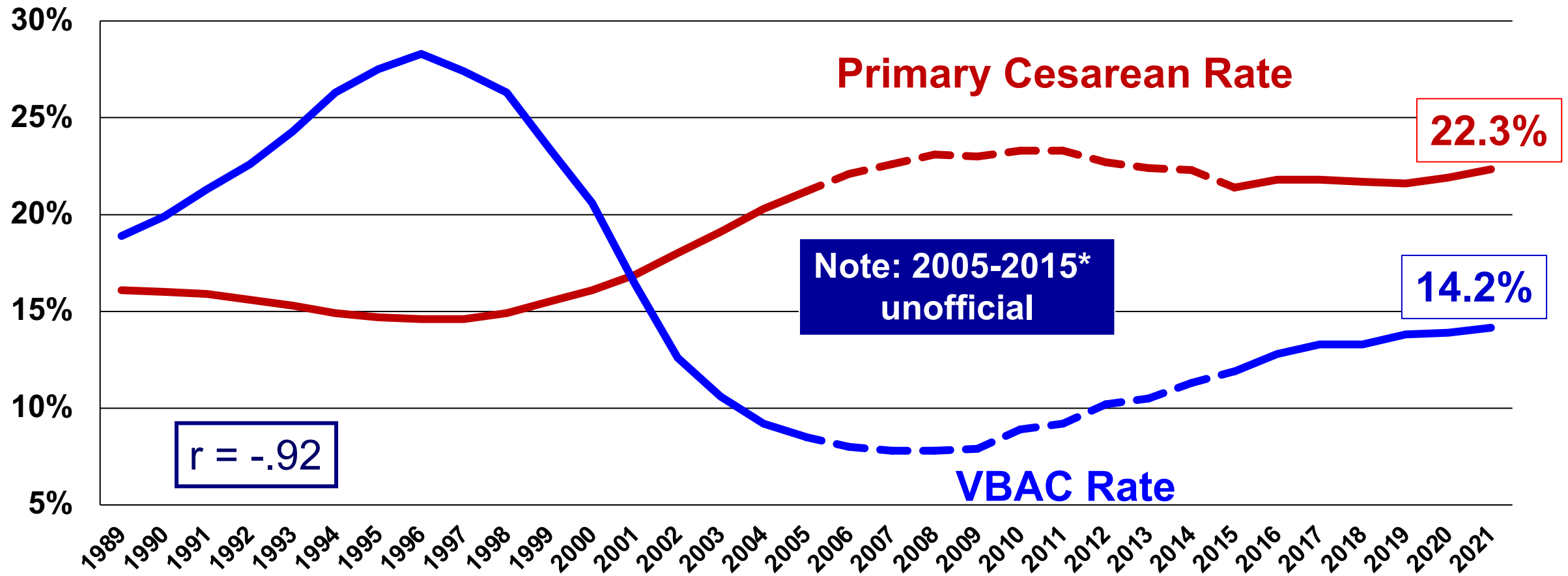
# Total cesarean rates by race/ethnicity, U.S. 1989-2022



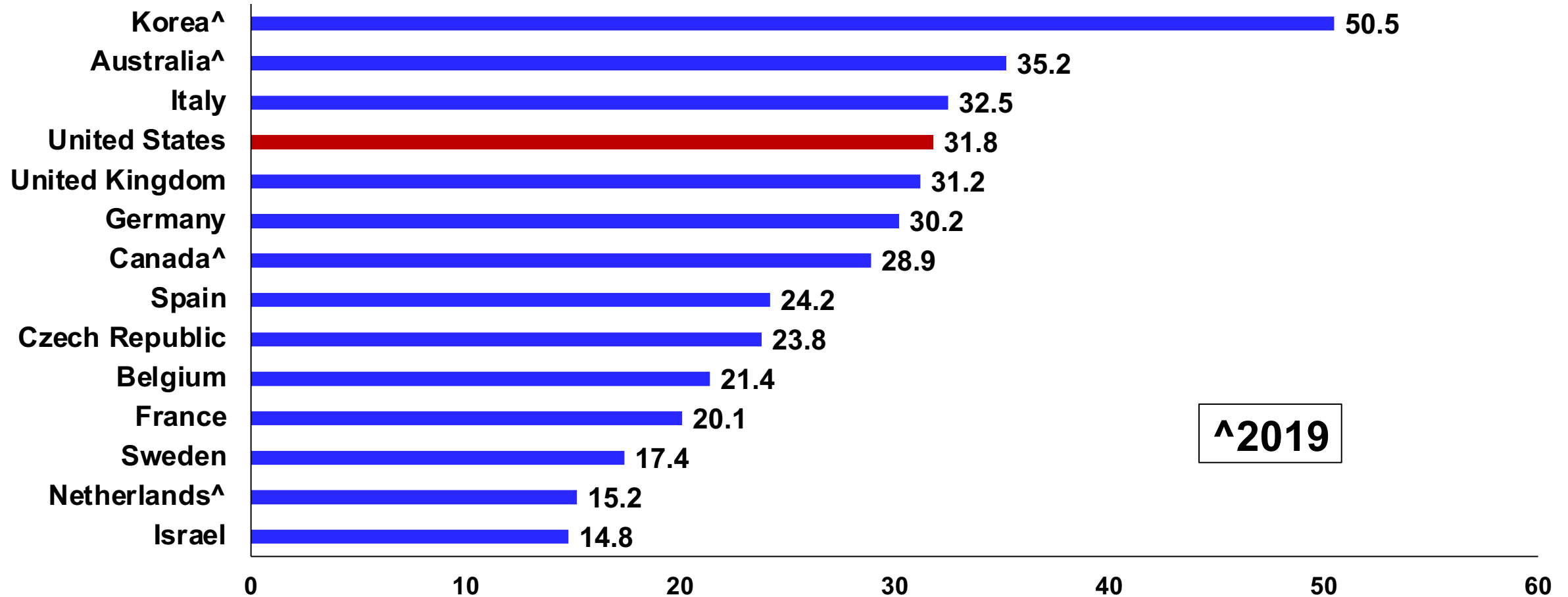
# Total cesarean rates by race/ethnicity, U.S. 2003-2022



# Primary Cesarean and VBAC Rates, U.S., 1989-2021



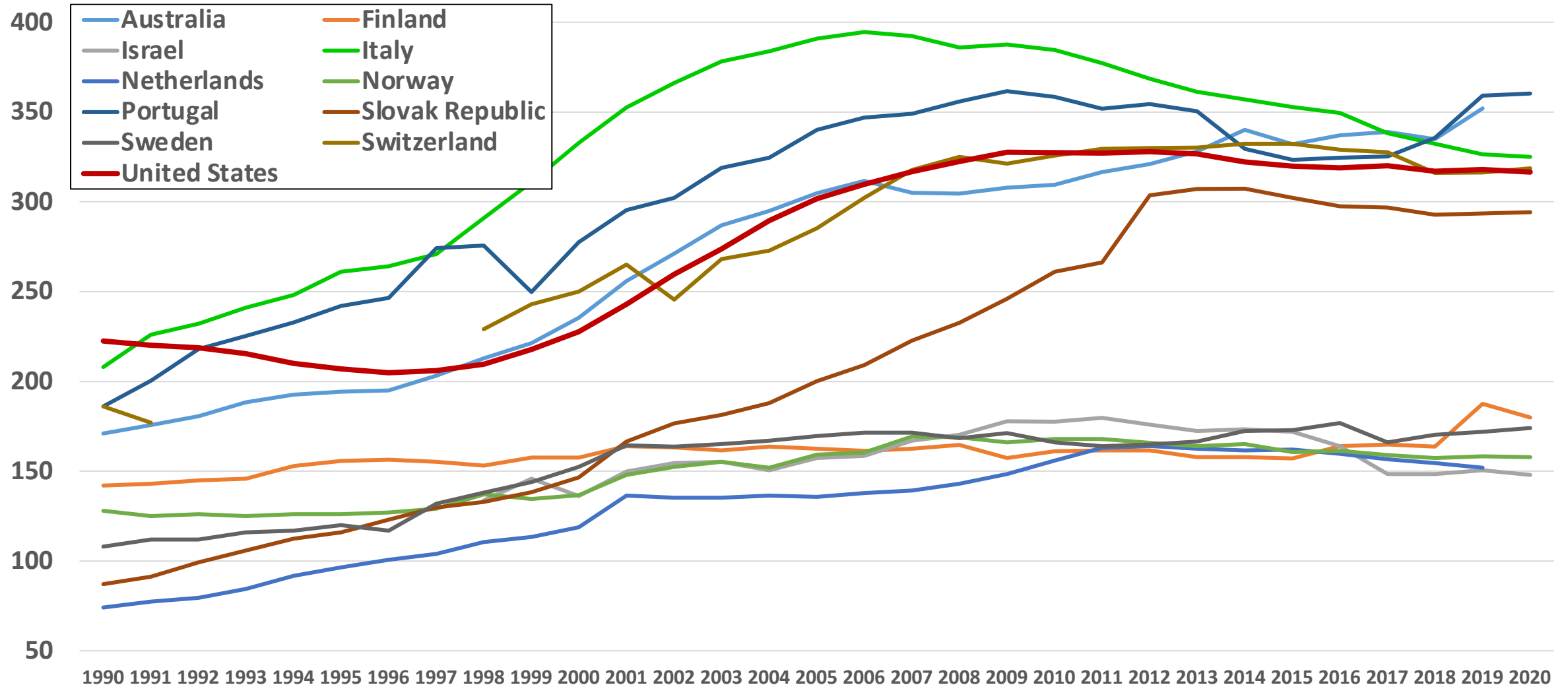
# Cesarean Rates (%) in Industrialized Countries\* with 100,000+ Births, 2020



Source: OECD data, 2023.

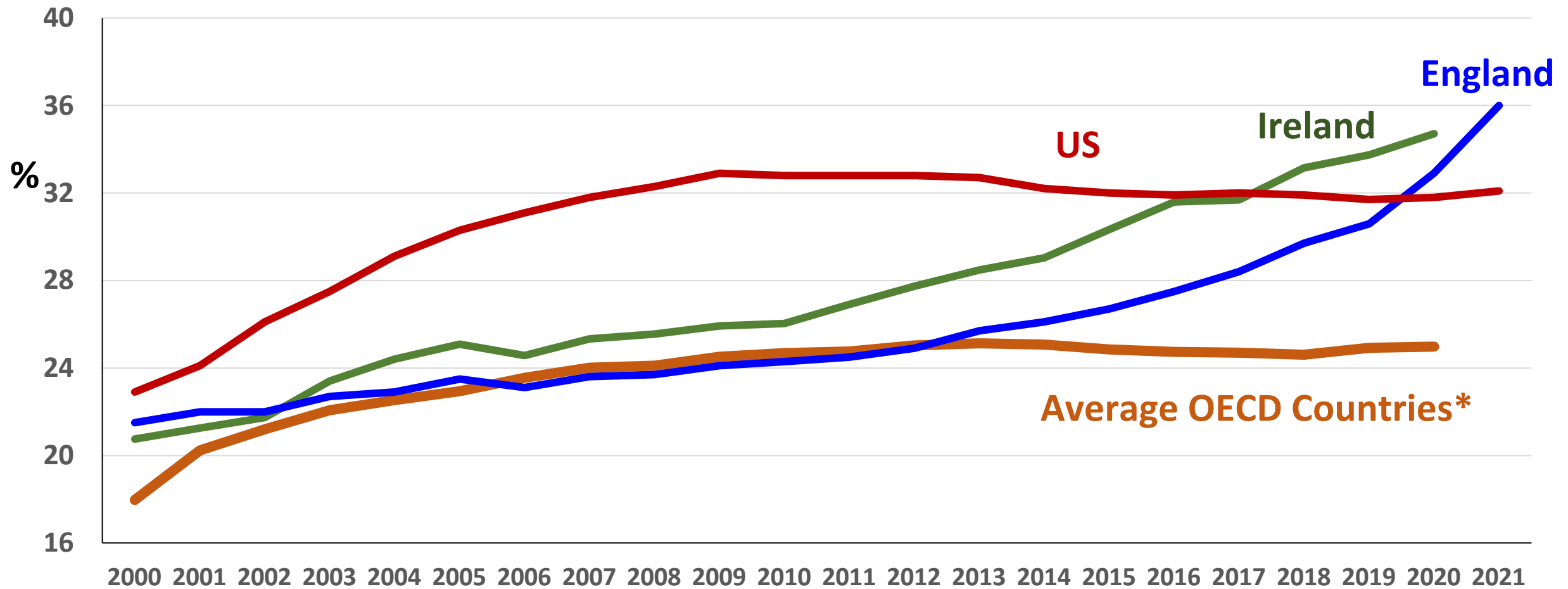
\* No comparative data on cesarean rates in Japan

# Trends in Overall Cesarean Rate (per 1,000) 1990 – 2020, Countries with Current Highest & Lowest Rates



Sources: OECD data 2023; WHO Europe Health for All Database.

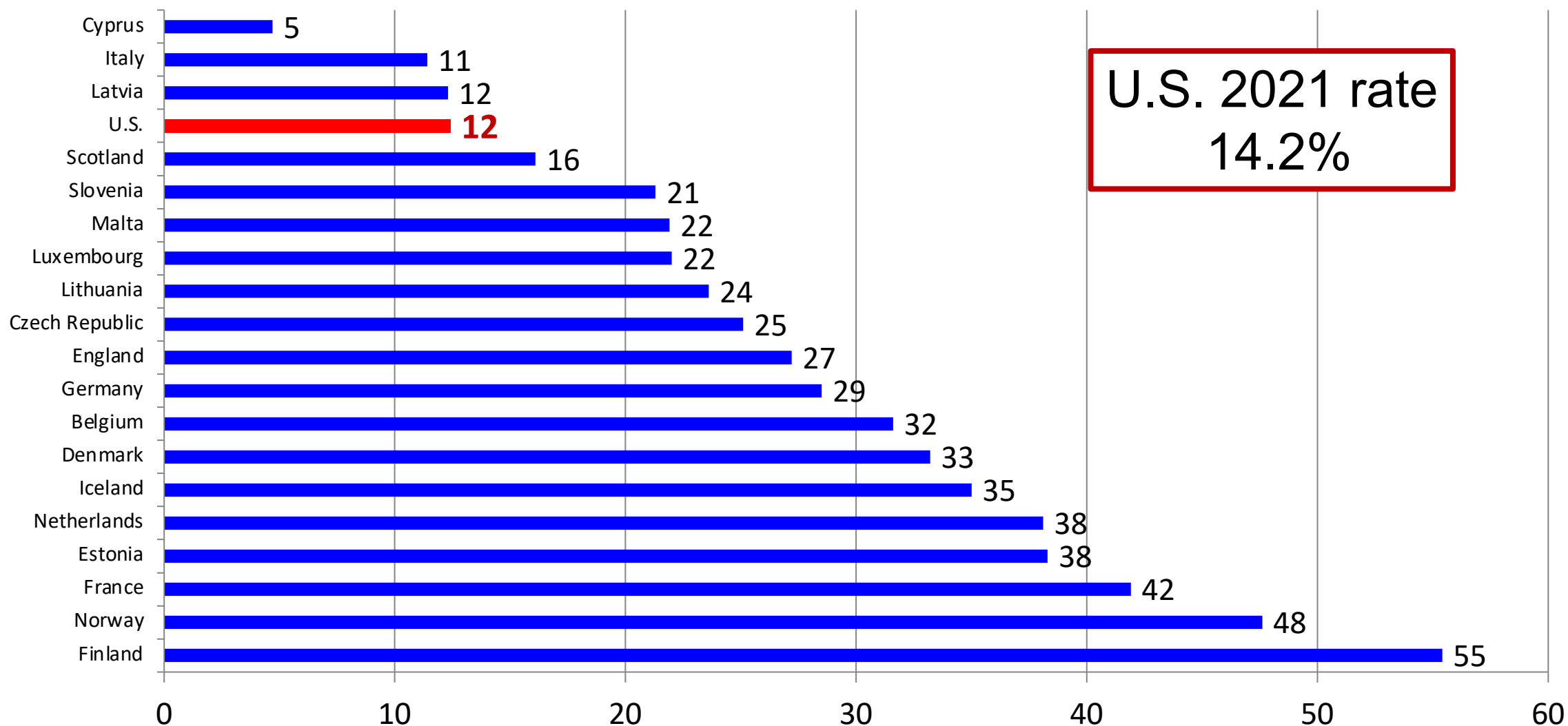
# Cesarean Trends (%) U.S. & OECD Countries, 2000-21



\* Comparison countries: Australia, Austria, Canada, Czech Republic, Denmark, Finland, France, Germany, Italy, Israel, Netherlands, Norway, Portugal, Slovak Republic, Spain, Sweden

Source: OECD Health Data 2023; England – NHS Maternity Statistics Annual Reports(2000-2001 through 2020-21)

# VBAC Rates Industrialized Countries, 2015

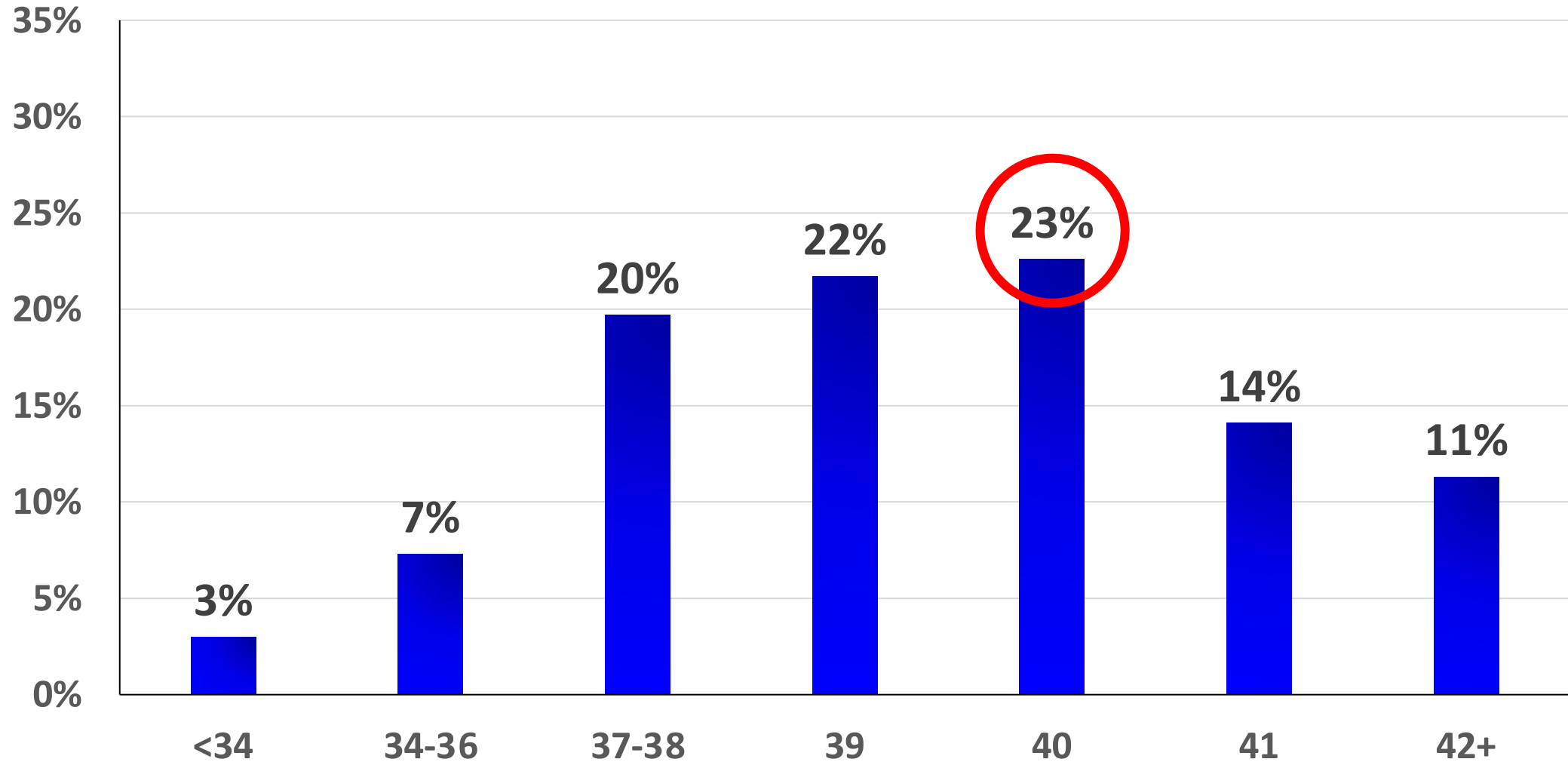


Source: Euro-Peristat Project. European Perinatal Health Report. Core indicators of the health and care of pregnant women and babies in Europe in 2015. November 2018.

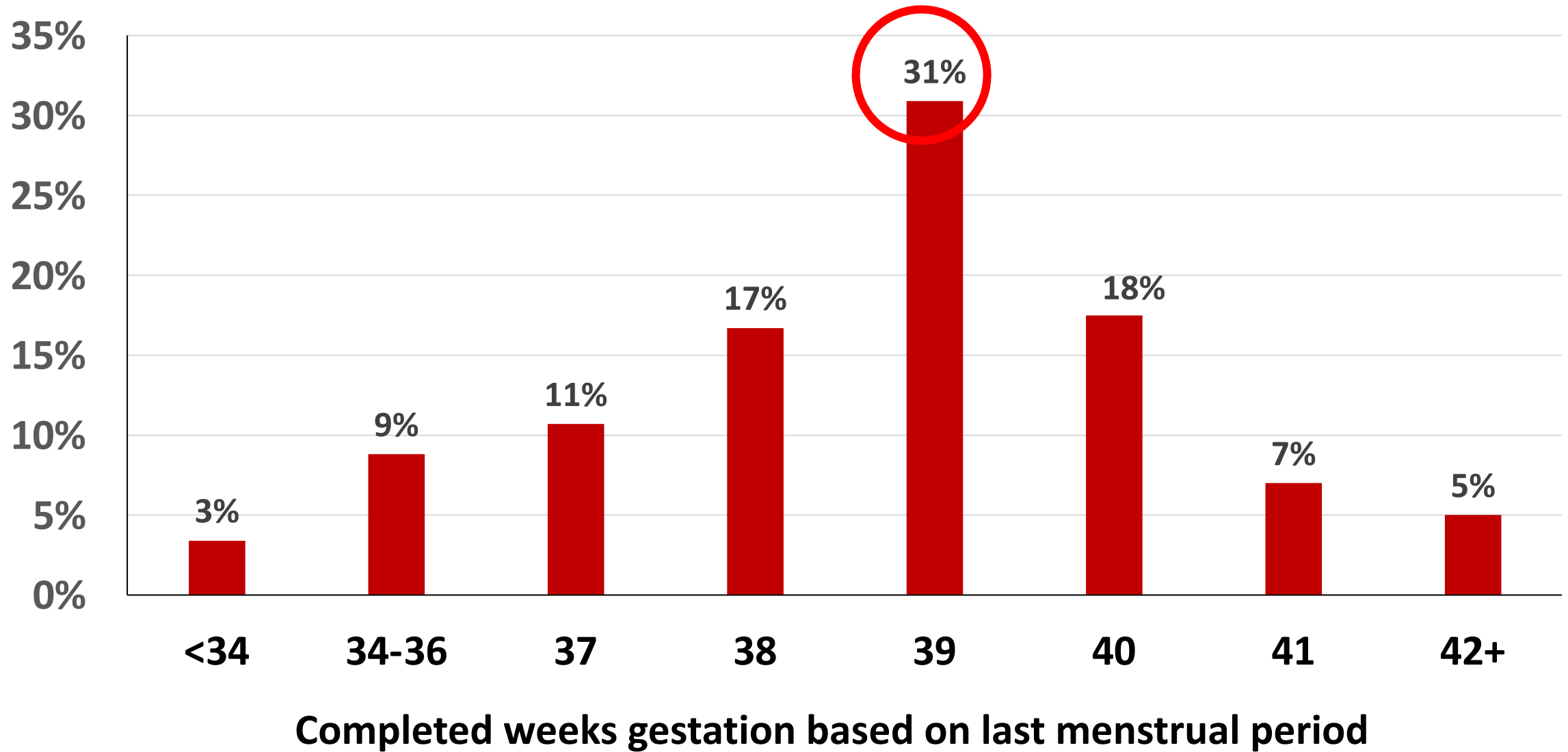
# *Do High Rates of Intervention Matter?*

*The shifting of gestational  
age in the U.S.*

# Gestational Age, U.S. All Births, 1990

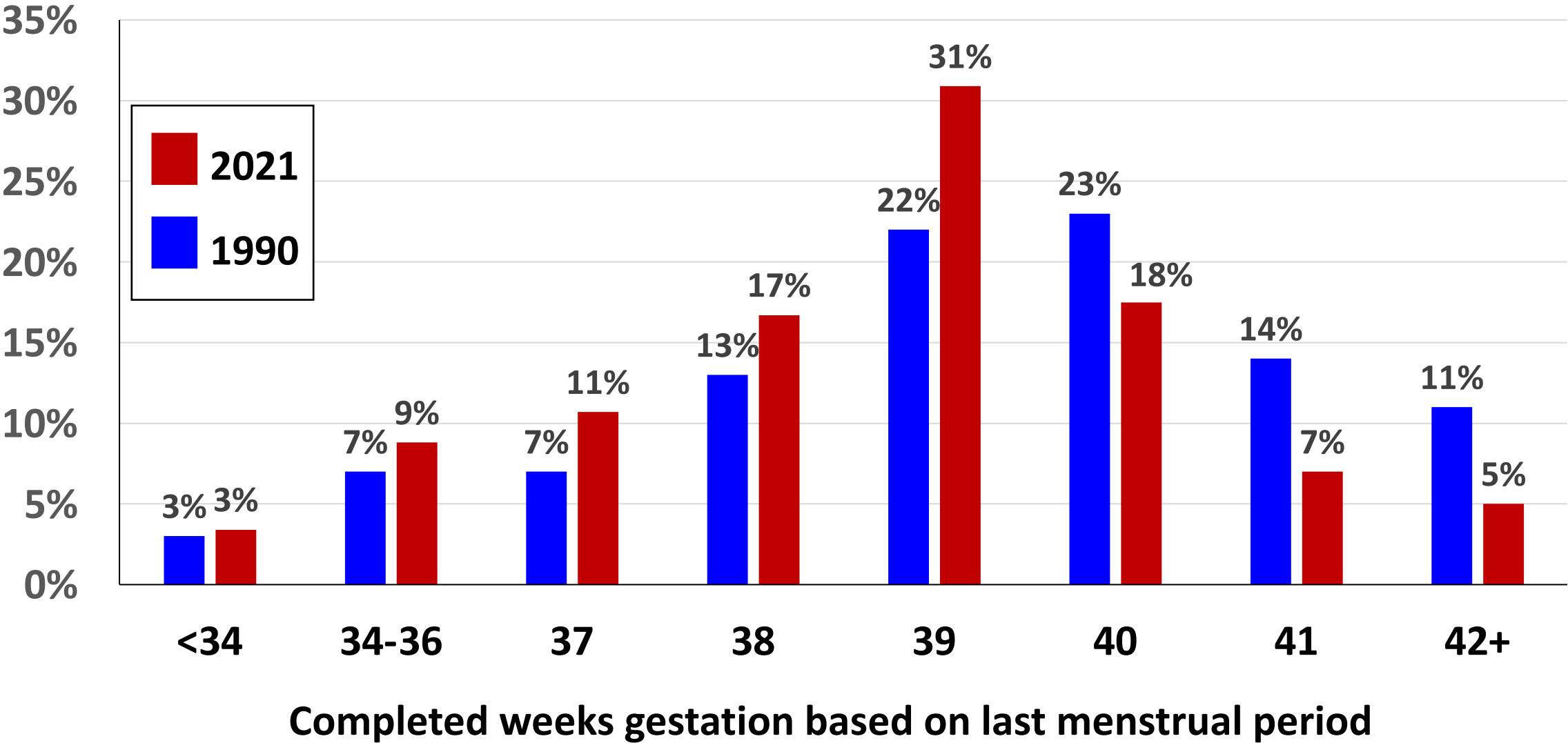


# Gestational Age, U. S., All Births, 2021



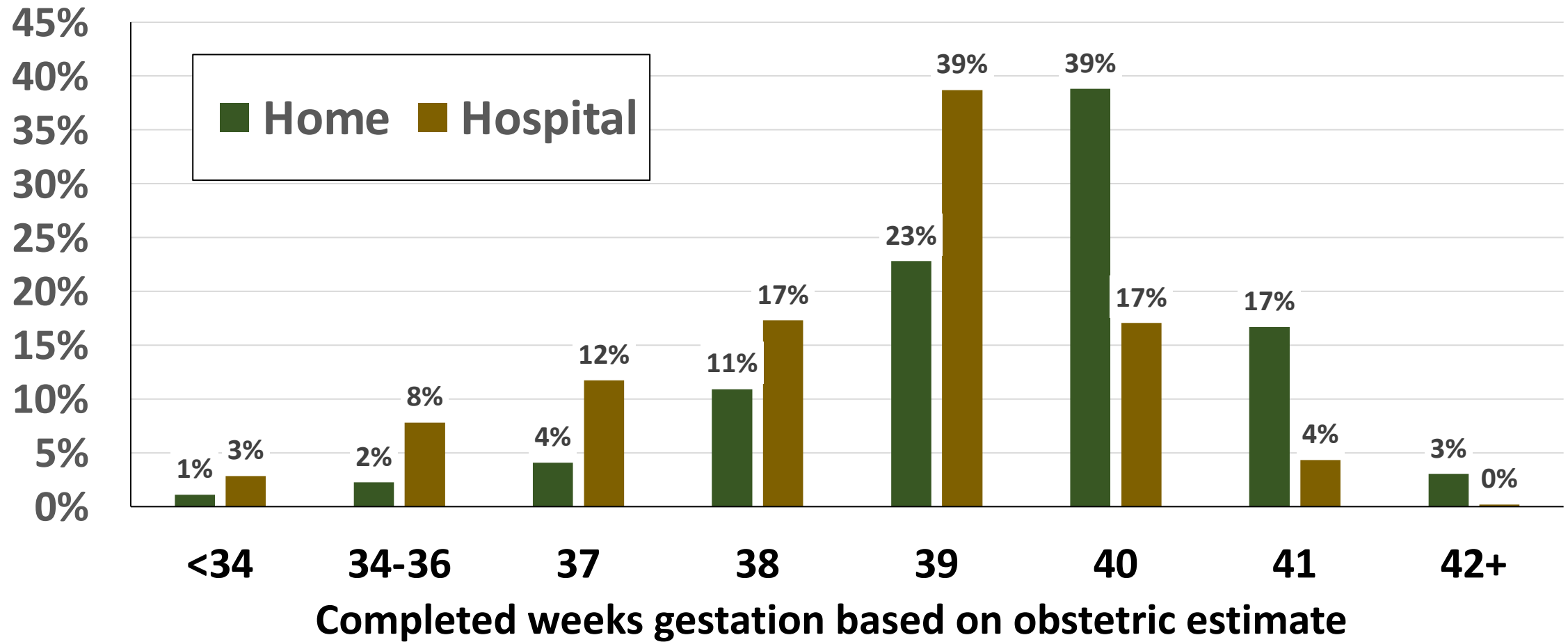
Sources: U.S.: National Vital Statistics System, 1990 & 2020 Public Use Datasets. Note: While NCHS recommends use obstetrical estimate of gestational age, it was not available in 1990, thus comparison is based on last menstrual period for consistency between 1990 and 2020 measure.

# Gestational Age, U. S., All Births, 1990, 2021



Sources: U.S.: National Vital Statistics System, 1990 & 2020 Public Use Datasets. Note: While NCHS recommends use obstetrical estimate of gestational age, it was not available in 1990, thus comparison is based on last menstrual period for consistency between 1990 and 2020 measure.

# Gestational Age Distribution by Place of Birth, U. S., 2021



**Is it hopeless?**

**What can be done**

- **Evidence** – keep an open mind and ask different questions.
- **Advocacy** – work for the change you want.

# Rethinking the Evidence



The American College of  
Obstetricians and Gynecologists  
WOMEN'S HEALTH CARE PHYSICIANS



Society for  
Maternal-Fetal  
Medicine

## OBSTETRIC CARE CONSENSUS

Number 1, March 2014

### Safe Prevention of Primary Cesarean Delivery

[www.acog.org/Resources\\_And\\_Publications/Obstetric\\_Care\\_Consensus\\_Series/Safe\\_Prevention\\_of\\_the\\_Primary\\_Cesarean\\_Delivery](http://www.acog.org/Resources_And_Publications/Obstetric_Care_Consensus_Series/Safe_Prevention_of_the_Primary_Cesarean_Delivery)

[BirthByTheNumbers.org](http://BirthByTheNumbers.org)

# Childbirth Advocacy Led by Mothers

## THE BUSINESS OF BEING BORN CLASSROOM EDITION

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### Upcoming Events

[Healthy Birth Choices Workshops](#)

March 20, 2014 - [Choosing Your Birth Team: Focus on Support](#)


April 24 - [Breastfeeding and Beyond](#)

[Check out a preview of our workshops](#)

Thank you to the [14th Street Y](#) for hosting!

### In the News

[Recent Media Coverage.](#)



Noelle with Isla Kai © Amanda Gentile

### Find a Provider

Location

Provider Type

☐ I have read and understand the [disclaimer](#).

or [Advanced Search](#)

### Join the Network

List your services in our Provider Network.

### Welcome to Choices in Childbirth

Choices in Childbirth is a non-profit organization that is a national leader in consumer advocacy and outreach for women and their families. At CiC we believe that every woman deserves a safe, respectful and deeply fulfilling birth experience. We help women make informed decisions about where, how and with whom to birth, and ensure that they have access to the full range of birth options. CiC constantly strives to improve maternity care across the country and to ensure that the birth of each child is treated with the reverence that it deserves.

### Our Mission

<http://www.choicesinchildbirth.org/>

# Childbirth Advocacy Led by Mothers



for Women  
and Families



**CHILDBIRTH  
CONNECTION**  
a program of the  
national partnership for women & families



for Health  
Professionals

**For Women** For Health Professionals

Understanding & Navigating the Maternity Care System

Transforming Maternity Care Partnership

Choosing a Caregiver

Choosing a Place of Birth

Induction of Labor

Labor Support

Labor Pain

Cesarean Section

Preventing Pelvic Floor Dysfunction

VBAC or Repeat C-Section

Planning Pregnancy

Pictures of Your Growing Body & Baby

Milbank Report: *Evidence-Based Maternity Care*

*Listening to Mothers* Surveys & Reports

*Journey to Parenthood*  
A Pregnancy Book

*The Rights of Childbearing Women*

Quotes from Mothers

Best Pregnancy Resources A-Z

Best Pregnancy Books

Best Pregnancy Videos

## Listening to Mothers<sup>SM</sup> III Pregnancy and Birth



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

May 2013

Transforming Maternity Care Partnership

Evidence-Based Maternity Care Resource Directory

Evidence Columns

Systematic Reviews

Milbank Report: *Evidence-Based Maternity Care*

*Listening to Mothers* Surveys & Reports

Pregnancy Resources for Women

*The Rights of Childbearing Women*

Report of the Third National U.S. Survey of Women's Childbearing Experiences

[childbirthconnection.org/](http://childbirthconnection.org/)

**Topic Index**

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[Child-Bearing](#) | [Growing Older](#) | [Medical Problems & Procedures](#) | [Knowledge is Power](#)

## WOMEN'S HEALTH INFORMATION & RESOURCE CENTER

Our Women's Health Information & Resource Center includes excerpts from our books, web-exclusive content, links, resources, and health news.

-  [More About Our Books](#)
-  [Buy Our Books](#)
-  [Help](#)

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- ♦ [Body Image](#)
- ♦ [Eating Well](#)
- ♦ [Alcohol, Tobacco, and Other Mood-Altering Drugs](#)
- ♦ [Our Bodies in Motion](#)
- ♦ [Complementary Health Practices](#)
- ♦ [Emotional Well-Being](#)
- ♦ [Environmental and Occupational Health](#)
- ♦ [Violence and Abuse](#)

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- ♦ [Safer Sex](#)
- ♦ [Sexually Transmitted Infections](#)

### Reproductive Choices



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- ♦ [Birth Control](#)
- ♦ [Unexpected Pregnancy](#)
- ♦ [Abortion](#)

### Growing Older



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- ♦ [Our Later Years](#)

### Medical Problems and Procedures



- ♦ [Unique to Women](#)
- ♦ [Special Concerns for Women](#)

[www.ourbodiesourselves.org/](http://www.ourbodiesourselves.org/)

For all childbearing women and infants

For childbearing women and infants  
with complications

Practice categories

Education  
Information  
Health promotion

Assessment  
Screening  
Care planning

Promotion of normal  
processes, prevention  
of complications

First-line  
management  
of complications

Medical  
obstetric  
neonatal  
services

Organisation of care

Available, accessible, acceptable, good-quality services—adequate resources, competent workforce  
Continuity, services integrated across community and facilities

Values

Respect, communication, community knowledge, and understanding  
Care tailored to women's circumstances and needs

Philosophy

Optimising biological, psychological, social, and cultural processes; strengthening woman's capabilities  
Expectant management, using interventions only when indicated

Care providers

Practitioners who combine clinical knowledge and skills with interpersonal and cultural competence  
Division of roles and responsibilities based on need, competencies, and resources

**NATIONAL  
MATERNAL HEALTH  
WEEK**

**MAY 5th-12th, 2019**



**#MarchforMoms**

**#BeyondMothersDay**

- Promote State & Federal Legislative Efforts to Improve Maternal Health
- Drive Media Attention on State of Maternal Health
- Seek City, State and National Proclamations
- Organize Visits in DC on Capitol Hill May 10th
- Rally on National DC Mall on May 11th
- Livestream the Rally on Facebook Live
- Curate and Promote Daily Themes Related to Maternal Health

[www.marchformoms.org](http://www.marchformoms.org)



# MARCH FOR MOMS

## SUCCESSFUL STRATEGIES IN MATERNAL HEALTH ADVOCACY PANEL

**JUNE 6TH, 2022 10AM-12PM LIVE STREAM**

## ACTIVE LEGISLATION

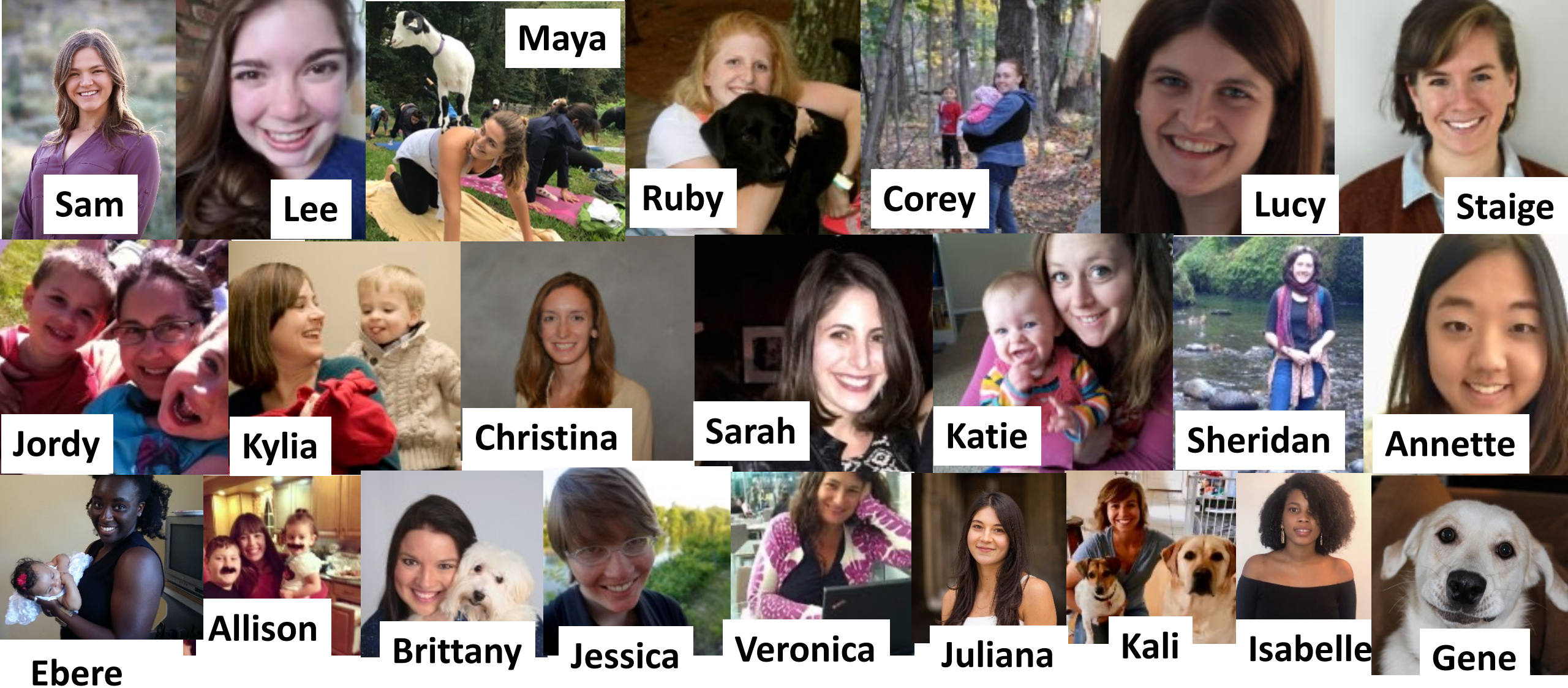
### FEDERAL

- BLACK MATERNAL HEALTH MOMNIBUS
- SHINE FOR AUTUMN ACT
- NIH IMPROVE ACT
- ENDOMETRIOSIS CARE ACT

### STATE

- REMOTE PATIENT MONITORING INITIATIVES
- DOULA REIMBURSEMENT
- RACIAL BIAS TRAINING
- THE COMMON START LEGISLATION

[www.birthbythenumbers.org](http://www.birthbythenumbers.org)



Sam

Lee

Maya

Ruby

Corey

Lucy

Staige

Jordy

Kyla

Christina

Sarah

Katie

Sheridan

Annette

Ebere

Allison

Brittany

Jessica

Veronica

Juliana

Kali

Isabelle

Gene

[www.birthbythenumbers.org](http://www.birthbythenumbers.org)

Email: [birthbynumbers@gmail.com](mailto:birthbynumbers@gmail.com)

Twitter: [@BirthNumbers](https://twitter.com/BirthNumbers)

FACEBOOK: [www.facebook.com/BirthByTheNumbers](https://www.facebook.com/BirthByTheNumbers)