Welcome to the 53rd Annual Conference

Semi-Political Public Health: Choices and Consequences

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David Schraub, FSA, FSA, MAAA, AQ, Founder and CEO, **David Schraub Actuarial Consultancy**
Jean-Marc Fix, FSA, MAAA, VP-R&D Biometric Risks, **Optimum Life Re**

Disclaimer

The views presented are solely the views of the presenters –and maybe not even them– and not the views of anyone else, including their employers or any organizations to which they may belong.

The views are intended to be educational and to foster debate. They do not represent advice of any sort.

Agenda

- Infant Mortality – Al Klein
- Socioeconomic Differences and Mortality – Al Klein
- Maternal Mortality – Jean-Marc Fix
- Medical Aid in Dying – Jean-Marc Fix
- Gun Violence – David Schraub
- Abortion – David Schraub

INFANT MORTALITY
AI

Definition of Infant Mortality Rate

- Number of infant deaths per 1,000 live births – Most common
- Typically counted when death within 28 days of birth, but differences in reporting

Reasons for Infant Mortality (CDC 2022)

- Congenital abnormalities (21%)
- Disorders related to low birth weight or pre-mature birth (17%)
- Sudden infant death syndrome (SIDS) (6%)
- Unintentional injuries (6%)
- Maternal pregnancy complications (6%)
- Other reasons:
  - Birth defects
  - Placenta and umbilical cord complications
  - Birth asphyxia
  - Infections
  - Deficiency in high-quality intrapartum care

Risk factors for Infant Mortality (CDC 2022)

- Alcohol or tobacco use during pregnancy
- A BMI greater than 30
- Being younger than 25 or older than 40
- Poverty
- Living in a rural area

Infant Mortality 1950-2020 (per 1,000 live births)

Year	U.S.		World	
	Infant Mort. Rate	Avg Ann.% Change	Infant Mort. Rate	Avg Ann. % Change
2020	5.7	- 1.3%	28.0	- 3.1%
2010	6.5	- 1.2%	38.2	-3.4%
2000	7.3	- 2.8%	53.8	-1.9%
1990	9.6	- 3.0%	66.3	-2.1%
1980	13.0	- 4.5%	81.1	-2.1%
1970	20.5	- 2.5%	100.1	- 2.2%
1960	26.4	- 1.9%	124.8	-1.6%
1950	32.0		146.7	

https://www.macrotrends.net/global-metrics/countries/USA/UNITED STATES/infant-mortality-rate

Infant Mortality 2020-2024 (per 1,000 live births)

Year	U.S.		World	
	Infant Mort. Rate	% Change	Infant Mort. Rate	% Change
2024	5.3	- 2.5%	25.5	- 2.1%
2023	5.5	- 1.2%	26.1	- 2.4%
2022	5.5	-1.2%	26.7	- 2.4%
2021	5.6	- 1.2%	27.3	- 2.3%
2020	5.7	- 1.2%	28.0	- 2.2%

https://www.macrotrends.net/global-metrics/countries/USA/UNITED STATES/infant-mortality-rate

Highest and Lowest Infant Mortality Rates by Country (2024)

https://www.cia.gov/the-world-factbook/field/infant-mortality-rate/country-comparison/

227. Afghanistan (101.3)
226. Somalia (83.6)
225. Central African Republic (80.5)
224. Equatorial Guinea (77.4)
223. Serra Leone (71.2)
221. Niger (64.3)

1. Slovenia (1.5)
2. Singapore (1.5)
3. Iceland (1.6)
4. Monaco (1.7)
5. Norway (1.8)
6. Japan (1.9)

55. U.S. (5.1)

U.S. Has Highest Infant Mortality Rates Despite Most Health Care Spending Among 13 High Income Countries

https://www.cia.gov/the-world-factbook/field/infant-mortality-rate/country-comparison/

5. Norway (1.8)
6. Japan (2.1)
10. Sweden (2.3)
16. South Korea (2.8)
17. Australia (2.9)
19. Switzerland (3.0)
22. Germany (3.1)
24. France (3.1)
29. New Zealand (3.3)
34. Netherlands (3.6)
38. United Kingdom (3.8)
43. Canada (4.3)

55. U.S. (5.1)

Health Care System Performance Rankings – 2024
U.S. Ranking among 10 High Income Countries
(all but Japan, Norway, South Korea on last slide)

https://www.commonwealthfund.org/publications/fund-reports/2024/sep/mirror-mirror-2024

	U.S. Rank
• Access to care	10 (Worst)
• Care process	2
• Administrative efficiency	9
• Equity	9
• Health outcomes	10
• Overall ranking	10

"Americans face the most barriers to accessing and affording healthcare."

U.S. infant mortality higher due to differences by race (2021 data)

National Vital Statistics Reports, Volume 72, Number 11, September 12, 2023

- Maternal Race Overall (5.4)
- Black, non-Hispanic (10.6)
- Native Hawaiian or Pacific Islander, non-Hispanic (7.8)
- American Indian or Alaskan native, non-Hispanic (7.5)
- Hispanic (4.8)
- White non-Hispanic (4.4)
- Asian, non-Hispanic (3.7)

U.S. infant mortality higher due to differences by state (2022 data)

https://www.cia.gov/the-world-factbook/field/infant-mortality-rate/country-comparison/

51. Mississippi (9.1)
50. South Dakota (7.8)
49. Arkansas (7.7)
48. Delaware (7.5)
47. Louisiana (7.4)
46. West Virginia (7.3)

1. Massachusetts (3.3)
2. New Hampshire (3.5)
3. New Jersey (3.6)
4. Rhode Island (3.9)
5. California (4.1)
6. Connecticut (4.3)

SOCIOECONOMIC DIFFFERENCES AND MORTALITY

AI

Source for most of this topic:

- Mortality by Socioeconomic Category in the United States
- Published by the SOA Research Institute
- Revised, February 2022
- Author: Magali Barbieri, Ph.D., University of California, Berkeley

Issues and considerations for this analysis

- Used 11 variables to construct a Socioeconomic Index Score (SIS) for every county in U.S.
- Data for variables came from census data for 1980, 1990, and 2000, and from American Community Surveys for years 2005-2009 through 2014-2019
- One major disparity was population size, ranging from 75 in Kalawao County (Hawaii) to 10 million in Los Angeles County (California)
- To avoid large socioeconomic and mortality fluctuations year to year, small counties were aggregated within each state to the neighboring county(ies) with the closest socioeconomic characteristics and population density

Eleven socioeconomic variables used

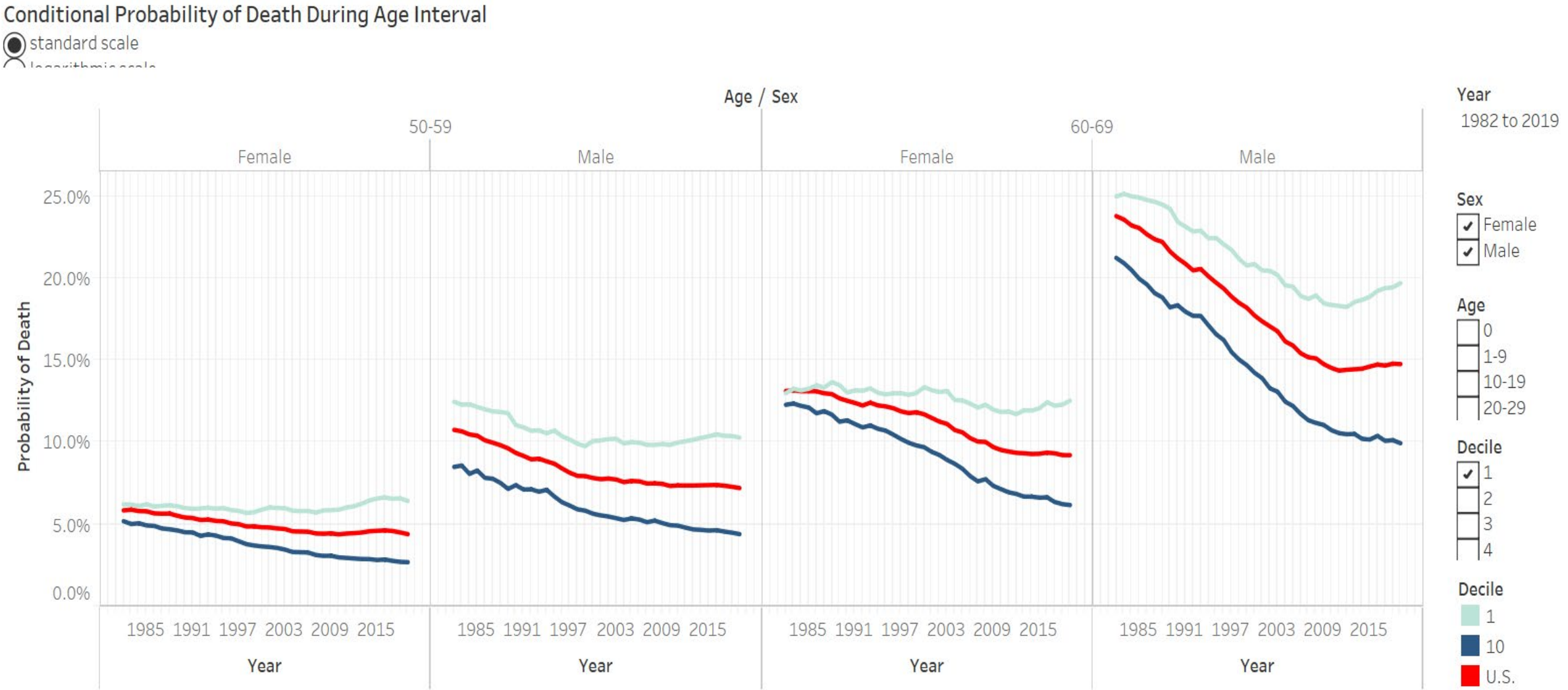
1. % of population age 25+ with less than 9 years of education
2. % of population age 25+ with at least 4 years of college education
3. % of population age 16+ employed in a white-collar occupation
4. Unemployment rate for the population age 16+
5. Median household income (HI) adjusted for local housing costs
6. Ratio of avg. HI in lowest quartile to same in highest quartile
7. % of population below the federal poverty threshold
8. Median home value for owner occupied units
9. Median gross rent for rental units
10. % of housing without a telephone
11. % of housing without complete plumbing

Results

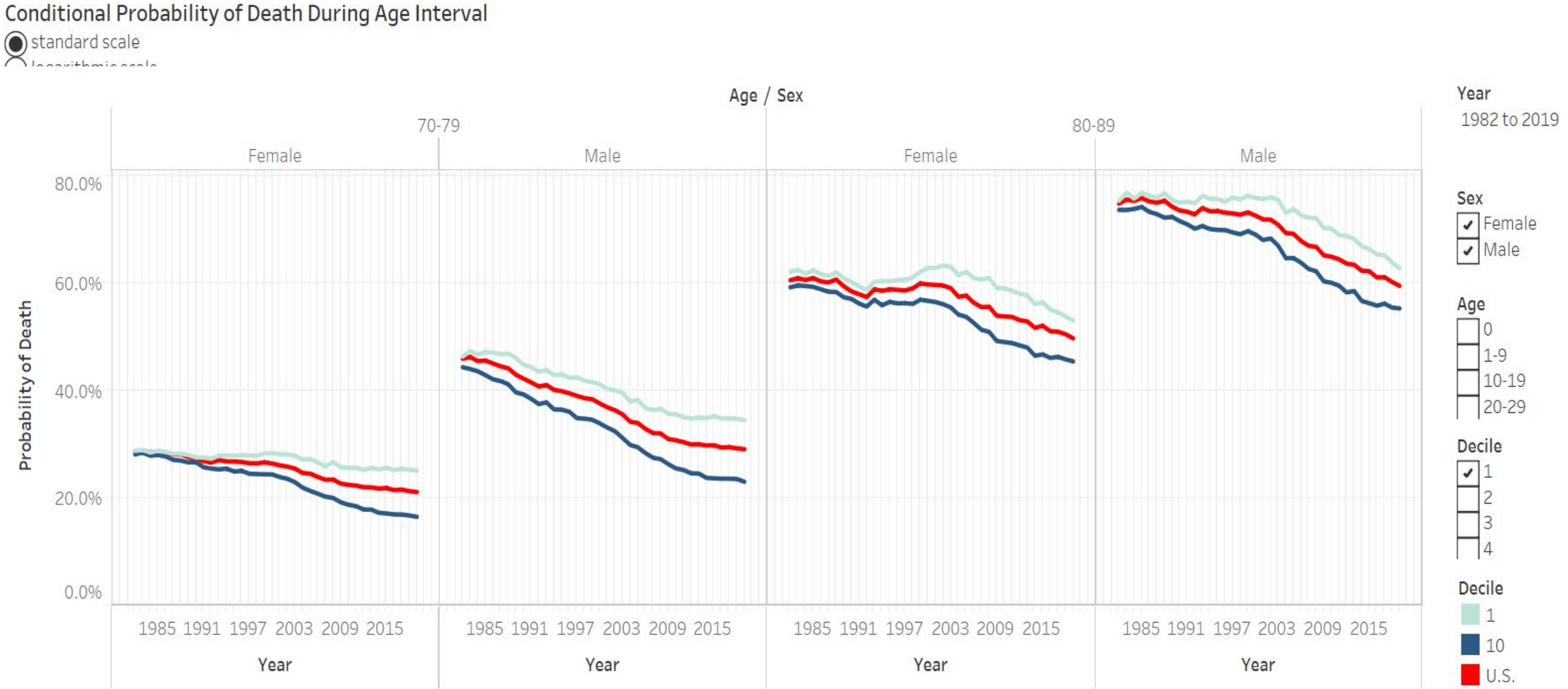
- Socioeconomic results split into 10 deciles, with decile 1 being the lowest decile/worst socioeconomic group
- Socioeconomic results studied by combinations of:
  - Age and Cause of Death
  - Gender
  - Year
- A comparison to Japan and OECD average of comparable countries was also made

Mortality by Socioeconomic Category in the United States: Deciles

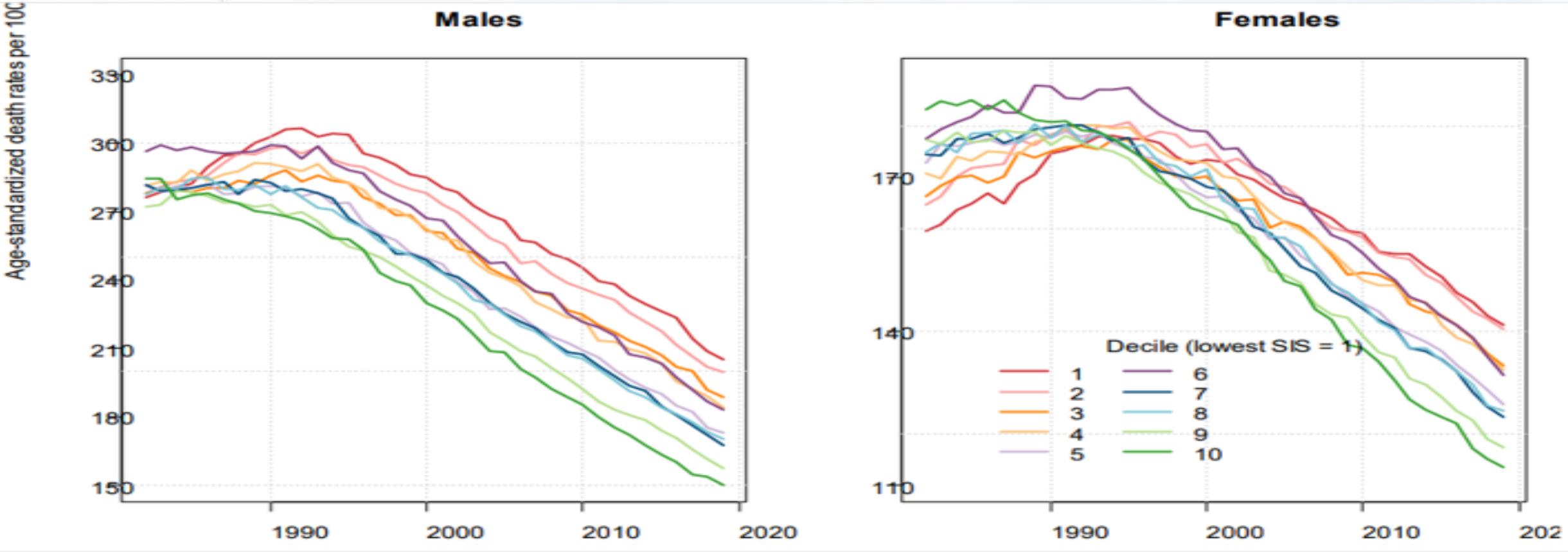
Mortality by Socioeconomic Category in the United States: Deciles



Mortality by Socioeconomic Category in the United States: Deciles

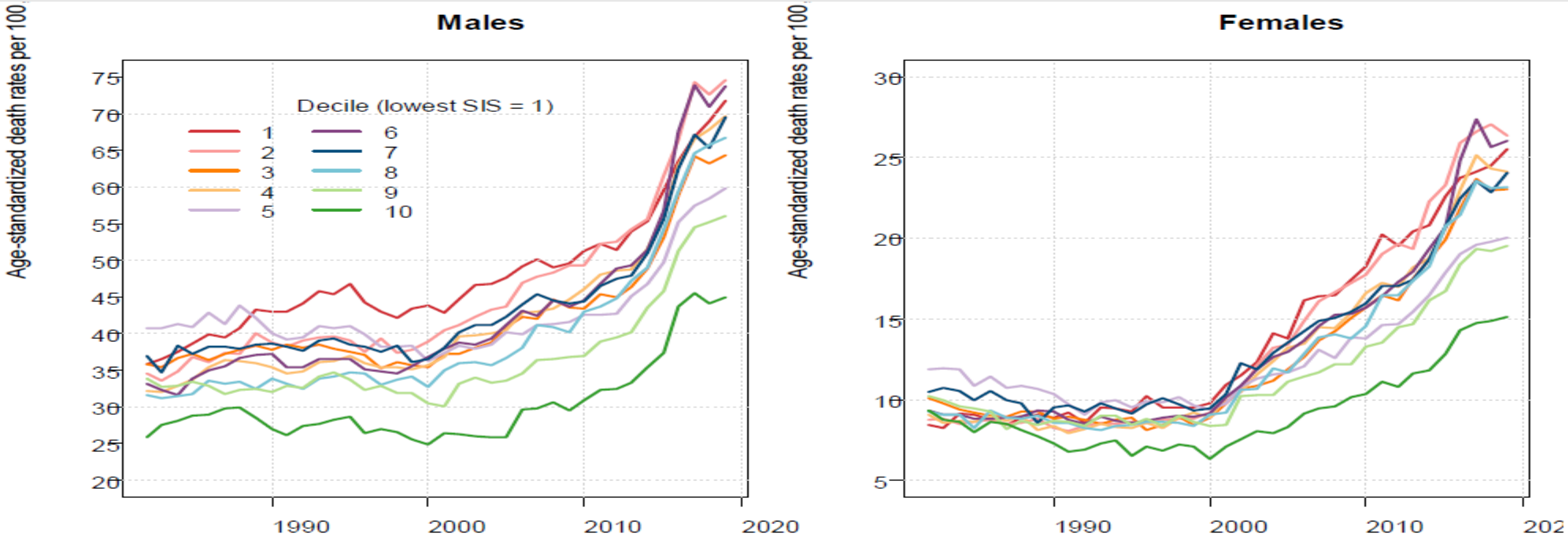


Age-Standardized Death Rates from Cancer, by SIS Decile and Sex, 1982–2019



- Source: Cause-of-Death Contributions to Socioeconomic Inequalities in Mortality in the United States, SOA Research Institute, June 2022

Age-Standardized Death Rates from Diseases of Despair *, by SIS Decile and Sex, 1982–2019



- Source: Cause-of-Death Contributions to Socioeconomic Inequalities in Mortality in the United States, SOA Research Institute, June 2022

* Includes suicide, drug overdoses, and alcohol-related disorders

Reasons Lower Socioeconomic Groups have Higher Mortality

Sources: CDC, JAMA, National Institute of Health

- Health behaviors – More likely to have unhealthy behaviors, e.g., smoking, drinking, poor diet, inactivity, leading poorer overall health
- Access to healthcare – Less access and/or underuse. Also, likely to have lower quality of healthcare available
- Psychological factors – More anxiety, depression, stress
- Social relationships – Can affect health behaviors and support
- Socioeconomic factors – Can affect education, employment, income

Reasons Lower Socioeconomic Groups have Higher Mortality (cont'd)

- Health behaviors
  - Poor diet
    - Healthy foods are not as accessible
    - Even if they were, they are often too expensive, leading to a greater consumption of unhealthy processed foods
  - Inactivity
    - Parks, walking trails, neighborhoods often not as safe
- Access to healthcare
  - Less accessible, now even more so with recent closings of healthcare facilities and increasing shortage of doctors and nurses
  - Even if accessible, often not affordable, so wait until issue is more serious (leading to a condition that is likely more difficult to treat and has worse outcomes)

What happens when socioeconomic inequality widens?

- http://www.slate.com/articles/video/video/2016/06/this_video_from_the_california_endowment_explains_how_zip_code_affects_life.html

What happens when socioeconomic inequality widens?

Source: United Nations – World Population Prospects, U.S. Death Rate 1950-2024. www.macrotrends.net. Retrieved 2024-12-19.

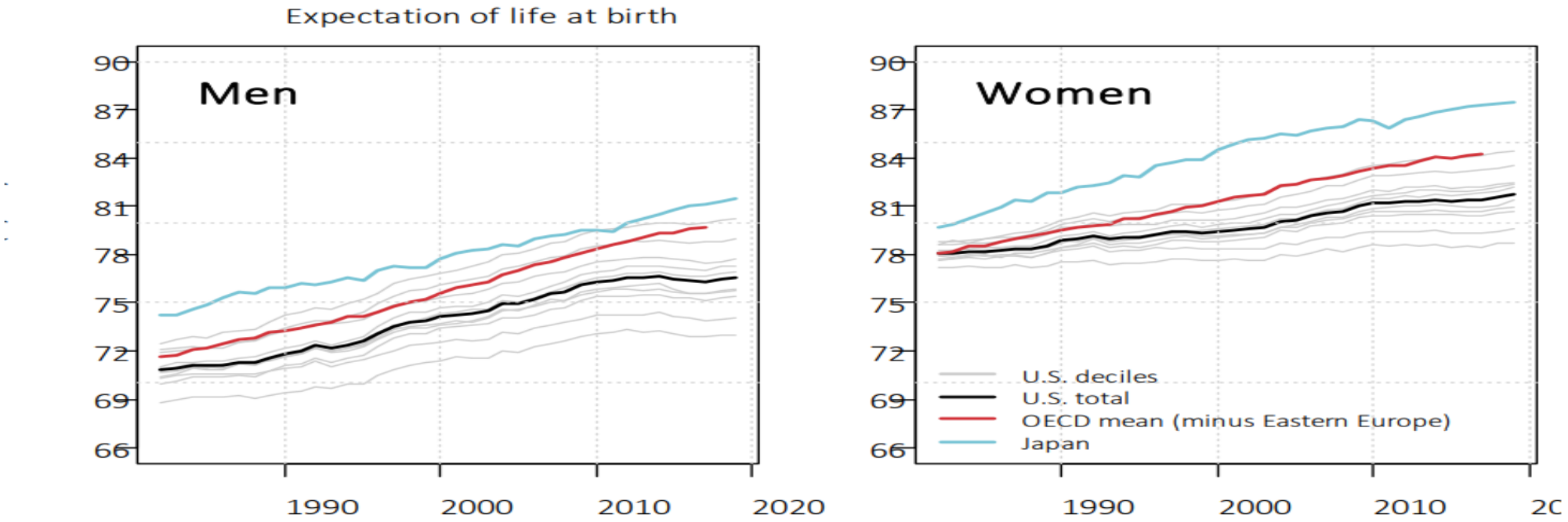
- We saw a widening of socioeconomic differences from about 2000 or 2005 through 2020
- U.S. mortality rates per 1,000
  - 1990 8.898
  - 1995 8.754
  - 2000 8.603
  - 2005 8.362
  - 2010 8.138
  - 2015 8.369
  - 2020 8.880

Greater socioeconomic differences affects LE for all lives
LE at birth – U.S., Japan & OECD (Comparable Countries)

Source: Mortality by Socioeconomic Category in the United States, Revised, February 2022

Figure 4

TRENDS IN LIFE EXPECTANCY AT BIRTH IN U.S. DECILES AND THE U.S. AS A WHOLE COMPARED WITH JAPAN AND THE AVERAGE FOR OTHER OECD COUNTRIES*, EACH SEX, 1982–2019



MATERNAL MORTALITY
Jean-Marc

Maternal Mortality

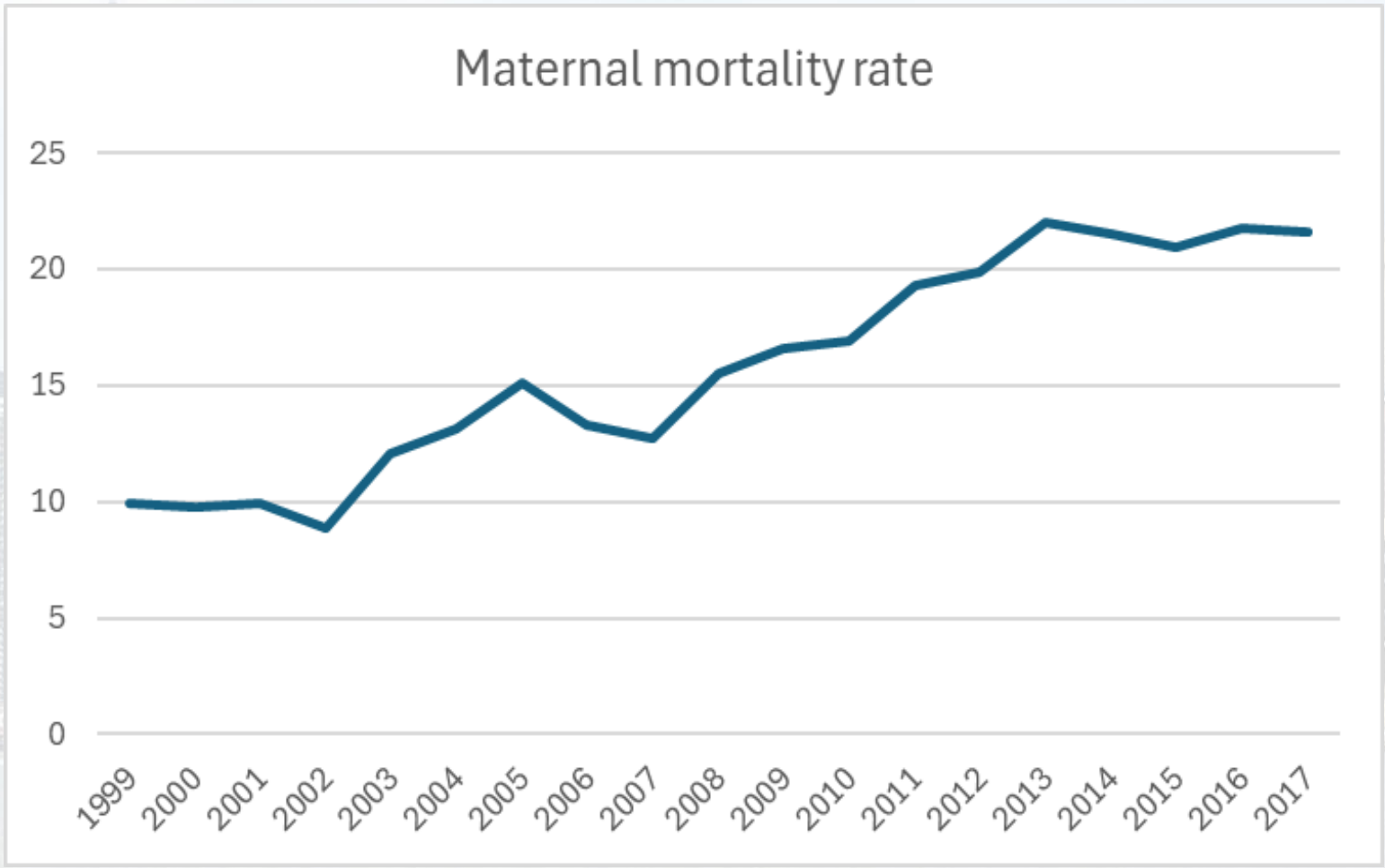
- The canary in the coal mine
- Beyond the human tragedy, not a major cause of death…anymore.
- 80% of maternal deaths are deemed preventable (1)
- Is there a fire?
- Is there smoke?
- Are we adding wood to something?
- SOARI Report (2)

(1): Pregnancy-Related Deaths: Data From Maternal Mortality Review Committees in 38 U.S. States, 2020 | Maternal Mortality Prevention | CDC
(2) https://www.soa.org/resources/research-reports/2024/maternal-mort-lit-review/

What Is Measured?

- Pregnancy-related deaths:
  - WHO Definition: death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. This number per 100,000 live births is the maternal mortality ratio.
  - CDC Definition: 1 year instead of 42 days
- Pregnancy-associated deaths: same as CDC but regardless of cause
- Difference in timing and underlying cause

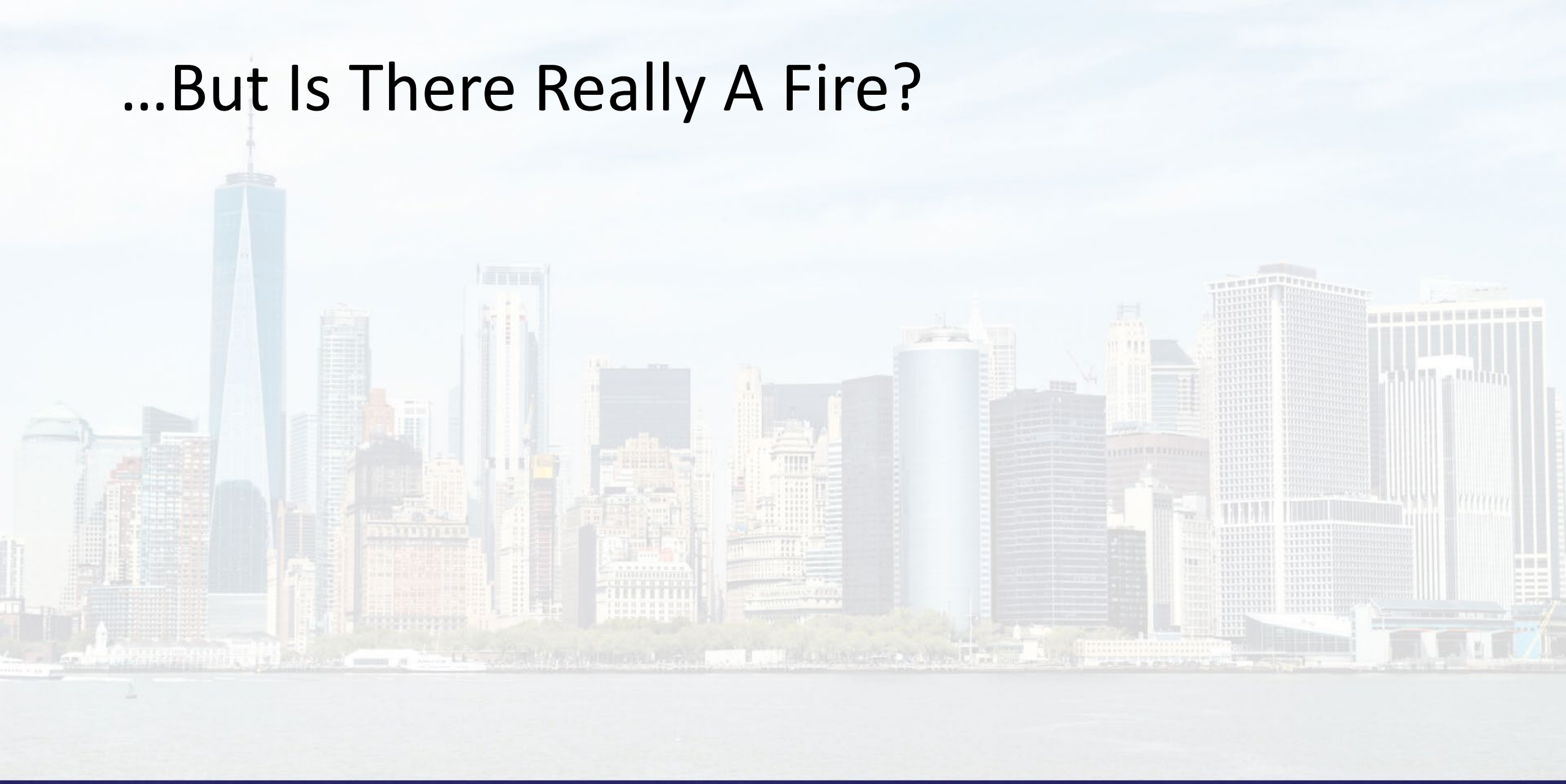
Maternal Mortality Trends



NVSS, a part of the CDC, uses the WHO definition

Source: Table III *The Impact of the Pregnancy Checkbox and Misclassification on Maternal Mortality Trends in the United States, 1999–2017*, January 2020, Series 3 Number 44, NCHS

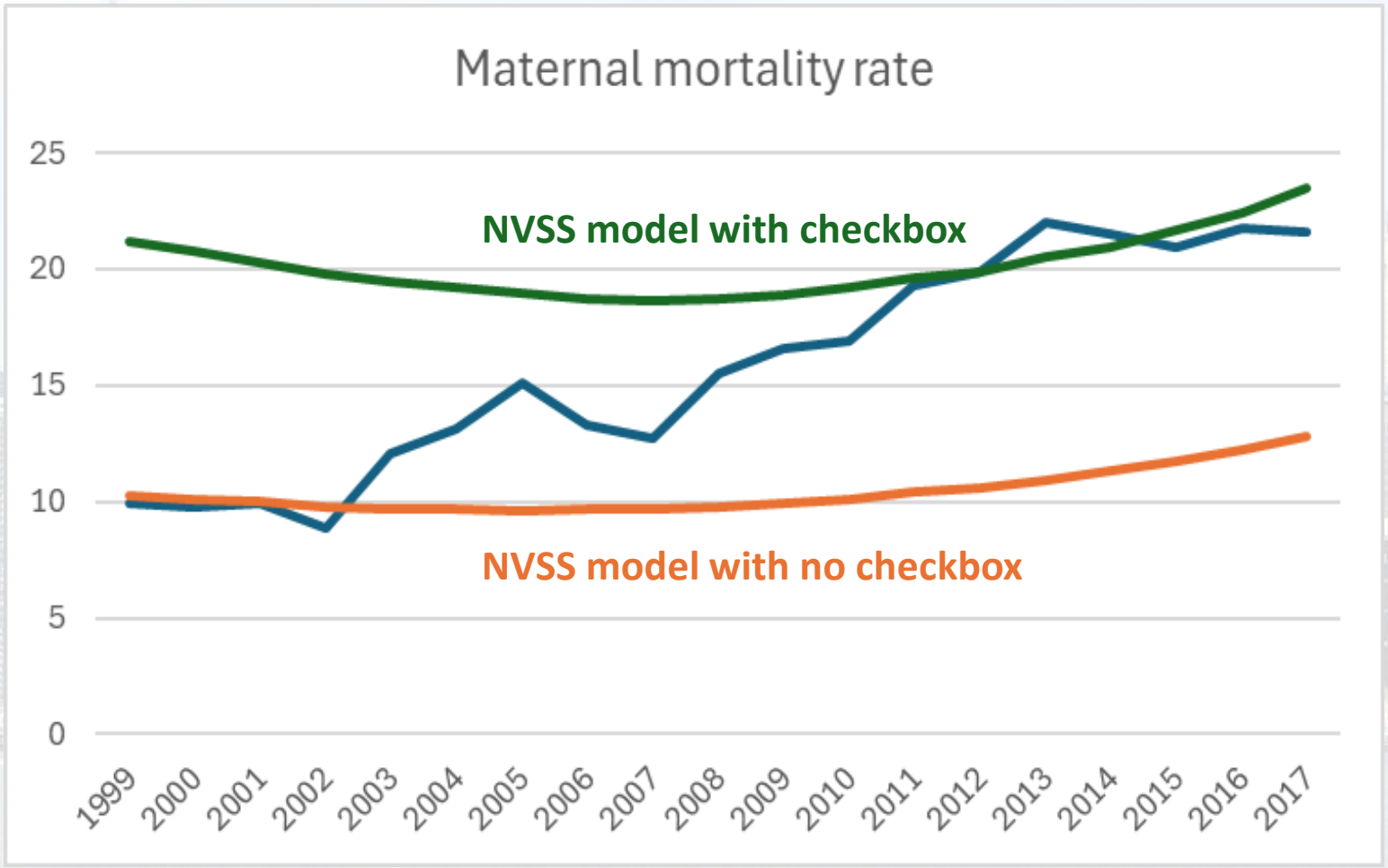
…But Is There Really A Fire?



The Checkbox

- Prior to 2000, noticed a substantial underreporting of maternal deaths
- A pregnancy question was added to the 2003 US Standard Certificate of Death
- Unfortunately, adopted by each state independently over a long period starting in 2003 and until 2017!

Maternal Mortality Trends – NVSS Models



Source: Table III *The Impact of the Pregnancy Checkbox and Misclassification on Maternal Mortality Trends in the United States, 1999–2017*, January 2020, Series 3 Number 44, NCHS

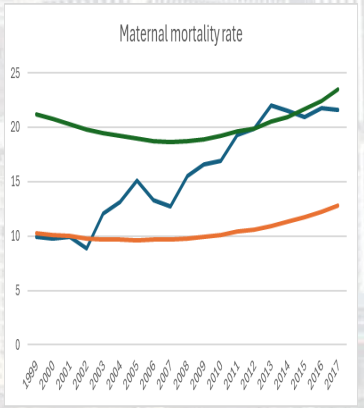
So Now We Know. Well…

- A lot of potential sources of errors remain that NVSS attempted to factor in their models.
- Was the woman really pregnant?
- During the right period?
- Were the right causes excluded?
- Coding errors
- NVSS - Maternal Mortality – Dashboard allows you to play with the error variables

International Comparison

Country	MMR 2000	MMR 2020
Australia	7	3
Austria	6	5
Canada	9	11
Denmark	8	5
France	9	8
Germany	7	4
Italy	10	5
Japan	9	4

Country	MMR 2000	MMR 2020
Netherlands	13	4
Singapore	15	7
Portugal	11	12
Spain	5	3
Sweden	6	5
UK	11	10
USA	12	21*
China	58	26

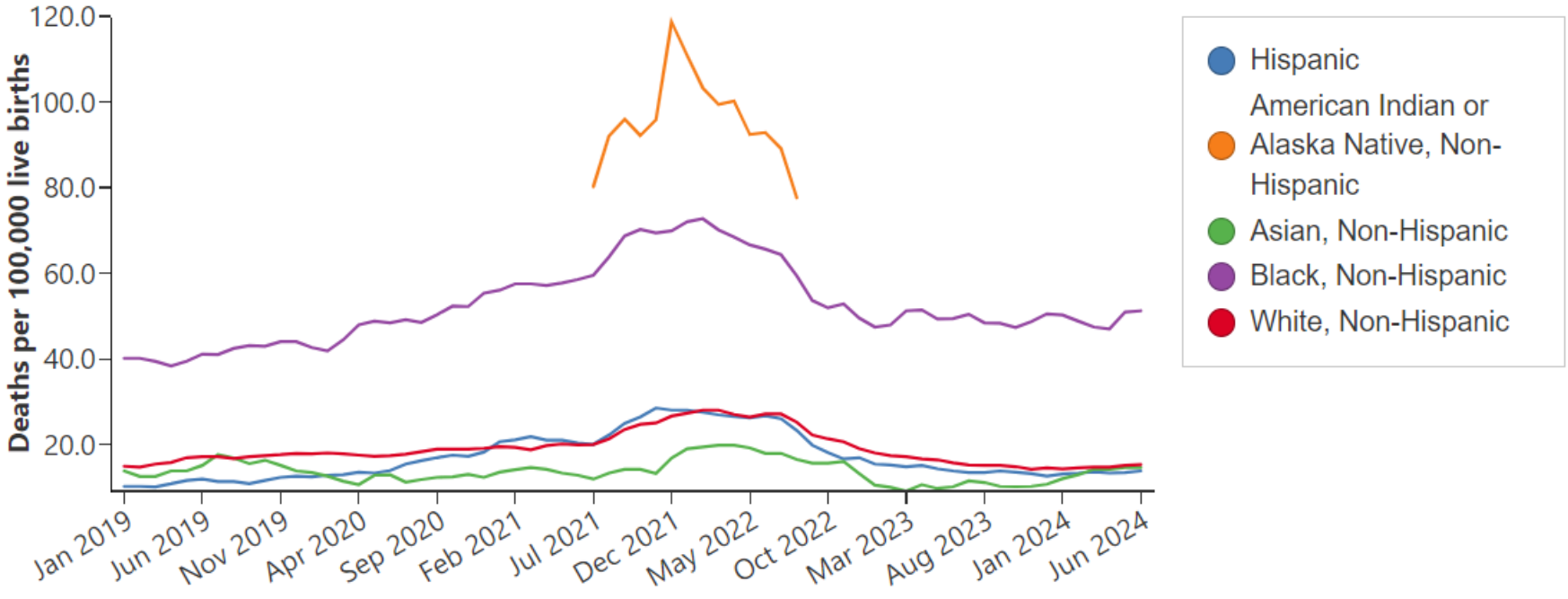


MMR is Maternal mortality related/aggravated, 42 days, per 100,000 live births

Source: Trends in maternal mortality 2000 to 2020 Executive Summary WHO 2023

Race and Ethnicity Impact

Figure 3. 12-month ending provisional maternal mortality rates by race and Hispanic origin: United States



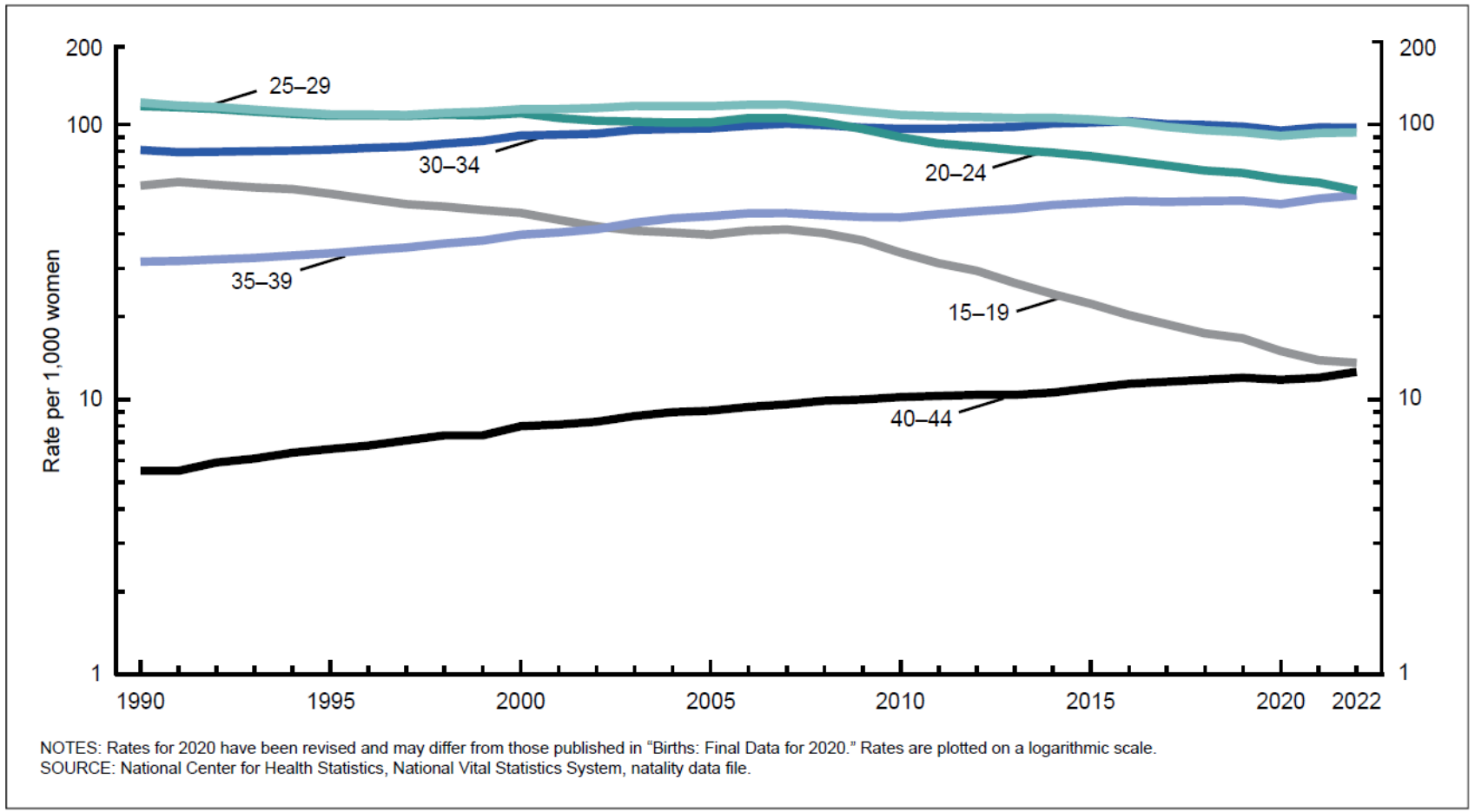
Source:
https://www.cdc.gov/nchs/nvss/vsrr/provisional-maternal-deaths-rates.htm

Where Is The Smoke Coming From?

- Population Health
  - Rise in chronic conditions
  - Trends in maternal age at birth
- Healthcare System Dynamics
  - Access to prenatal care
  - Health insurance coverage and Medicaid expansion
- Social Determinants
  - Impact of poverty, systemic racism, and geography

Population- Maternal Age at Birth

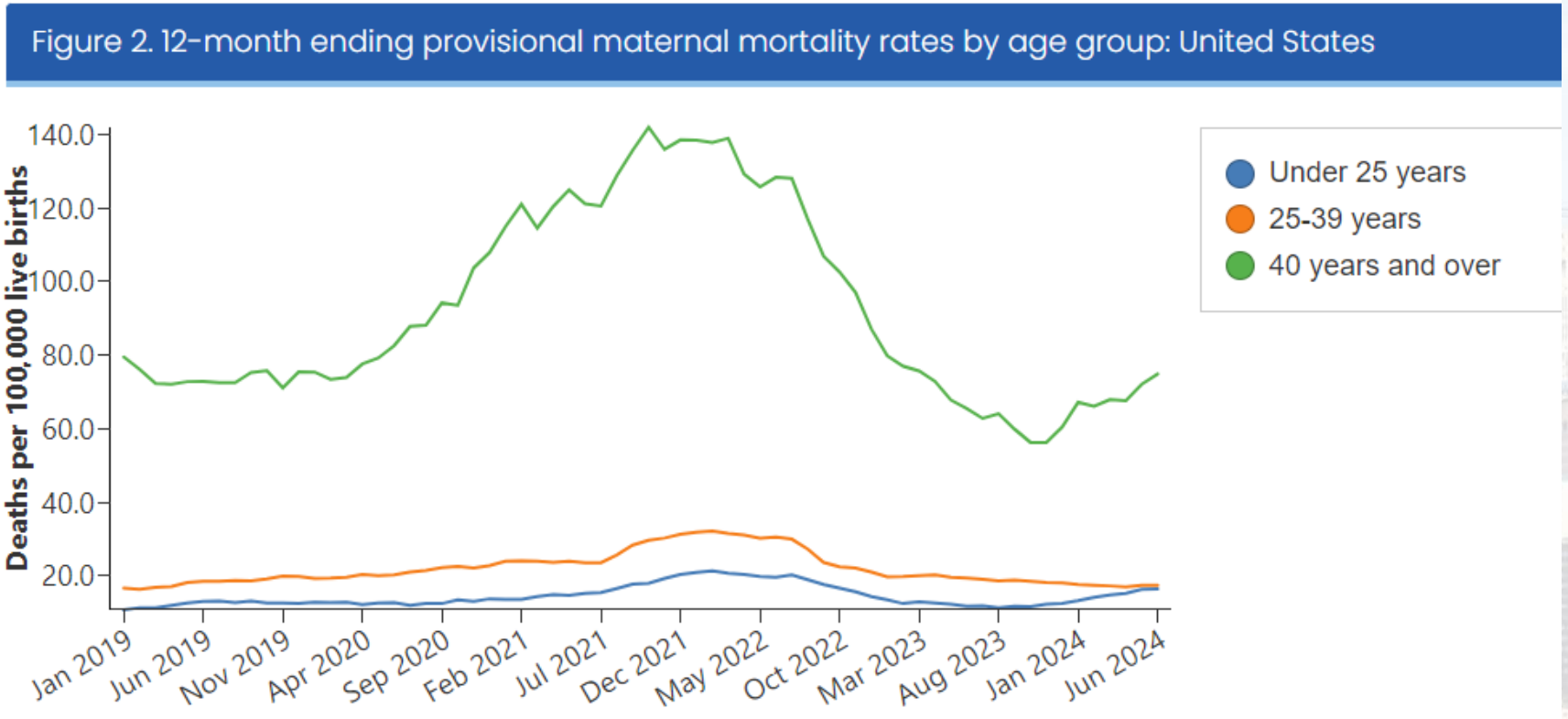
Figure 2. Birth rate, by selected age of mother: United States, 1990–2022



NOTES: Rates for 2020 have been revised and may differ from those published in "Births: Final Data for 2020." Rates are plotted on a logarithmic scale.
SOURCE: National Center for Health Statistics, National Vital Statistics System, natality data file.

Source: NVSS Vol73 Num 2 Births: Final Data for 2022

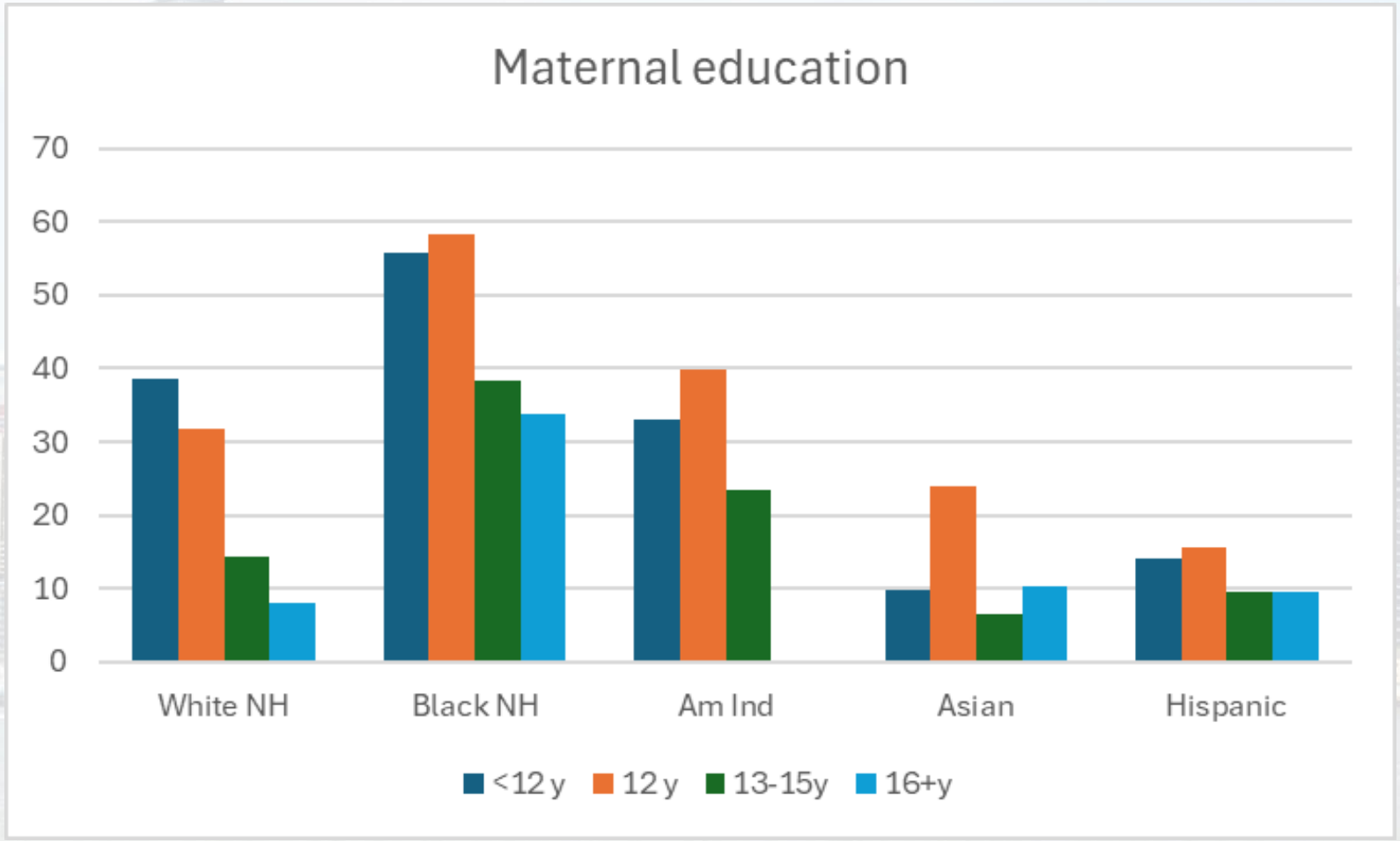
Population Maternal Age and Death



Risk of maternal deaths increased with older mothers Other pregnancy risk factors are also more prevalent with maternal age (obesity, diabetes…)

Source: https://www.cdc.gov/nchs/nvss/vsrr/provisional-maternal-deaths-rates.htm

Sociodemographic - Education



Source: G Singh, Trends and social inequalities in maternal mortality in the United states 1969-2018, Int J mat and Child Health and AIDS Vol 10, Iss 1 2021

Care and the Law

Care[1]	White	Black	Hispanic
First trimester	82.6%	67.6%	70.5%
Late or never	4.7%	10.0%	9.1%

Payor for delivery[1]	White	Black	Hispanic
Medicaid	27.8%	64.1%	58.6%
Private	65.1%	30.6%	31.6%
Self-Pay	3.7%	2.2%	6.6%
Other	3.4%	3.1%	3.2%

- In 2022, possibility to extend care for postpartum, adopted by 40 states[2]

Source: (1) Table 13 Births: Final data for 2022, National Vital Statistics Reports Vol 73 no 2 4/4/24

(2) https://www.kff.org/medicaid/issue-brief/medicaid-postpartum-coverage-extension-tracker/

Abortion Regulation and Maternal Mortality

- "Each additional abortion regulation was associated with an increase in maternal mortality (1.09/100,000 live births, 95% CI 0.36–1.82) and infant mortality (20/100,000 (1) live births, 95% CI 0.12–0.26)".
- Data based on analysis prior to Dobbs Supreme Court decision.

Source: https://journals.lww.com/greenjournal/fulltext/2023/02000/All_Cause_Mortality_in_Reproductive_Aged_Females.2.aspx, LM Harper et al, Obstetrics and Gynecology 2023

(1) I reformatted the numbers for them to be on the same basis

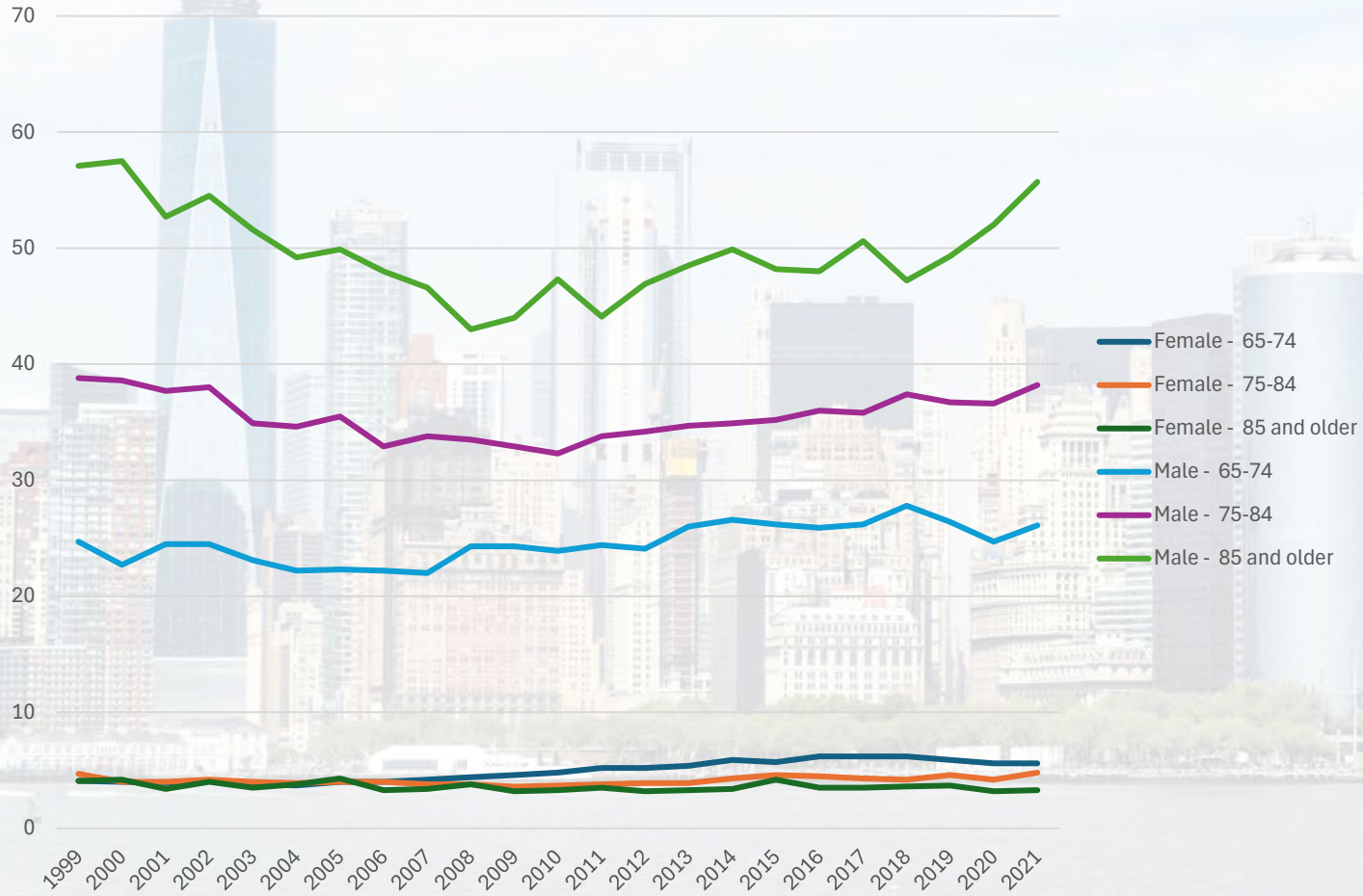
Other Factors Changing The Landscape

- Data Collection Improvements
  - Establishment of Maternal Mortality Review Committees (MMRCs)
  - Importance of standardized reporting
- Awareness and Grassroots Efforts
  - March of Dimes, Black Maternal Health Caucus, etc.
- Awareness and Federal Initiatives
  - Strategies under the Healthy People 2020 and 2030 frameworks

ASSISTED SUICIDE

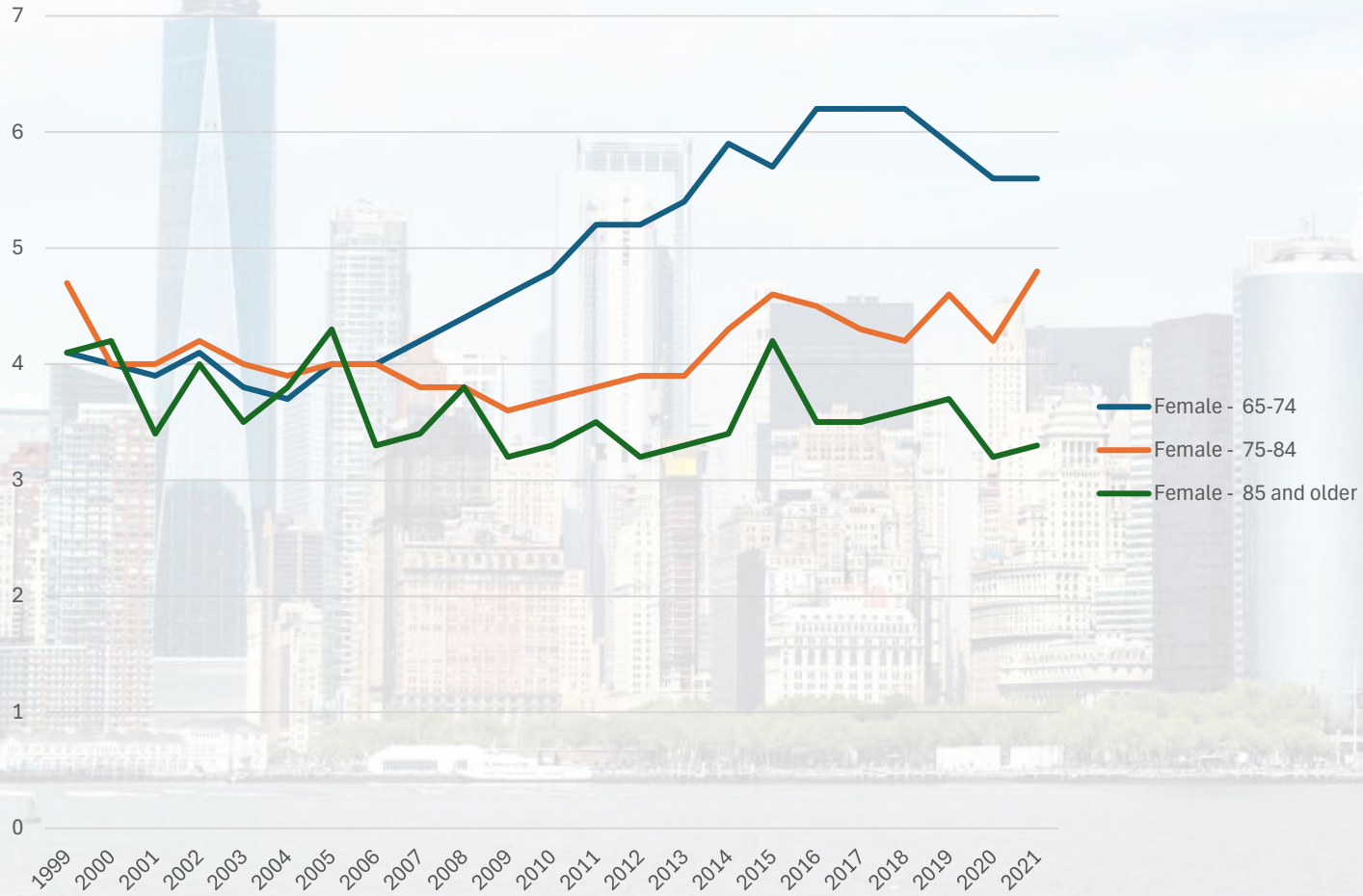
Jean-Marc

Suicide Among Older Adults – US Trends



Source: https://nchsdata.cdc.gov/DQS/#nchs-home_suicide/-/sex-and-age-group/all-time-periods/2

Suicide Among Older Adults – Fem. US Trends



Source: https://nchsdata.cdc.gov/DQS/#nchs-home_suicide/-/sex-and-age-group/all-time-periods/2

Suicide Types

- You kill yourself by yourself
- You kill yourself but someone provides assistance (Assisted Suicide)
- You kill yourself but a medical professional helps you (Physician Assisted Suicide)
- A medical professional kills you (Euthanasia)
- Refuse treatment
- Refuse to eat/drink
- In a number of jurisdictions, any of those, except the last two, could be a crime

A War of Words

Assisted suicide vs. Death with dignity

Tomehto vs. Tomahto?

Words choice matters in biasing the debate

Aid in Dying Around the World

- Europe: Netherlands (E&P), Belgium (E&P), Luxembourg (E&P), Switzerland (P & A), Spain (E), Portugal (E), Austria (some P) Germany (P)
- Americas: USA (P in CA, CO, HI, ME, MT, NJ, NM, OR, VT, WA; no E), Canada (E&P), Colombia (E&P), Uruguay (some tolerance)
- Oceania: Australia (most states, A), NZ (E&P)
- Asia: Japan (some tolerance)

P: Physician assisted suicide, E:Euthanasia, A: assisted suicide

How Much Goes Under the Radar?

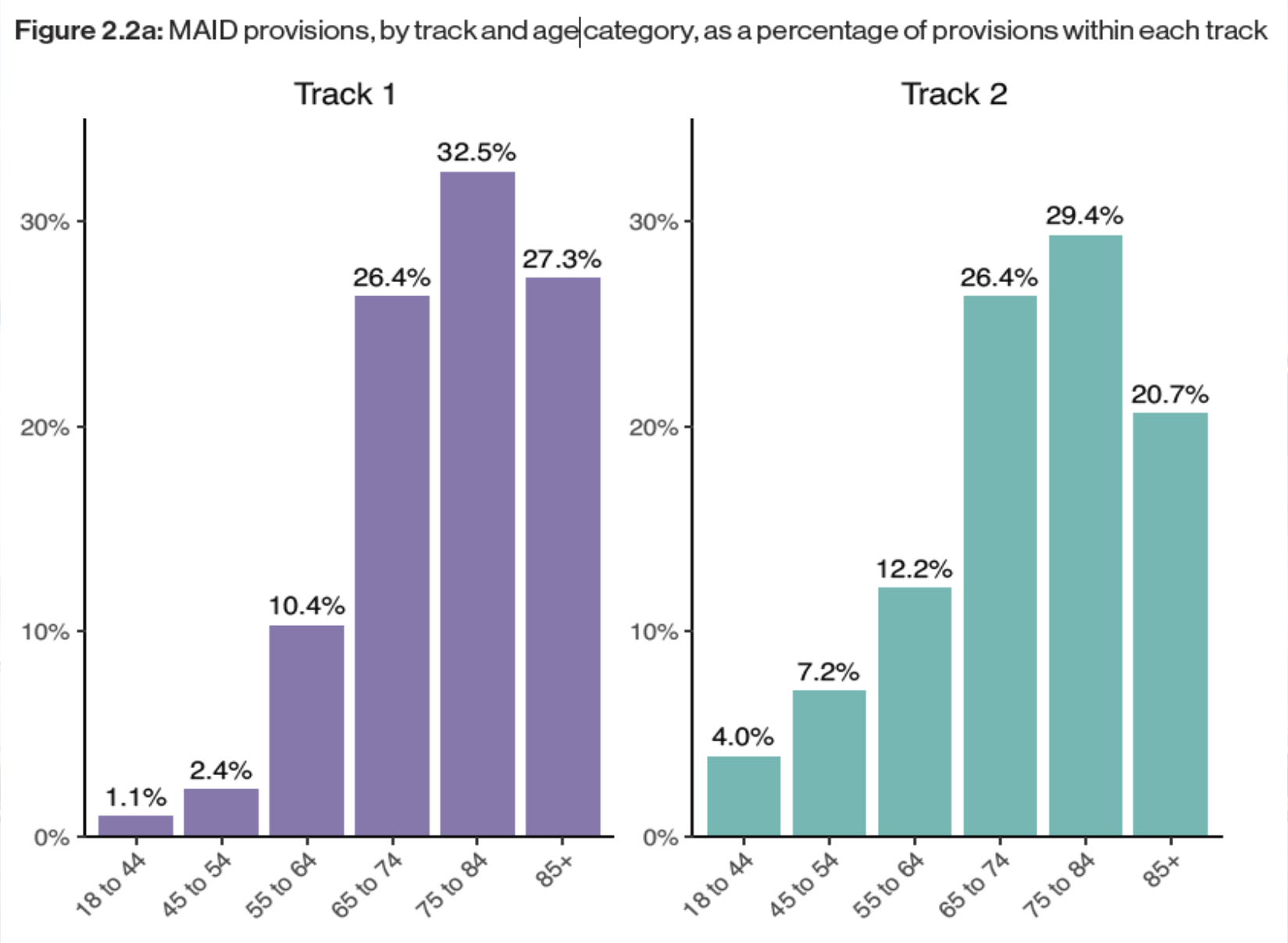
- Netherlands: 0.7% in 1995 and 2001
- Belgium: 3.2% in 1998 but down to 1.8% in 2007 and 1.6% in 2016 after legislation)
- Also in many other countries (including Denmark, Italy, Sweden , UK)
- Refusing to take medications
- Refusing to eat/drink

Source: box 1, S Mroz et al, Developments Under Assisted Dying Legislation, Deu. Artz Int. 2022

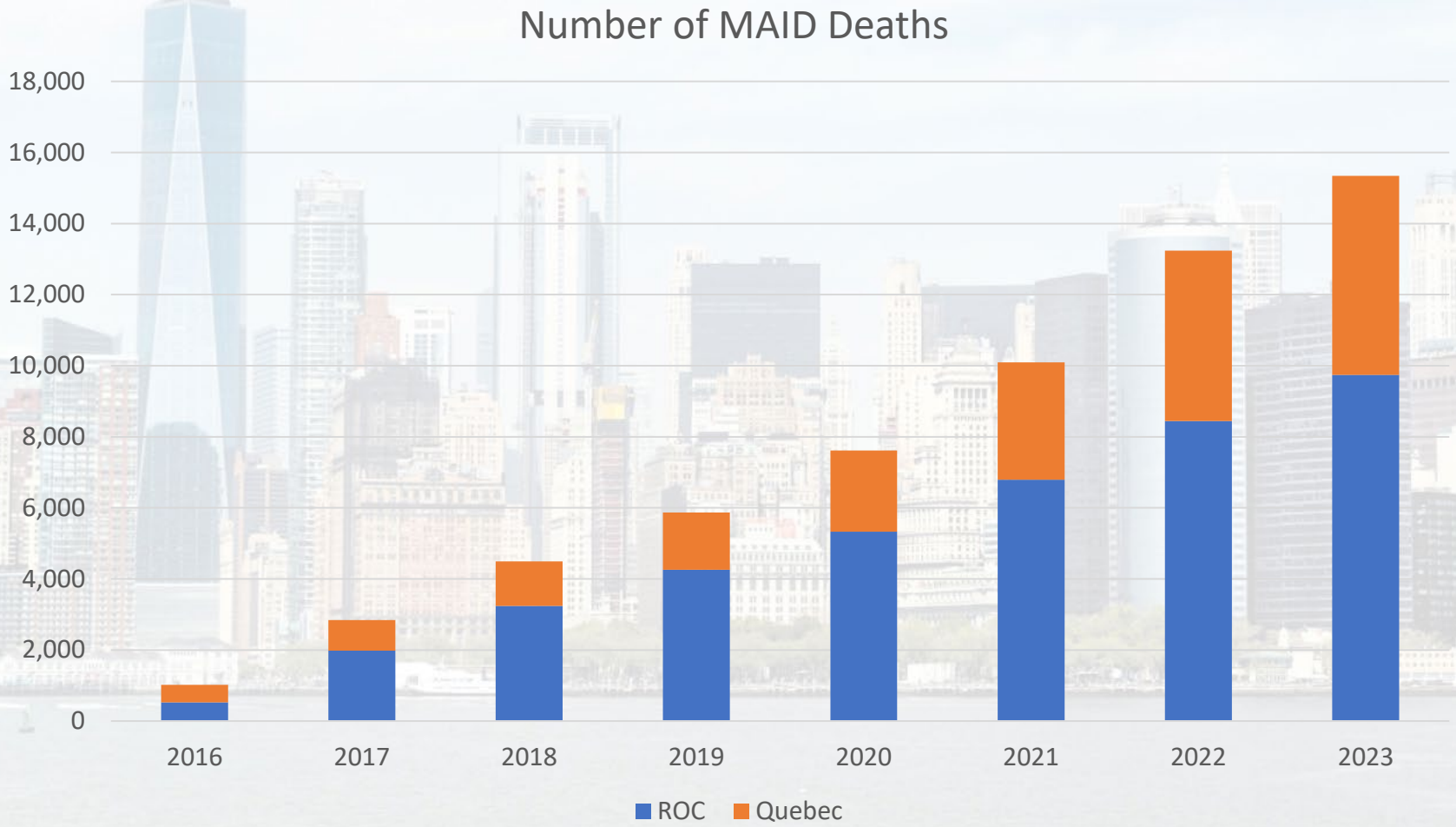
Medical Aid in Dying - Québec

- Track 1: reasonably foreseeable death
- Track 2: not reasonably foreseeable death
- 95.9% Track 1
- Gender % is 48.4% F for track 1, 58.5% for track 2

Source: 5th Report on Medical Aid in Dying 2023 , Health Canada

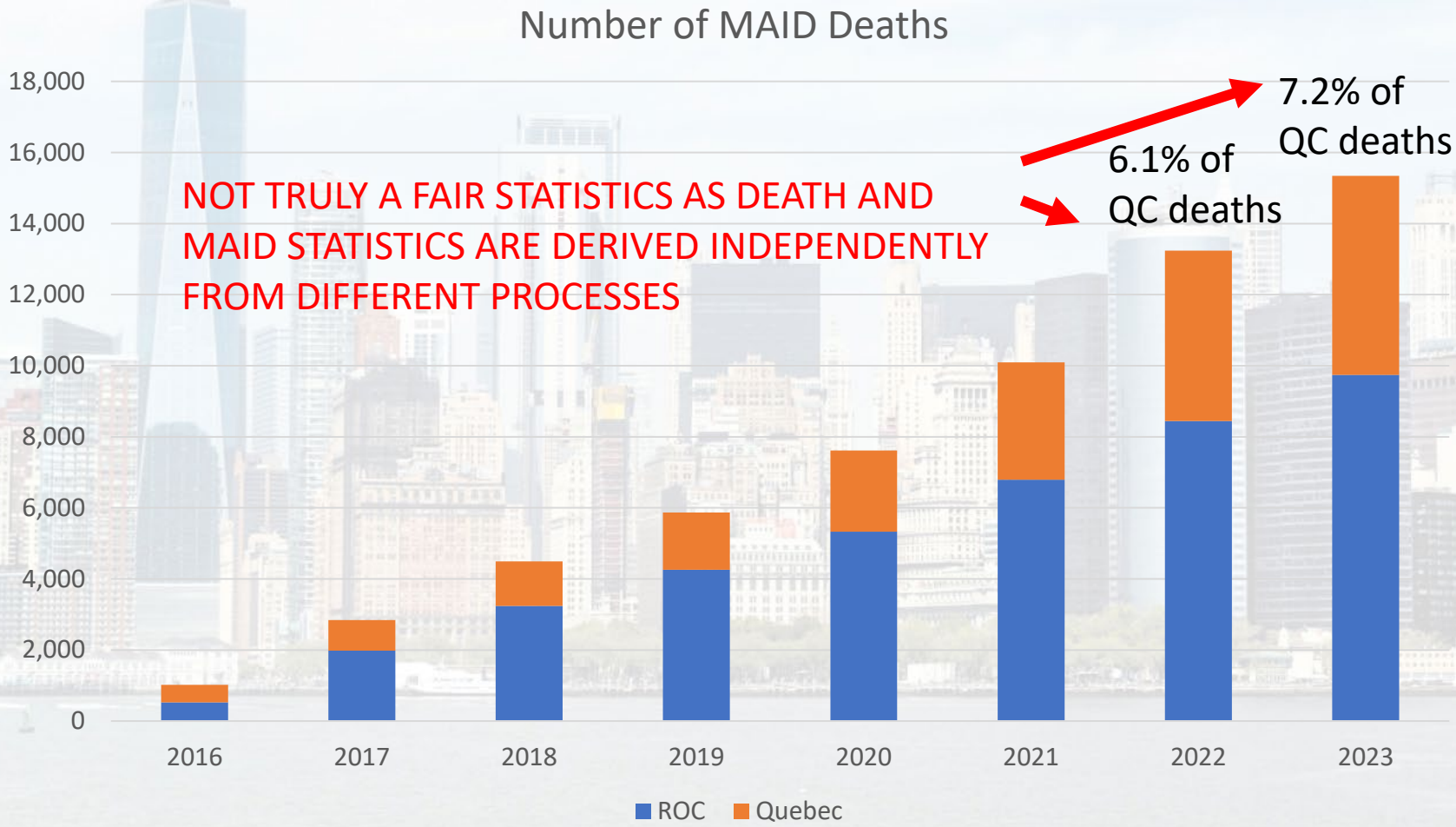


Trend in MAID – Canada and Québec



Source: 4th & 5th Report on Medical Aid in Dying 2022, 2023 , Health Canada

Trend in MAID – Canada and Québec



Calculated by the author

Source: 4th & 5th Report on Medical Aid in Dying 2022, 2023 , Health Canada

Legislation and Results

- In Canada, MAID is not counted as suicide. Keeps the cause that triggered the MAID request.
- Does not reduce suicide rate, may even increase it.[1]
- Used by older women disproportionately compared to "regular" suicide.[1]
- Depending on the wording, could range from 0.5% (Oregon 2018 [2]), to 4% (Netherlands 2018 [2]) to Quebec level (around 7%)
- Trend is for increasing public acceptance and widening criteria and, if so, rates will increase quickly.
- No major issues identified with safeguards.

Source: (1) AM Doherty et al, Investigating the relationship between euthanasia and/or assisted suicide and rates of non-assisted suicide: systematic review, BJ/ Psych Open 2022
(2) Table 3, S Mroz et al, Developments Under Assisted Dying Legislation, Deu. Artz Int. 2022

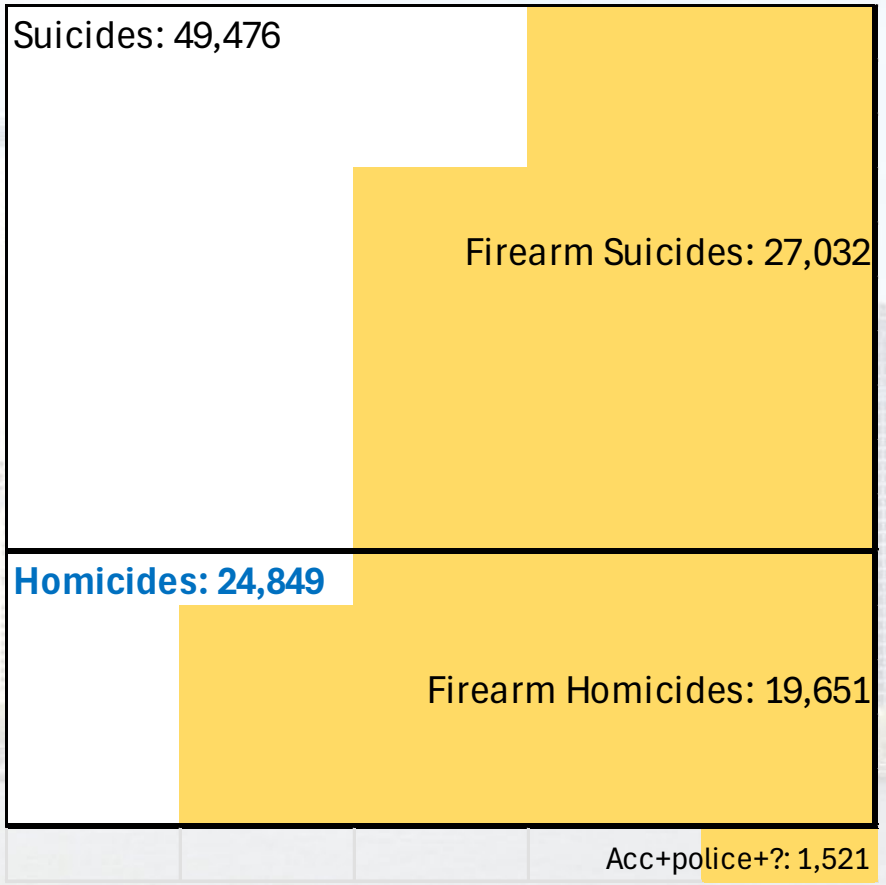
GUN VIOLENCE
David

Gun Violence in Perspective

- All suicides:
  - Number of deaths: 49,476,
  - Deaths per 100,000 population: 14.8,
  - Cause of death rank: 11
- Firearm suicides:
  - Number of deaths: 27,032,
  - Deaths per 100,000 population: 8.1
- All firearm deaths:
  - Number of deaths: 48,204,
  - Deaths per 100,000 population: 14.5
- All homicides:
  - Number of deaths: 24,849,
  - Deaths per 100,000 population: 7.5
- Firearm homicides:
  - Number of deaths: 19,651,
  - Deaths per 100,000 population: 5.9

2022 data
https://www.cdc.gov/nchs/fastats/homicide.htm
https://www.cdc.gov/nchs/fastats/suicide.htm
See also
https://www.pewresearch.org/short-reads/2023/04/26/what-the-data-says-about-gun-deaths-in-the-u-s/

Gun Violence in Perspective – # of Deaths



Gun violence – just shy of the top 10 CoD

Data table for Figure 4. Number of deaths, percentage of total deaths, and age-adjusted death rate for the 10 leading causes of death in 2022: United States, 2021 and 2022

Rank[1]	Cause of death (based on *International Classification of Diseases, 10th Revision*)	2021			2022		
		Number	Percent	Rate[2]	Number	Percent	Rate[2]
...	All causes	3,464,231	100.0	879.7	3,279,857	100.0	798.8
1	Diseases of heart (I00–I09,I11,I13,I20–I51)	695,547	20.1	173.8	702,880	21.4	167.2
2	Malignant neoplasms (cancer) (C00–C97)	605,213	17.5	146.6	608,371	18.5	142.3
3	Accidents (unintentional injuries) (V01–X59,Y85–Y86)	224,935	6.5	64.7	227,039	6.9	64.0
4	COVID-19 (U07.1)	416,893	12.0	104.1	186,552	5.7	44.5
5	Cerebrovascular diseases (stroke) (I60–I69)	162,890	4.7	41.1	165,393	5.0	39.5
6	Chronic lower respiratory diseases (J40–J47)	142,342	4.1	34.7	147,382	4.5	34.3
7	Alzheimer disease (G30)	119,399	3.4	31.0	120,122	3.7	28.9
8	Diabetes mellitus (E10–E14)	103,294	3.0	25.4	101,209	3.1	24.1
9	Nephritis, nephrotic syndrome and nephrosis (kidney disease) (N00–N07,N17–N19,N25–N27)	54,358	1.6	13.6	57,937	1.8	13.8
10	Chronic liver disease and cirrhosis (K70,K73–K74)	56,585	1.6	14.5	54,803	1.7	13.8
...	All other causes (residual)	882,775	25.5	...	908,169	27.7	...

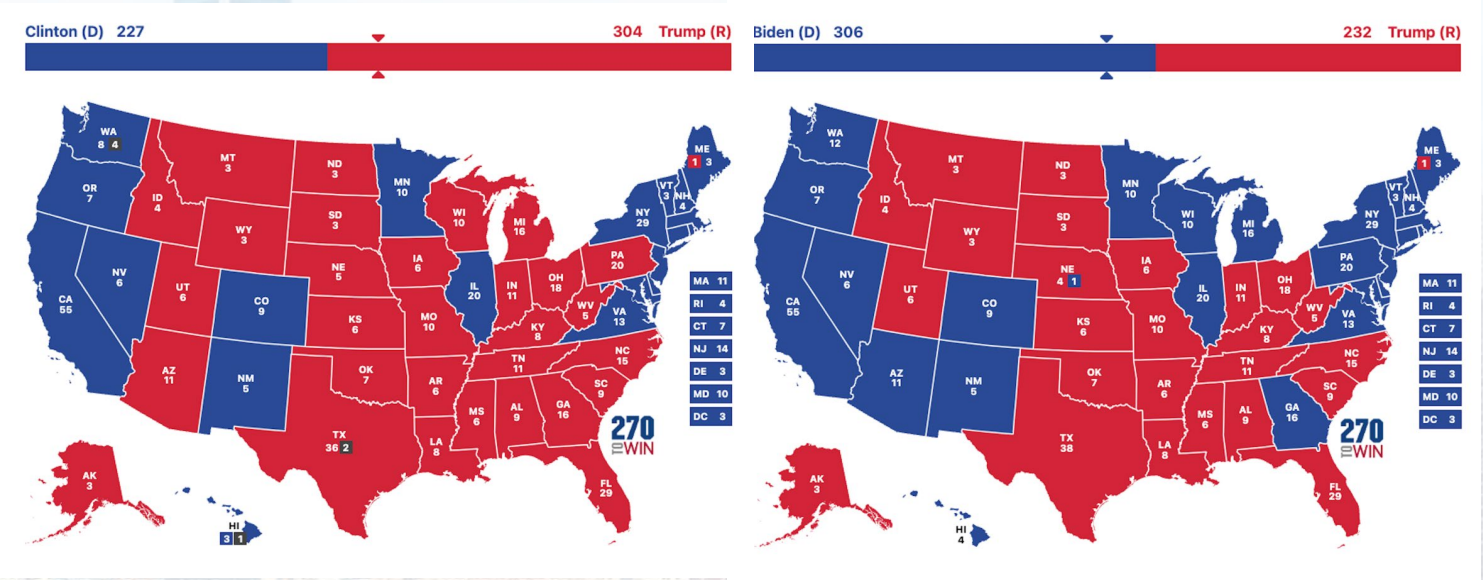
... Category not applicable.
[1]Based on number of deaths.
[2]Deaths per 100,000 U.S. standard population.

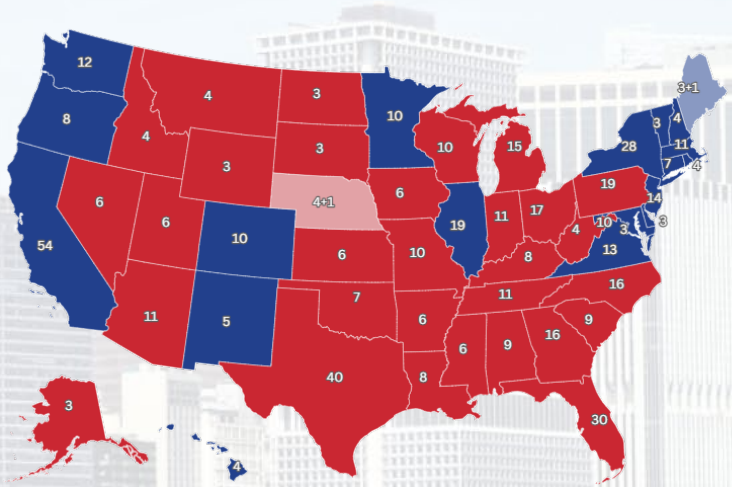
NOTES: Numbers showing percentage by cause are rounded, so these numbers may not add to 100.0%. The 10 leading causes of death accounted for 72.3% of all U.S deaths in 2022. Causes of deaths are ranked according to number of deaths. Rankings for 2021 data are not shown.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

49,476 1.5 14.8

Political Geography

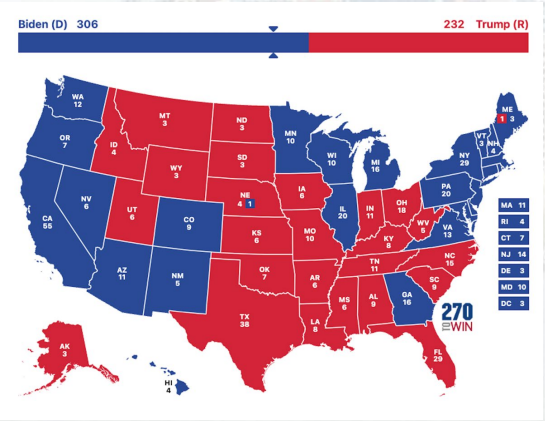


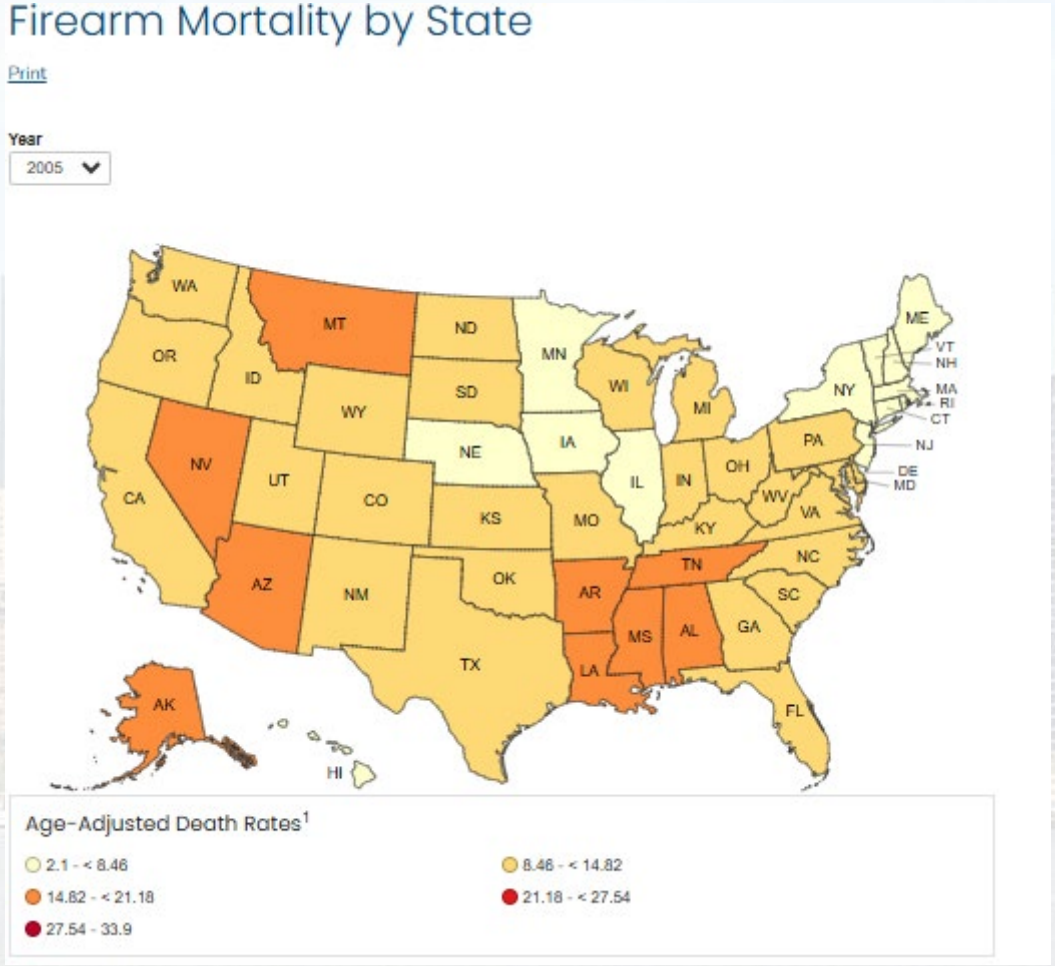


This represents the evolution of the electoral college vote over the recent history.
For illustration purposes, I select the 2016 map as comparison point.

https://www.newsweek.com/electoral-college-map-2020-2016-1981434

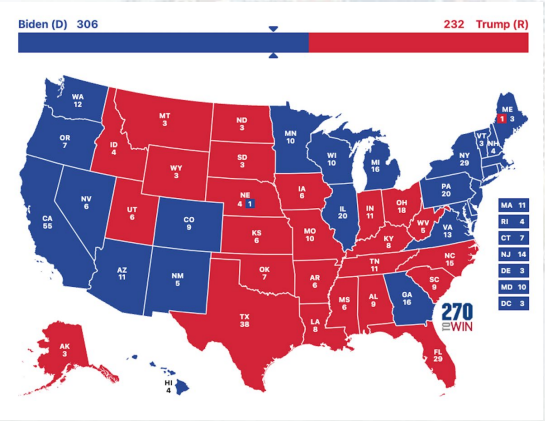
Firearm Mortality by State - 2005

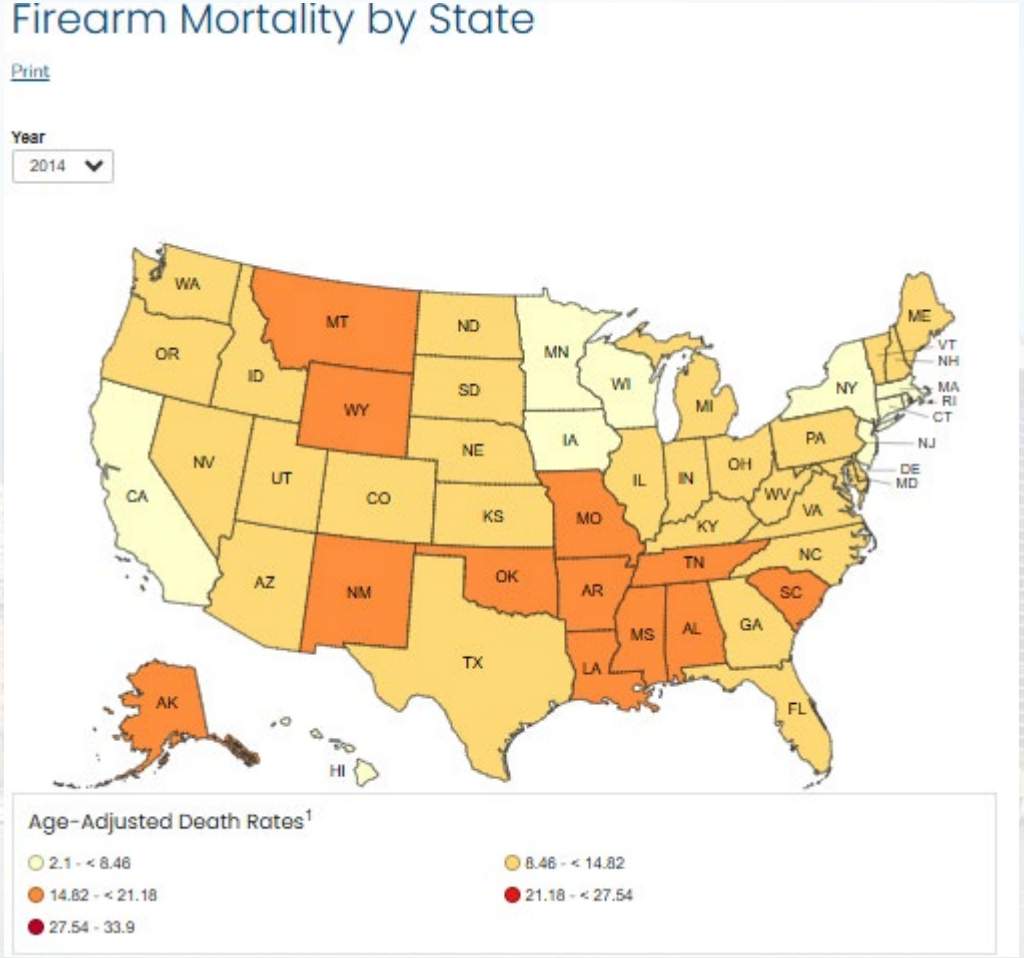




CDC data
https://www.cdc.gov/nchs/pressroom/sosmap/firearm_mortality/firearm.htm

Firearm Mortality by State - 2014





CDC data
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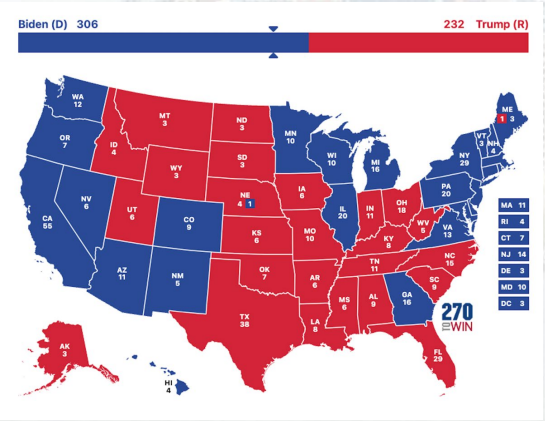
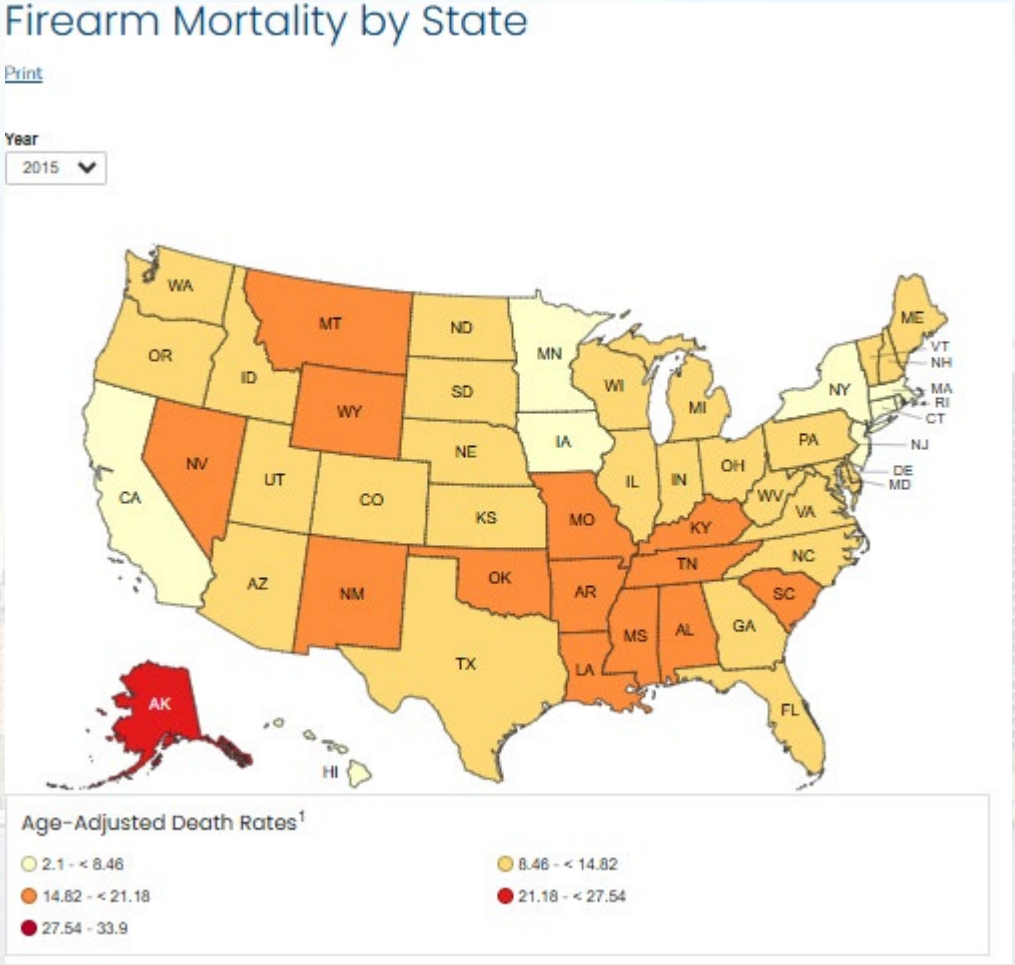
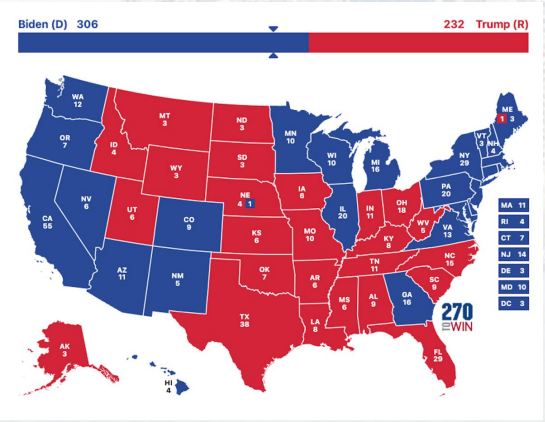
Firearm Mortality by State - 2015

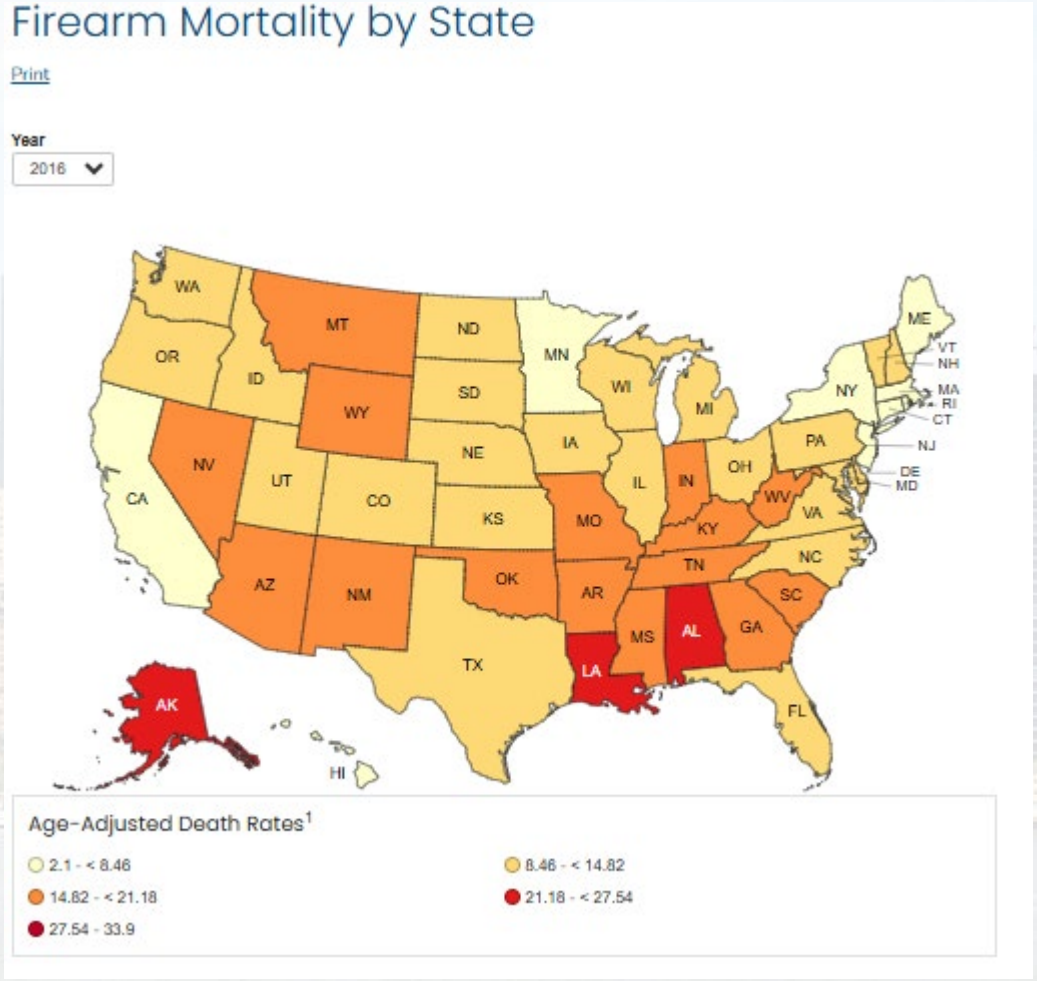




CDC data
https://www.cdc.gov/nchs/pressroom/sosmap/firearm_mortality/firearm.htm

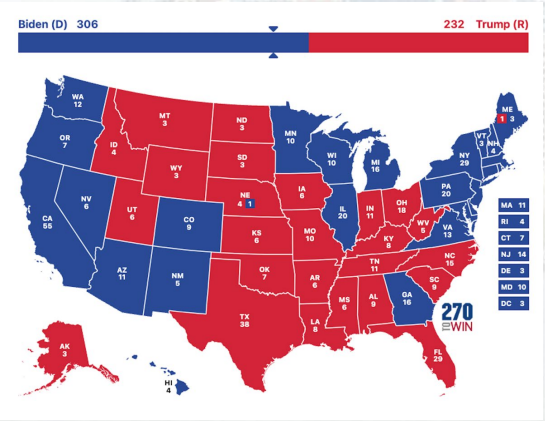
Firearm Mortality by State - 2016

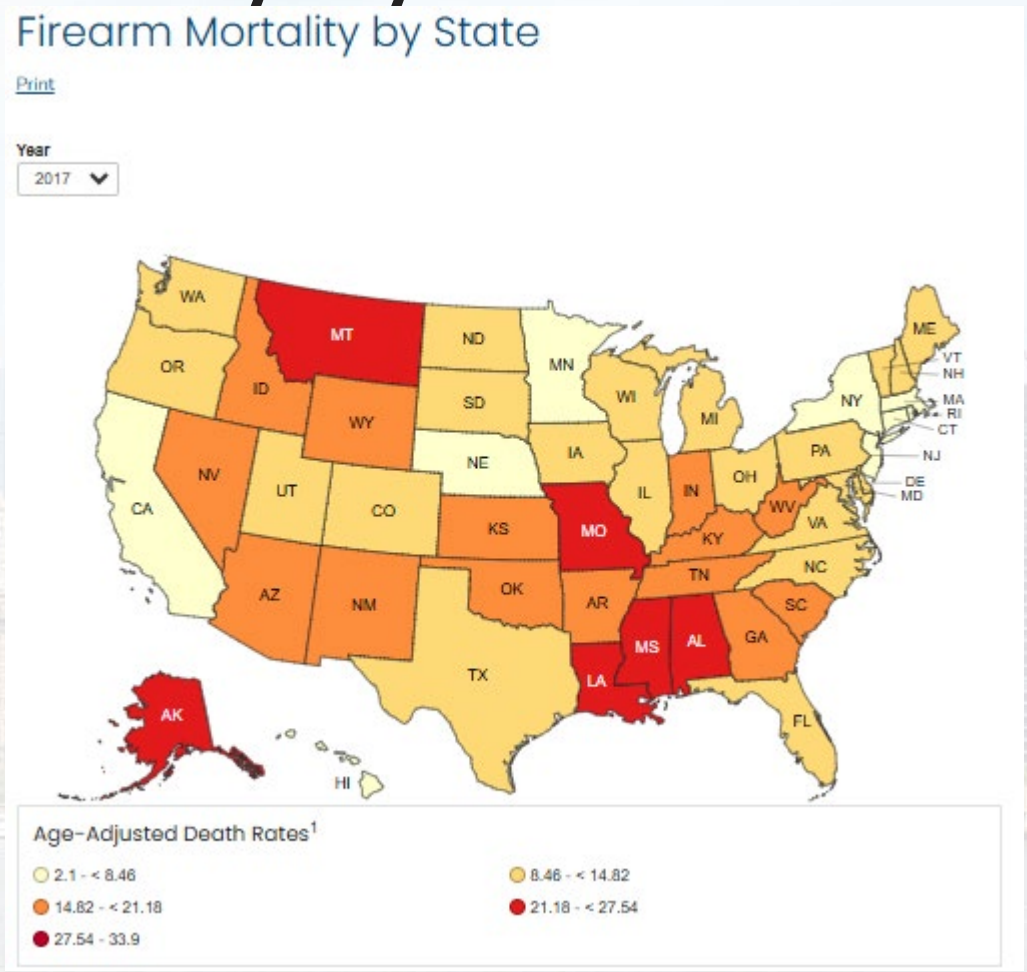




CDC data
https://www.cdc.gov/nchs/pressroom/sosmap/firearm_mortality/firearm.htm

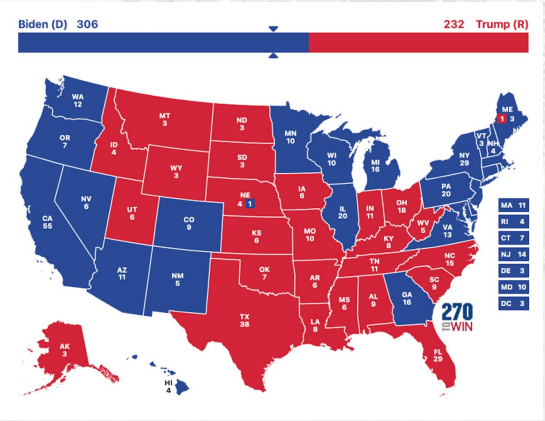
Firearm Mortality by State - 2017

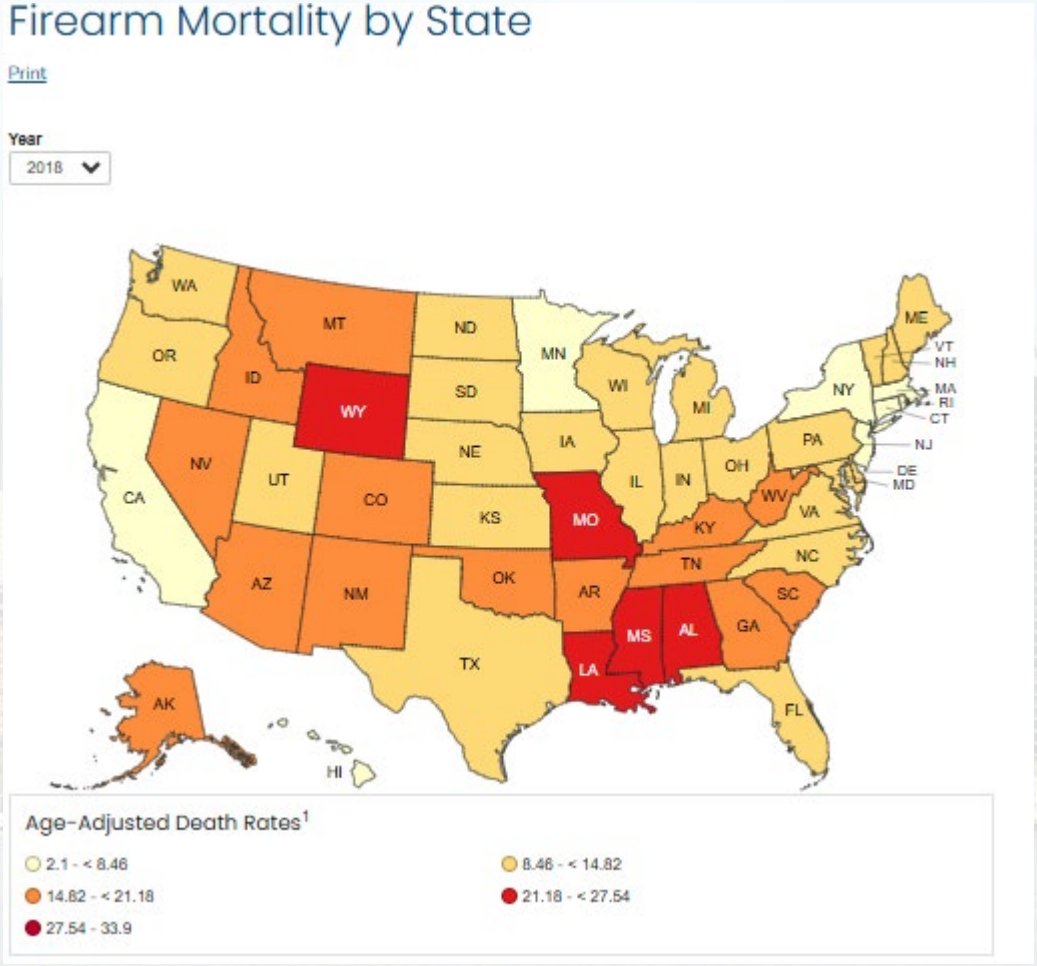




CDC data
https://www.cdc.gov/nchs/pressroom/sosmap/firearm_mortality/firearm.htm

Firearm Mortality by State - 2018





CDC data
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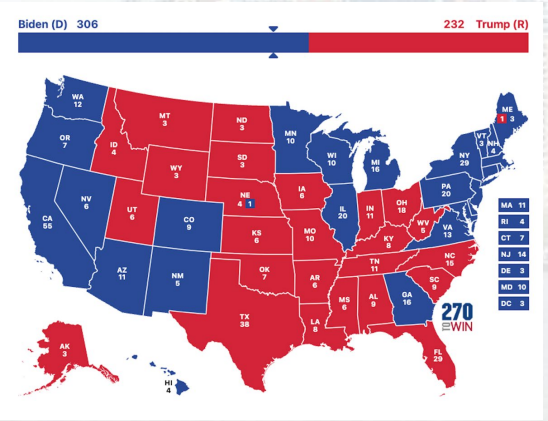
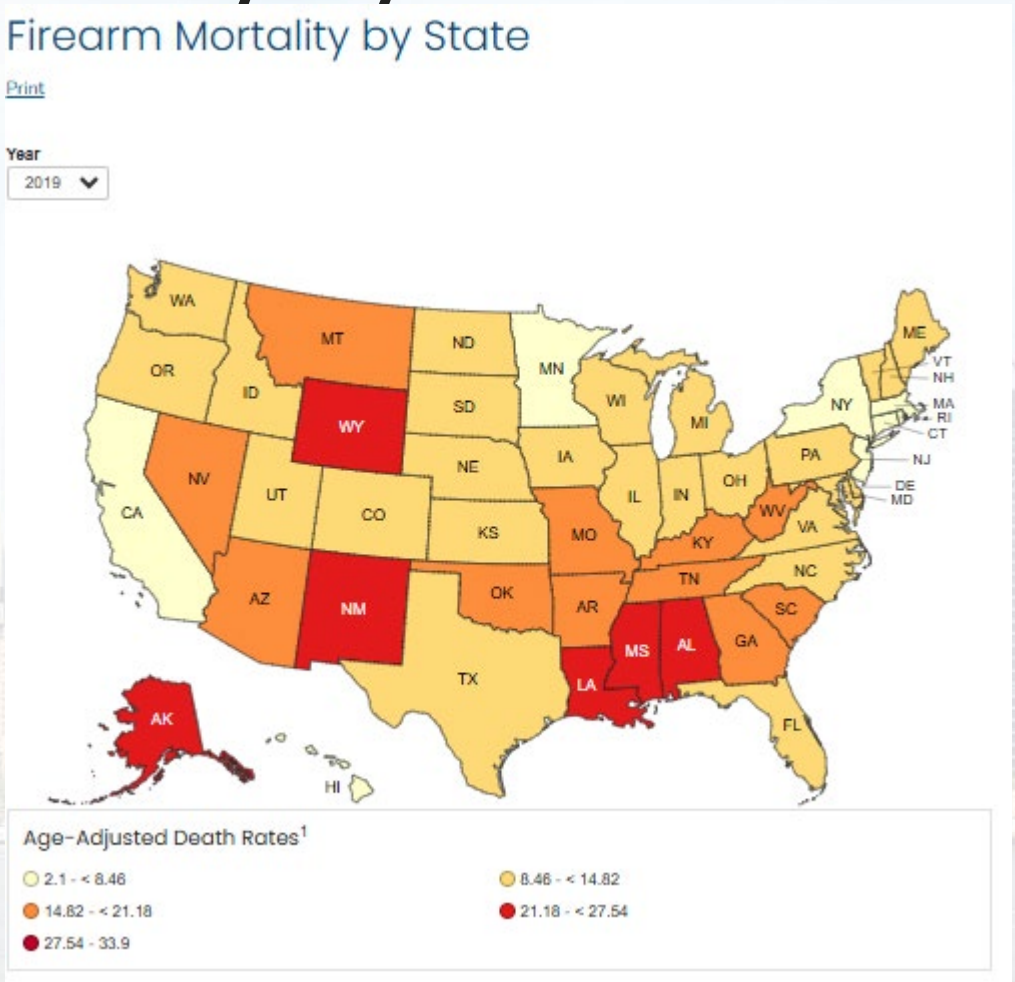
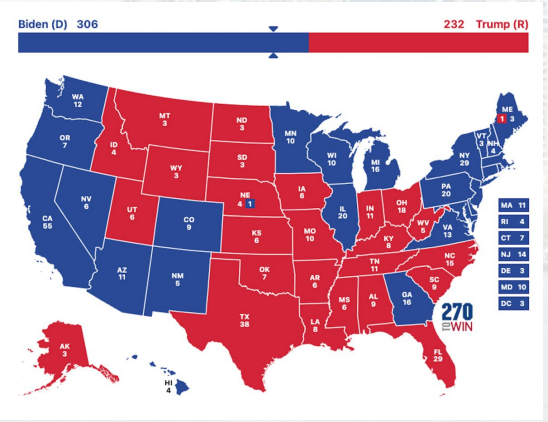
Firearm Mortality by State - 2019

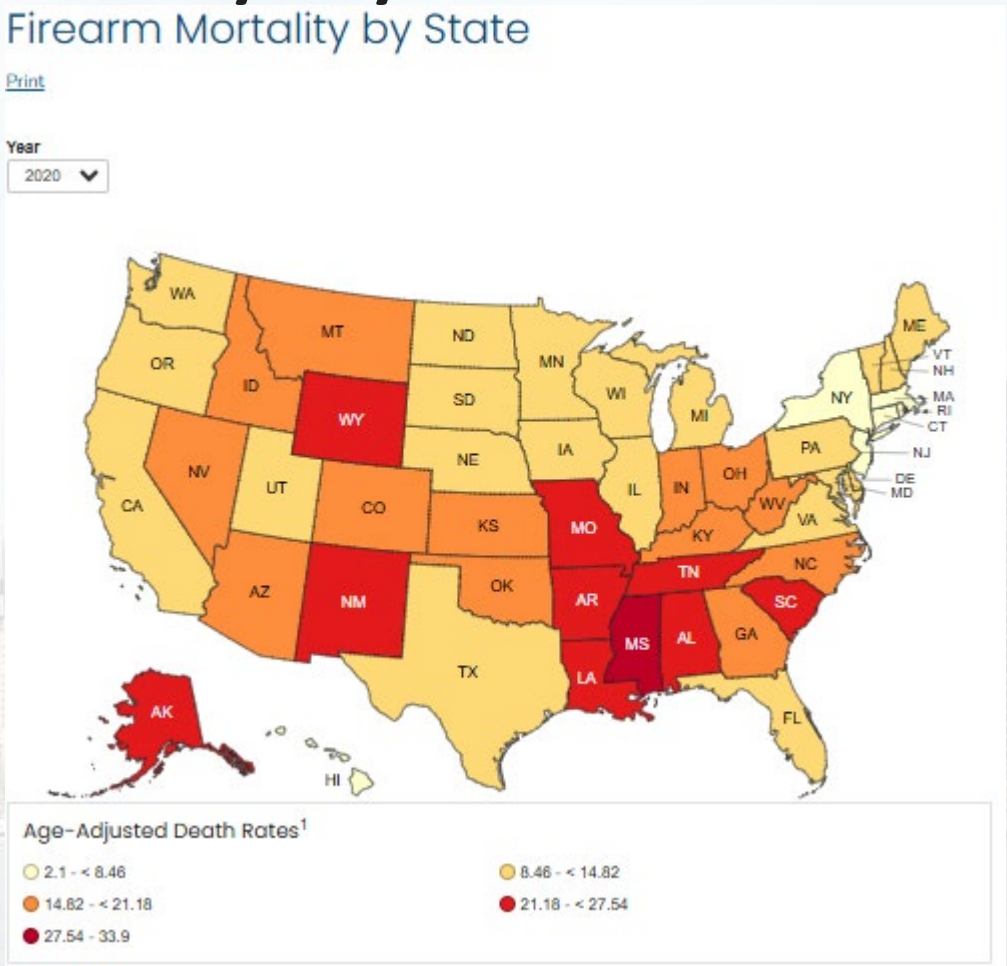




CDC data
https://www.cdc.gov/nchs/pressroom/sosmap/firearm_mortality/firearm.htm

Firearm Mortality by State - 2020





CDC data
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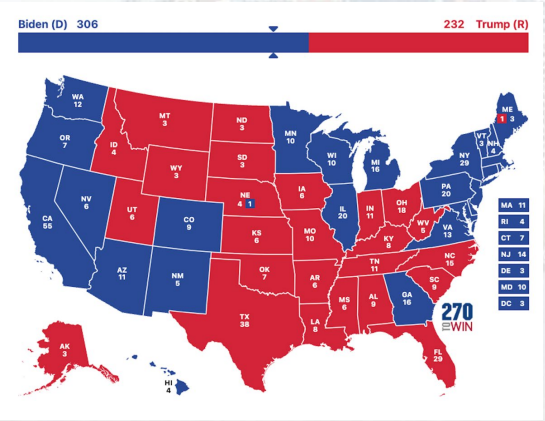
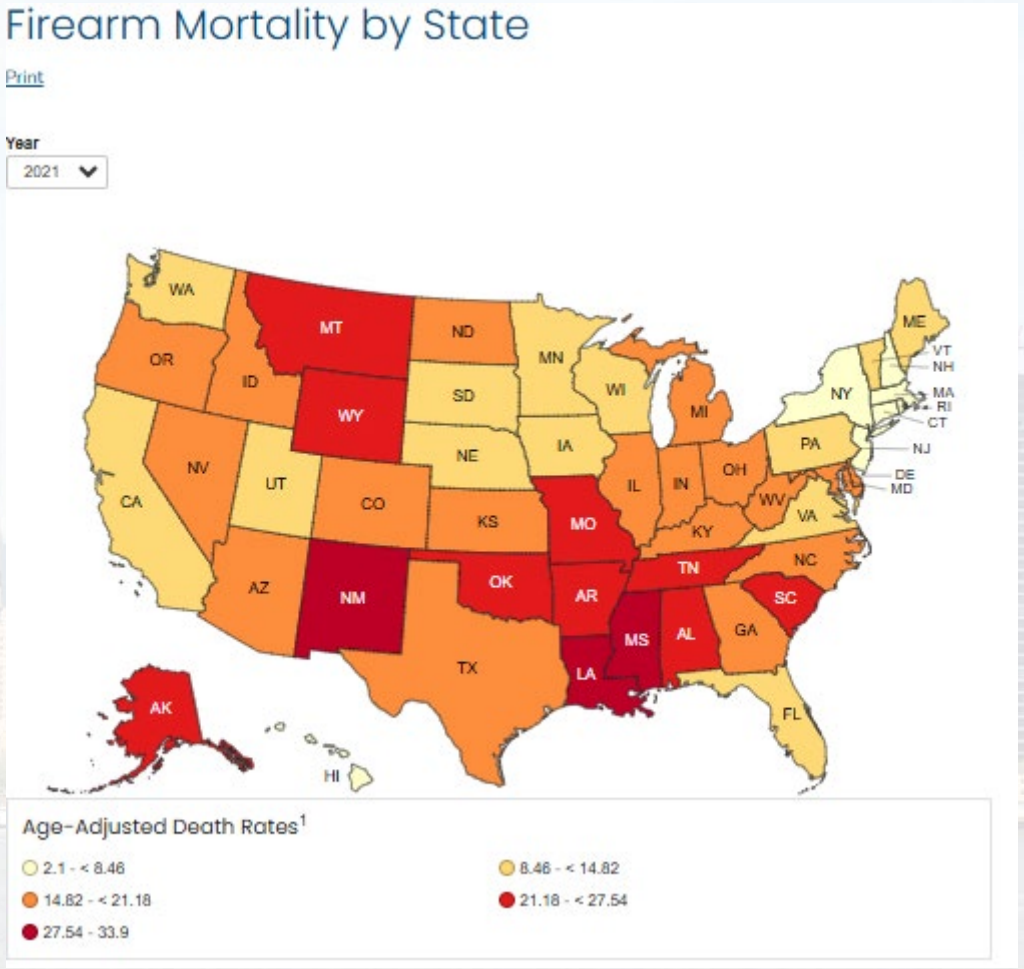
Firearm Mortality by State – 2021





CDC data
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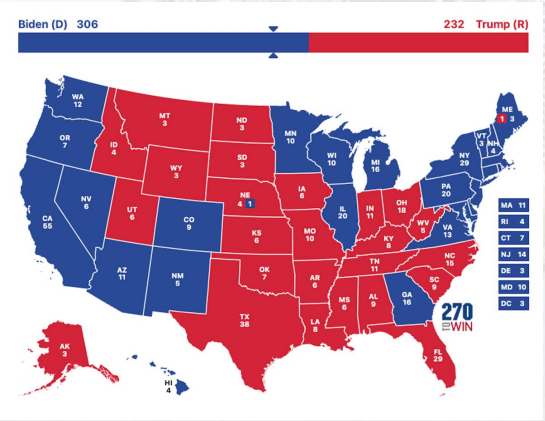
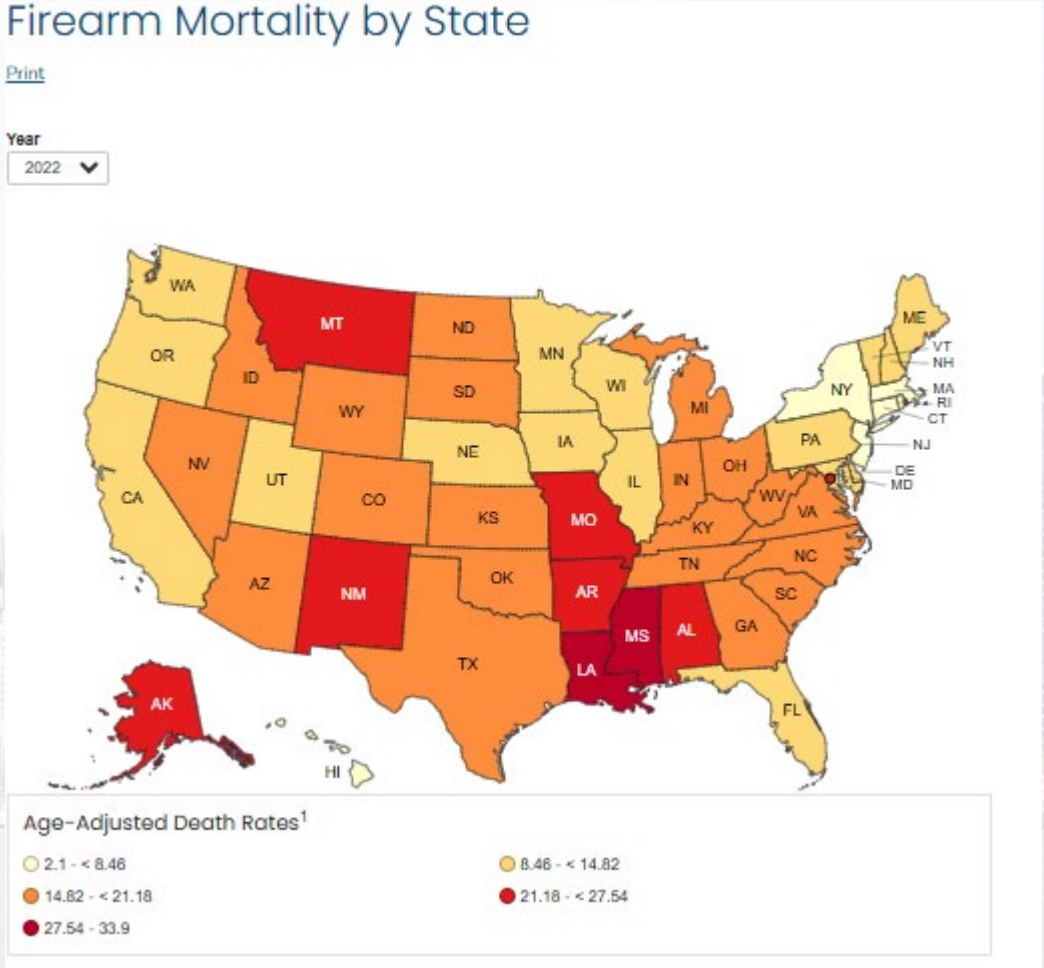
Firearm Mortality by State - 2022





CDC data
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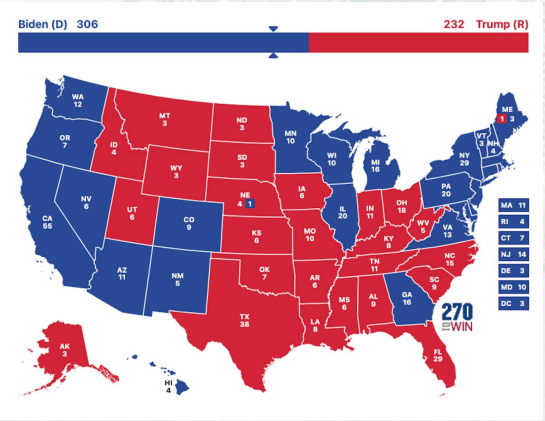
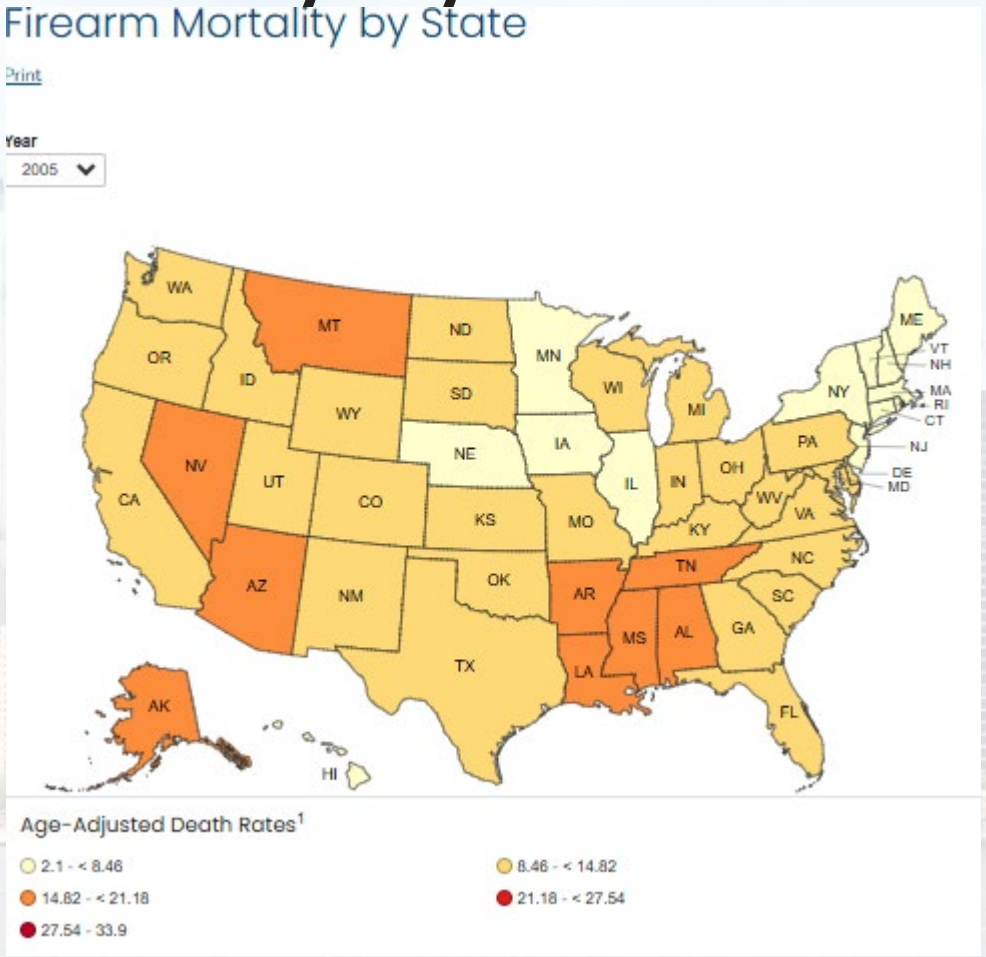
Homicide Mortality by State - 2005





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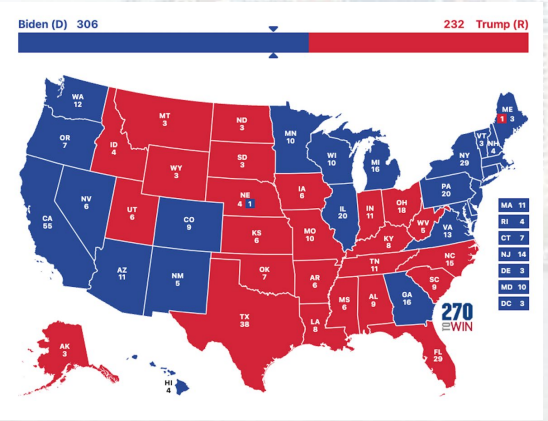
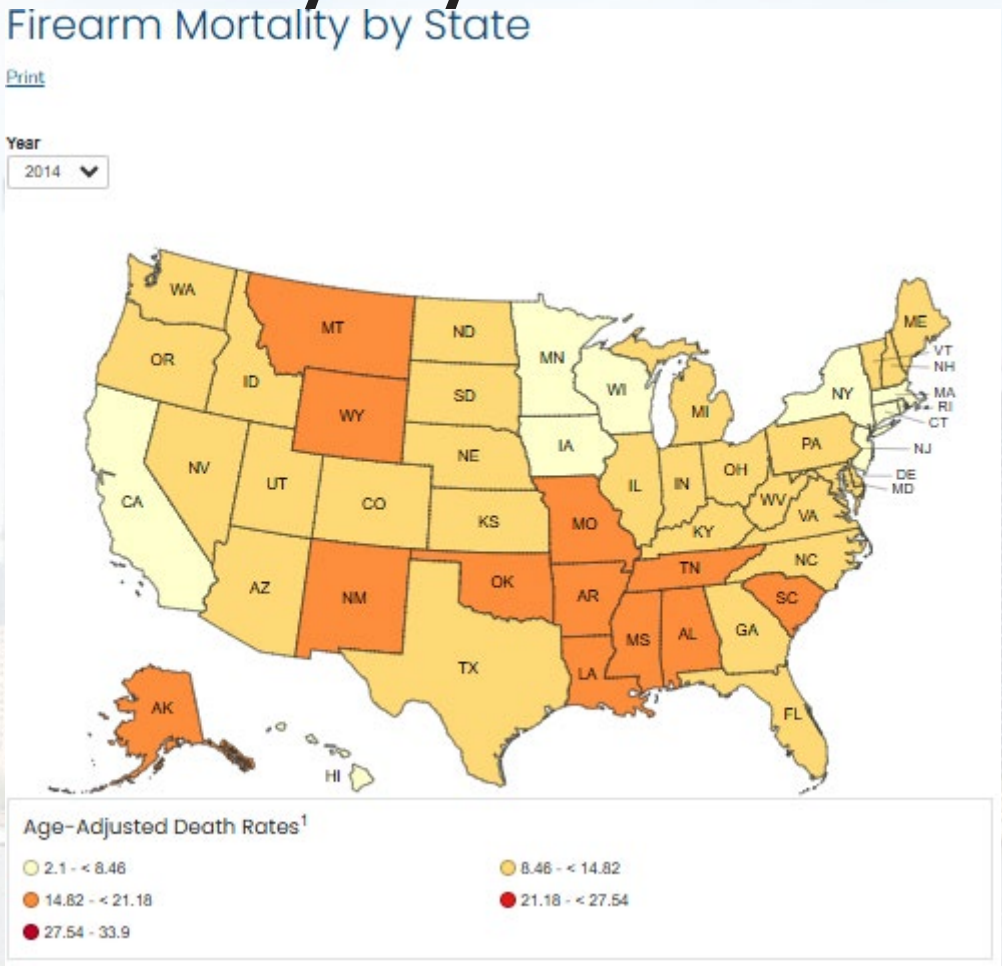
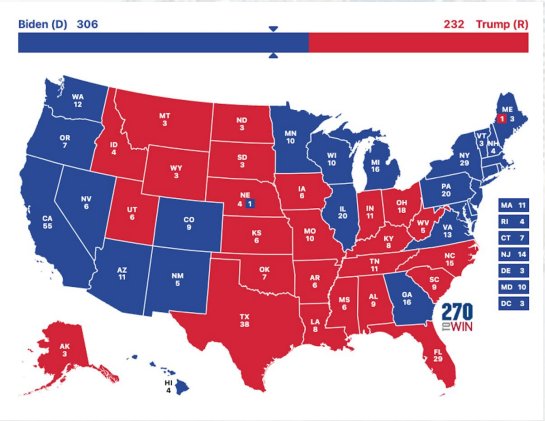
Homicide Mortality by State - 2014

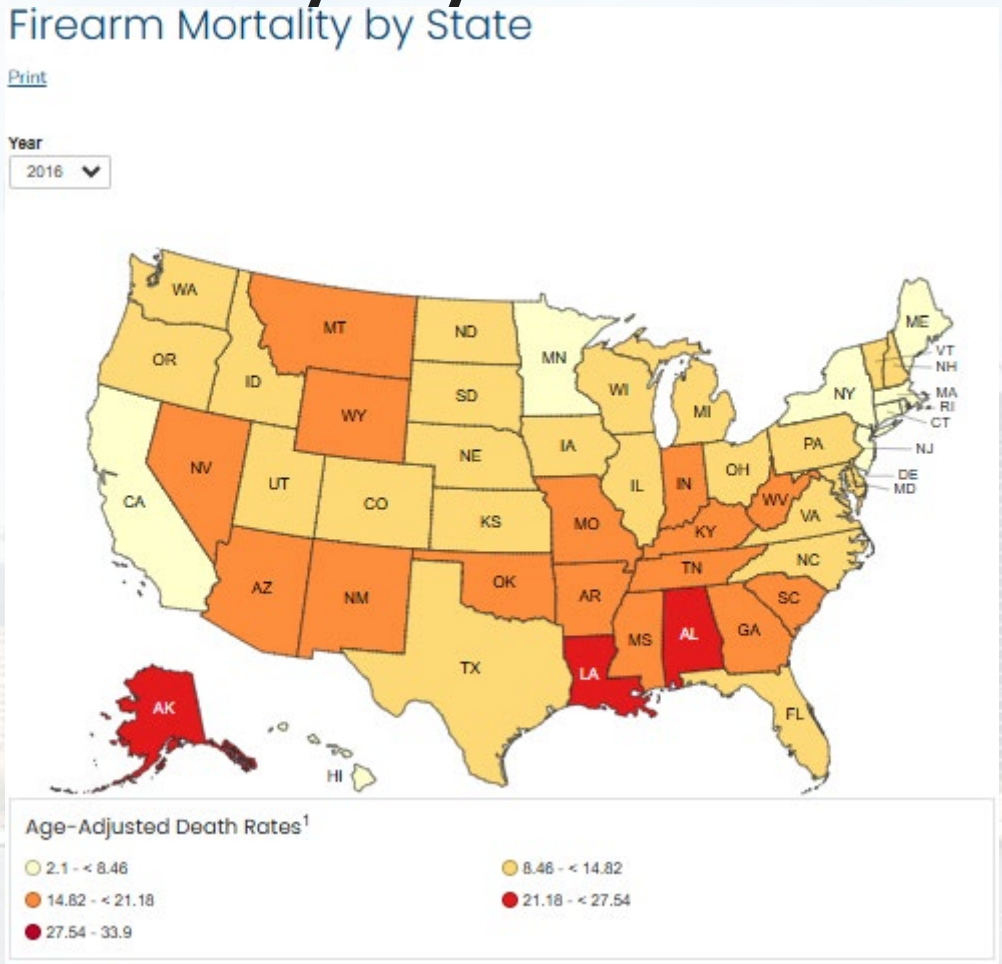




https://www.cdc.gov/nchs/pressroom/sosmap/firearm_mortality/firearm.htm

Homicide Mortality by State - 2016





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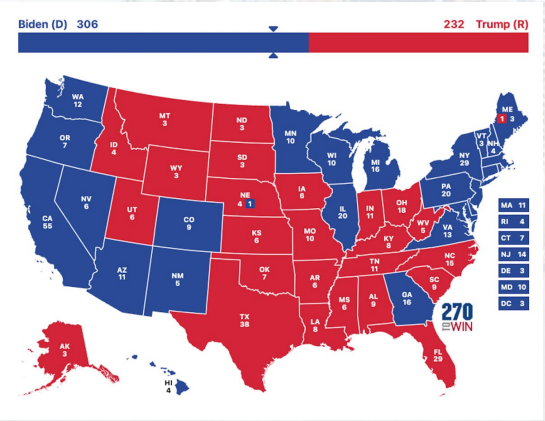
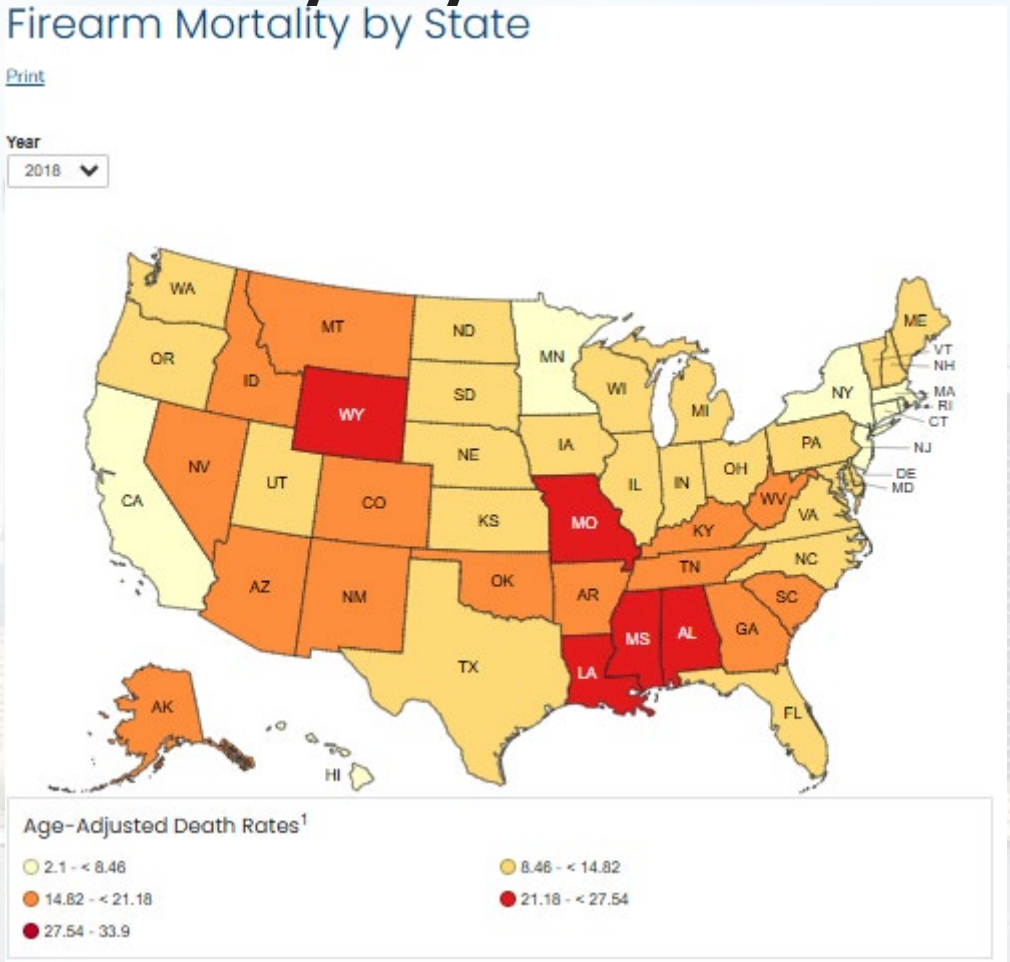
Homicide Mortality by State - 2018





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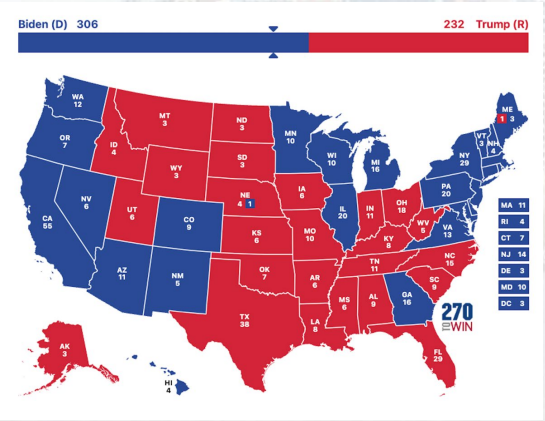
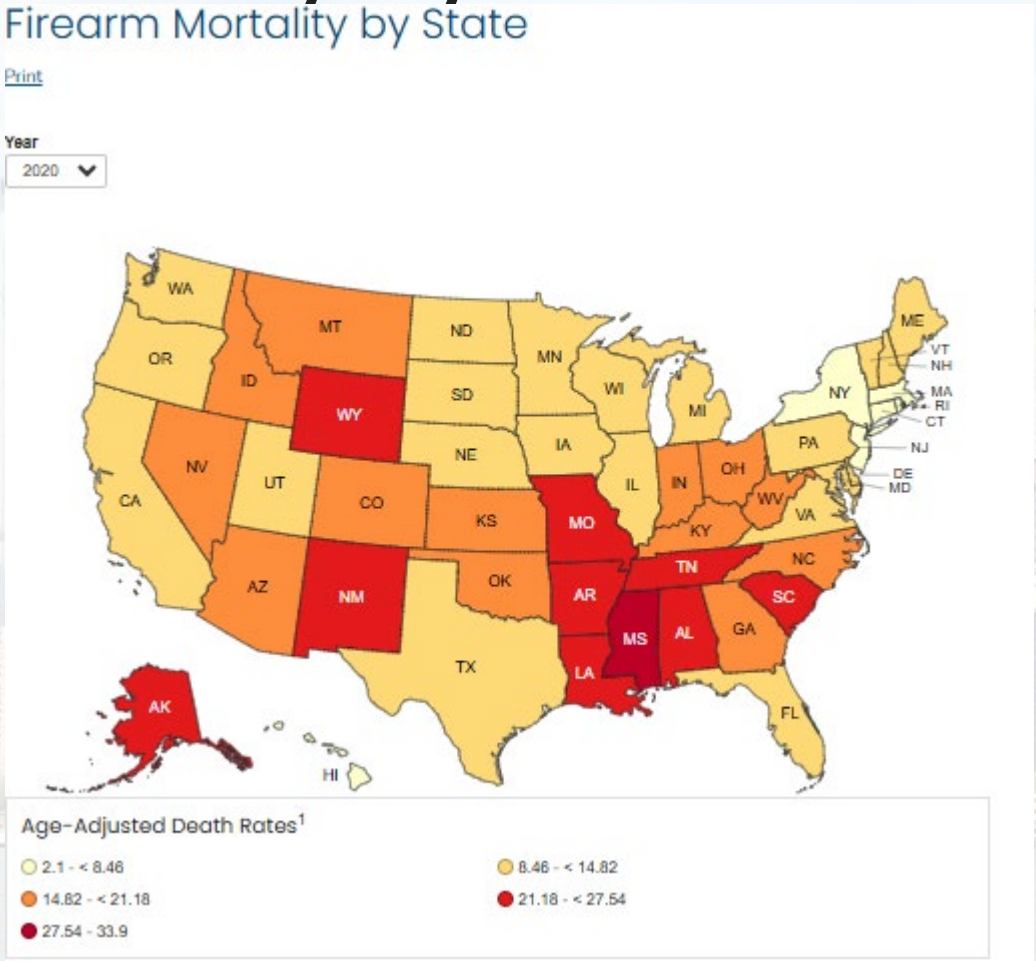
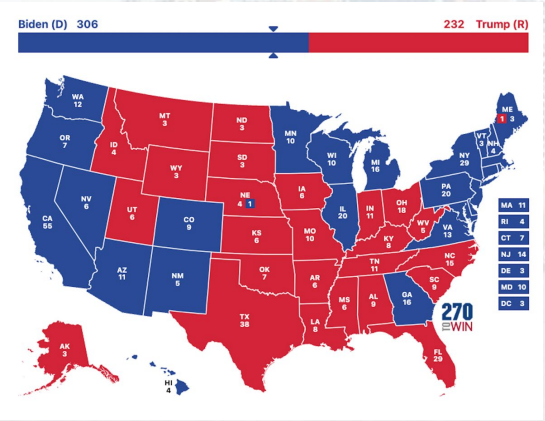
Homicide Mortality by State - 2020

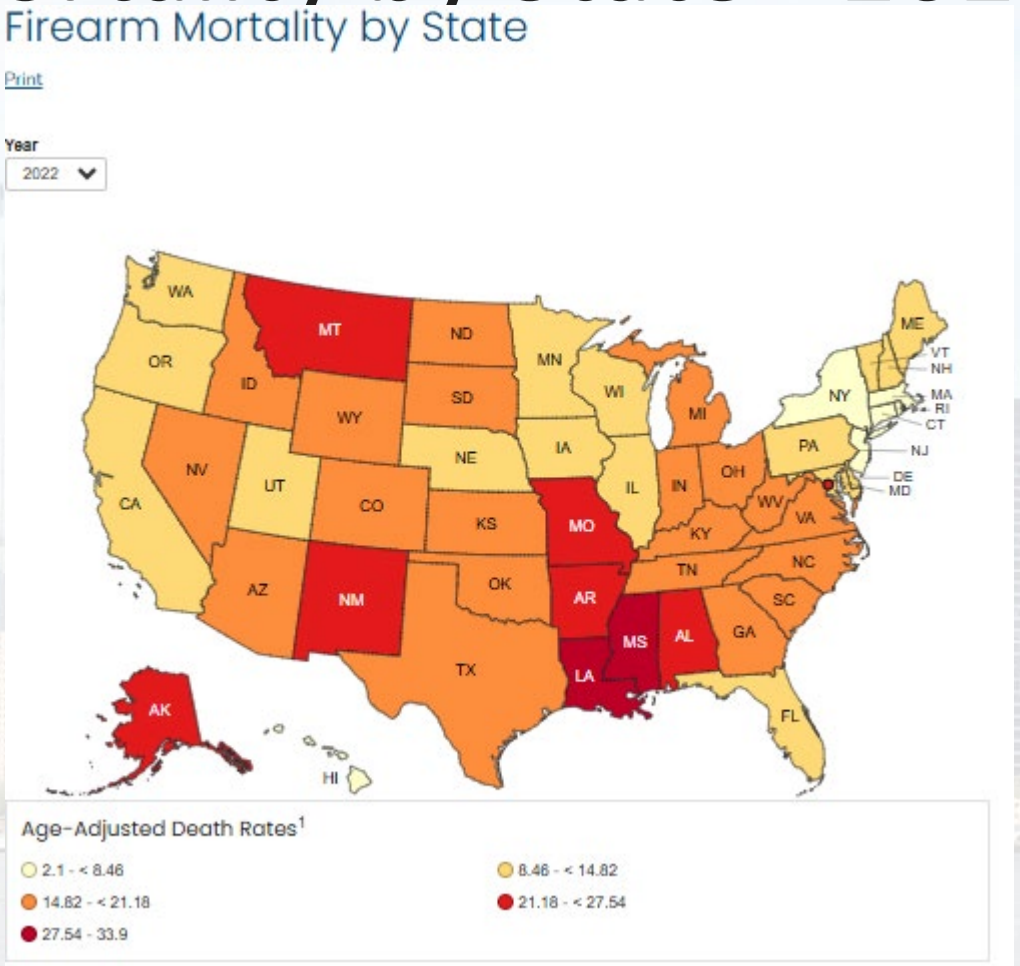




https://www.cdc.gov/nchs/pressroom/sosmap/firearm_mortality/firearm.htm

Homicide Mortality by State - 2022





https://www.cdc.gov/nchs/pressroom/sosmap/firearm_mortality/firearm.htm

What are these maps telling us?

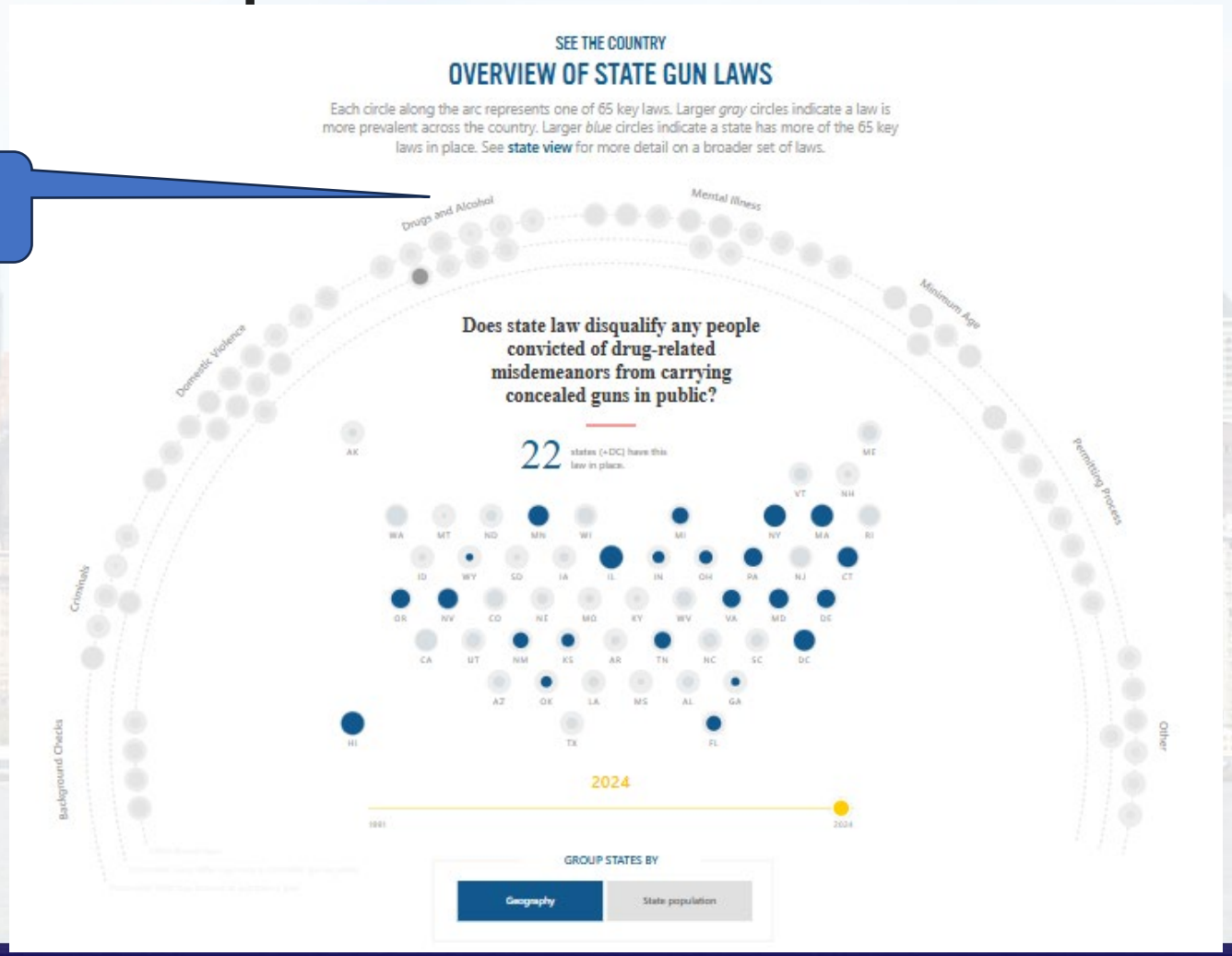
- Gun violence is increasing
- Circumstantial evidence
- Taking a look at "Firearm Mortality by State – 2021" map has similarity with the political map
  - Cause and effect?
  - Correlation and causation? Confounding variables?

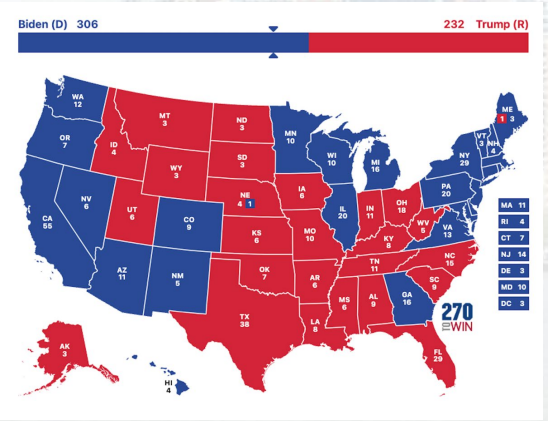
Gun Law Comparison Categories

- Background Check (e.g. criminal background check required for all firearms, background check record keeping)
- Criminals (e.g. convicted felon, misdemeanor)
- Domestic Violence (e.g. misdemeanor, retraining order, stalker)
- Drugs and Alcohol (e.g. drug treatment, alcohol misdemeanor)
- Mental Illness (e.g. insanity pleas, involuntary outpatient)
- Minimum Age (e.g. purchasing, owning)
- Permitting Process (e.g. required training, renewal)
- Other (e.g. fugitive, immigration status, military discharge)

Gun laws comparison

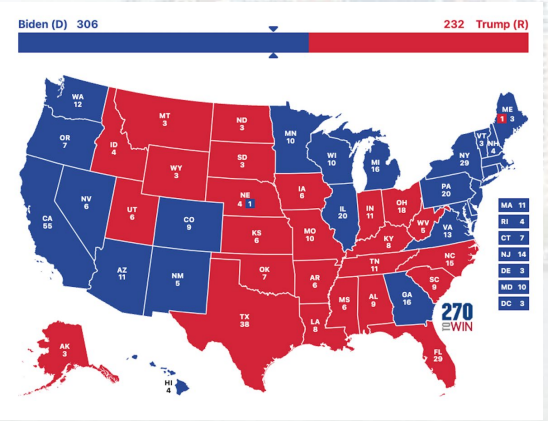
Drug & alcohol

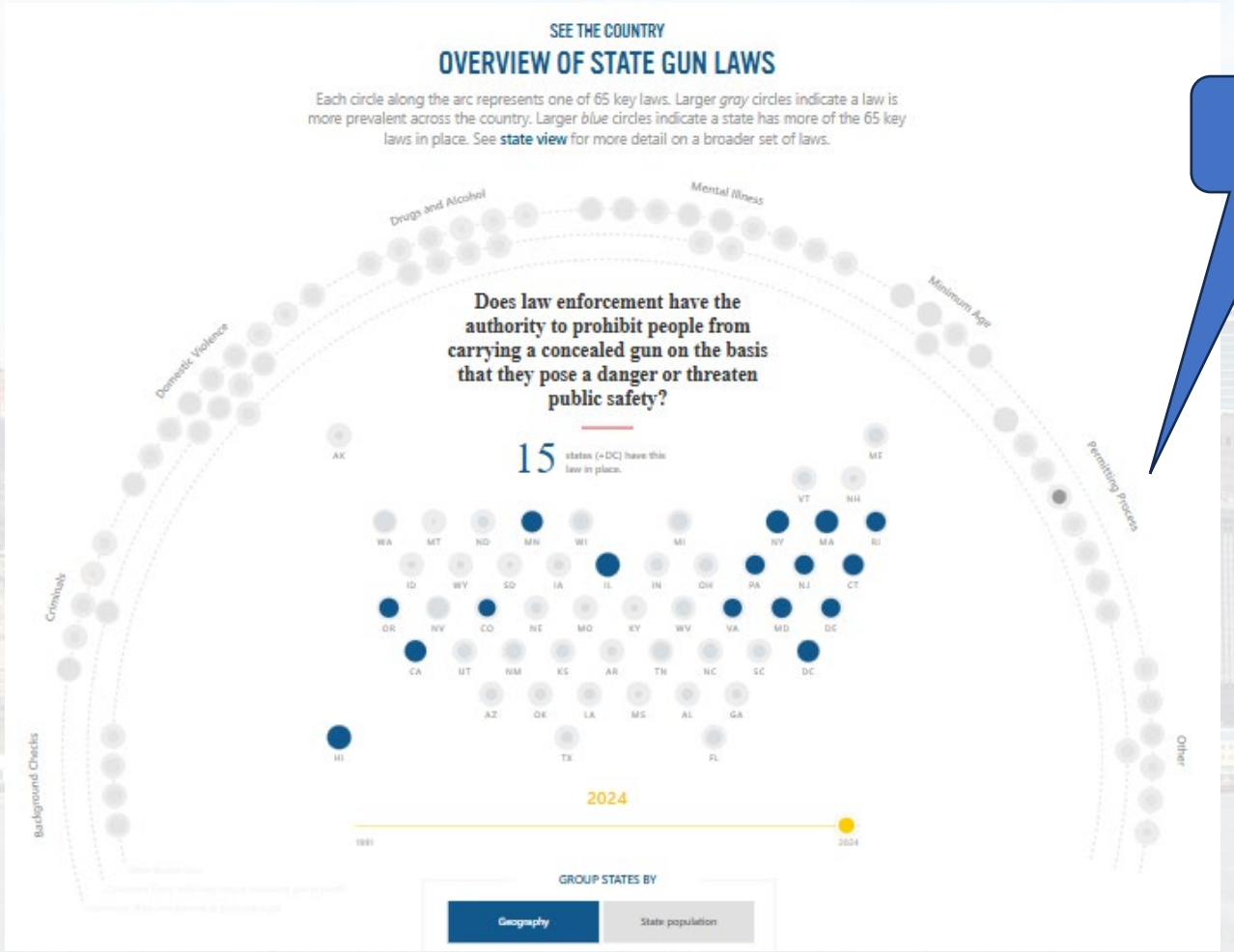




https://maps.everytownresearch.org/navigator/country.html

Gun laws comparison

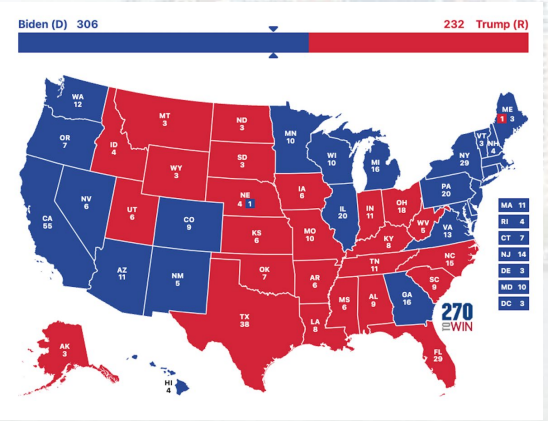


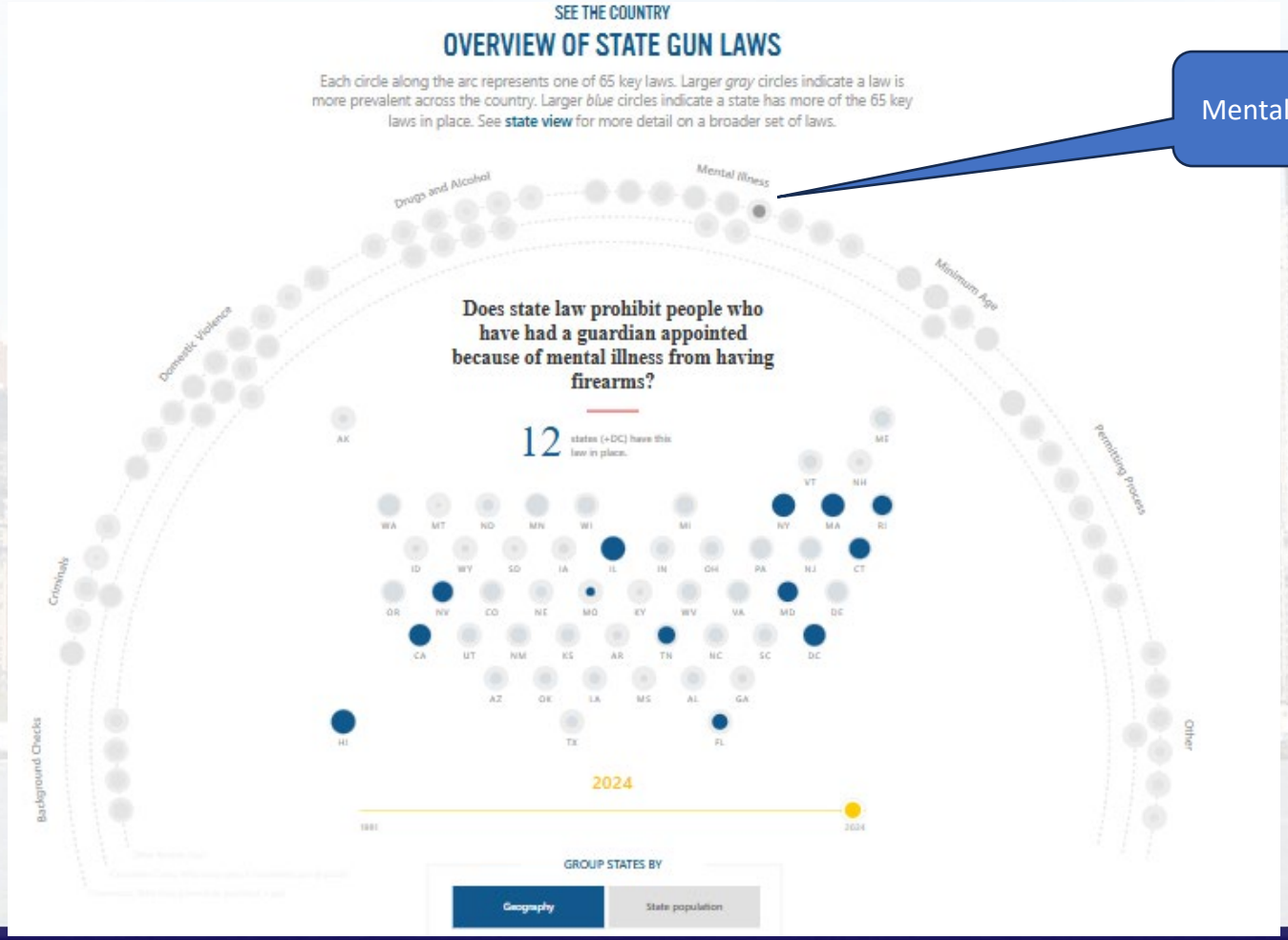


Permitting process

https://maps.everytownresearch.org/navigator/country.html

Gun laws comparison

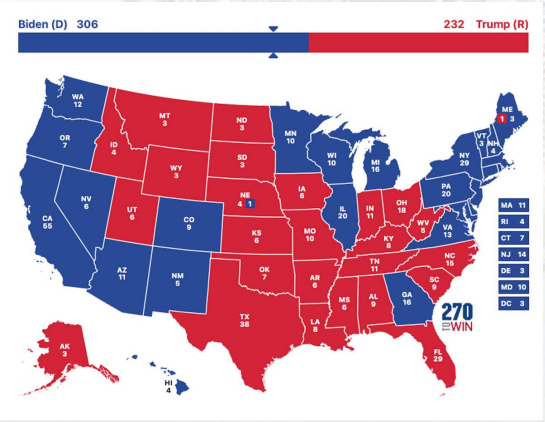


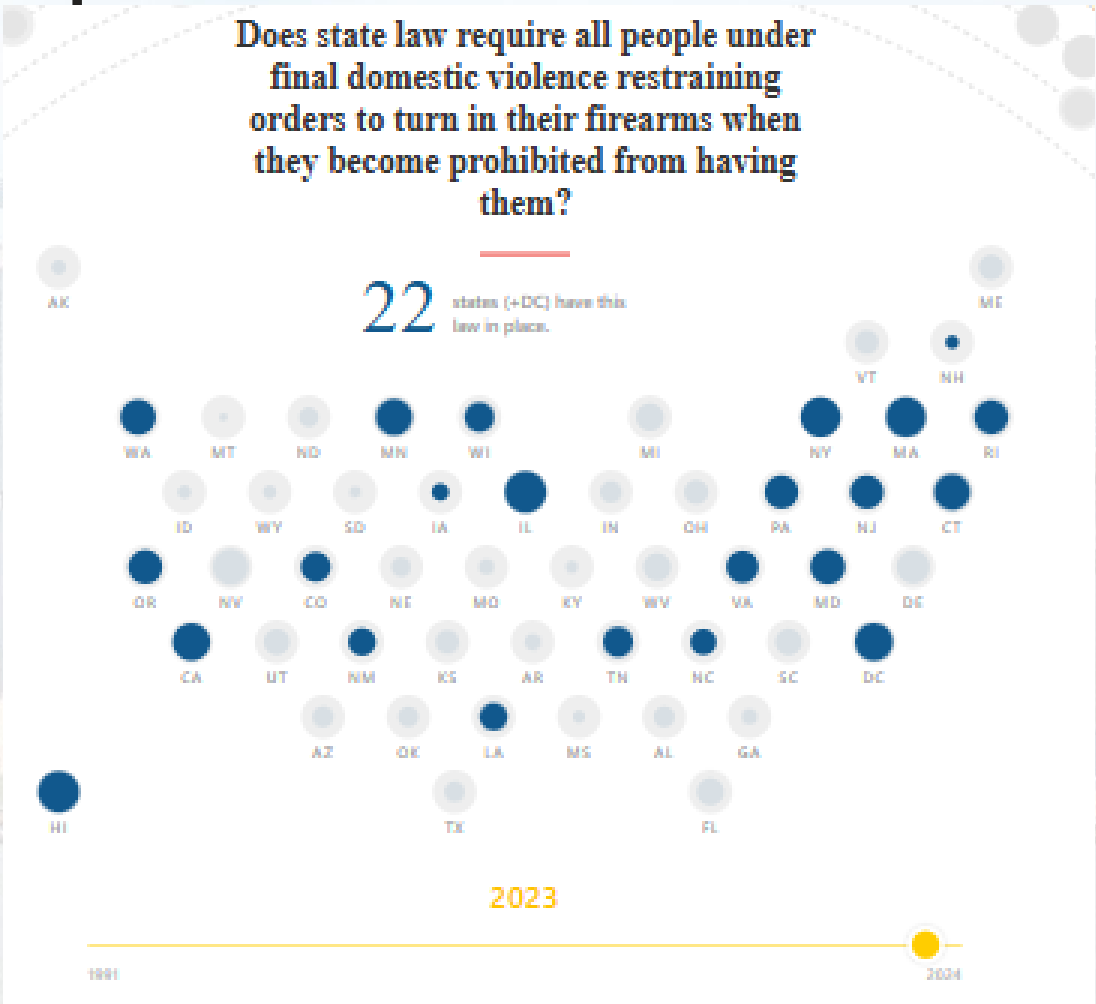


Mental illness

https://maps.everytownresearch.org/navigator/country.html

Gun laws comparison

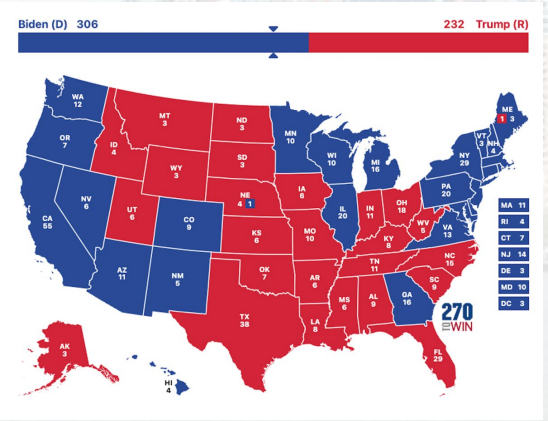


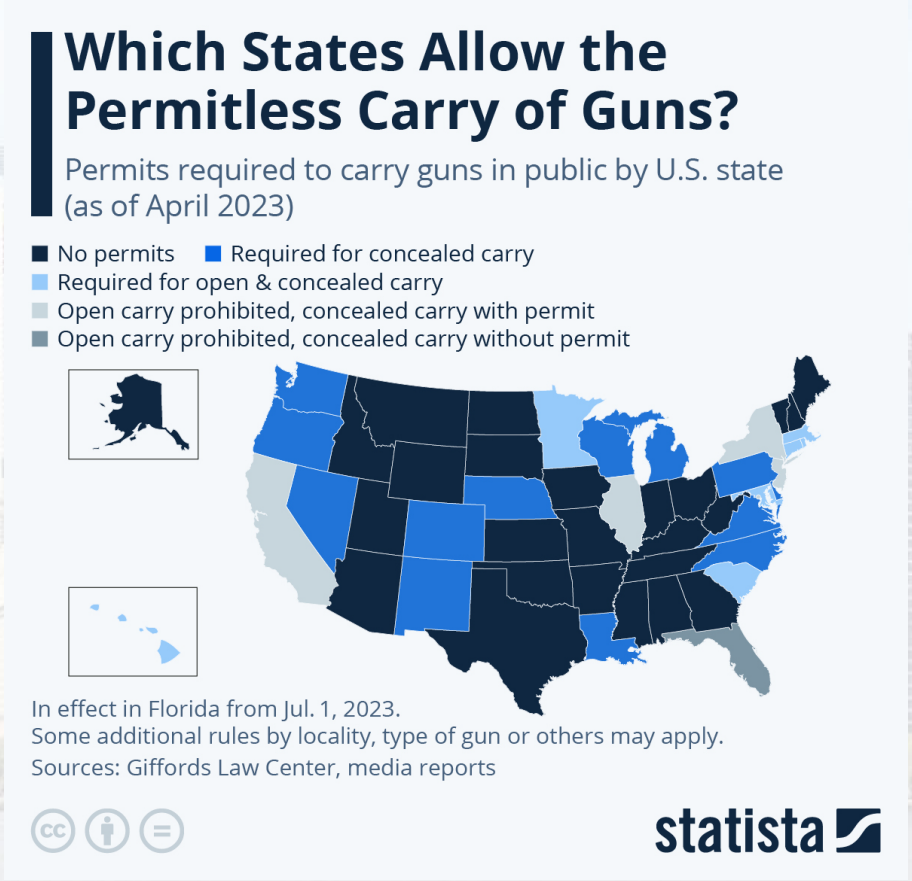


Map showing the strength of the language of the law in 2023 regarding domestic violence. This map can be compared with the political footprint

https://maps.everytownresearch.org/navigator/country.html

Gun laws comparison





https://www.statista.com/chart/20047/gun-carry-laws-in-us-states/

What are these new maps telling us?

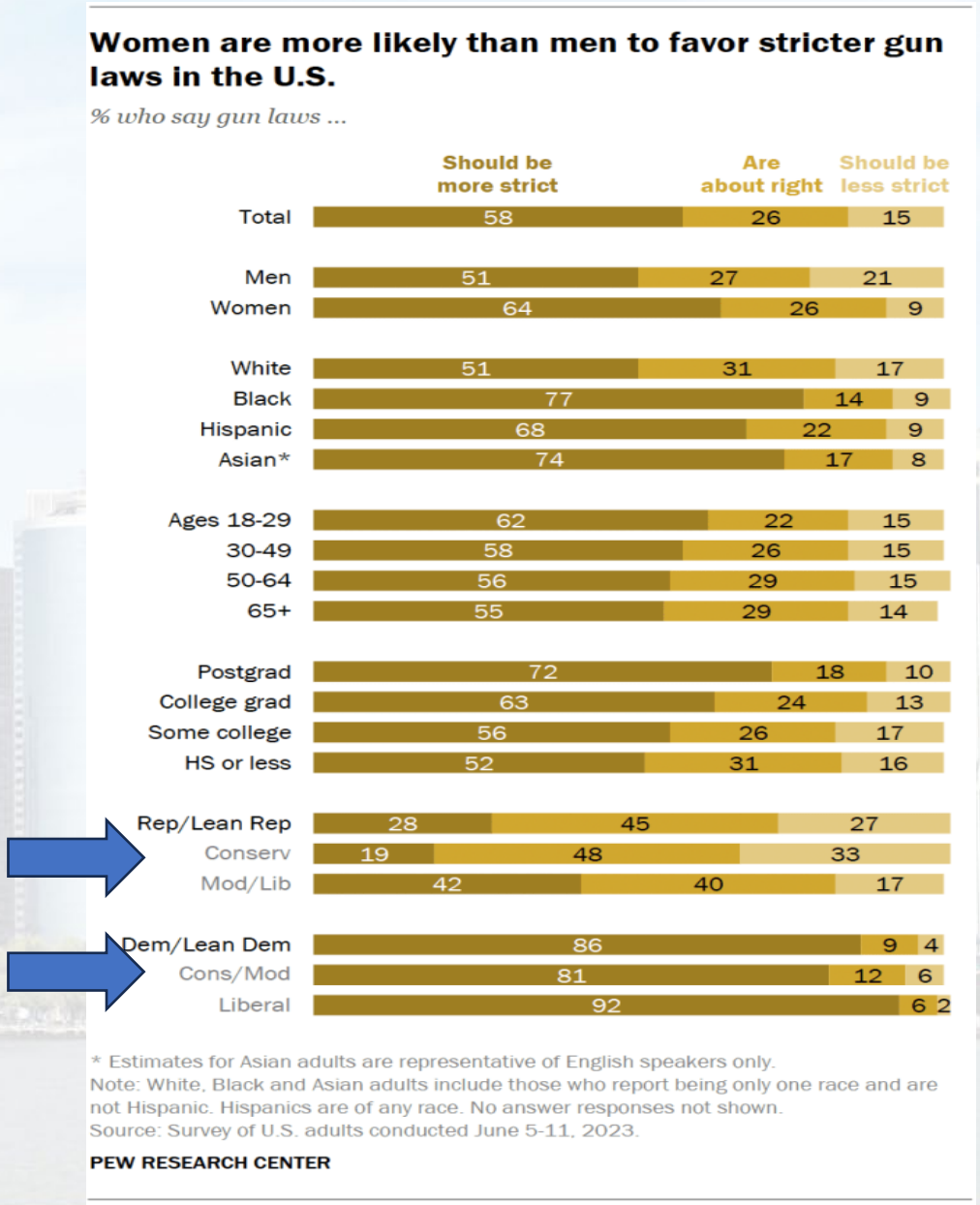
- Alignment between the political map and the strength of the legal framework
- Laws are written by elected officials, so it is political in nature

Sentiments

- Pew Research Center conducted this analysis to summarize key facts about Americans' relationships with guns. We used data from recent Center surveys to provide insights into Americans' views on gun policy and how those views have changed over time, as well as to examine the proportion of adults who own guns and their reasons for doing so.
- https://www.pewresearch.org/short-reads/2024/07/24/key-facts-about-americans-and-guns/

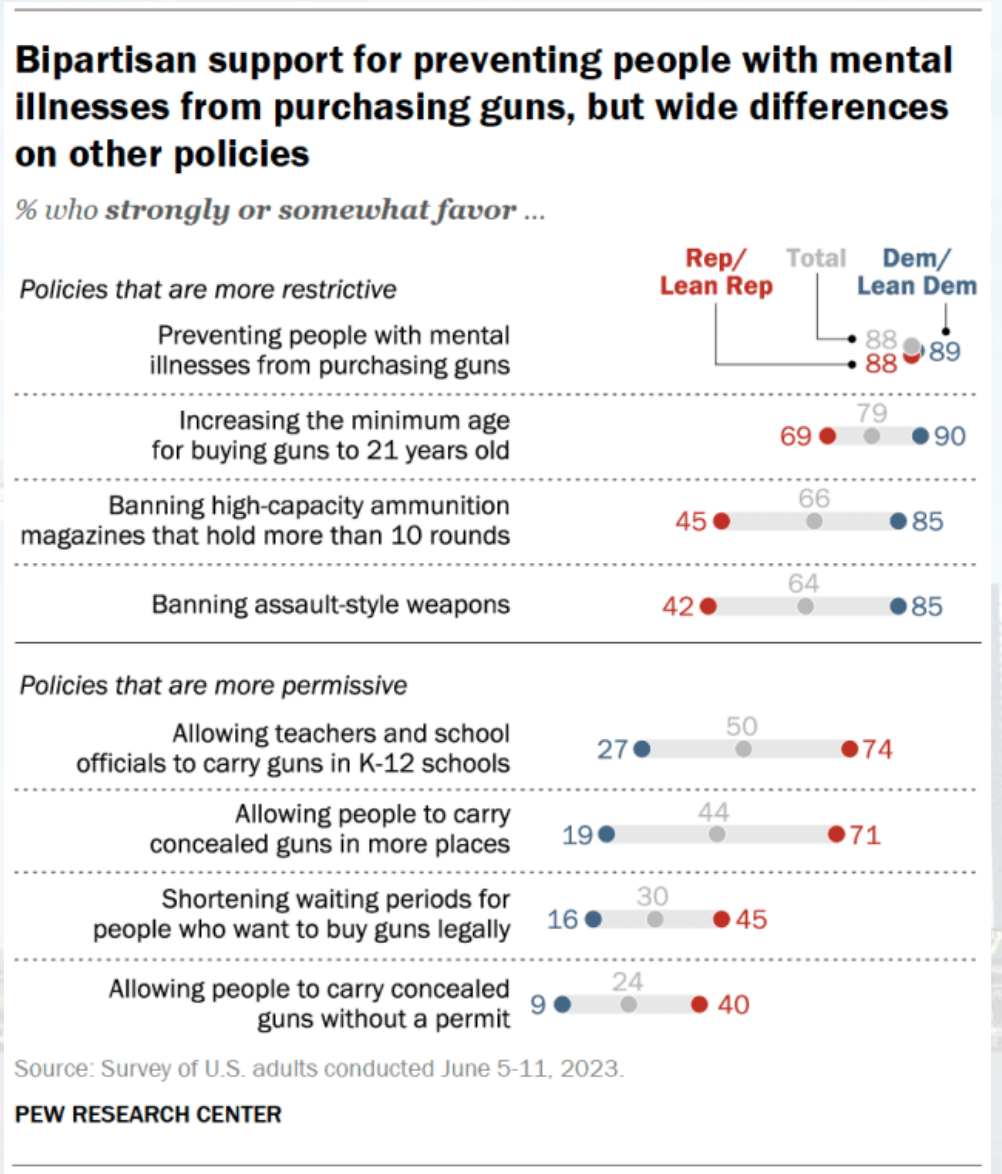
General Sentiments

- Political view is the largest differentiator in the strength of gun laws
- Rep/Lean Rep feels the laws are about right (28-45-27) whereas Dem/Lean Dem demands stricter laws (86-9-4)



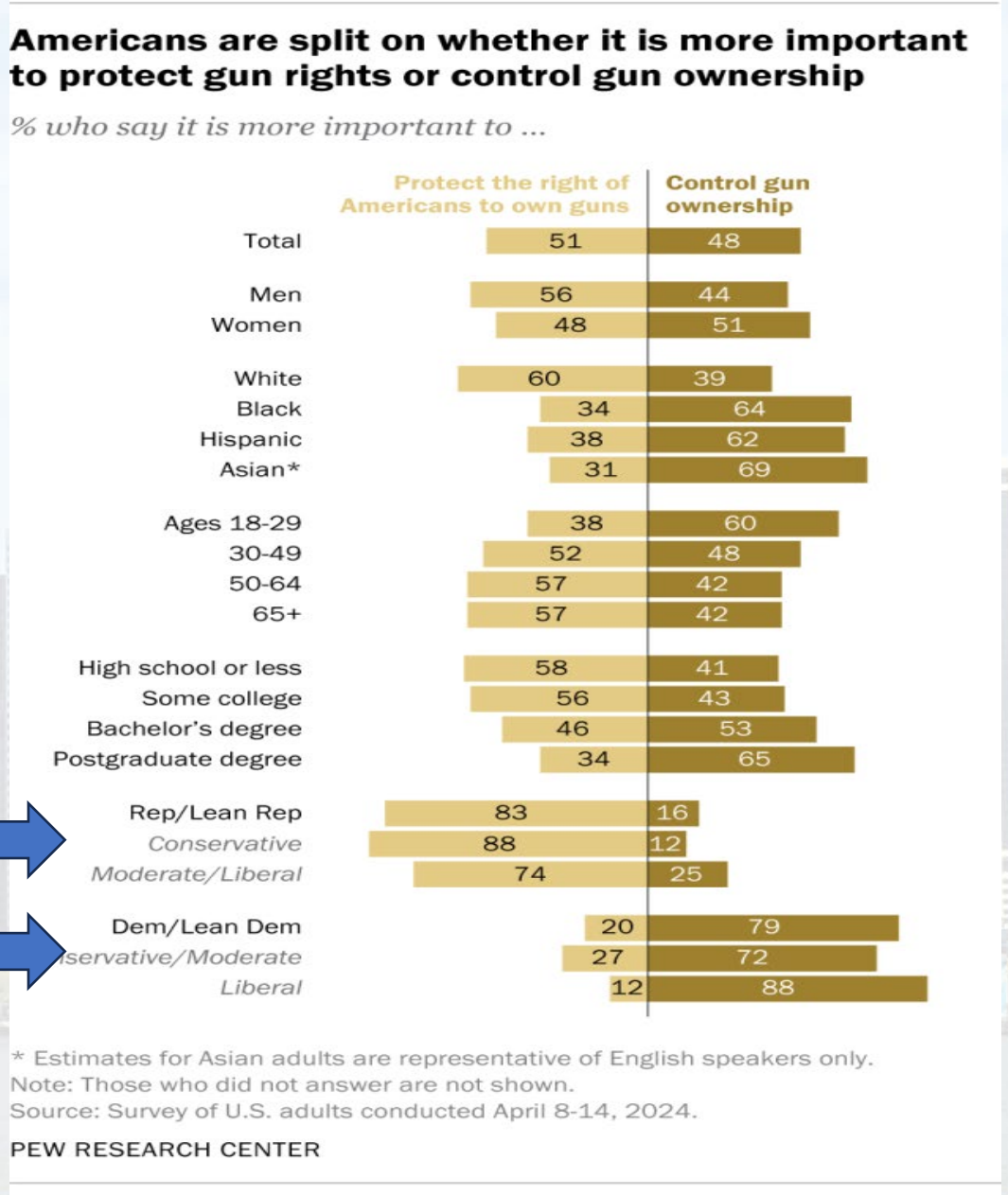
Sentiment for each issue

- Bipartisan support on one narrow issue – mental illness.
- Disagreement on all other issues



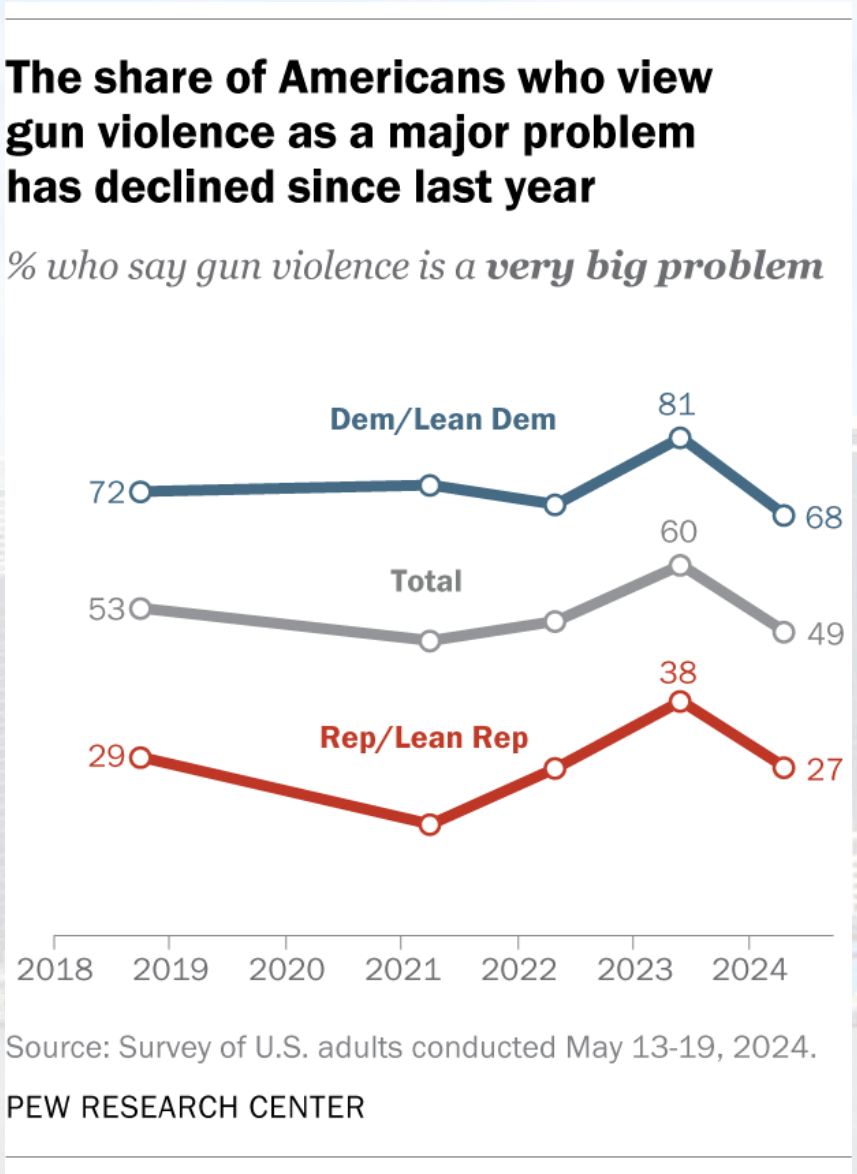
Gun Rights v. Gun Ownership Control

- Political view is the largest differentiator



Gun Rights v. Gun Ownership Control

- Political view differentiator
- Fluctuation over the years
  - 2024 YoY decline,
  - Stability over the longer period



What is this survey telling us?

- Confirmation of some link between political view and gun
- Coincidental, Confounding Factor, Reciprocal causation?

- Insured population is distinct from general population

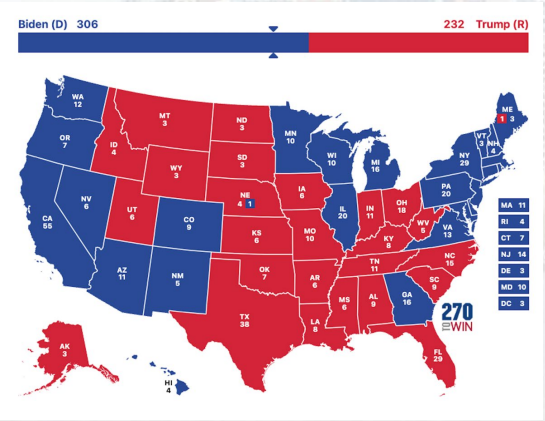
ABORTION
David

Roe v. Wade / Dobbs v. Jackson Women's Health Organization

- June 24, 2022, ruling in Dobbs v. Jackson Women's Health Organization overturns the previous Roe v. Wade ruling.
- Now a state issue, the country quickly diverged from ban to protection and sanctuary laws.
  - Ban of various degree (exceptions, # week LMP…)
  - Restriction (waiting period, mandatory parental involvement, provider requirement, access to information…)
  - Protection (interstate shield, public funding…)
- Women mortality
  - Pregnancy-related deaths, including riskier illegal abortion & peripartum morbidity
- Infant mortality
  - Pregnancies considered not viable may have been terminated
- Still evolving, not all laws have been court-tested

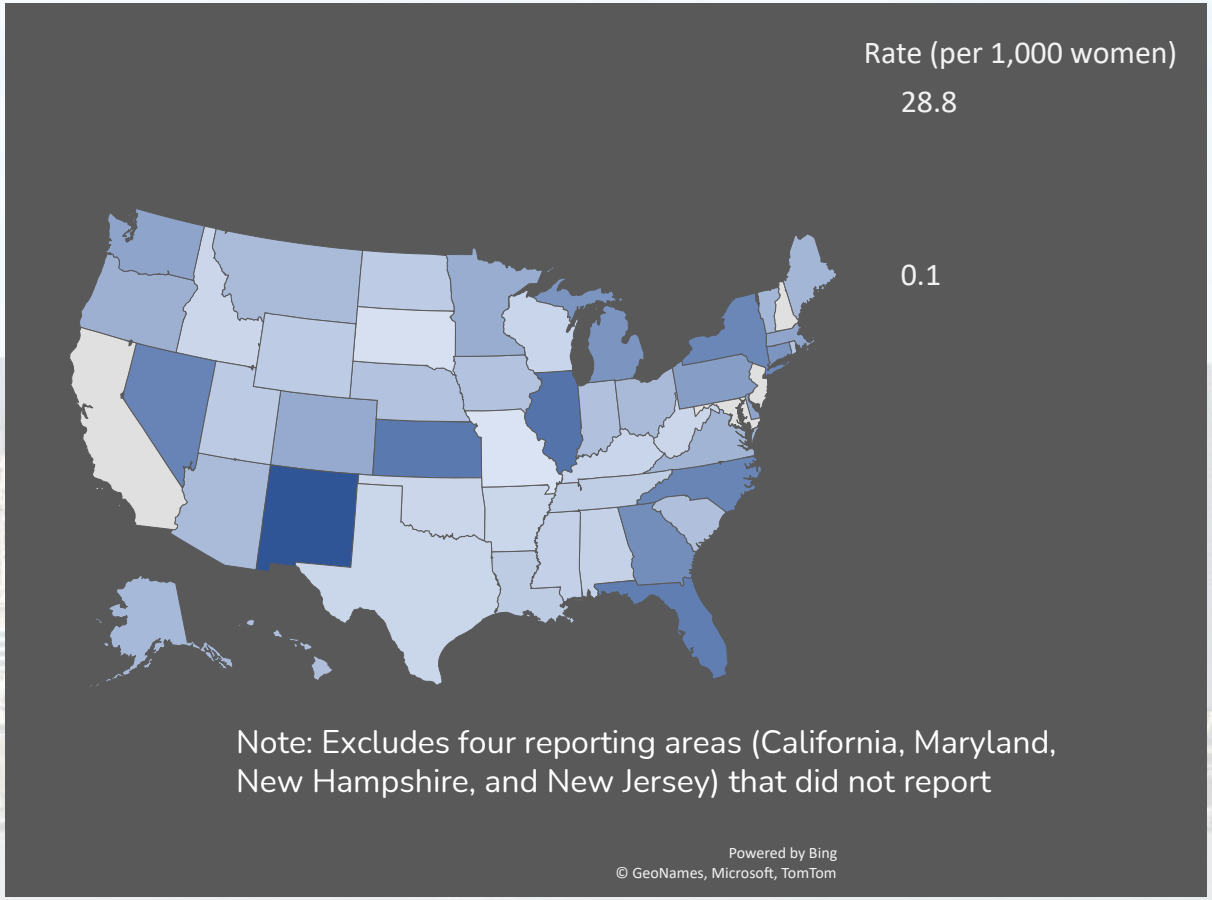
Order of magnitude

- For 2022, 613,383 abortions reported
- Abortion Rate: 11.2 abortions per 1,000 women
- Abortion ratio :199 abortions per 1,000 live births



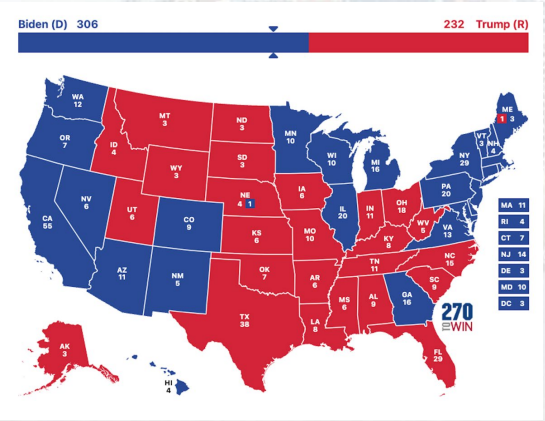
https://www.cdc.gov/mmwr/volumes/73/ss/ss7307a1.htm#:~:text=Abortion%20Mortality,the%20previous%205%2Dyear%20periods.

Number and rate of reported abortions, by reporting area of occurrence — United States, 2022

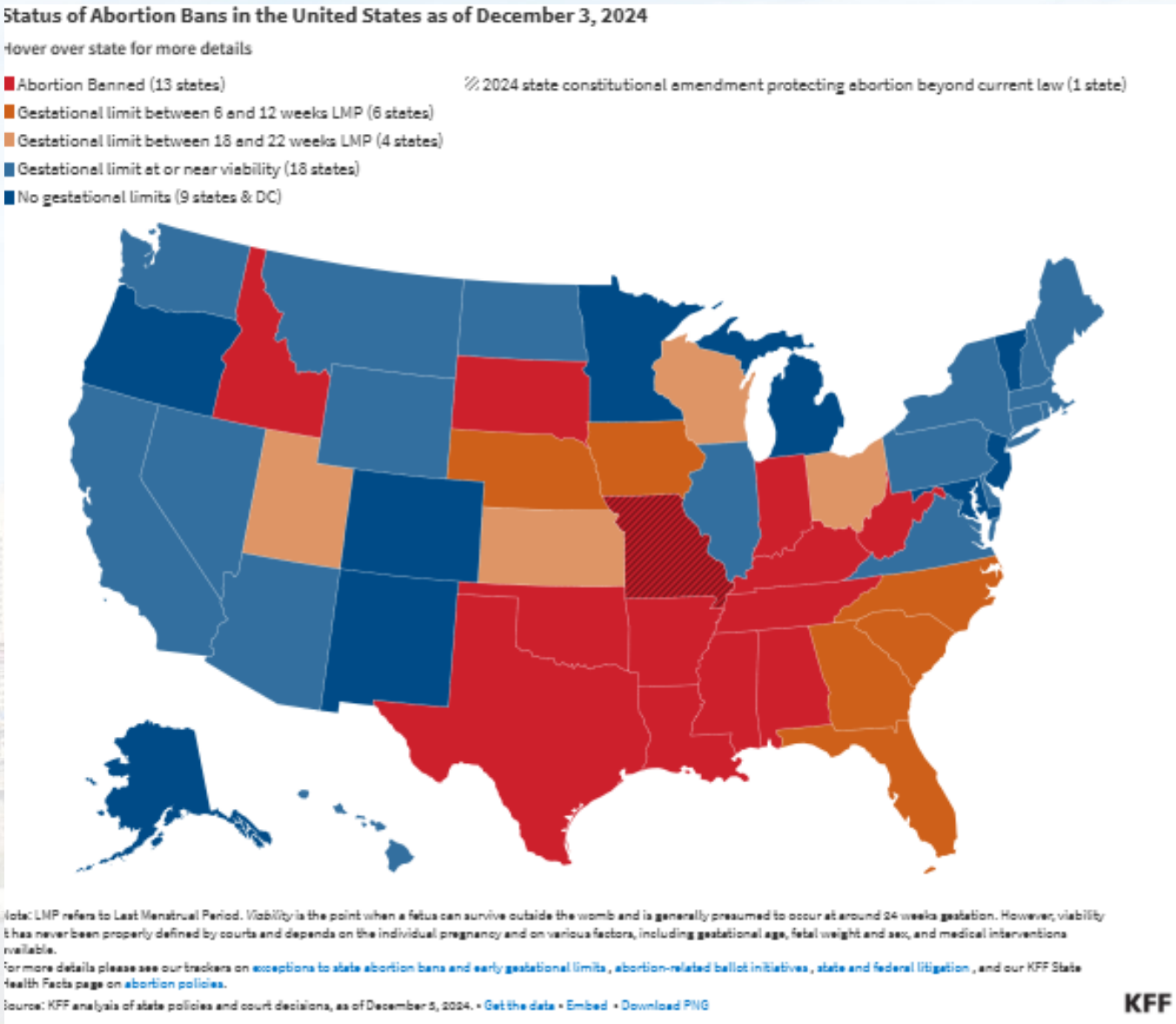


Abortion Laws

- Abortion is a hot political topic



https://www.kff.org/womens-health-policy/dashboard/abortion-in-the-u-s-dashboard/



Impact – JAMA June 8, 2023 - Projections

- Projected Health Outcomes Associated With 3 US Supreme Court Decisions in 2022 on COVID-19 Workplace Protections, Handgun-Carry Restrictions, and Abortion Rights
- **Model, not actual cases**
- For the Dobbs ruling, the model assessed unwanted pregnancy continuations, resulting from the change in distance to the closest abortion facility, and then excess deaths (and peripartum complications) from forcing these unwanted pregnancies to term
- Projected 30,440 fewer abortions, or up to 76,612 (depending on states' adoption)
- 6 to 15 additional pregnancy-related deaths each year, respectively, and hundreds of additional cases of peripartum morbidity

gaffney_2023_oi_230474_1685552481.15554.pdf

JAMA Network Open. 2023;6(6):e2315578. doi:10.1001/jamanetworkopen.2023.15578 (

Adaptation to the new landscape

- Affecting where doctors work
- Abortion increases in fact – Telehealth leading cause*
- Shield laws
- Supreme court on Mifepristone and on Emergency situations

https://www.npr.org/sections/health-shots/2024/05/22/1252771024/state-abortion-laws-2024-election
https://societyfp.org/wp-content/uploads/2024/10/WeCount-Report-8-June-2024-data.pdf
https://www.pbs.org/newshour/show/why-both-abortion-and-infant-mortality-rates-have-gone-up-in-post-roe-america

Conclusion

- Still evolving

- Quid of secondary effects
  - Medical desert
  - Poverty, Criminality, Gender gap
  - Societal cohesion

Q&A

Thank you

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