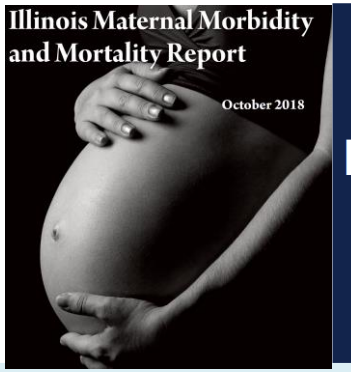
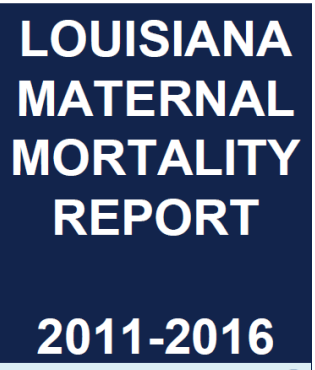
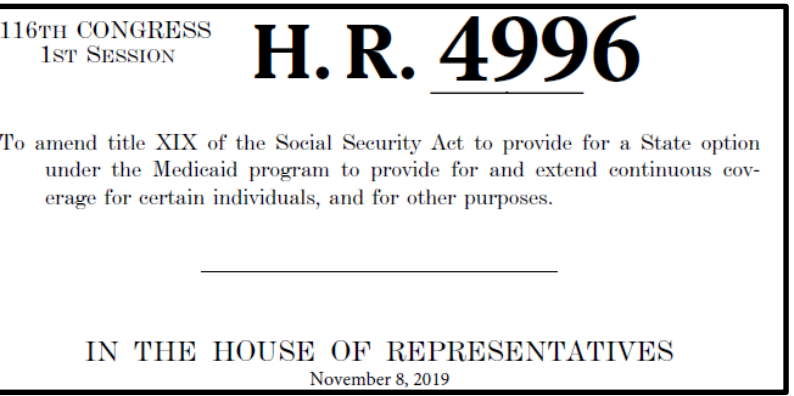
MYTH AND REALITY IN CURRENT EFFORTS TO ADDRESS MATERNAL MORTALITY IN THE U.S.

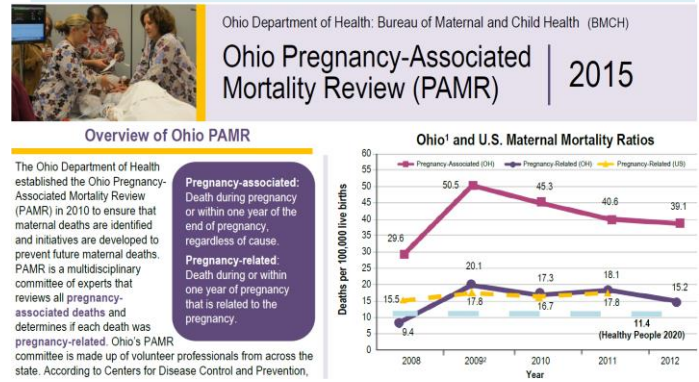
Gene Declercq, PhD
Community Health Sciences Dept.,
Boston University SPH
www.birthbythenumbers.org





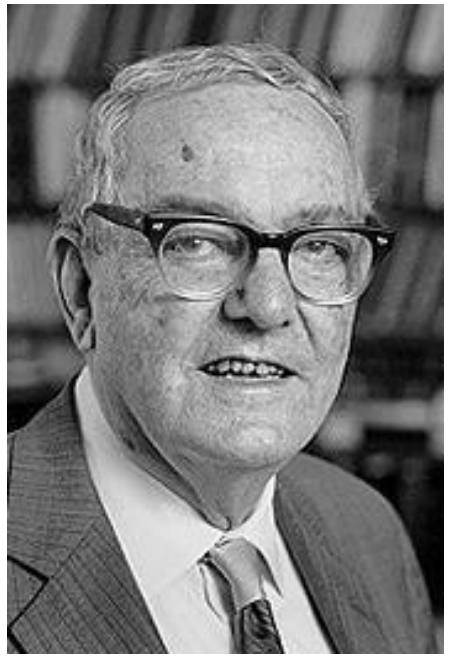


TAY GAVIN ERICKSON
LECTURE SERIES 2019
University of Massachusetts
Amherst, MA
December 5, 2019



I don't have time to read the New York Times.

Herbert Simon
Nobel Prize in Economics

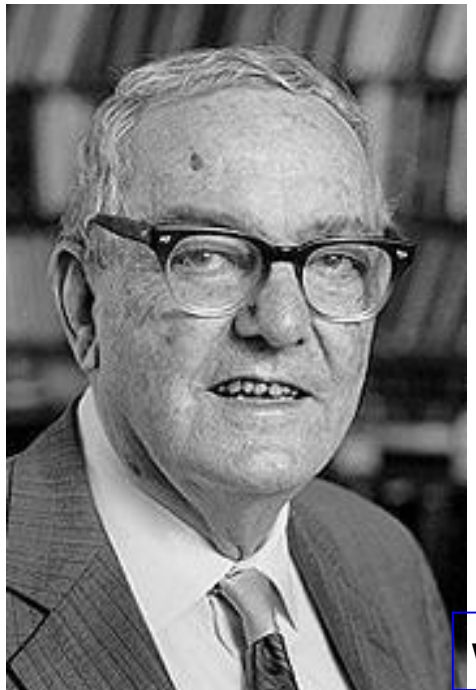


I don't have time to read the New York Times.

Herbert Simon, ***1971***

Nobel Prize in Economics, 1978

Died in 2001



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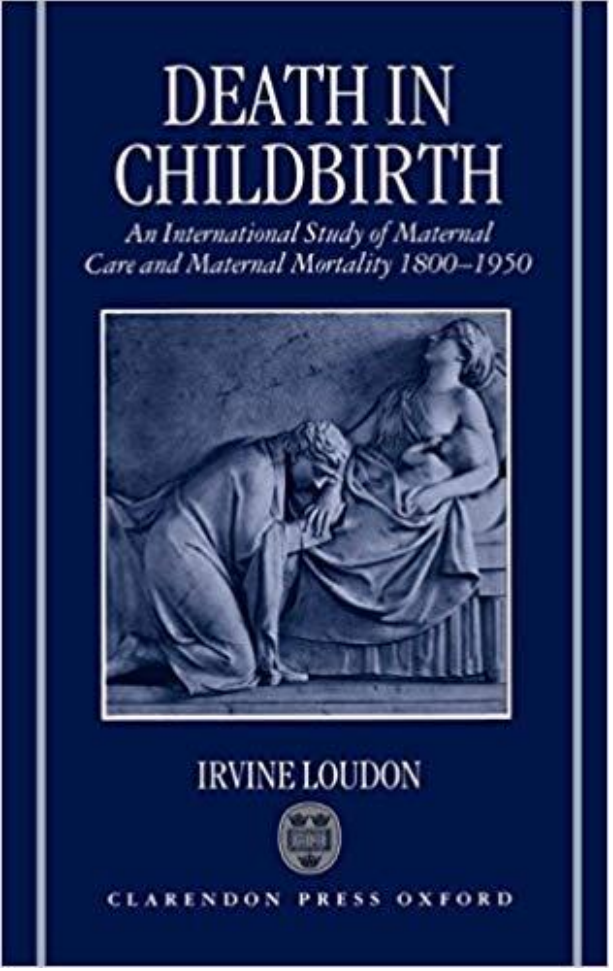
What information consumes is rather obvious: it consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention, and a need to allocate that attention efficiently among the overabundance of information sources that might consume it.

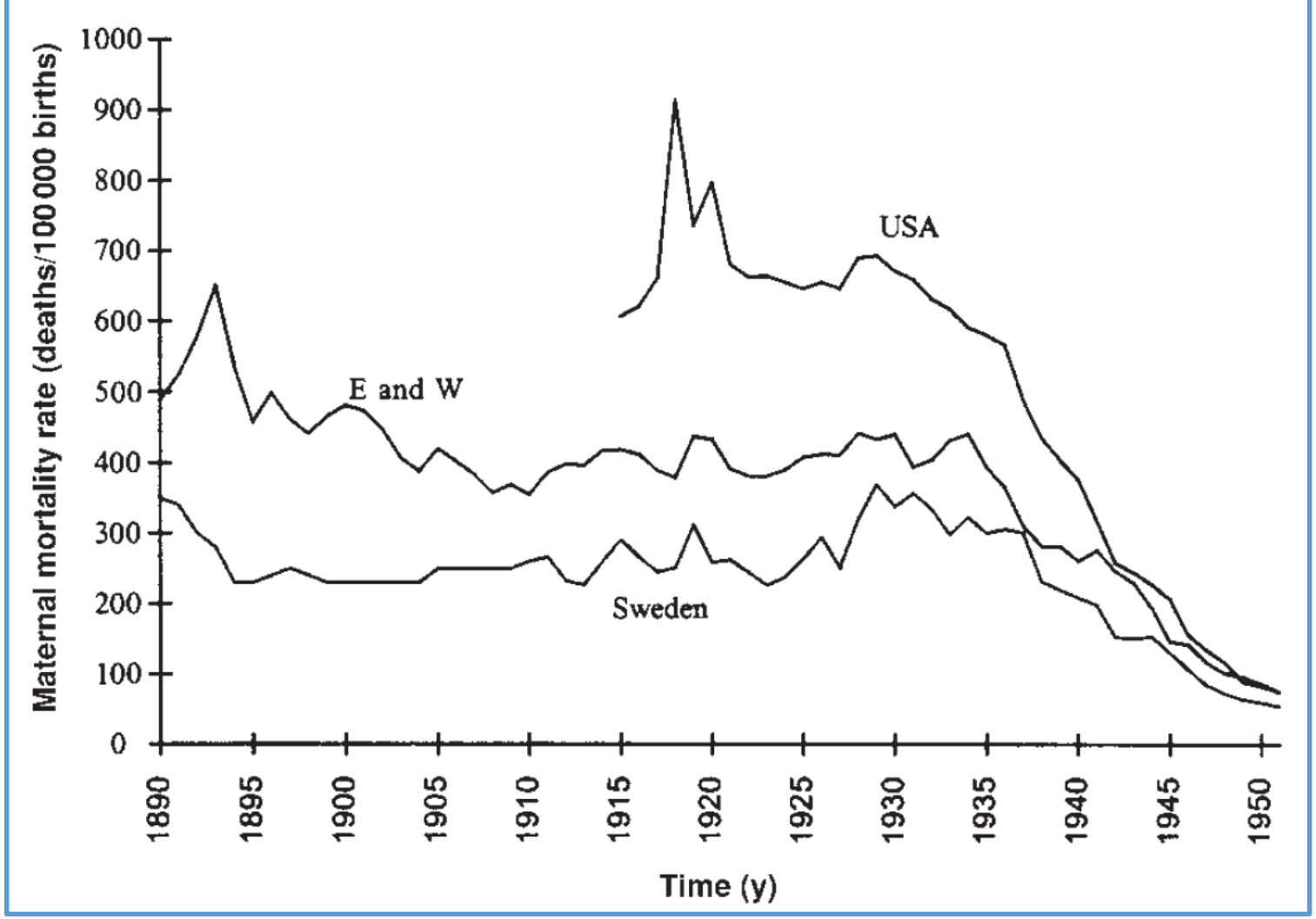
H. Simon. Computers, Communications and the Public Interest, pages 40-41, Martin Greenberger, ed., The Johns Hopkins Press, 1971.

Some Journals Related to Maternal & Infant Health

Human Reproduction Update
Obstetrics and Gynecology
Gynecologic Oncology
Human Reproduction
American Journal of Obstetrics and Gynecology
Fertility and Sterility
BJOG
Perspectives on Sexual and Reproductive Health
Fetal Diagnosis and Therapy
Maternal and Child Nutrition
Ultrasound in Obstetrics and Gynecology
Molecular Human Reproduction
Placenta
Contraception
International Journal of Gynecology and Obstetrics
Archives of Disease in Childhood: Fetal and Neonatal Edition
Reproduction
Prenatal Diagnosis
BMC Pregnancy and Childbirth
Twin Research and Human Genetics
American Journal of Reproductive Immunology
Reproductive Health
Journal of Sexual Medicine
Menopause
Archives of Women's Mental Health

Journal of Reproductive Immunology
Maternal and Child Health Journal
Acta Obstetricia et Gynecologica Scandinavica
Clinics in Perinatology
Journal of Perinatology
Seminars in Perinatology
Best Practice and Research in Clinical OBGYN
Obstetrical and Gynecological Survey
Maturitas
Journal of Minimally Invasive Gynecology
Women's Health Issues
Journal of Ovarian Research
Journal of Lower Genital Tract Disease
Journal of Pregnancy
Seminars in Reproductive Medicine
Reproductive Sciences
Infectious Diseases in Obstetrics and Gynecology
International Urogynecology Journal and Pelvic Floor Dysfunction
International Breastfeeding Journal
Early Human Development
Current Opinion in Obstetrics and Gynecology
Midwifery
Journal of Human Lactation
American Journal of Perinatology
Journal of Assisted Reproduction and Genetics





Historical data show that maternal mortality rates were lowest for home deliveries undertaken by trained and supervised midwives with no exceptions.

Sourcve: Loudon I. *Am J Clin Nutr* 2000;72(suppl):241S–6S.

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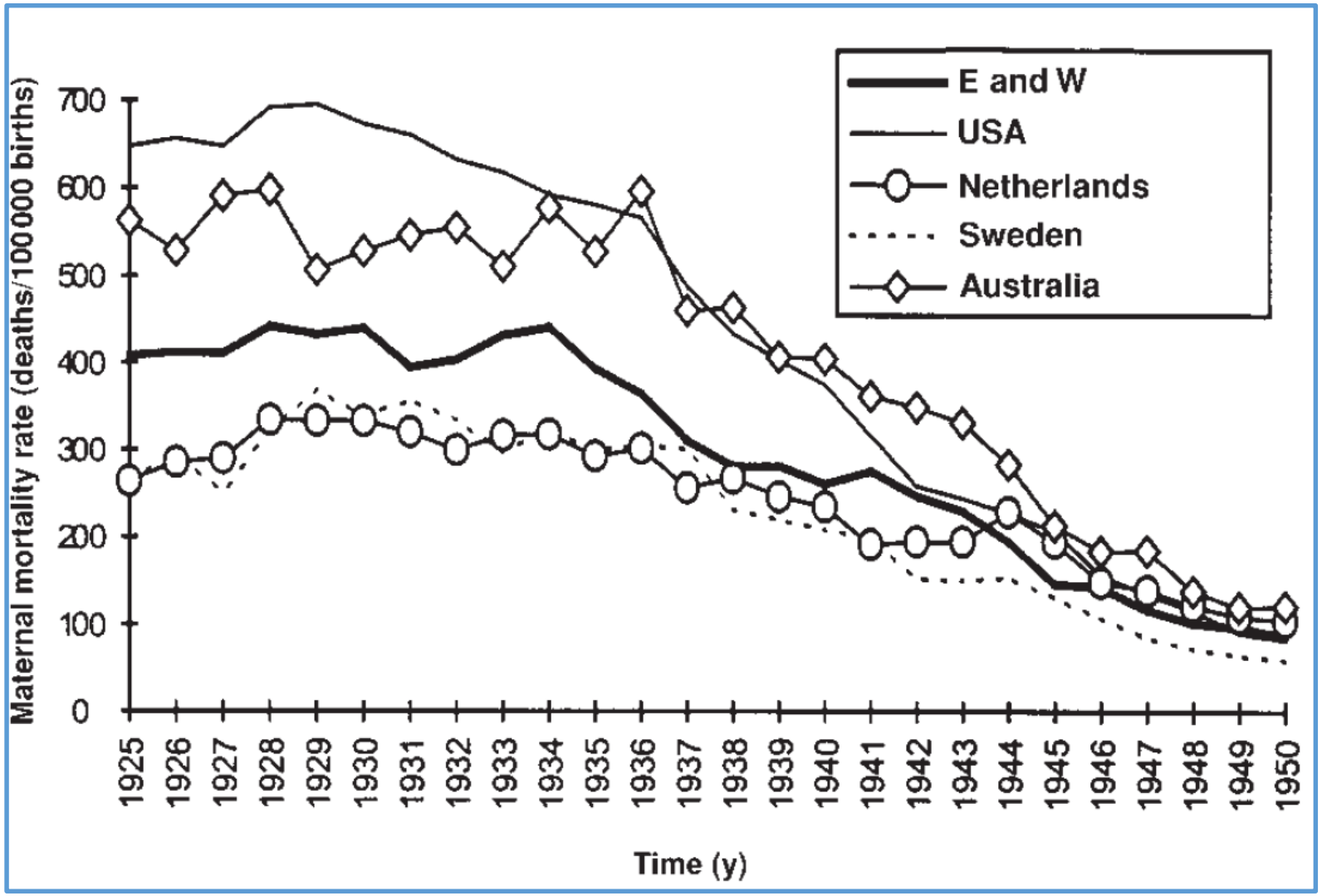
Annual maternal mortality rates in the United States, England and Wales, and Sweden, 1890–1950



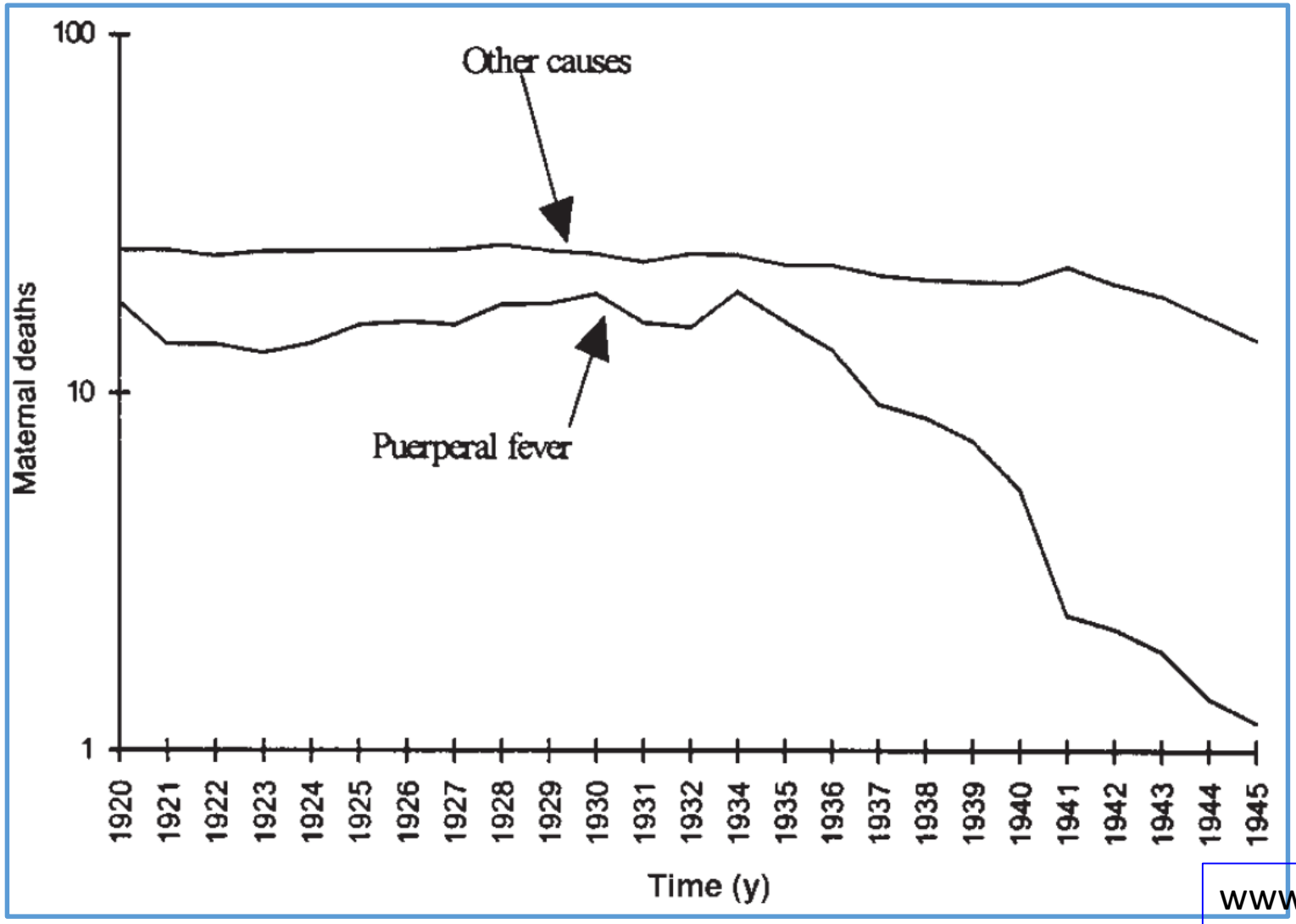
Sourcve: Loudon I. *Am J Clin Nutr* 2000;72 (suppl):241S–6S.

Total maternal deaths and percentage of maternal deaths in England and Wales by cause in 1872–1876 and in 1976–1981

Cause of death	%
1872–1876 (n = 23 051)[1]	
Puerperal fever	55.5
Hemorrhage[2]	21.0
Puerperal convulsions	11.6
Miscarriage and abortion	4.0
Puerperal mania	2.5
Phlegmasia dolens[3]	2.0
Retained placenta	1.5
Extrauterine foetation	0.2
Other	0.8

Sourcve: Loudon I. *Am J Clin Nutr* 2000;72(suppl):241S–6S.

Annual maternal mortality rates attributable to puerperal fever and to all other causes (logarithmic scale), in England and Wales, 1920-1945



Sourcve: Loudon I. *Am J Clin Nutr* 2000;72(suppl):241S–6S.

But what about me (i.e. Massachusetts)?

The Boston Medical and Surgical Journal

May 1, 1919

A YEAR'S STUDY OF THE MATERNITY WARD AT THE BOSTON CITY HOSPITAL.

BY BESS LYNDE RUSSELL, BOSTON,

Department of Medical-Social Work, Boston City Hospital

9 deaths

400 births =

MMR 2,250 per 100,000

Pre-Natal Care. In a group of 400 patients admitted to the maternity ward, 262. or 60%. had received no pre-natal care;

a. 189 patients, or 42%, of our admission group came for first confinement (presumably a group ignorant concerning the hygiene of pregnancy).

b. 101 patients, or 22%, admitted having had previous miscarriage.

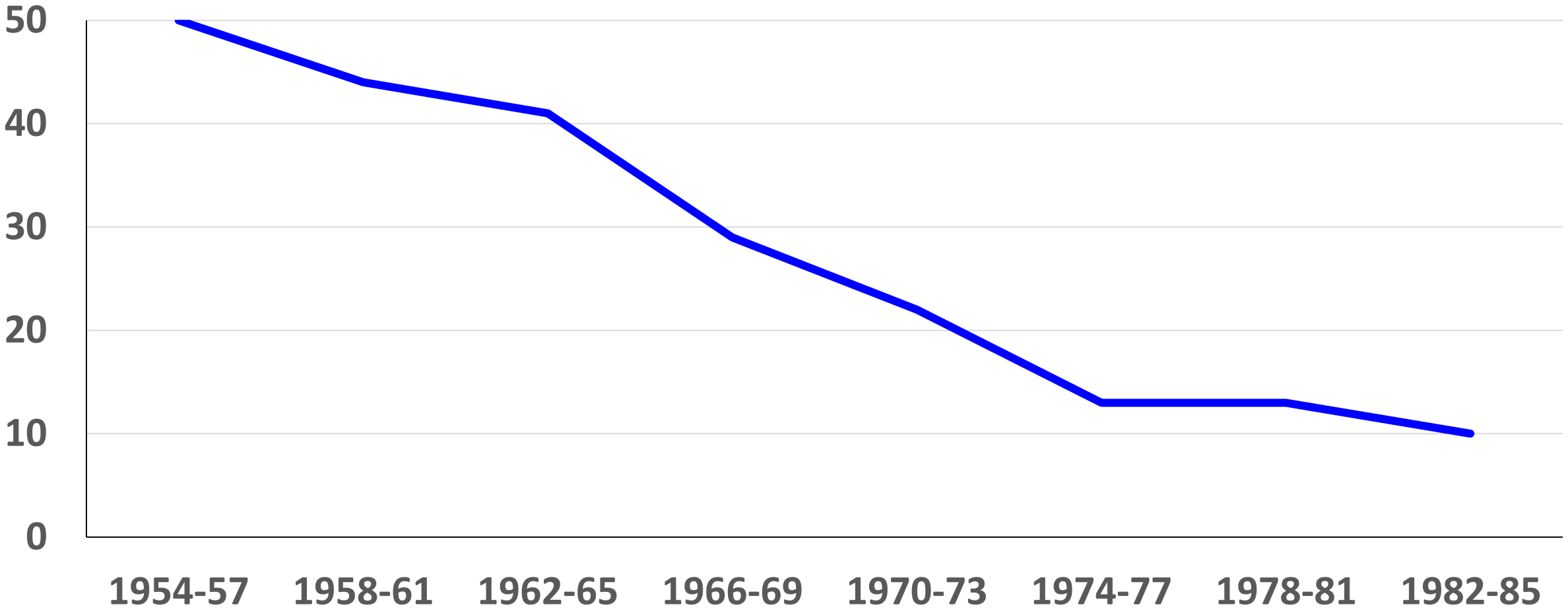
c. 18 patients, or 4%, admitted having had more than one previous miscarriage.

d. 26 patients had babies, still born or died before discharge of mother from hospital.

1. Of 85% of the babies who died,
   62% were premature,
   19% were still born,
   4% had congenital syphilis.

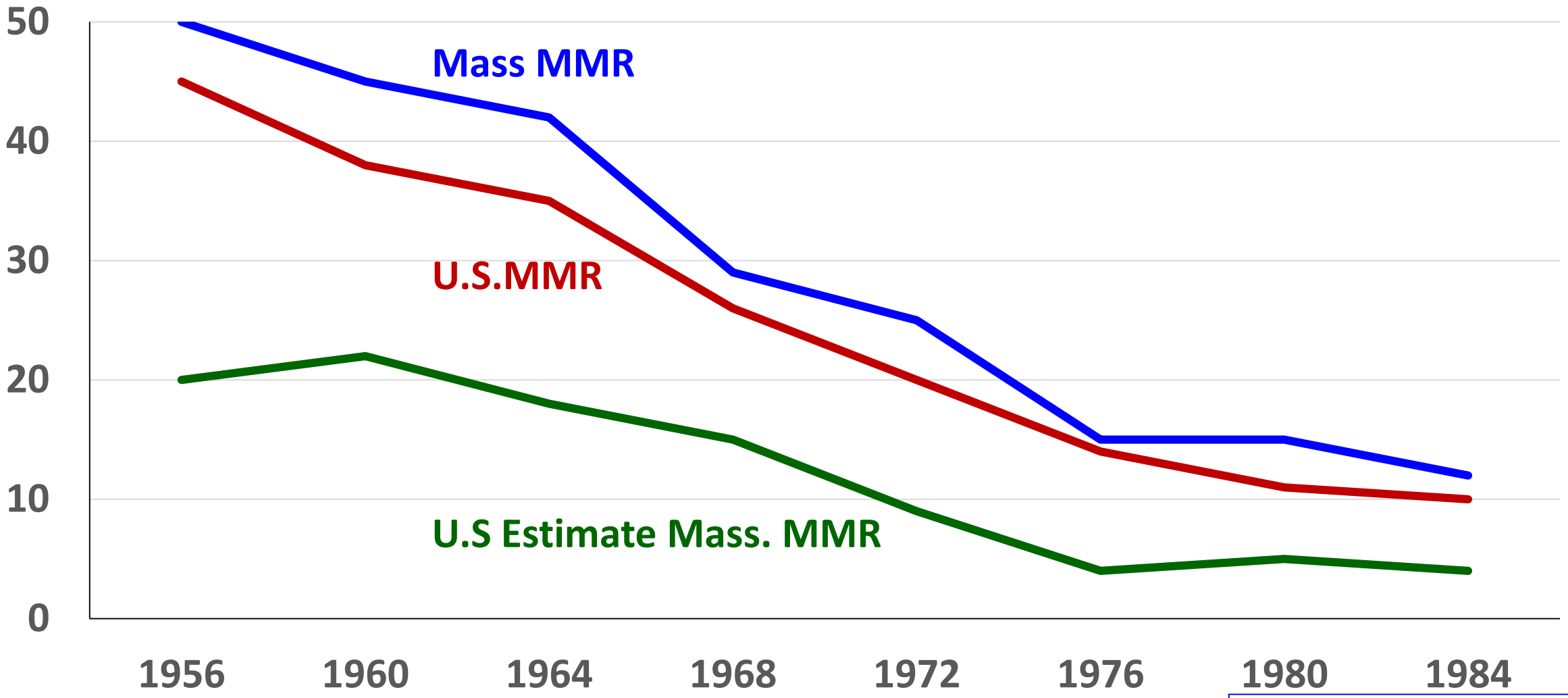
e. Of 9 patients who died, over 50% died with maternity complicated by eclamptic or pulmonary symptoms.†

Massachusetts Maternal Mortality Ratios (per 100K Births) 1956-84



Source: Sachs. NEJM. 1987.316:667-672

Maternal Mortality Ratios (per 100K Births) 1956-84



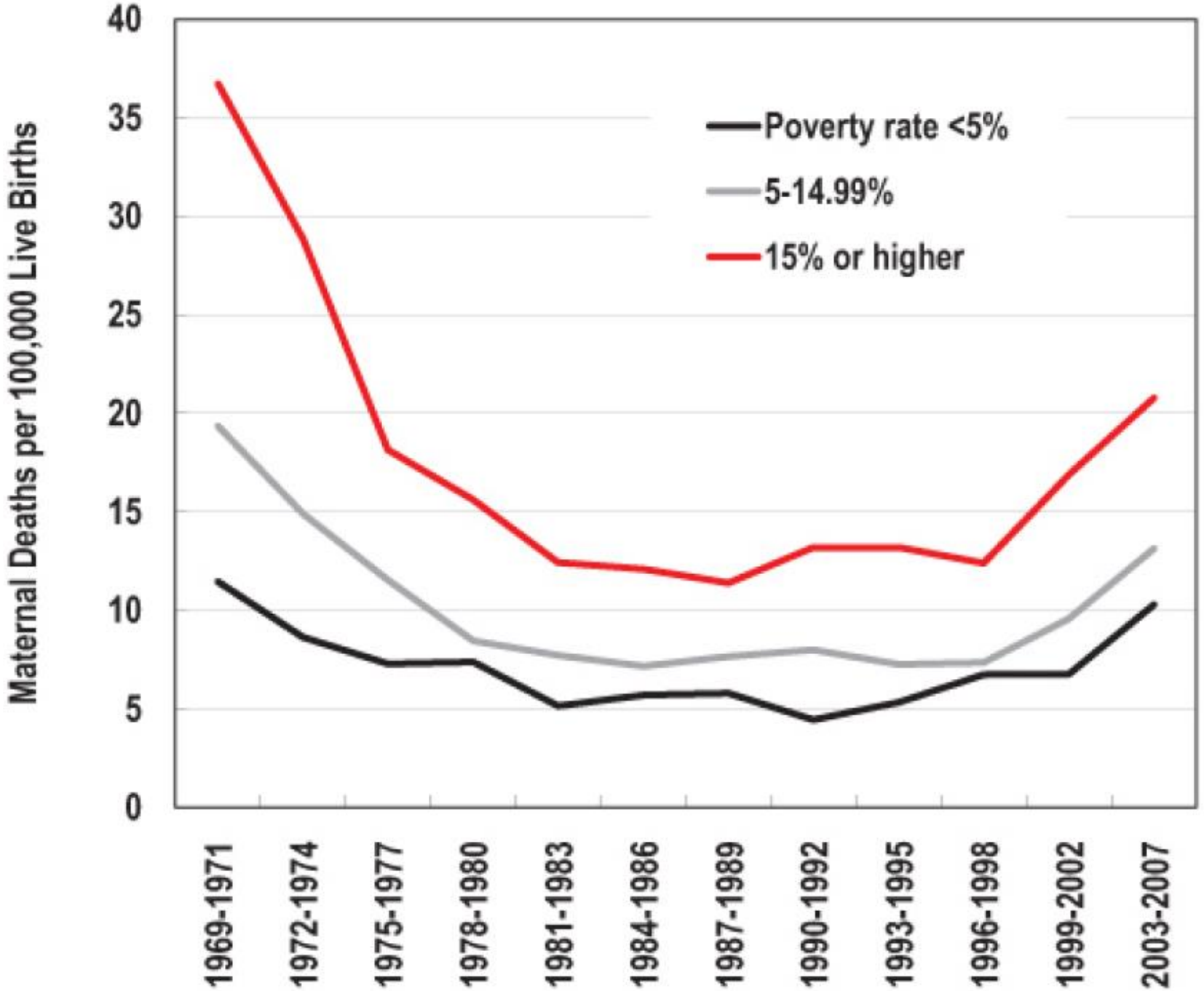
Source: Sachs. NEJM. 1987.316:667-672

Table 3. Preventable Maternal Deaths in Massachusetts, 1976 through 1985.

VARIABLE	PERIOD					
	1976–77	1978–79	1980–81	1982–83	1984–85	TOTAL
			number			*no. (%)*
Maternal deaths	12	16	20	20	11	79 (100)
Preventable deaths	5	8	4	14	3	34 (43)
Responsibility assigned to						
Physician	2	2	2	8	0	14 (18)
Hospital	0	0	0	0	1	1 (1)
Patient	2	1	2	0	0	5 (6)
Physician and patient	0	2	0	3	0	5 (6)
Hospital and patient	0	0	0	0	1	1 (1)
Unknown or undetermined	1	3	0	3	1	8 (10)

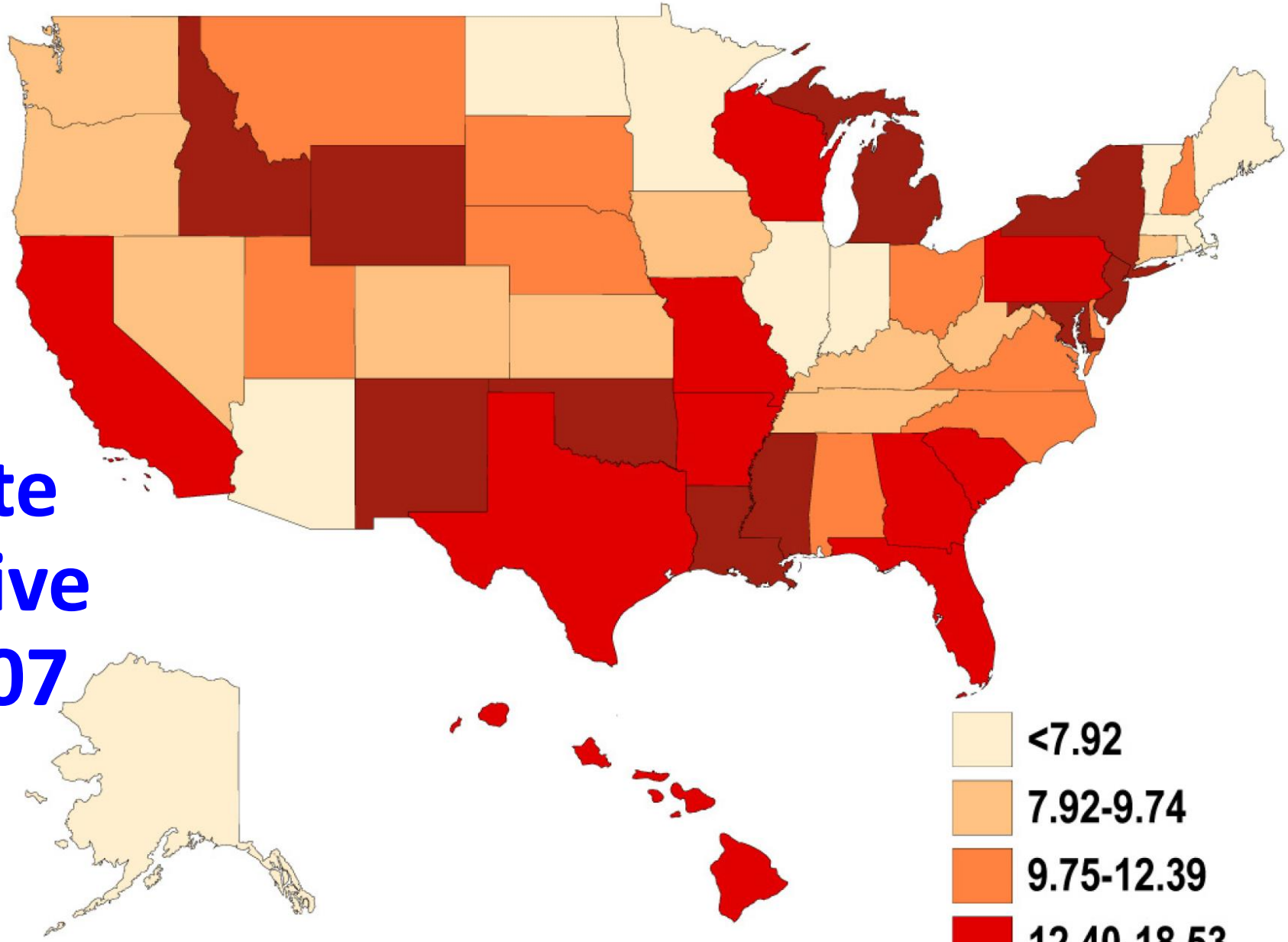
Source: Sachs. NEJM. 1987.316:667-672

Maternal Mortality Ratios 1956-84



Source: MCHB. **Maternal Mortality in the United States, 1935-2007. 2010**

Maternal Mortality Rate per 100,000 Live Births, 2003-07



Source: MCHB. **Maternal Mortality in the United States, 1935-2007. 2010**

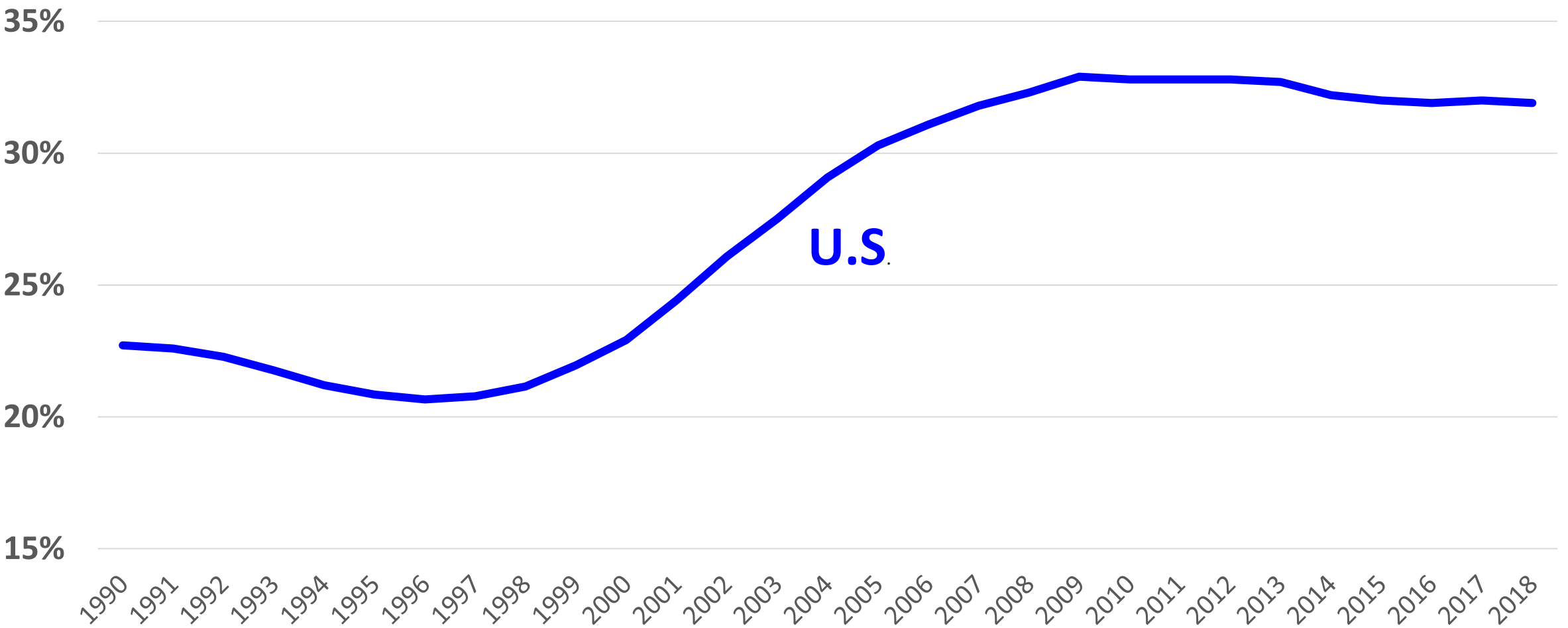
NCHS Data Brief ■ No. 350 ■ September 2019

Mortality Patterns Between Five States With Highest Death Rates and Five States With Lowest Death Rates: United States, 2017

Contemporary Massachusetts Context

- 9th lowest age-adjusted death rate overall
- Lowest overall IMR (2015-2017)
  - 3rd for white IMR;
  - Lowest for NHB IMR;
  - 16th for Hispanic IMR
- 8th lowest in Home Births
- 29th in births attended by "other" midwives
- 9th in CNM Births
- 24th highest cesarean rates

Cesarean Rates, U.S., 1990-2018



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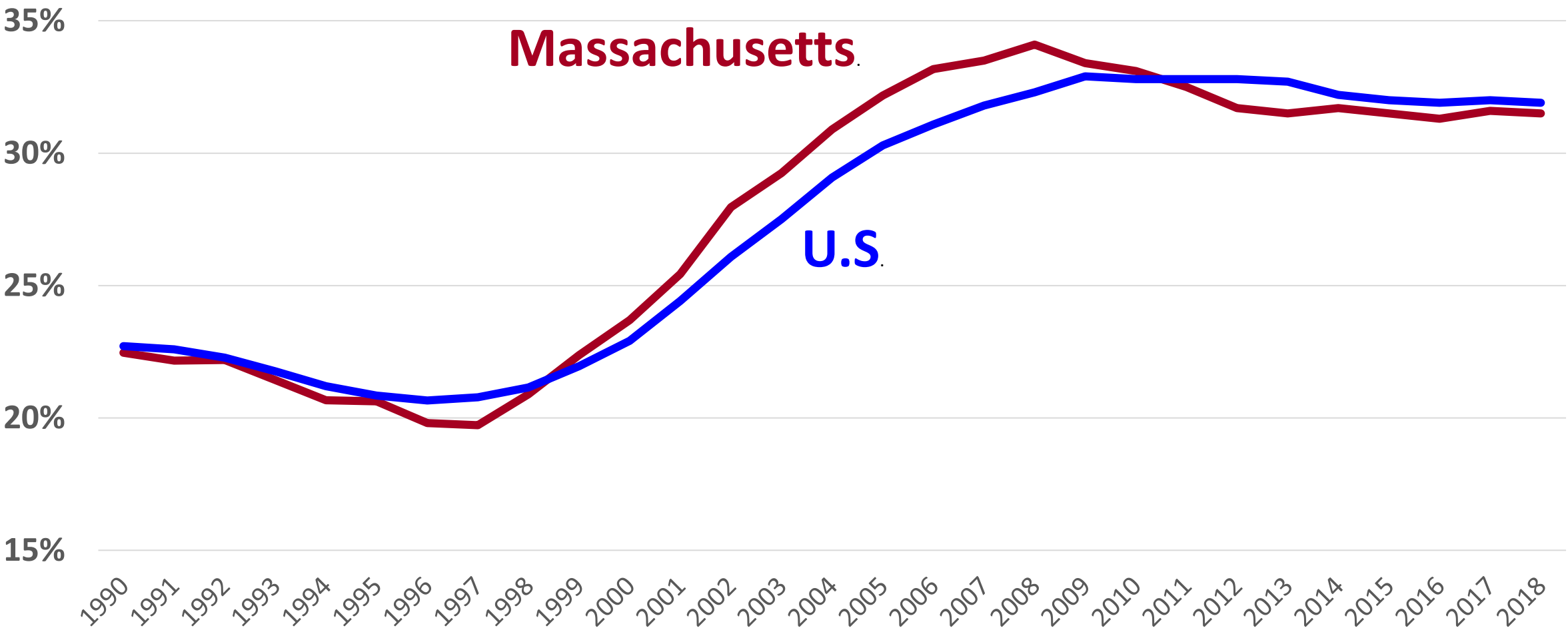
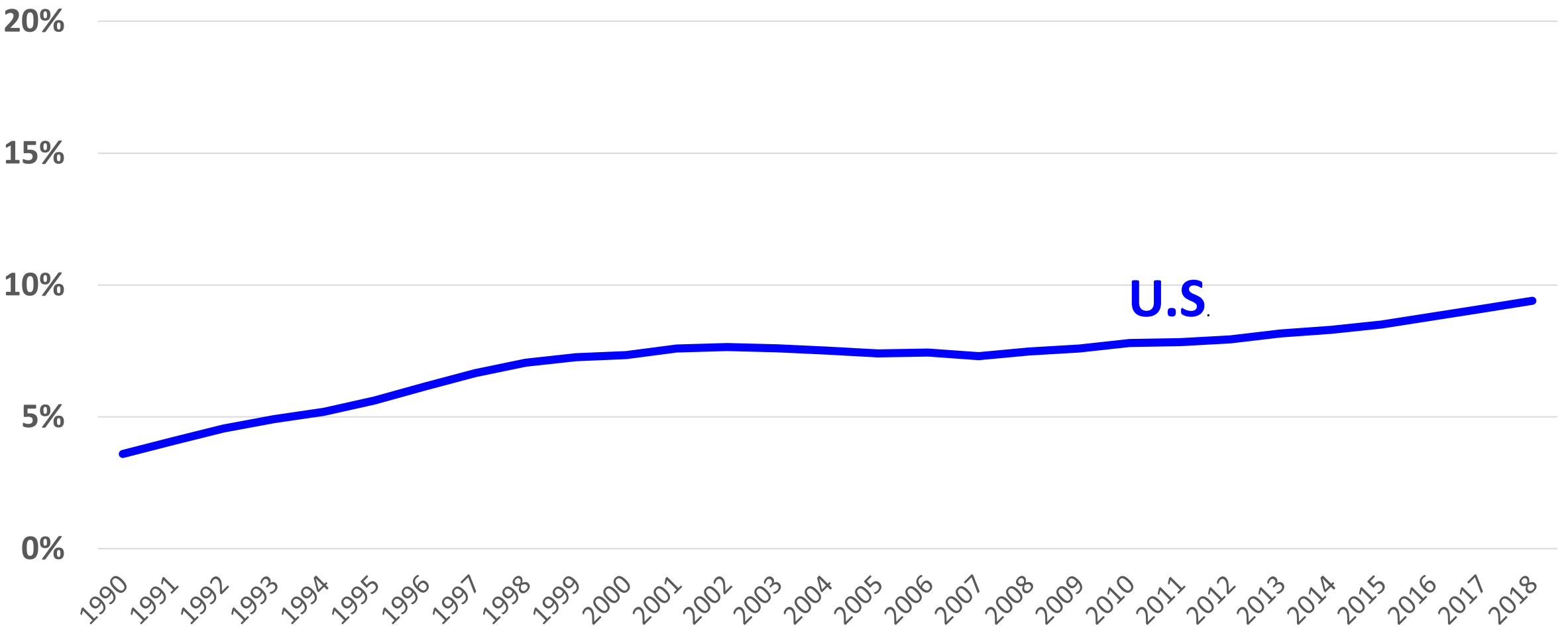
Cesarean Rates, U.S. and Massachusetts 1990-2018



www.birthbythenumbers.org

CNM Attendance at Birth, U.S., 1990-2018



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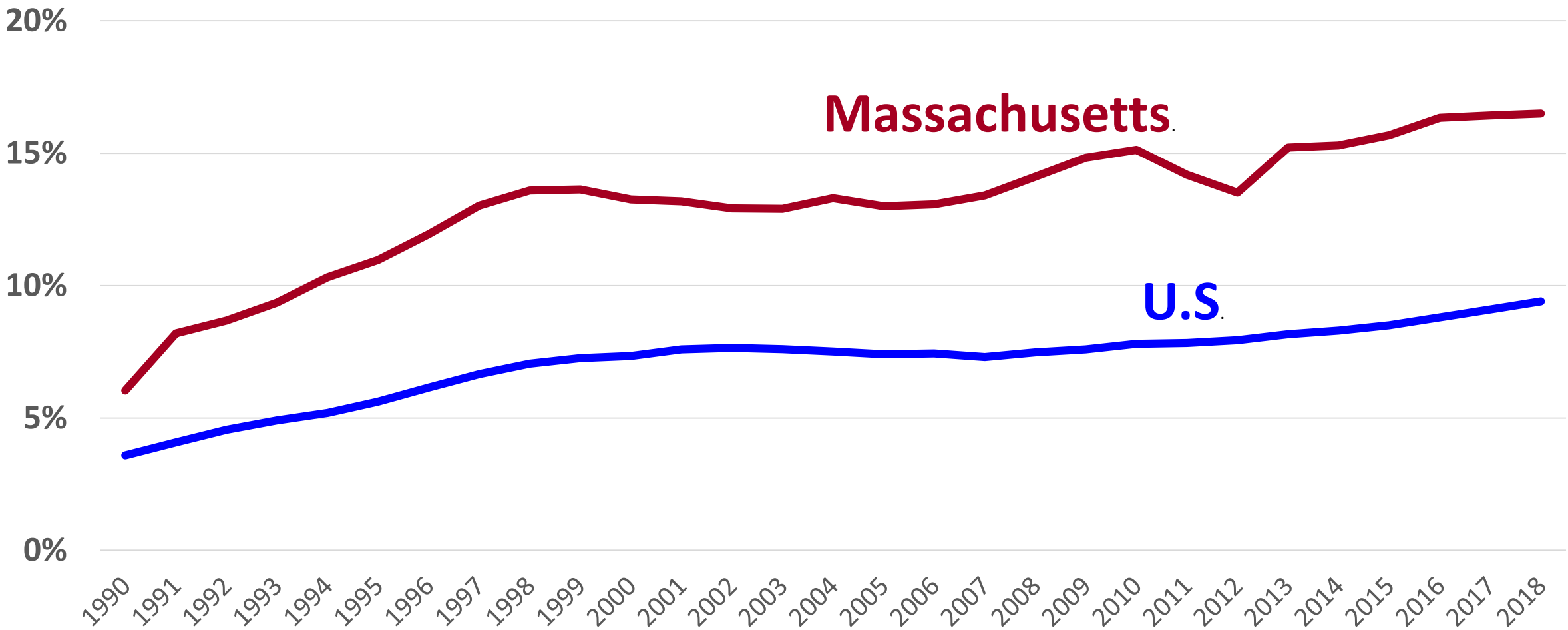
CNM Attendance at Birth, U.S. and Massachusetts 1990-2018



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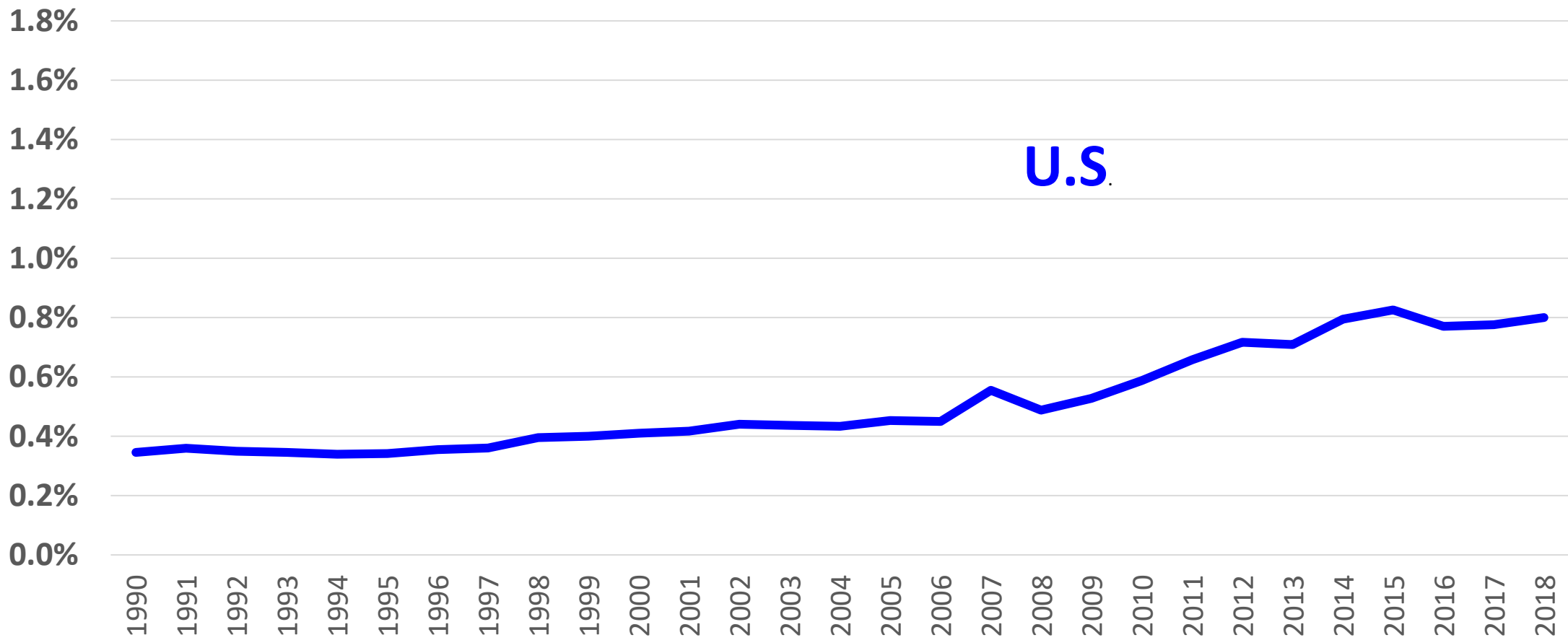
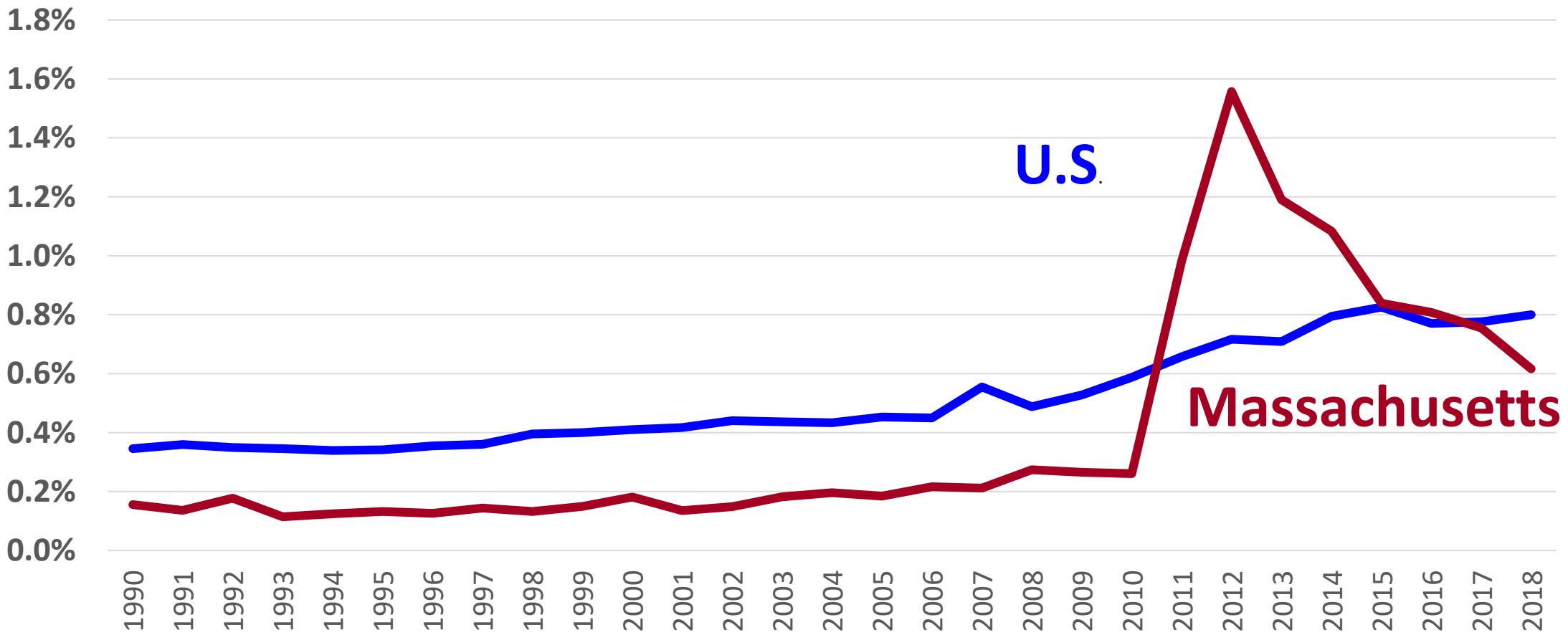
“Other” Midwives Attendance at Birth, U.S. 1990-2018



www.birthbythenumbers.org

“Other” Midwives Attendance at Birth, U.S. and Massachusetts 1990-2018



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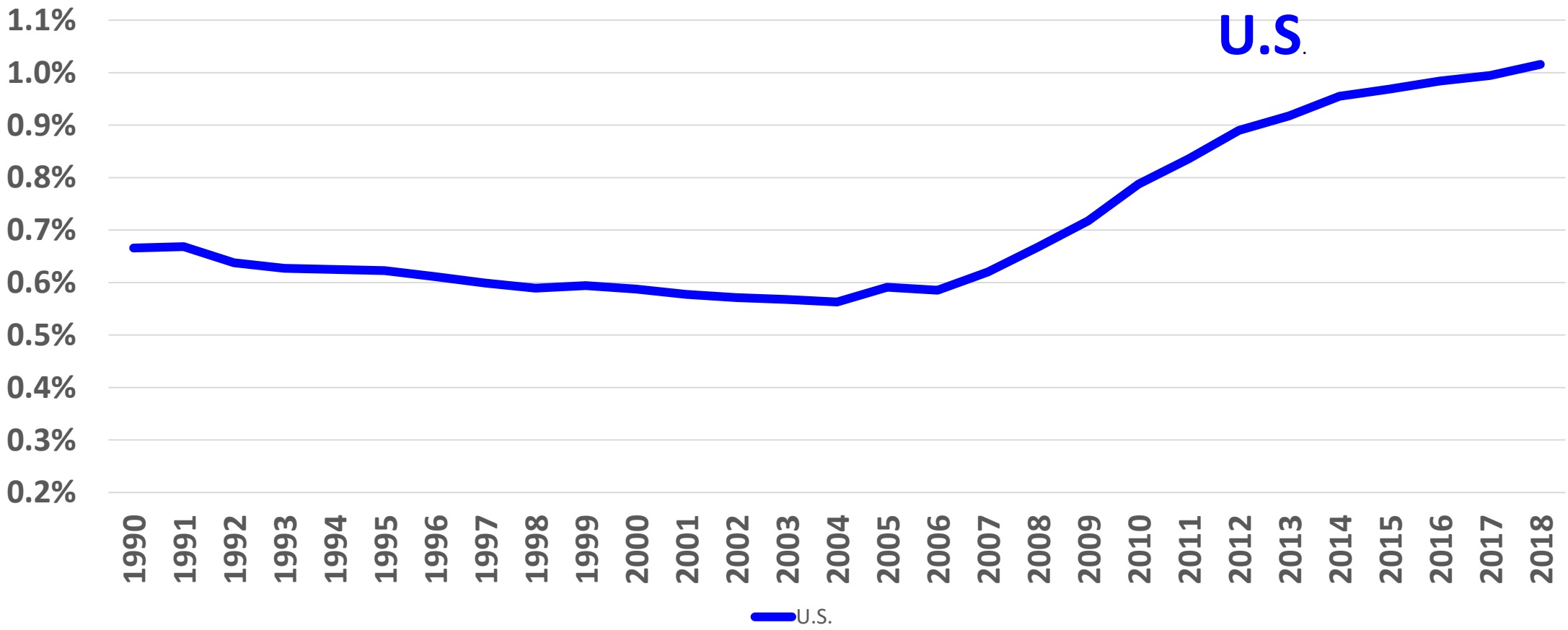
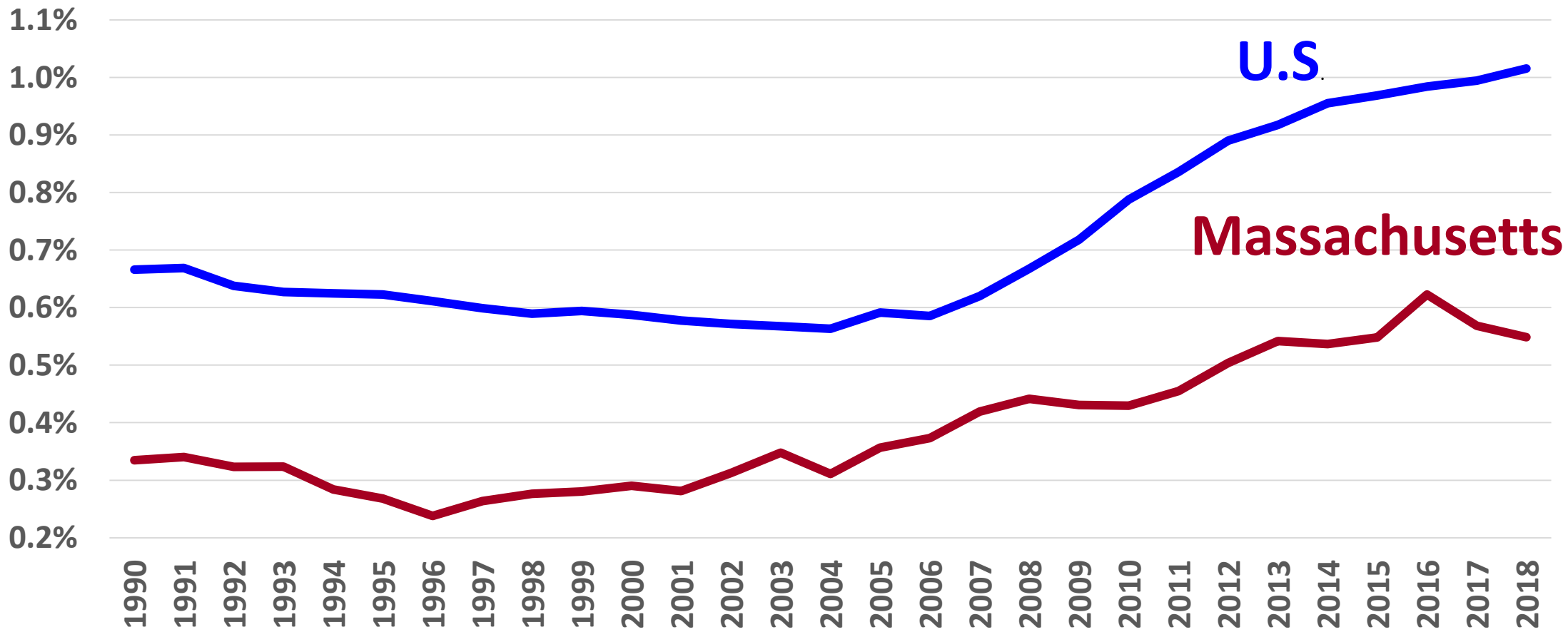
Home Births in the U.S. and Massachusetts, 1990-2018



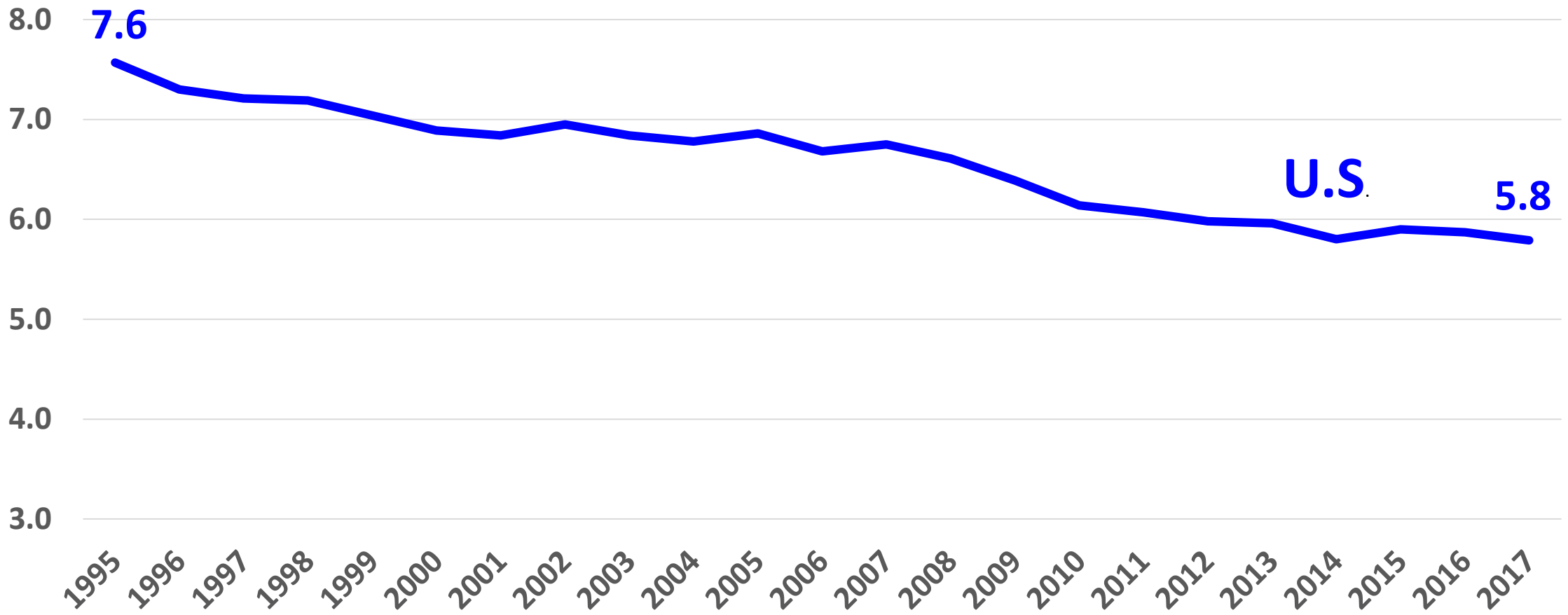
www.birthbythenumbers.org

Home Births in the U.S. and Massachusetts, 1990-2018



www.birthbythenumbers.org

Infant Mortality (per 1,000 live births) in the U.S. and Massachusetts, 1995-2017



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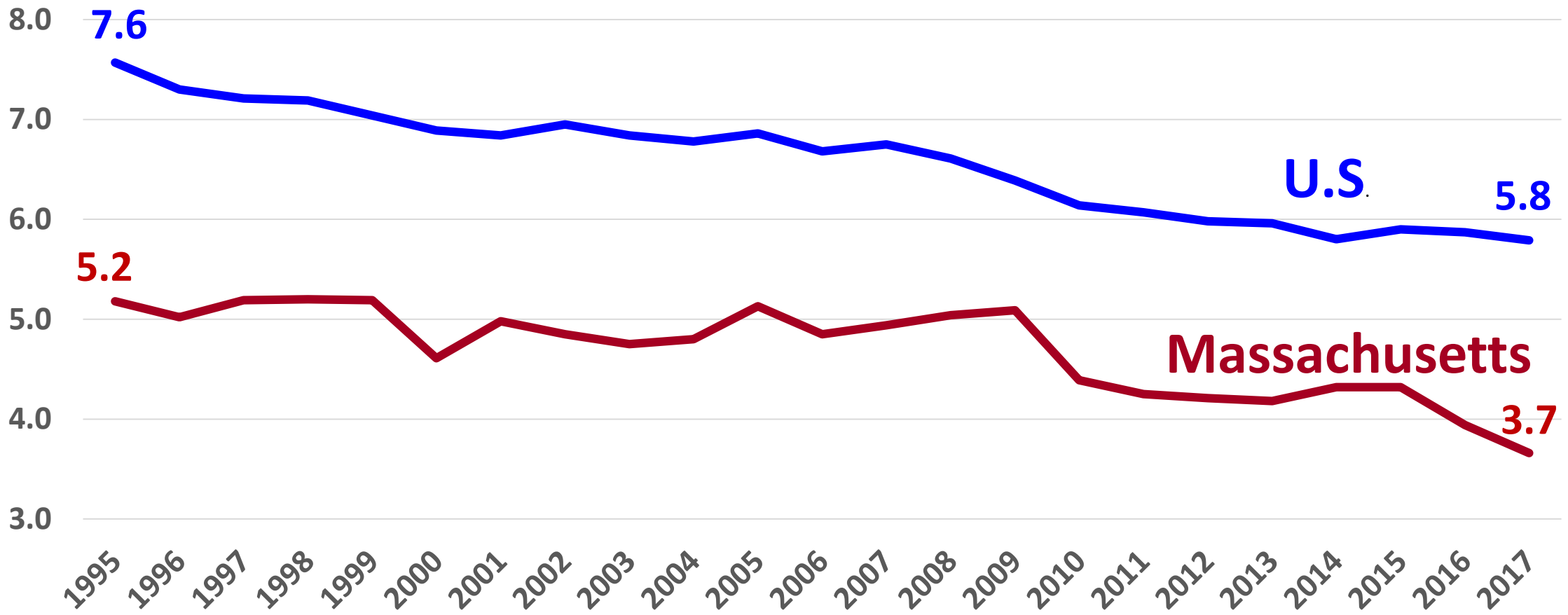
Infant Mortality (per 1,000 live births) in the U.S. and Massachusetts, 1995-2017



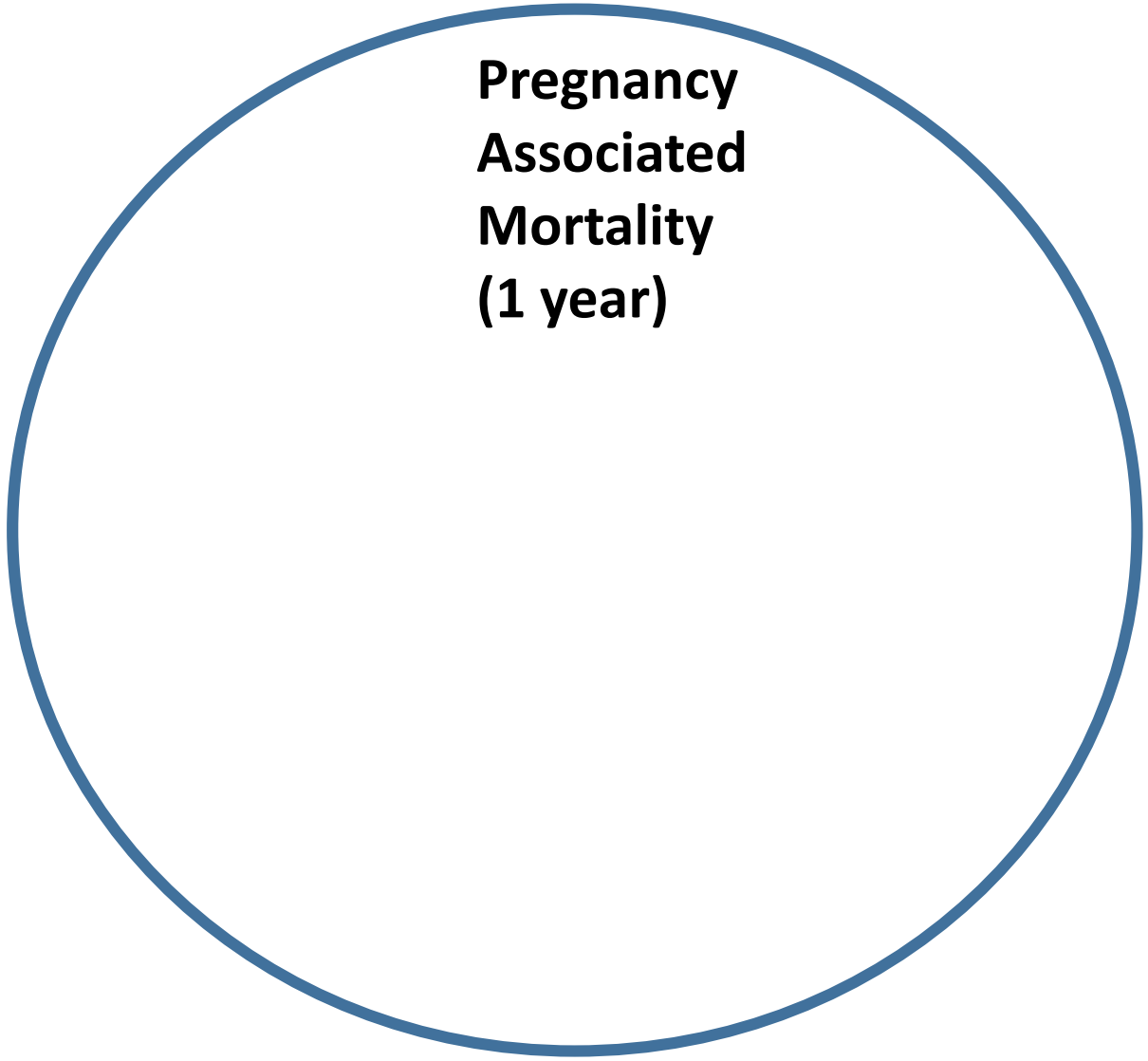
www.birthbythenumbers.org

What we'll be discussing

1. **Some background – how did we get here?**
2. **The crisis in measuring maternal mortality**
3. **Five key points concerning maternal mortality**
   - *The persistence of racial disparities*
   - *The U.S. in a comparative context*
   - *Maternal mortality is a public health problem more than a clinical one*
   - *The problem is much bigger than maternal deaths*
   - *Potential policy solutions*

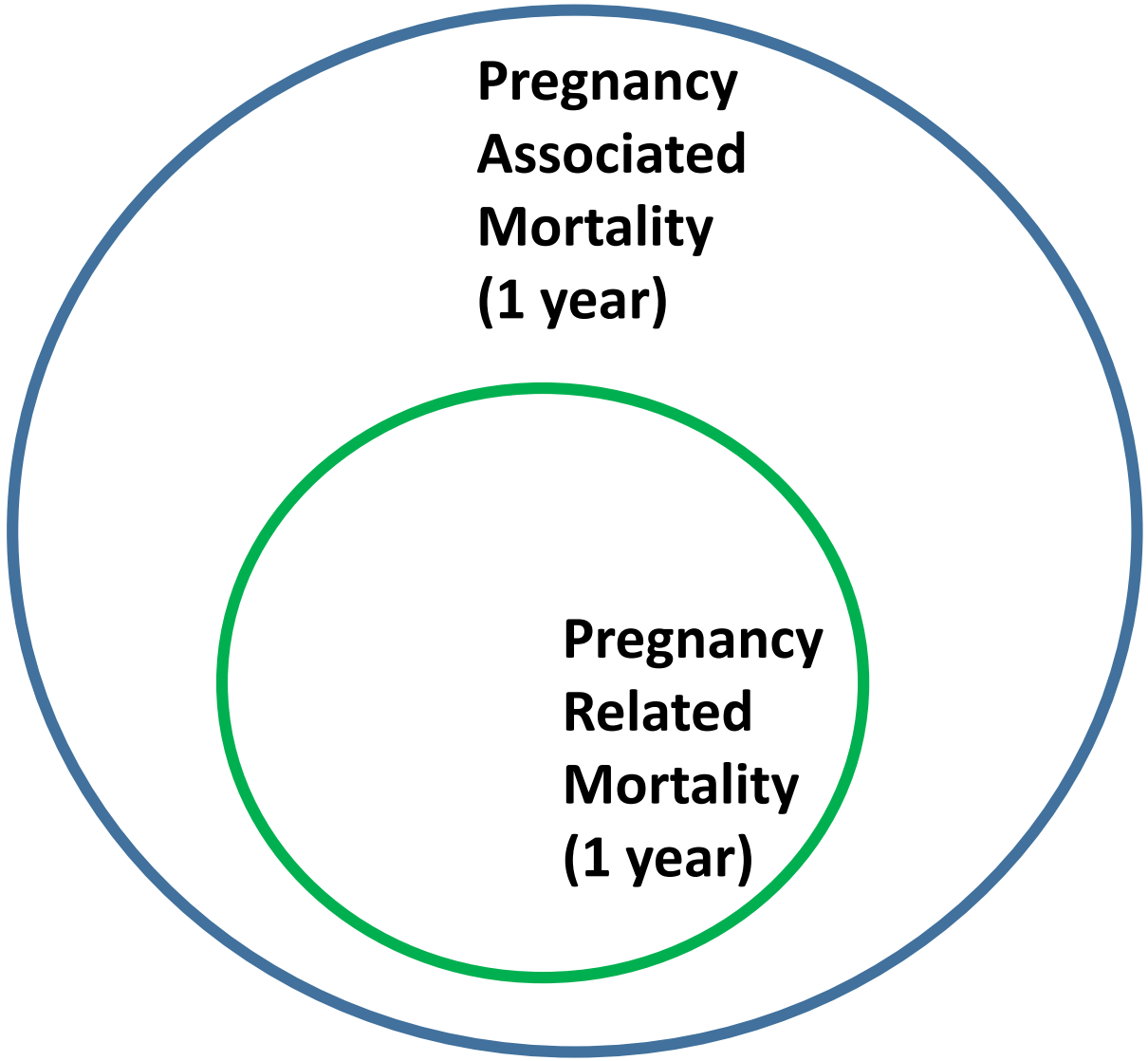
First, some background

Clarifying Definitions:
Pregnancy Associated Mortality



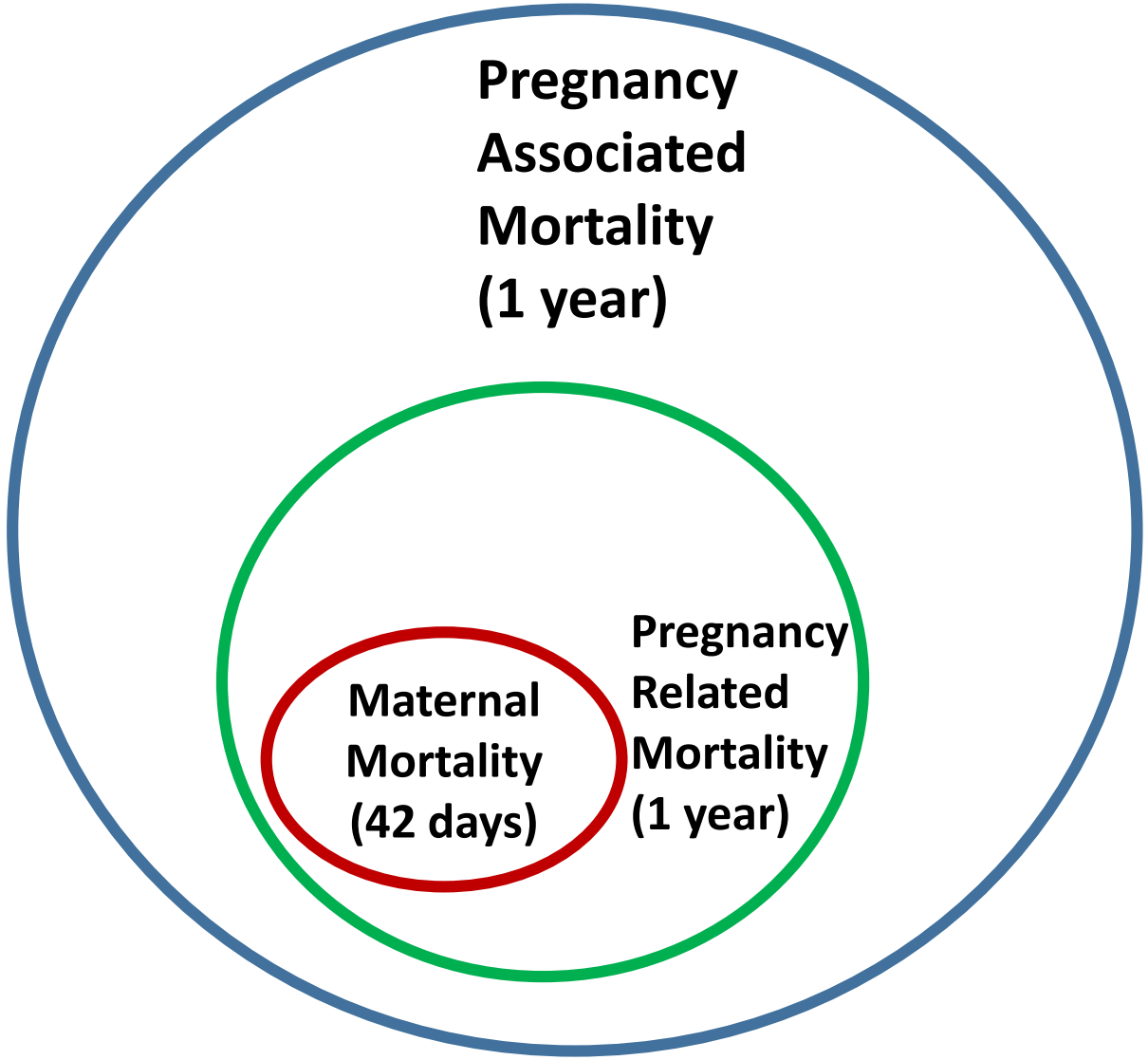
All Deaths women of reproductive age pregnancy to 1 year ppm

Clarifying Definitions:
Pregnancy Related Mortality



All Deaths women during pregnancy, birth and up to 1 year ppm & *Related* to the pregnancy

Clarifying Definitions:
Maternal Mortality



All Deaths women during pregnancy, birth and up to 42 days ppm Related to the pregnancy

NOTE: WHO defines pregnancy related term

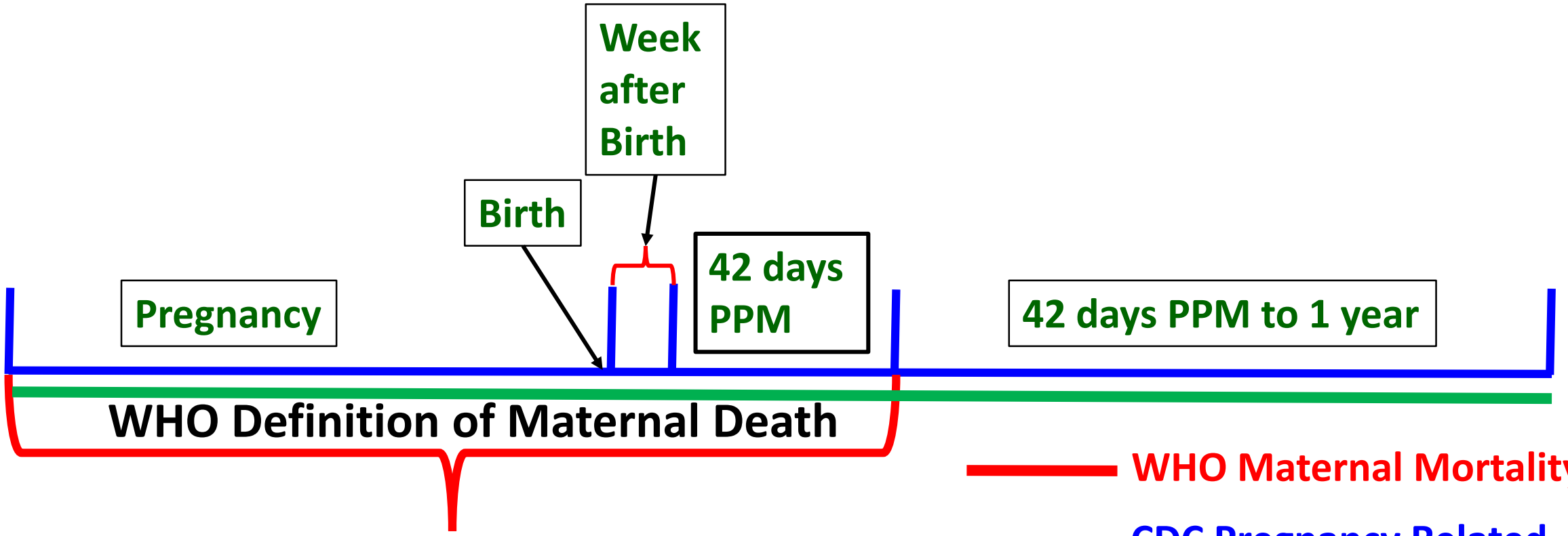
Three Definitions (in the U.S.)

- **Pregnancy Associated Death** – The death of a women while pregnant or ***within one year*** of termination of pregnancy, ***irrespective of cause. (WHO calls these "pregnancy related"). Starting point for analyses.***

- **Maternal Mortality Ratio** – the 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. Typically reported as a ratio per 100,000 births. ***Used in international comparisons.***

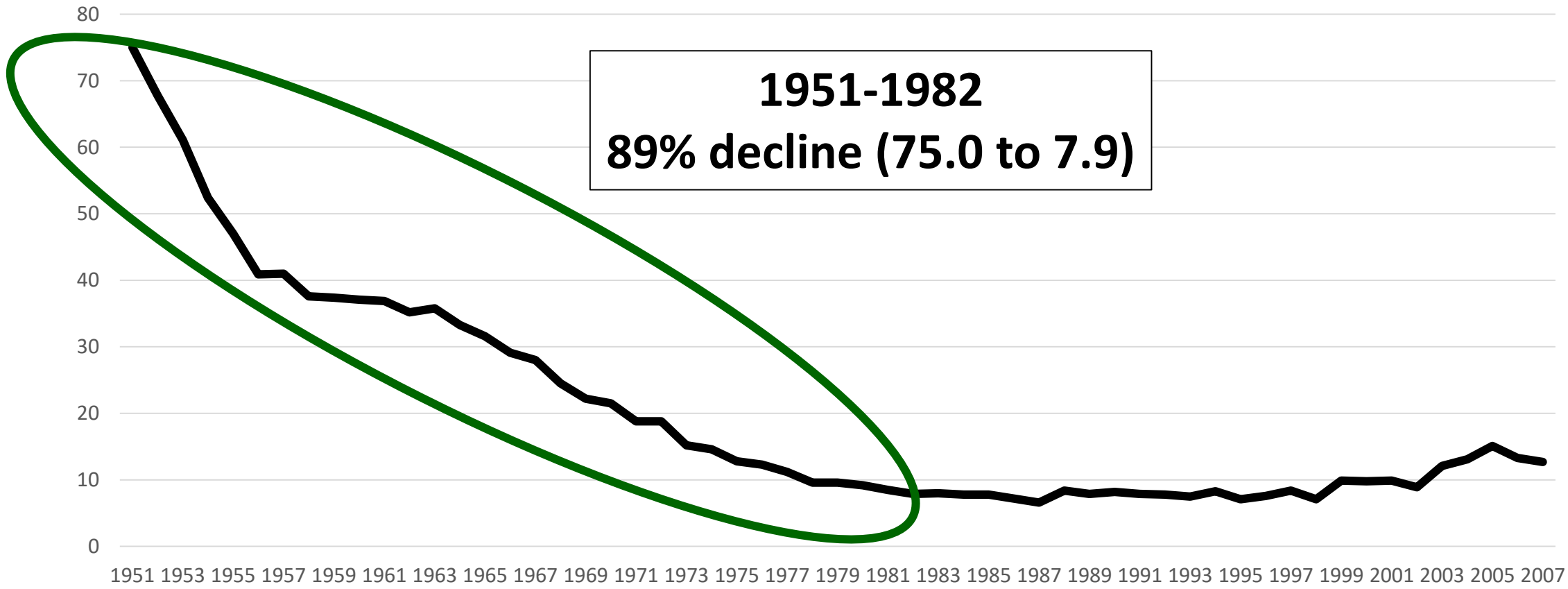
- **Pregnancy Related Death** – the death of a woman during pregnancy or ***within one year*** of the end of pregnancy from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy. ***Used by CDC for U.S. trends.***

Timeline of Maternal Mortality Definitions



PPM – postpartum –period after the birth

U.S. Maternal Mortality (per 100,000 live births), 1951-2007



Source: NCHS. Deaths: Final Data. Annual Reports.

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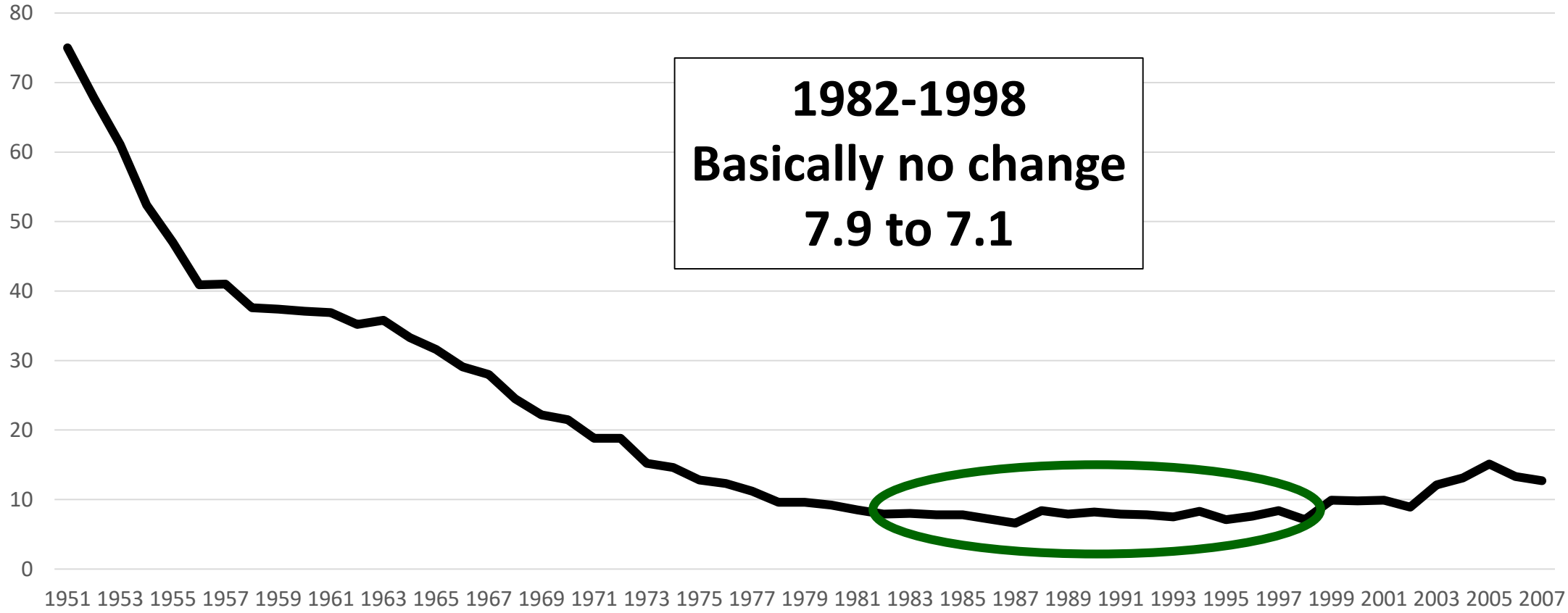
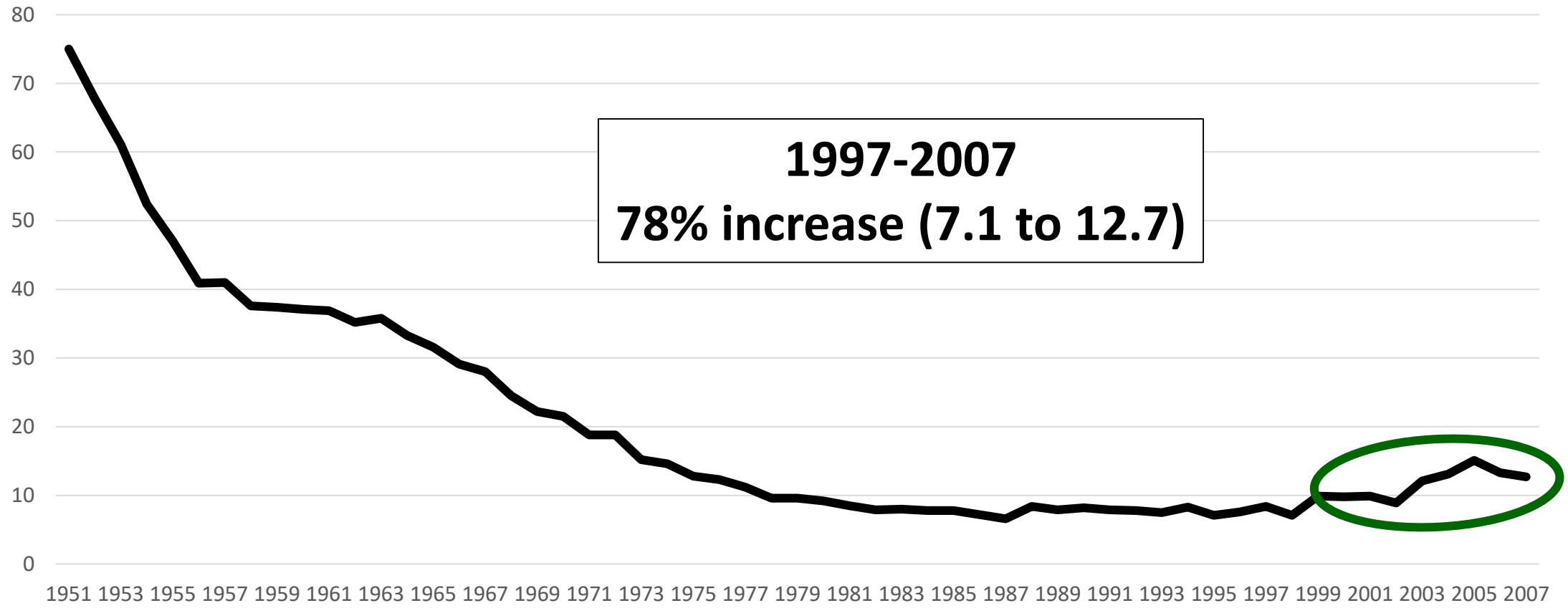
U.S. Maternal Mortality (per 100,000 live births), 1951-2007



Source: NCHS. Deaths: Final Data. Annual Reports.

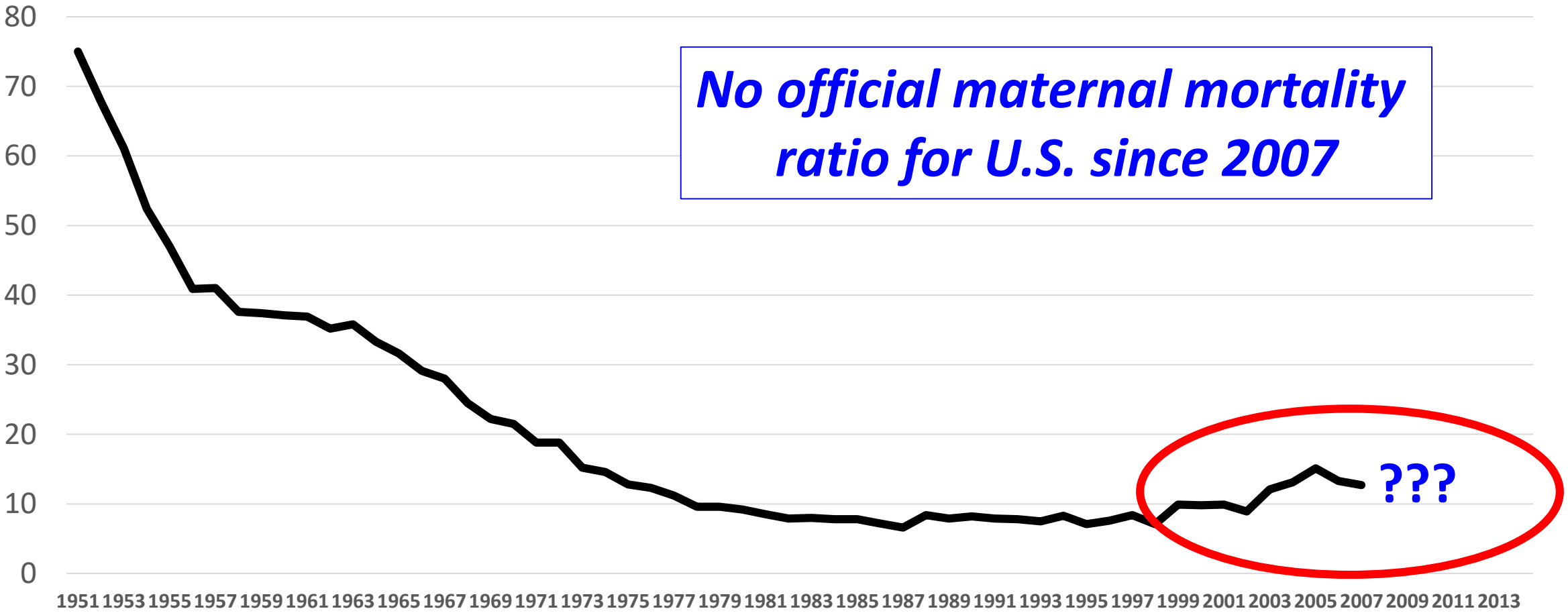
U.S. Maternal Mortality (per 100,000 live births), 1951-2007



Source: NCHS. Deaths: Final Data. Annual Reports.

U.S. Maternal Mortality Ratio , 1951-2007

The dual problem: substance & measurement



www.birthbythenumbers.org

How did the U.S. get to the point where they stopped publishing a maternal mortality rate?

Efforts to avoid poor case ascertainment led to over-ascertainment

Last reporting (2007)of a maternal mortality rate by NCHS

Table 34. Number of maternal deaths and maternal mortality rates for selected causes, by Hispanic origin and race for non-Hispanic population: United States, 2007

[Maternal causes are those assigned to categories A34, O00–O95, and O98–O99 of the *International Classification of Diseases, Tenth Revision* (ICD–10), Second Edition. An increasing number of states use a separate item regarding pregnancy status on the death certificate to help identify these deaths; see "Technical Notes." Rates are per 100,000 live births in specified group; see "Technical Notes." Race and Hispanic origin are reported separately on the death certificate. Persons of Hispanic origin may be of any race. Data for Hispanic persons are not tabulated separately by race; data for non-Hispanic persons are tabulated by race. Data for Hispanic origin should be interpreted with caution because of inconsistencies between reporting Hispanic origin on death certificates and on censuses and surveys; see "Technical Notes"]

Cause of death (based on ICD–10, 2004)		Number					Rate				
		All origins[1]	Hispanic	Non-Hispanic[2]	Non-Hispanic white[3]	Non-Hispanic black[3]	All [illegible]	Hispanic	Non-Hispanic[2]	Non-Hispanic white[3]	Non-Hispanic black[3]
Maternal causes	(A34,O00–O95,O98–O99)	548	95	453	242	178	12.7	8.9	14.1	10.5	28.4
Pregnancy with abortive outcome	(O00–O07)	31	5	26	8	17	0.7	*	0.8	*	*
Ectopic pregnancy	(O00)	14	1	13	2	11	*	*	*	*	*
Spontaneous abortion	(O03)	9	2	7	3	3	*	*	*	*	*
Medical abortion	(O04)	–	–	–	–	–	*	*	*	*	*
Other abortion	(O05)	1	–	1	–	1	*	*	*	*	*
Other and unspecified pregnancy with abortive outcome	(O01–O02,O06–O07)	7	2	5	3	2	*	*	*	*	*
Other direct obstetric causes	(A34,O10–O92)	362	67	295	153	117	8.4	6.3	9.2	6.6	18.7
Eclampsia and pre–eclampsia	(O11,O13–O16)	64	13	51	29	19	1.5	*	1.6	1.3	*
Hemorrhage of pregnancy and childbirth and placenta previa	(O20,O44–O46,O67,O72)	41	12	29	18	9	0.9	*	0.9	*	*
Complications predominately related to the puerperium	(A34,O85–O92)	93	15	78	35	31	2.2	*	2.4	1.5	4.9
Obstetrical tetanus	(A34)	–	–	–	–	–	*	*	*	*	*
Obstetric embolism	(O88)	33	6	27	12	8	0.8	*	0.8	*	*
Other complications predominately related to the puerperium	(O85–O87,O89–O92)	60	9	51	23	23	1.4	*	1.6	1.0	3.7
All other direct obstetric causes	(O10,O12,O21–O43,O47–O66,O68–O71,O73–O75)	164	27	137	71	58	3.8	2.5	4.3	3.1	9.2
Obstetric death of unspecified cause	(O95)	20	4	16	7	7	0.5	*	*	*	*
Indirect obstetric causes	(O98–O99)	135	19	116	74	37	3.1	*	3.6	3.2	5.9
Maternal causes more than 42 days after delivery or termination of pregnancy	(O96–O97)	221	39	181	92	70	5.1	3.7	5.6	4.0	11.2
Death from any obstetric cause occurring more than 42 days but less than 1 year after delivery	(O96)	215	38	176	92	66	5.0	3.6			
Death from sequelae of direct obstetric causes	(O97)	6	1	5	–	4	*				

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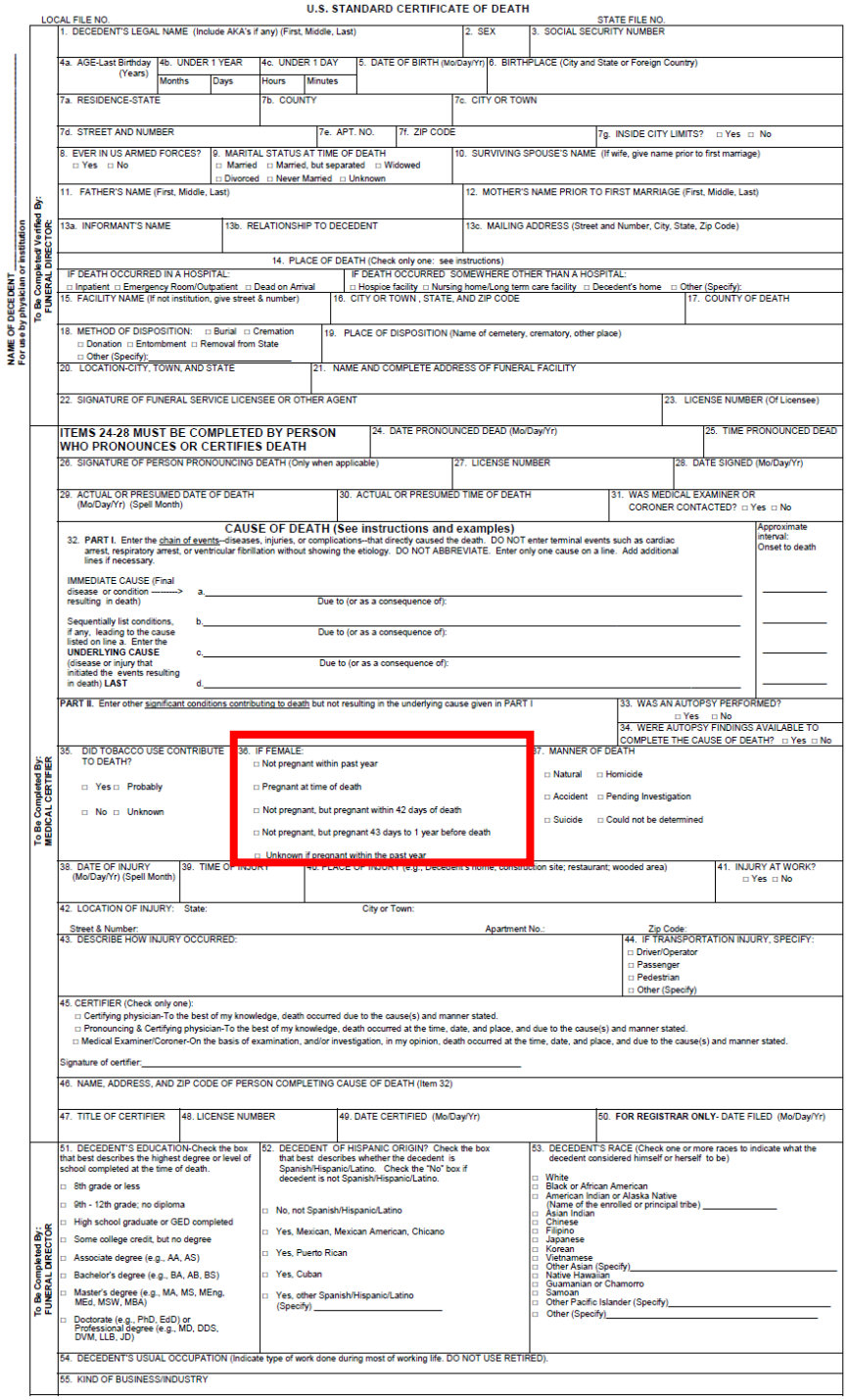


U.S. STANDARD CERTIFICATE OF DEATH

LOCAL FILE NO. STATE FILE NO.

NAME OF DECEDENT _____
For use by physician or institution
To Be Completed Verified By: FUNERAL DIRECTOR

1. DECEDENT'S LEGAL NAME (Include AKA's if any) (First, Middle, Last) | 2. SEX | 3. SOCIAL SECURITY NUMBER

4a. AGE-Last Birthday (Years) | 4b. UNDER 1 YEAR Months Days | 4c. UNDER 1 DAY Hours Minutes | 5. DATE OF BIRTH (Mo/Day/Yr) | 6. BIRTHPLACE (City and State or Foreign Country)

7a. RESIDENCE-STATE | 7b. COUNTY | 7c. CITY OR TOWN

7d. STREET AND NUMBER | 7e. APT. NO. | 7f. ZIP CODE | 7g. INSIDE CITY LIMITS? □ Yes □ No

8. EVER IN US ARMED FORCES? □ Yes □ No | 9. MARITAL STATUS AT TIME OF DEATH □ Married □ Married, but separated □ Widowed □ Divorced □ Never Married □ Unknown | 10. SURVIVING SPOUSE'S NAME (If wife, give name prior to first marriage)

11. FATHER'S NAME (First, Middle, Last) | 12. MOTHER'S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last)

13a. INFORMANT'S NAME | 13b. RELATIONSHIP TO DECEDENT | 13c. MAILING ADDRESS (Street and Number, City, State, Zip Code)

14. PLACE OF DEATH (Check only one: see instructions)

IF DEATH OCCURRED IN A HOSPITAL: □ Inpatient □ Emergency Room/Outpatient □ Dead on Arrival
IF DEATH OCCURRED SOMEWHERE OTHER THAN A HOSPITAL: □ Hospice facility □ Nursing home/Long term care facility □ Decedent's home □ Other (Specify):

15. FACILITY NAME (If not institution, give street & number) | 16. CITY OR TOWN , STATE, AND ZIP CODE | 17. COUNTY OF DEATH

18. METHOD OF DISPOSITION: □ Burial □ Cremation □ Donation □ Entombment □ Removal from State □ Other (Specify): | 19. PLACE OF DISPOSITION (Name of cemetery, crematory, other place)

20. LOCATION-CITY, TOWN, AND STATE | 21. NAME AND COMPLETE ADDRESS OF FUNERAL FACILITY

22. SIGNATURE OF FUNERAL SERVICE LICENSEE OR OTHER AGENT | 23. LICENSE NUMBER (Of Licensee)

To Be Completed By: MEDICAL CERTIFIER

ITEMS 24-28 MUST BE COMPLETED BY PERSON WHO PRONOUNCES OR CERTIFIES DEATH | 24. DATE PRONOUNCED DEAD (Mo/Day/Yr) | 25. TIME PRONOUNCED DEAD

26. SIGNATURE OF PERSON PRONOUNCING DEATH (Only when applicable) | 27. LICENSE NUMBER | 28. DATE SIGNED (Mo/Day/Yr)

29. ACTUAL OR PRESUMED DATE OF DEATH (Mo/Day/Yr) (Spell Month) | 30. ACTUAL OR PRESUMED TIME OF DEATH | 31. WAS MEDICAL EXAMINER OR CORONER CONTACTED? □ Yes □ No

CAUSE OF DEATH (See instructions and examples)

32. PART I. Enter the chain of events--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.

Approximate interval: Onset to death

IMMEDIATE CAUSE (Final disease or condition resulting in death) ——> a. _____ Due to (or as a consequence of):

Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST
b. _____ Due to (or as a consequence of):
c. _____ Due to (or as a consequence of):
d. _____

PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I | 33. WAS AN AUTOPSY PERFORMED? □ Yes □ No | 34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? □ Yes □ No

35. DID TOBACCO USE CONTRIBUTE TO DEATH? □ Yes □ Probably □ No □ Unknown

36. IF FEMALE: □ Not pregnant within past year □ Pregnant at time of death □ Not pregnant, but pregnant within 42 days of death □ Not pregnant, but pregnant 43 days to 1 year before death □ Unknown if pregnant within the past year

37. MANNER OF DEATH □ Natural □ Homicide □ Accident □ Pending Investigation □ Suicide □ Could not be determined

38. DATE OF INJURY (Mo/Day/Yr) (Spell Month) | 39. TIME OF INJURY | 40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area) | 41. INJURY AT WORK? □ Yes □ No

42. LOCATION OF INJURY: State: City or Town: Street & Number: Apartment No.: Zip Code:

43. DESCRIBE HOW INJURY OCCURRED: | 44. IF TRANSPORTATION INJURY, SPECIFY: □ Driver/Operator □ Passenger □ Pedestrian □ Other (Specify)

45. CERTIFIER (Check only one):
□ Certifying physician-To the best of my knowledge, death occurred due to the cause(s) and manner stated.
□ Pronouncing & Certifying physician-To the best of my knowledge, death occurred at the time, date, and place, and due to the cause(s) and manner stated.
□ Medical Examiner/Coroner-On the basis of examination, and/or investigation, in my opinion, death occurred at the time, date, and place, and due to the cause(s) and manner stated.

Signature of certifier: _____

46. NAME, ADDRESS, AND ZIP CODE OF PERSON COMPLETING CAUSE OF DEATH (Item 32)

47. TITLE OF CERTIFIER | 48. LICENSE NUMBER | 49. DATE CERTIFIED (Mo/Day/Yr) | 50. FOR REGISTRAR ONLY- DATE FILED (Mo/Day/Yr)

To Be Completed By: FUNERAL DIRECTOR

51. DECEDENT'S EDUCATION-Check the box that best describes the highest degree or level of school completed at the time of death.
□ 8th grade or less
□ 9th - 12th grade; no diploma
□ High school graduate or GED completed
□ Some college credit, but no degree
□ Associate degree (e.g., AA, AS)
□ Bachelor's degree (e.g., BA, AB, BS)
□ Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)
□ Doctorate (e.g., PhD, EdD) or Professional degree (e.g., MD, DDS, DVM, LLB, JD)

52. DECEDENT OF HISPANIC ORIGIN? Check the box that best describes whether the decedent is Spanish/Hispanic/Latino. Check the "No" box if decedent is not Spanish/Hispanic/Latino.
□ No, not Spanish/Hispanic/Latino
□ Yes, Mexican, Mexican American, Chicano
□ Yes, Puerto Rican
□ Yes, Cuban
□ Yes, other Spanish/Hispanic/Latino (Specify) _____

53. DECEDENT'S RACE (Check one or more races to indicate what the decedent considered himself or herself to be)
□ White
□ Black or African American
□ American Indian or Alaska Native (Name of the enrolled or principal tribe) _____
□ Asian Indian
□ Chinese
□ Filipino
□ Japanese
□ Korean
□ Vietnamese
□ Other Asian (Specify) _____
□ Native Hawaiian
□ Guamanian or Chamorro
□ Samoan
□ Other Pacific Islander (Specify) _____
□ Other (Specify) _____

54. DECEDENT'S USUAL OCCUPATION (Indicate type of work done during most of working life. DO NOT USE RETIRED).

55. KIND OF BUSINESS/INDUSTRY

Revised (2003) U.S. Standard Certificate of Death

PART II (Other significant conditions)

•Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**. See attached examples.
•If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH

Should additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS 33-34 - AUTOPSY

•33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
•34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No". Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?

Check "yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "no" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?

This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH

•Always check Manner of Death, which is important: 1) in determining accurate causes of death; 2) in processing insurance claims; and 3) in statistical studies of injuries and death.
•Indicate "Pending investigation" if the manner of death cannot be determined whether due to an accident, suicide, or homicide within the statutory time limit for filing the death certificate. This should be changed later to one of the other terms.
•Indicate "Could not be Determined" **ONLY** when it is impossible to determine the manner of death.

www.birthbythenumbers.org

To improve case identification:

U.S. Standard Pregnancy Question, 2003 (sort of)

Checkbox format:

IF FEMALE:

- ❑ Not pregnant within past year
- ❑ Pregnant at time of death
- ❑ Not pregnant, but pregnant within 42 days of death
- ❑ Not pregnant, but pregnant 43 days to 1 year before death
- ❑ Unknown if pregnant within the past year

Meant to solve 2 problems:

(1) Most states had no such question; and

(2) Different questions used in different states

The Check Box

Determining Pregnancy Status to Improve Maternal Mortality Surveillance

Andrea P. MacKay, MSPH, Roger Rochat, MD, Jack C. Smith, MS, Cynthia J. Berg, MD, MPH

Objective: More than half of pregnancy-related deaths are not identified through routine surveillance methods. The purpose of this study was to evaluate the effectiveness of the pregnancy check box on death certificates in ascertaining pregnancy-related deaths.

Methods: Data derived from the Centers for Disease Control and Prevention's ongoing Pregnancy Mortality Surveillance System were used to identify states that included a check box on the death certificate in 1991 and 1992. Death certificates from those states were evaluated to determine the number and proportion of pregnancy-related deaths identified by a marked check box. Characteristics of death were also examined.

Results: Sixteen states and New York City included a check box or question specifically asking about pregnancy of the decedent. Of the 425 pregnancy-related deaths identified in the 17 reporting areas, 124 (29%) were determined to be pregnancy-related deaths only because of the pregnancy status information provided in the check box. The proportion of deaths identified only by a marked check box ranged from less than 5% for four states to 40% or more for seven states.

Conclusions: The availability of pregnancy status information on death certificates is a simple and effective aid in ascertaining a pregnancy-related death, when no other indicators of pregnancy appear on the death certificate. Routine use of the pregnancy check box for all states would lead to substantially increased classification of maternal deaths and more accurate classification of the causes of and risk factors for maternal deaths.

16 States already had a checkbox as far back as 1991-1992, but with different wording

Am J Prev Med 2000;19(1S):35-39.

Table III. Separate questions related to pregnancy on state certificates in 2003

Alabama	Was there a pregnancy in last 42 days? (Specify Yes, No, or Unknown)
California	If female, pregnant in last year? ☐ Yes ☐ No ☐ Unknown
Florida	If female, was there a pregnancy in the past 3 months? ___ Yes ___ No
Idaho	If female aged 10–54: ☐ not pregnant within past year ☐ pregnant at time of death ☐ not pregnant, but pregnant within 42 days of death ☐ not pregnant, but pregnant 43 days to 1 year before death ☐ unknown if pregnant within the past year
Illinois	If female, was there a pregnancy in past three months? ☐ Yes ☐ No
Indiana	Was decedent pregnant or 90 days postpartum? (Yes or no)
Iowa	If female, was there a pregnancy in the past 12 months? (Specify yes or no)
Kentucky	If female, was there a pregnancy in the past 12 months? ☐ Yes ☐ No
Louisiana	If deceased was female 10–49, was she pregnant in the last 90 days? ☐ Yes ☐ No ☐ Unknown
Maryland	If female: Was decedent pregnant in the past 12 months? ☐ Yes ☐ No ☐ Unknown *Separate fields on dates of death and delivery support capability to compute the other categories in the standard.*
Minnesota	Was female pregnant: At death? ___ yes ___ no___ unknown In last 12 months?___ yes ___ no___ unknown
Mississippi	Had decedent been pregnant within 90 days prior to death? ☐ Yes ☐ No
Missouri	If deceased was female 10–49, was she pregnant in the last 90 days? ☐ Yes ☐ No ☐ Unknown
Montana	If female: ☐ not pregnant within past year ☐ not pregnant but pregnant with 42 days of death ☐ not pregnant but pregnant 43 days to 1 year before death ☐ pregnant at time of death ☐ unknown if pregnant within past year
Nebraska	If female, was there a pregnancy in the past 3 months? ☐ Yes ☐ No
New Jersey	If female, was she pregnant at death, or any time 90 days prior to death? ☐ Yes ☐ No
New Mexico	Was decedent pregnant within last 6 weeks? ☐ Yes ☐ No
New York City	If female: ☐ not pregnant within 1 year of death ☐ pregnant at time of death ☐ not pregnant at death, but pregnant within 42 days of death ☐ not pregnant at death, but pregnant 43 days to 1 year before death ☐ unknown if pregnant within 1 year of death *Also have date of outcome, so could compute intervals if needed.*
New York State	If female: ☐ not pregnant within last year ☐ pregnant at time of death ☐ not pregnant, but pregnant within 42 days of death ☐ not pregnant, but pregnant 43 days to 1 year before death ☐ unknown if pregnant within past year *Also have date of delivery, so could compute intervals if needed.*
North Dakota	Was deceased pregnant within 18 months of death? ☐ Yes ☐ No
Texas	Was decedent pregnant at time of death ☐ Yes ☐ No ☐ Unknown within last 12 months ☐ Yes ☐ No ☐ Unknown
Virginia	If female, was there a pregnancy in past 3 months? ☐ Yes ☐ No ☐ Unknown

Time periods used:
42 days;
6 weeks;
3 months;
90 days;
12 mos;
“last year”

Source: Hoyert . *Maternal Mortality and Related Concepts*. NCHS. Vital Health Stat 3(33). 2007. p.12.

Delays in Adoption of the U.S. Standard Pregnancy Question among States

	New Adopters*	Total
2003	4	4
2004	7	11
2005	7	18
2006	4	22
2007	2	24
2008	7	31
2009	0	31
2010	4	35
2011	2	37
2012	4	41
2013	1	42
2014	5	47
2015	2	49
2016	1	50
2017	1	51

Specific State	
California	2003
New Hampshire	4/2004
Connecticut	2005
Minnesota	3/2011
Wisconsin	9/2013
Massachusetts	**9/2014**

* Note: Some states adopted change in the middle of the calendar year.

Our Analysis

We did an analysis that examined data by state, modeled for whether or not they were using the new item, and came up with national estimates.

Not enough cases to do single state analyses, but could look at some of the larger states.

Original Research

Recent Increases in the U.S. Maternal Mortality Rate

Disentangling Trends From Measurement Issues

Marian F. MacDorman, PhD, Eugene Declercq, PhD, Howard Cabral, PhD, and Christine Morton, PhD

RESULTS: The estimated maternal mortality rate (per 100,000 live births) for 48 states and Washington, DC (excluding California and Texas, analyzed separately) increased by 26.6%, from 18.8 in 2000 to 23.8 in 2014. California showed a declining trend, whereas Texas had a sudden increase in 2011–2012. Analysis of the measurement change suggests that U.S. rates in the early 2000s were higher than previously reported.

(Obstet Gynecol 2016;128:447–55)

Grouping the States

- **Group 1** – 24 states & D.C. that did not have an unrevised pregnancy question and adopted the U. S. standard question by January 2013

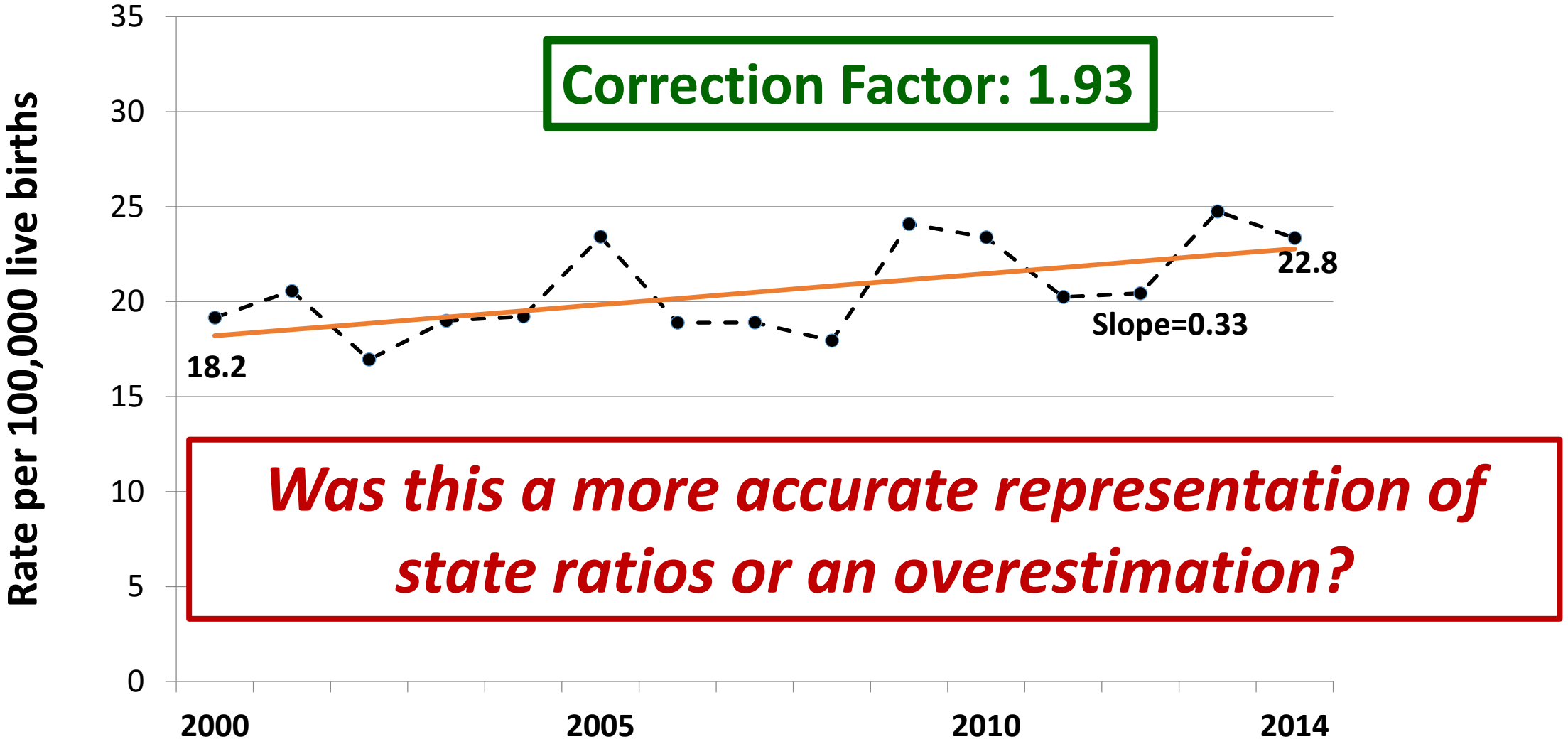
- **Group 2** – 14 states that had an unrevised pregnancy question with a timeframe longer than the U.S. standard

- **Group 3** – 7 states that had not revised by late 2013 with either no pregnancy question or a nonstandard pregnancy question on their unrevised death certificate.

- **Group 4** – 3 states that had an unrevised pregnancy question consistent with the U.S. standard.

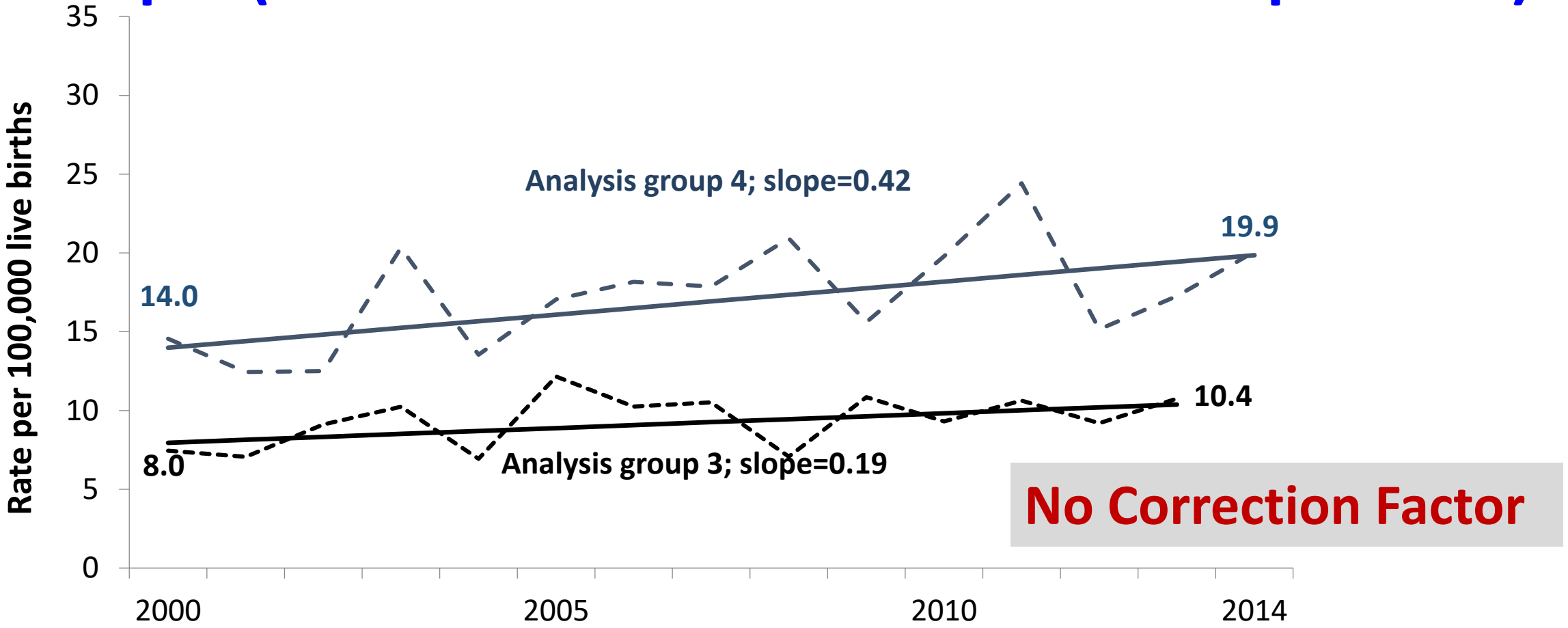
California and Texas are unique – each in their own ways

Group 1 states (had no question & added Standard)



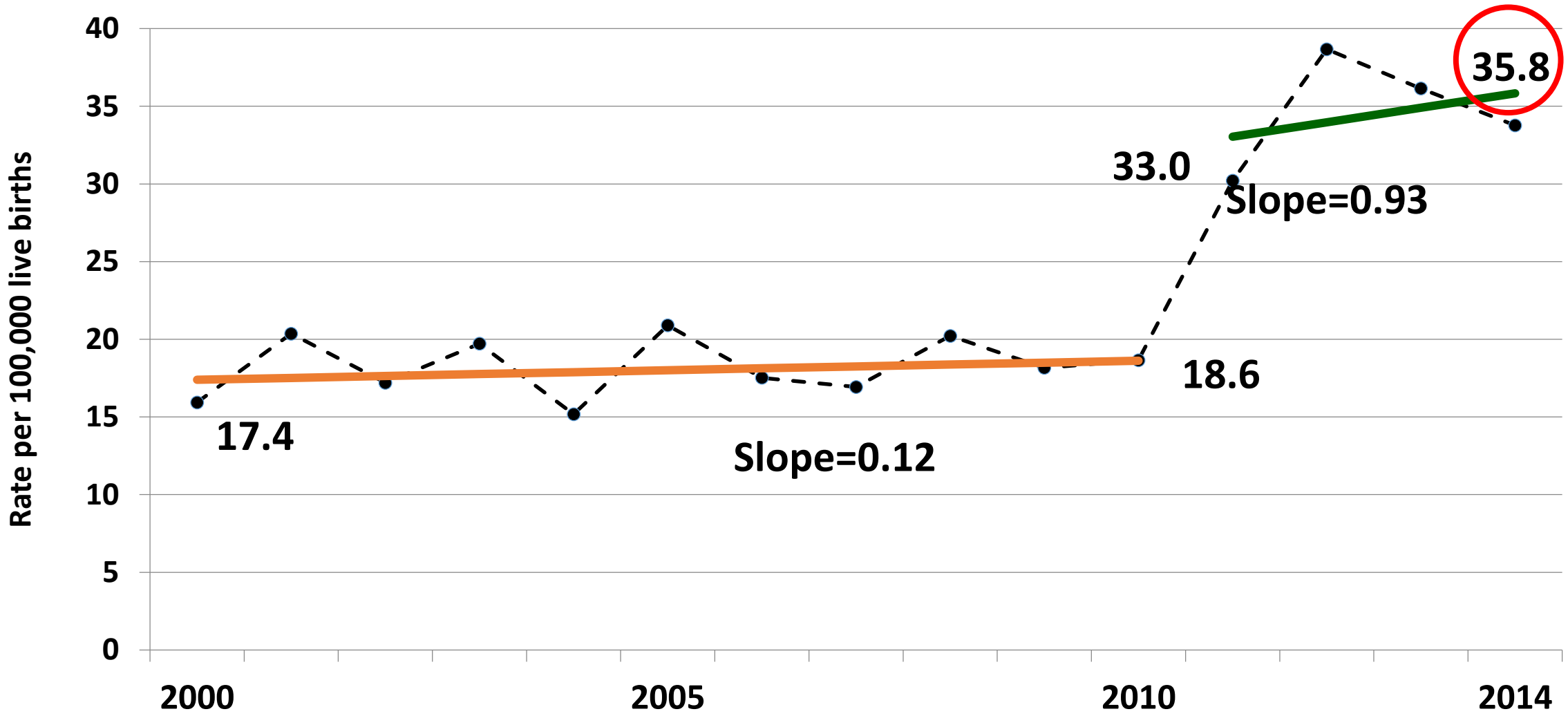
Note: Includes 24 states that did not have a pregnancy question on their unrevised death certificate and which adopted the U.S. standard question upon revision: Arkansas, Arizona, Connecticut, Delaware, Georgia, Idaho, Kansas, Maine, Michigan, Montana, New Hampshire, Nevada, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Utah, Vermont, Washington, and Wyoming.

Group 3 (7 states– no question & no revision by 2013) & Group 4 (3 states no revision & had same question)



Note: Group 3 includes 8 states who did not have a pregnancy question on their unrevised death certificate (Alaska, Colorado, Hawaii, North Carolina, **Massachusetts**, West Virginia, and Wisconsin) or who had a pregnancy question with a longer timeframe (Virginia) and had not revised as of late 2013.(Wisconsin revised in late 2013 and their data were excluded from the 2013 data point.) Group 4 includes 3 states (Alabama, Maryland and New Mexico) who had an unrevised pregnancy question consistent with the U.S. standard.

Adjusted MMRs, Texas, 2000-2014



Texas revised to the U.S. standard pregnancy question in 2006. The unrevised question asked about pregnancies within the past 12 months. Analysis group 2 correction factor was used to adjust unrevised data.

Is there a Problem Over Ascertainment??

- Research into the cause of death category finds much of the increase is coming from ***less specific ICD-10 codes***.

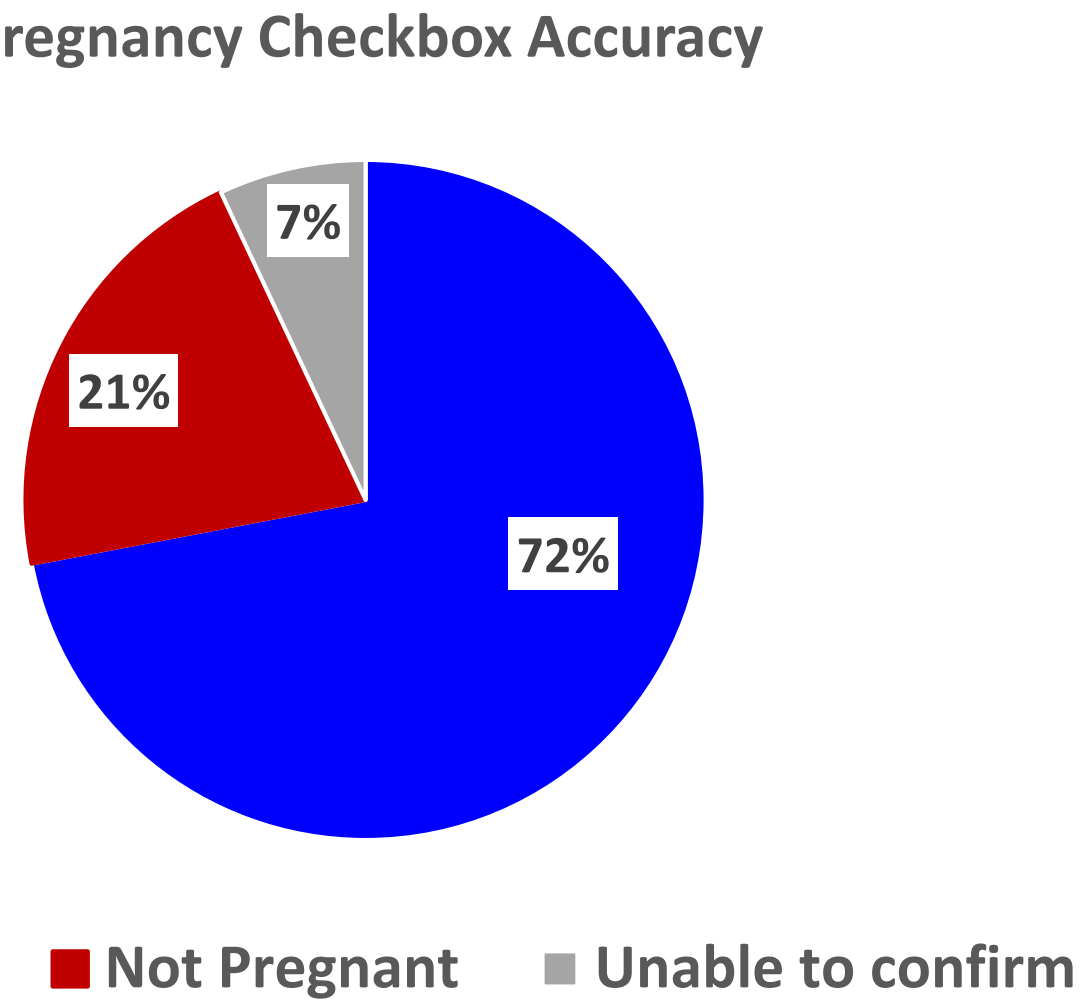
- Other specified pregnancy-related conditions (O26.8)
- Other obstetric complications (O21–O22, O24– O41.0, O41.8–O43.1, O43.8–O43.9,O47–O66, O68–O70, O71.2, O71.5,O71.6, O71.8, O71.9, O73–O75.2,O75.4–O75.9, O87–O90, O92)
- Other specified diseases and conditions (O99.8)
- Obstetric death of unspecified cause (O95)

Assessing the impact of ill-defined causes on maternal deaths and mortality rates by cause of death, 27 states and DC, 2008-2009 to 2013-2014

Underlying cause of death (ICD-10 category)	2008-9 Number of deaths	2008-9 Rate~	2013-14 Number of deaths	2013-14 Rate~	Percent change 2008-9 to 2013-14
Total maternal (A34, O00-O05, O98-O99)	780	20.6	907	25.4	23.3
Ill-defined causes (O26.8, O95, O99.8)	266	7.0	371	10.4	47.9
Total maternal minus ill-defined causes (Remainder)	514	13.5	536	15.0	10.6
Total direct obstetric (A34, O00-O92)	527	13.9	595	16.6	19.7
Other specified pregnancy-related conditions (O26.8)	130	3.4	212	5.9	73.0
Total direct obstetric minus O26.8 (Remainder)	397	10.5	383	10.7	2.3
Total indirect causes (O98-O99)	202	5.3	294	8.2	54.4
Other specified diseases and conditions (O99.8)	85	2.2	141	3.9	75.9
Total indirect causes minus O99.8 (Remainder)	117	3.1	153	4.3	38.7

Over-ascertainment: Results of a 4 state study
(Georgia, Louisiana, Michigan, and Ohio)

In 28% of cases with pregnancy checkbox checked, not certain woman was pregnant



Source: A. Daymude. Checking the pregnancy checkbox: Evaluation of a four-state quality assurance pilot. *Birth* 2019 online

Impact of the Checkbox – Better *and* Worse Ascertainment

- While the checkbox contributed to errors, the Four Committee data show that the ***checkbox also improved identification of pregnancy-related deaths***. ***Without the pregnancy checkbox, approximately:***

- ***50% of pregnancy-related deaths that occurred during pregnancy***

- ***11% of pregnancy-related deaths that occurred within 42 days of the end of pregnancy, and***

- ***8% of pregnancy-related deaths that occurred within 43 days to 1 year of the end of pregnancy***

would have been missed.

So has there been any way to monitor maternal death since 2007?

CDC and Pregnancy Related Mortality

Three Sources of U.S. Maternal Death Data

- **National Vital Statistics System (NVSS).** This is the source of the official maternal mortality ratio for the United States and is based on "…information from death certificates filed in the 50 states and the District of Columbia that are subsequently compiled into national data….. Physicians, medical examiners, and coroners are responsible for completing the medical portion of the death certificate." These state data are compiled by NCHS into a national data system.

- **Pregnancy Mortality Surveillance System (PMSS)**. This system was established by CDC. It is based on reports from 52 areas (50 states, Washington, D.C. and New York city) which submits to CDC "… deidentified copies of death certificates for females 12–55 years who died during or within 1 year of pregnancy from any cause; when available, linked birth or fetal death certificates are also sent. Additional sources include computerized searches of Lexis Nexis, reports by public health agencies, including state-based maternal mortality review committees, professional organizations, and individual health care providers." The records are reviewed by specially trained clinicians to determine whether or not a death was pregnancy related.

- **Maternal Mortality Review Information Application (MMRIA).** State interdisciplinary committees do case reviews of maternal deaths. CDC building a data system to compile data from MMRCs. Project got a major boost in recent federal legislation.

Pregnancy Mortality Surveillance System

CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

SEARCH

CDC A-Z INDEX

Reproductive Health

Pregnancy Mortality Surveillance System

When did CDC start conducting national surveillance of pregnancy-related deaths?

CDC initiated national surveillance of pregnancy-related deaths in 1986 because more clinical information was needed to fill data gaps about causes of maternal death.

How does CDC define pregnancy-related deaths?

For reporting purposes, a pregnancy-related death is defined as the death of a woman while pregnant or within 1 year of pregnancy termination—regardless of the duration or site of the pregnancy—from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

How are the data collected and coded?

Each year, CDC requests the 52 reporting areas (50 states, New York City, and Washington DC) to voluntarily send copies of death certificates for all women who died during pregnancy or within 1 year of pregnancy, and copies of the matching birth or fetal death certificates, if they have the ability to perform such record links. All of the information obtained is summarized, and medically trained epidemiologists determine the cause and time of death related to the pregnancy. Causes of death are coded by using a system established in 1986 by the American College of Obstetricians and Gynecologists and the Centers for Disease Control and Prevention Maternal Mortality Study Group.

How are the data used?

Data are analyzed by CDC scientists. Information about causes of pregnancy-related deaths and risk factors associated with these deaths is released periodically through peer-reviewed literature, CDC's *Morbidity and Mortality Weekly Reports*, and the CDC Web site. This information helps clinicians and public health professionals to better understand circumstances surrounding pregnancy-related deaths and to take appropriate them.

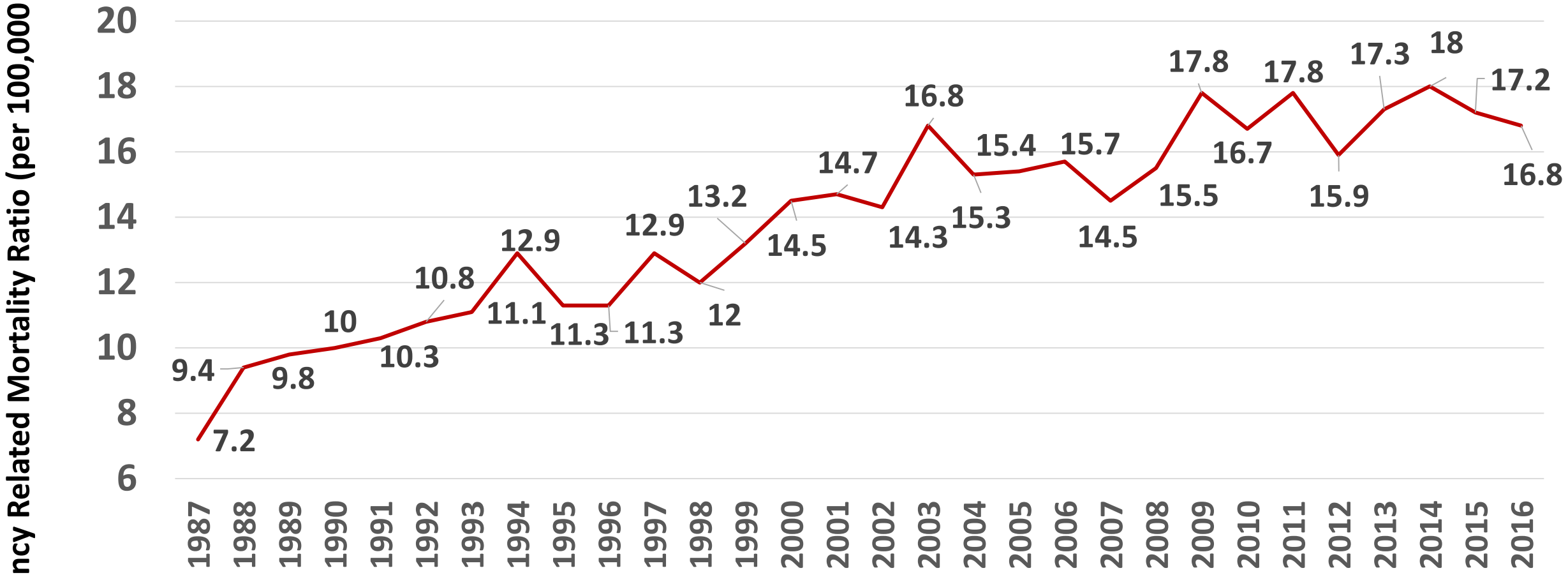
www.birthbythenumbers.org

Data for CDCs Pregnancy Related Mortality System

Each year, CDC requests the 52 reporting areas (50 states, New York City, and Washington DC) to ***voluntarily send copies of death certificates for all women who died during pregnancy or within 1 year of pregnancy, and copies of the matching birth or fetal death certificates,*** *if they have the ability to perform such record links. All of the information obtained is summarized, and medically trained epidemiologists determine the cause and time of death related to the pregnancy. Causes of death are coded by using a system established in 1986 by the American College of Obstetricians and Gynecologists and the Centers for Disease Control and Prevention Maternal Mortality Study Group.*

Our best existing measure

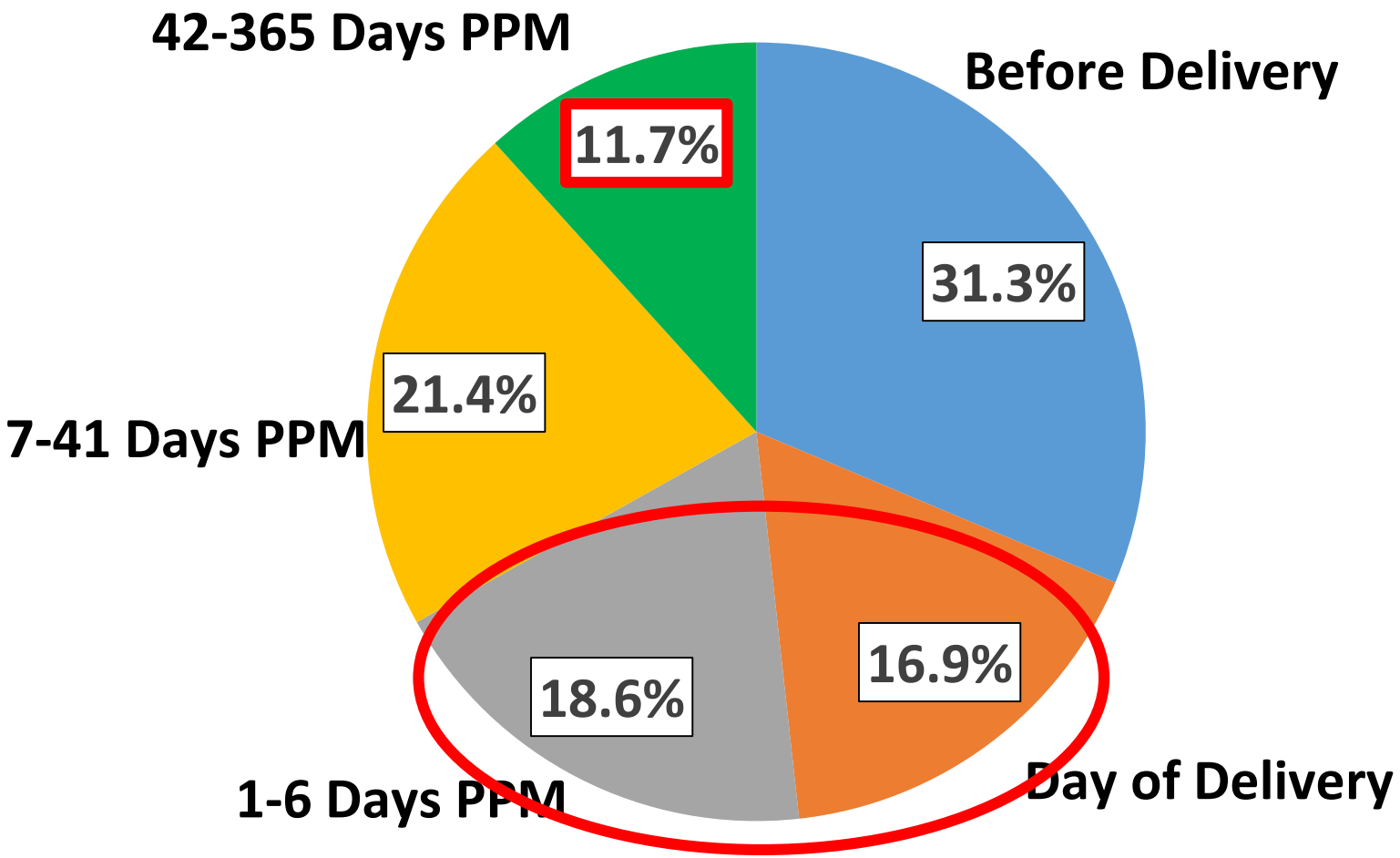
Pregnancy Related Mortality, U.S., 1987-2016



Source: CDC. Adapted from Creanga. Pregnancy-Related Mortality in the United States. *Obstet Gynecol 2017* & Petersen E. et al. Vital Signs: Pregnancy-Related Deaths, U.S., 2011–2015,. *MMWR* .vol.68. May 7, 2019. 1-7 & Petersen E et al. Racial/Ethnic Disparities in Pregnancy Related Deaths – U.S. 2007-'16. *MMWR* 9/6/19.

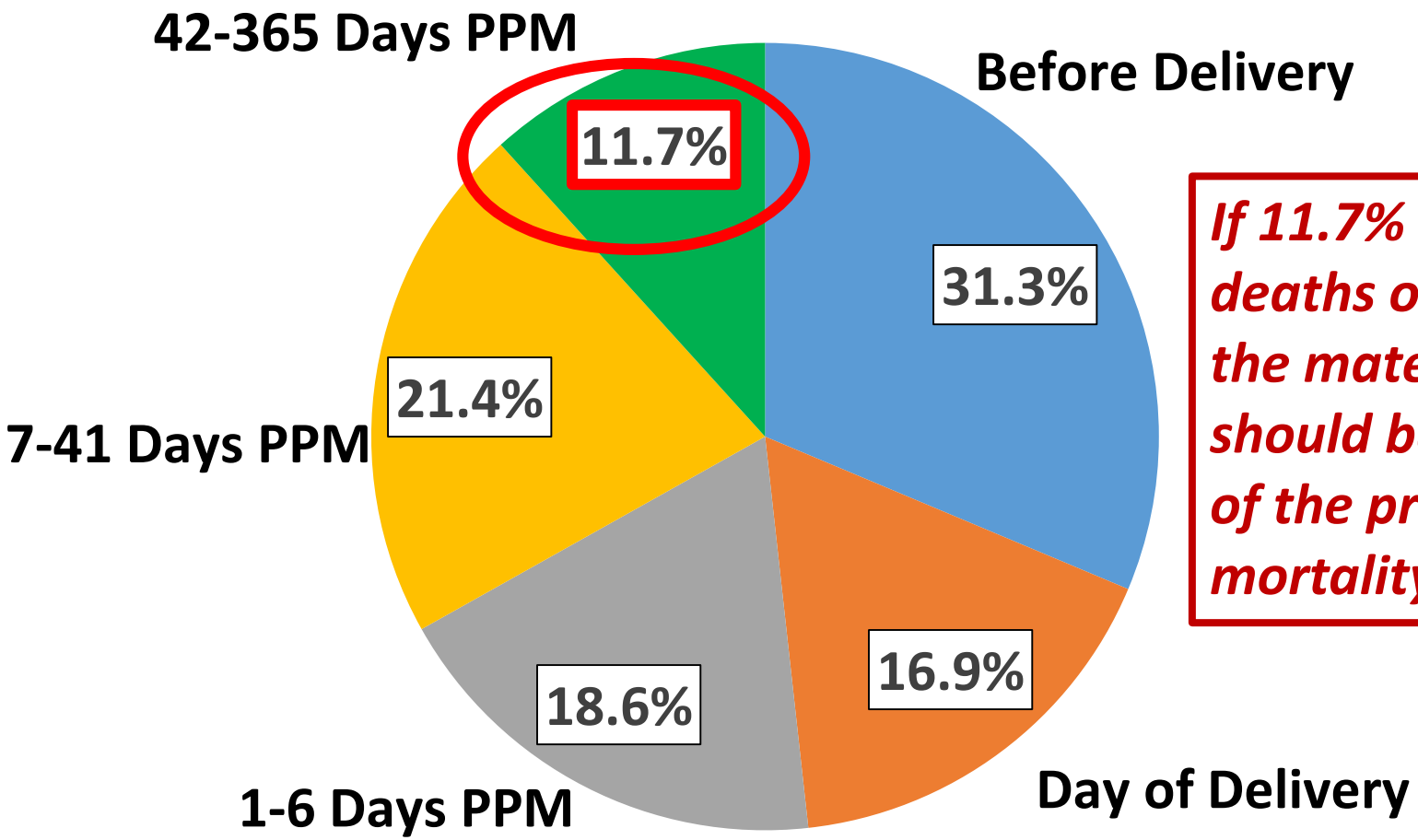
www.birthbythenumbers.org

Timing of Maternal Deaths



Source: Petersen E. et al. Vital Signs: Pregnancy-Related Deaths, United States, 2011–2015, and Strategies for Prevention, 13 States, 2013–2017. *MMWR* .vol.68. May 7, 2019. 1-7.

Timing of Maternal Deaths

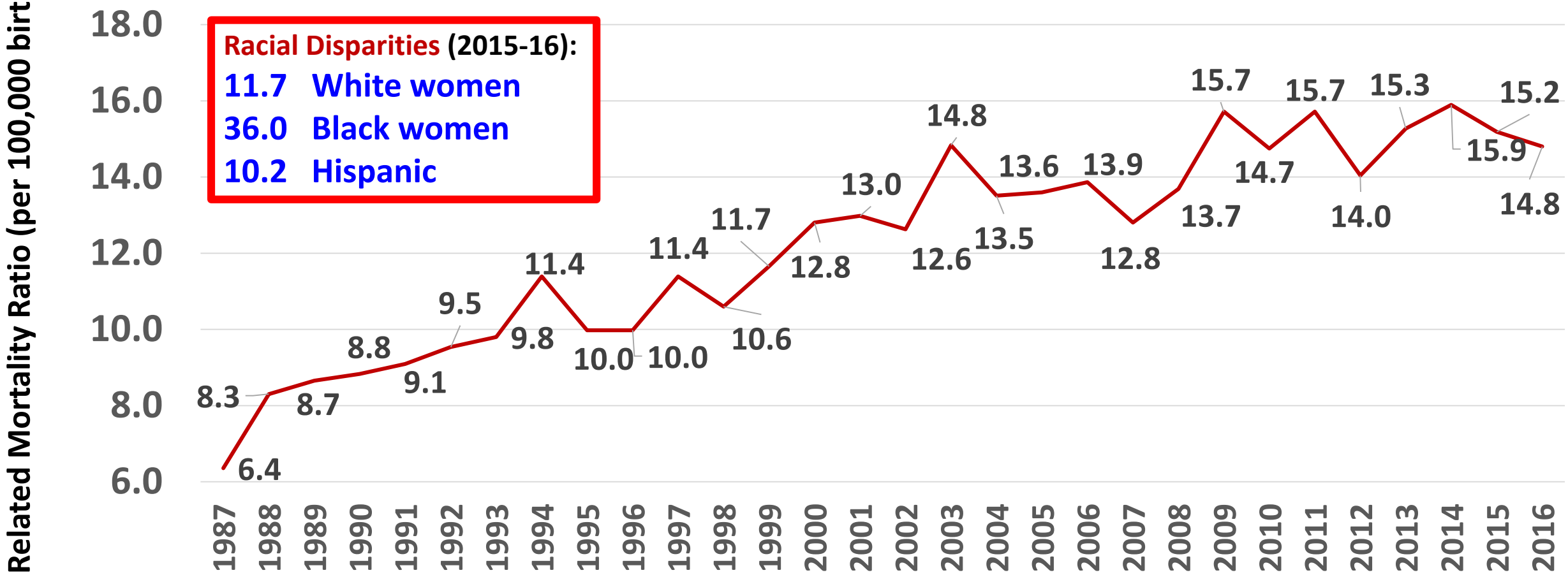


If 11.7% of the pregnancy related deaths occur at 42+ days, then the maternal mortality ration should be approximately 88.3% of the pregnancy related mortality rate.

Source: Petersen E. et al. Vital Signs: Pregnancy-Related Deaths, United States, 2011–2015, and Strategies for Prevention, 13 States, 2013–2017. *MMWR* .vol.68. May 7, 2019. 1-7.

Based on assumption of 11.7% of deaths ppm

Estimated Maternal Mortality, U.S., 1987-2016



Source: CDC. Adapted from Creanga. Pregnancy-Related Mortality in the United States. *Obstet Gynecol 2017* & Petersen E. et al. Vital Signs: Pregnancy-Related Deaths, United States, 2011–2015,. *MMWR* .vol.68. May 7, 2019. 1-7..

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Summary of Background

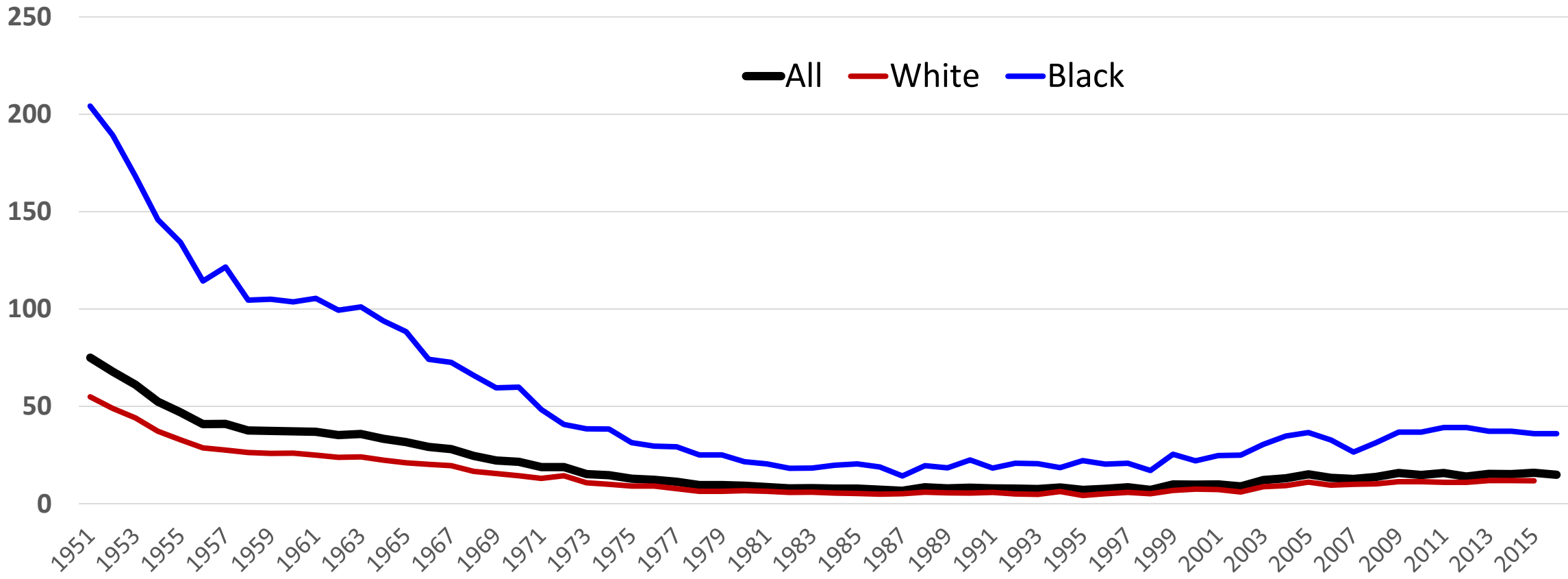
- Attempts to improve case ascertainment resulted in improved identification of cases during pregnancy, but general over-ascertainment
- Despite the measurement problems, clear evidence of a rising pregnancy-related mortality rate

Five key points concerning maternal mortality

1. *The persistence of racial disparities*
2. *The U.S. in a comparative context*
3. *Maternal mortality is a public health problem more than a clinical one*
4. *The problem is much bigger than maternal deaths*
5. *Potential policy solutions*

1. The persistence of racial disparities

U.S. Maternal Mortality (per 100,000 live births), 1951-2016* by Race



* Rates from 2008-2016 blend two year averages and based on Petersen E. *MMWR* .vol.68.No. 35 Sept. 6, 2019. 762-765 with pregnancy related rates adjusted for timing of deaths

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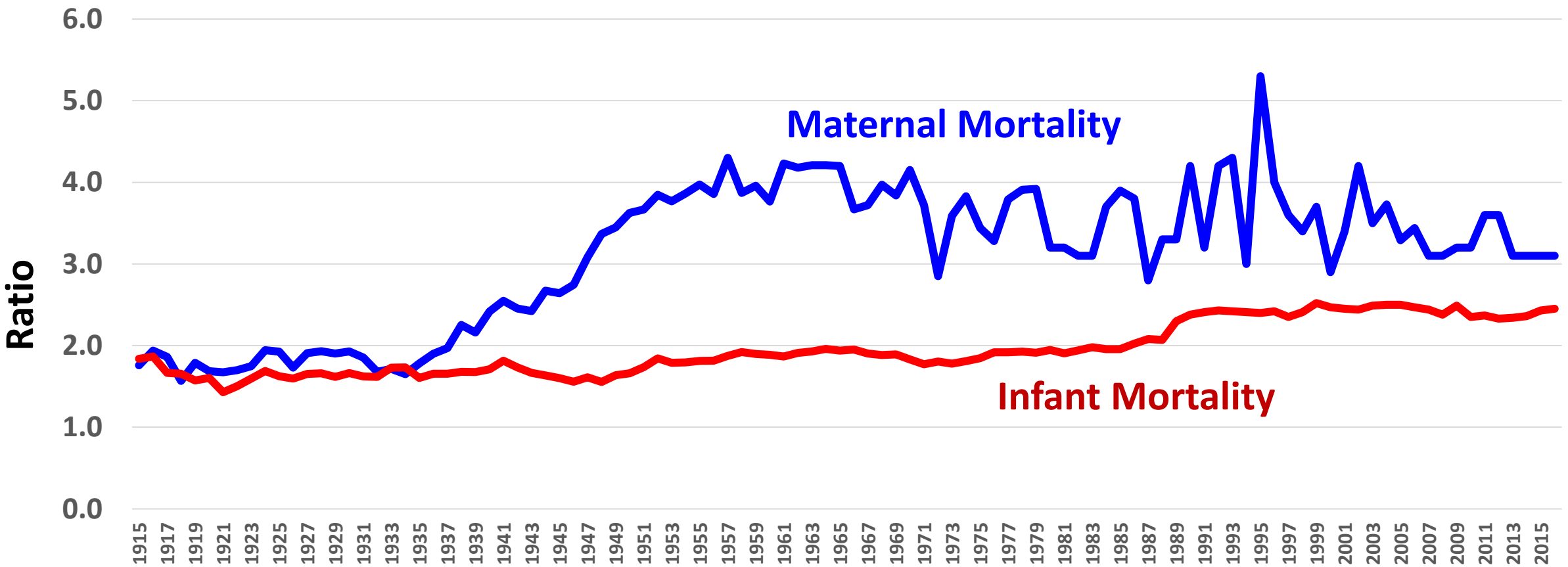
(1) The Persistence of Racial Disparities

U.S. Infant & Maternal Mortality

Black to White Ratios, 1915-2016



Source: NCHS. Maternal Mortality and Related Concepts. Vital & Health Statistics. Series 33; #3. & annual data reports. 1915-1960 data from NCHS. *Vital Statistics Rates In The United States 1940-1960***.** NOTE: Shifts in measurement (e.g. not all states were part of registration system prior to 1933; infant race was based on race of the child until 1980 & then race of the mother post 1980) accounts for some of the variation over time. 2007-2016 based on 2 year estimates of the pregnancy related mortality rate: Petersen E. *MMWR*.9/6/19.

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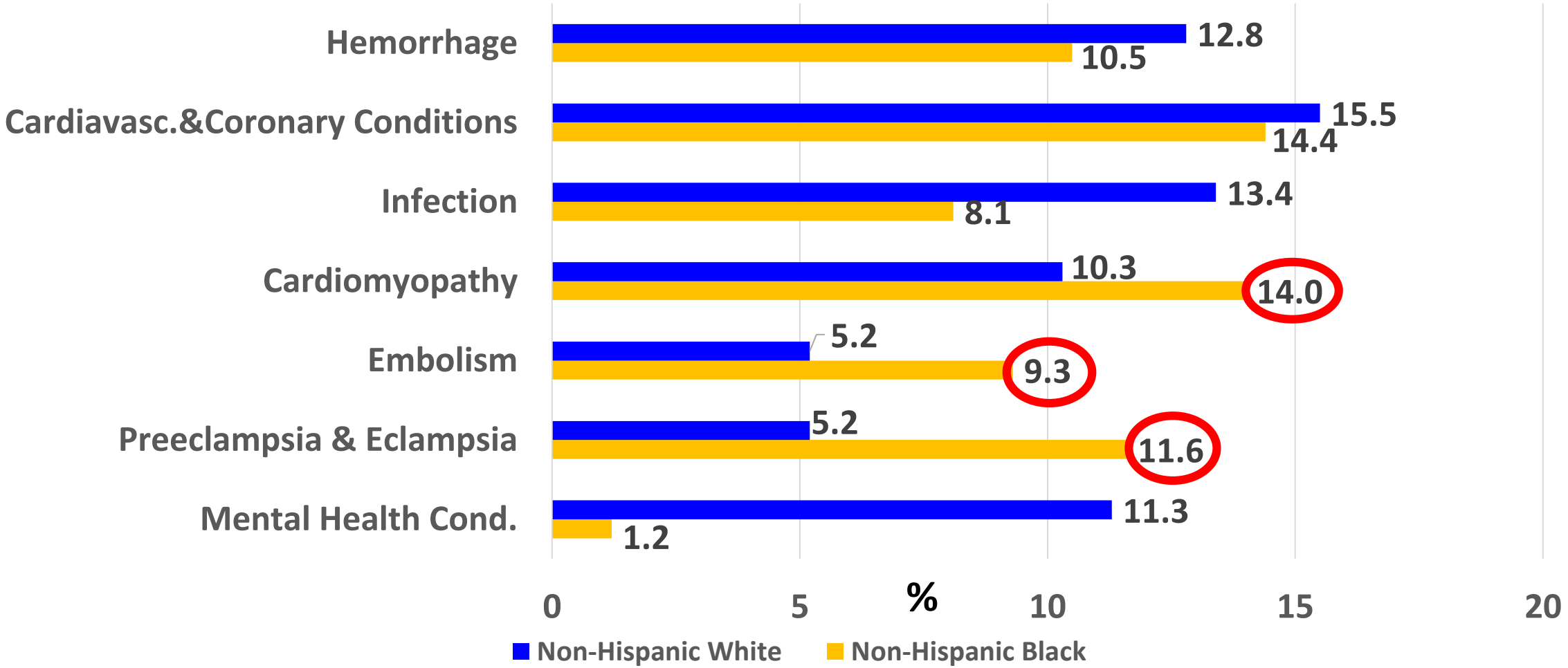
Manifestation of Racial Disparities

Leading Underlying Causes of Pregnancy- Related Deaths, by Race-Ethnicity



Source: CDC. 2018. *Report from 9 Maternal Mortality Review Committees.*

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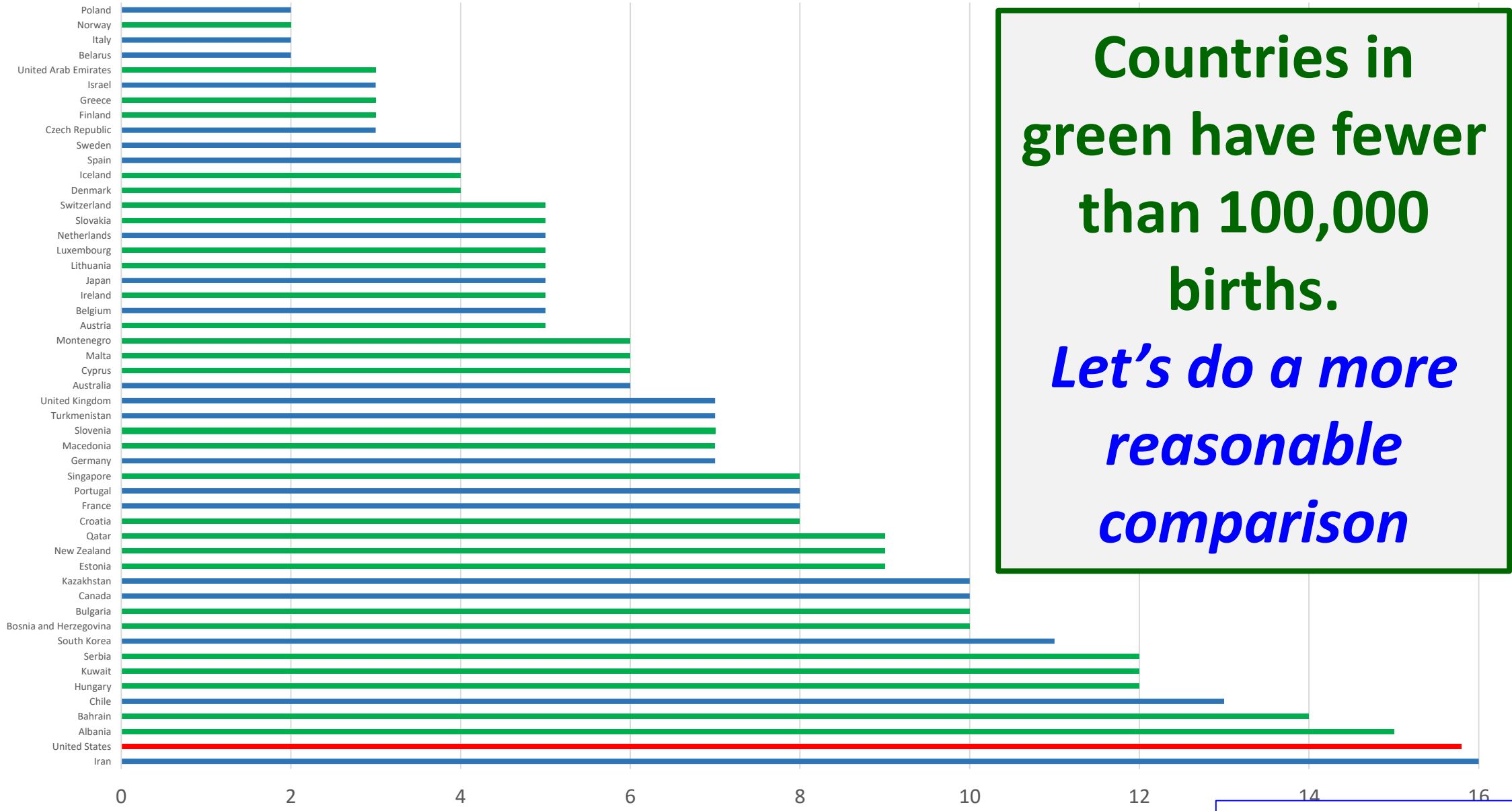
2. Now that we have a reliably estimated maternal mortality rate, how does the U.S. compare internationally?

Maternal Mortality Ratios, 2017



Countries in green have fewer than 100,000 births.

Let's do a more reasonable comparison

Sources: *Maternal Mortality: 2000 to 2017* Estimates by WHO, UNICEF, UNFPA, World Bank Group & UN Pop. Div.. Geneva: 2019

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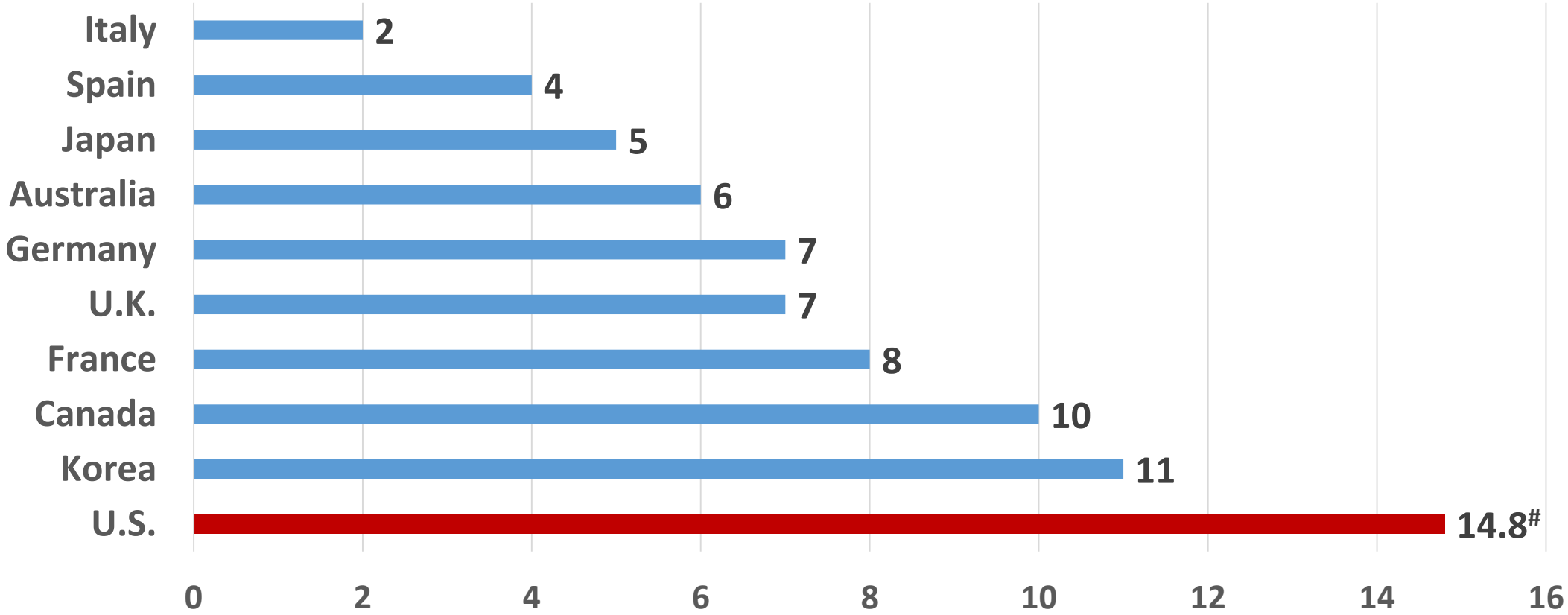
Putting the Problem in Context

U.S. MMR Compared to Countries with 300,000+ births, 2016-7*



* **Maternal Mortality** per 100,000 births; # Estimated from 2016 U.S. Pregnancy Related Mortality.
WHO estimates U.S. as having an MMR of 19.

Sources: *Maternal Mortality: 2000 to 20157* Estimates by WHO, UNICEF, UNFPA, World Bank Group & UN Population Div.. Geneva: 2019; U.S. adapted from data in Petersen E. *MMWR* .vol.68.No. 35 Sept. 6, 2019. 762-765.. by adjusting for timing of deaths .

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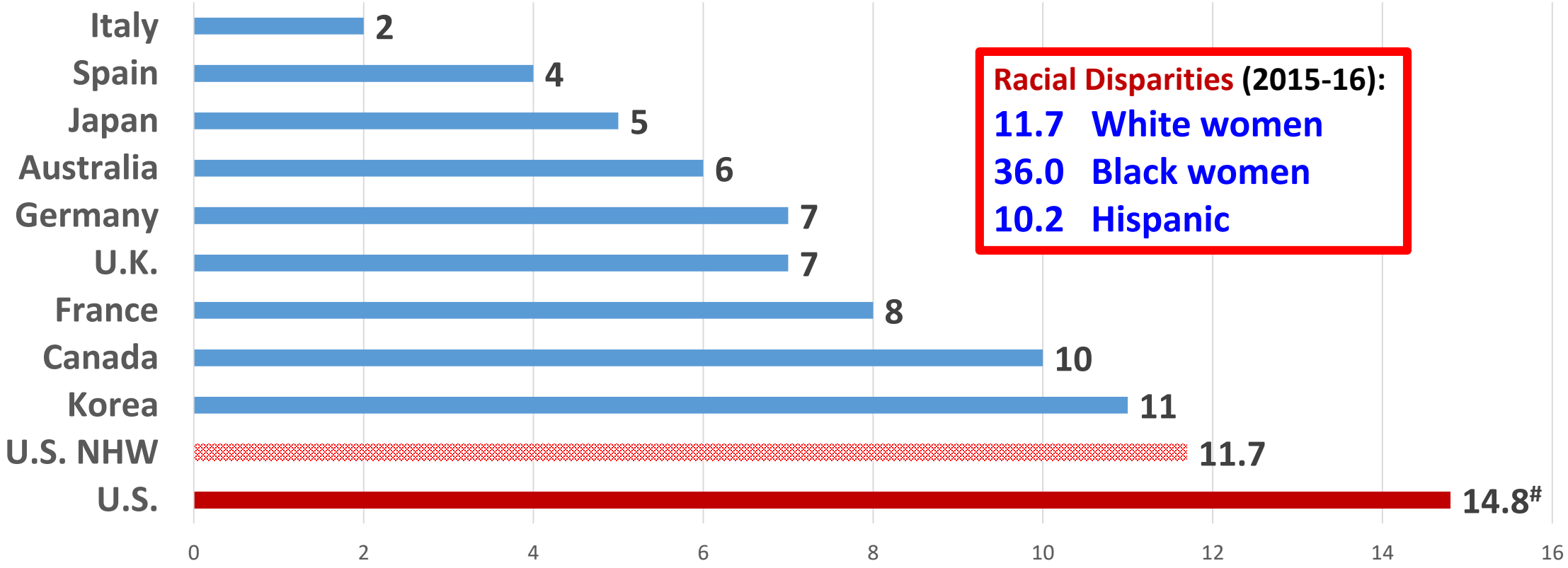
Putting the Problem in Context

U.S. MMR Compared to Countries with 300,000+ births, 2016-7*



* **Maternal Mortality** per 100,000 births; # Estimated from 2016 U.S. Pregnancy Related Mortality.

Sources: *Maternal Mortality: 2000 to 20157* Estimates by WHO, UNICEF, UNFPA, World Bank Group & UN Population Div.. Geneva: 2019; U.S. adapted from data in Petersen E. *MMWR . MMWR* .vol.68.No. 35 Sept. 6, 2019. 762-765.. by adjusting for timing of deaths .

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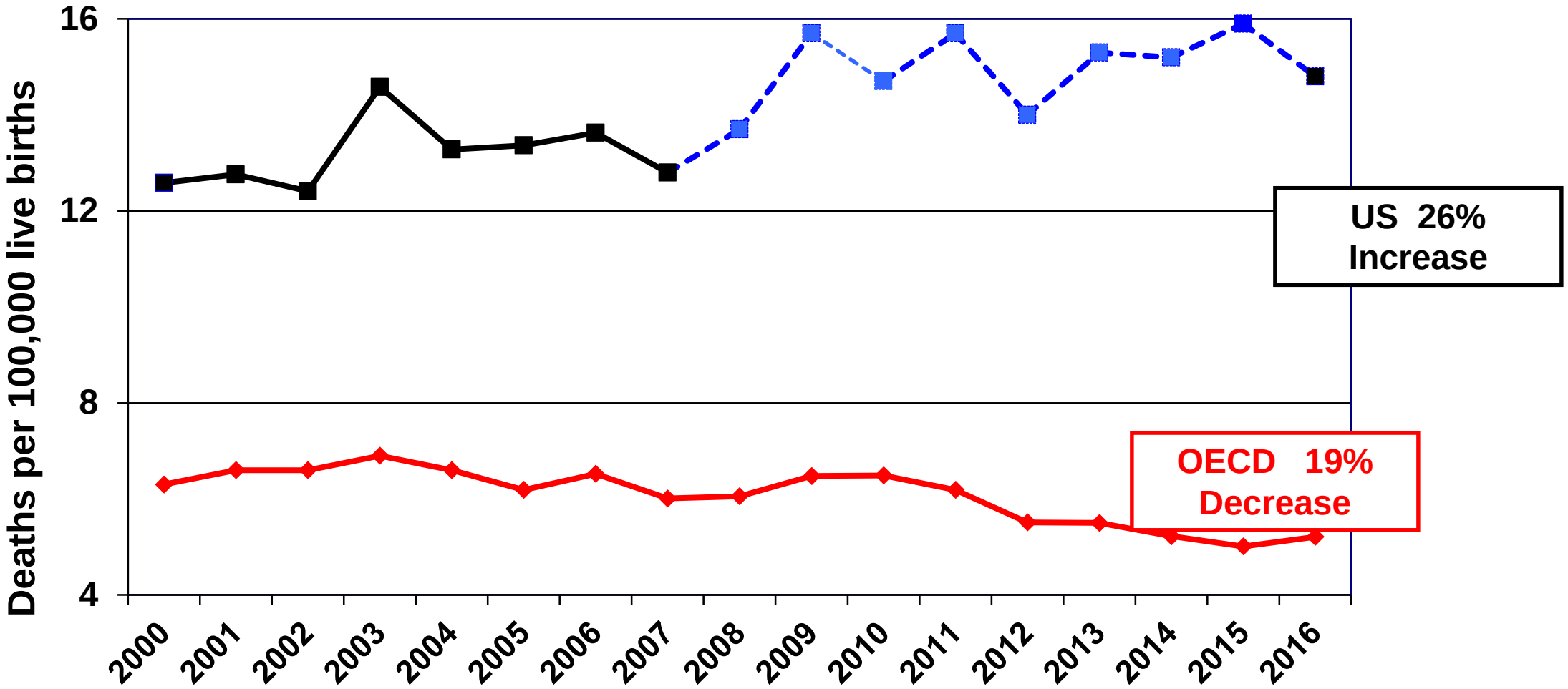
US vs Comparable Countries

*Estimated U.S. Maternal Mortality Ratios (per 100K births), 2000-2016, U.S. & Comparable Countries **



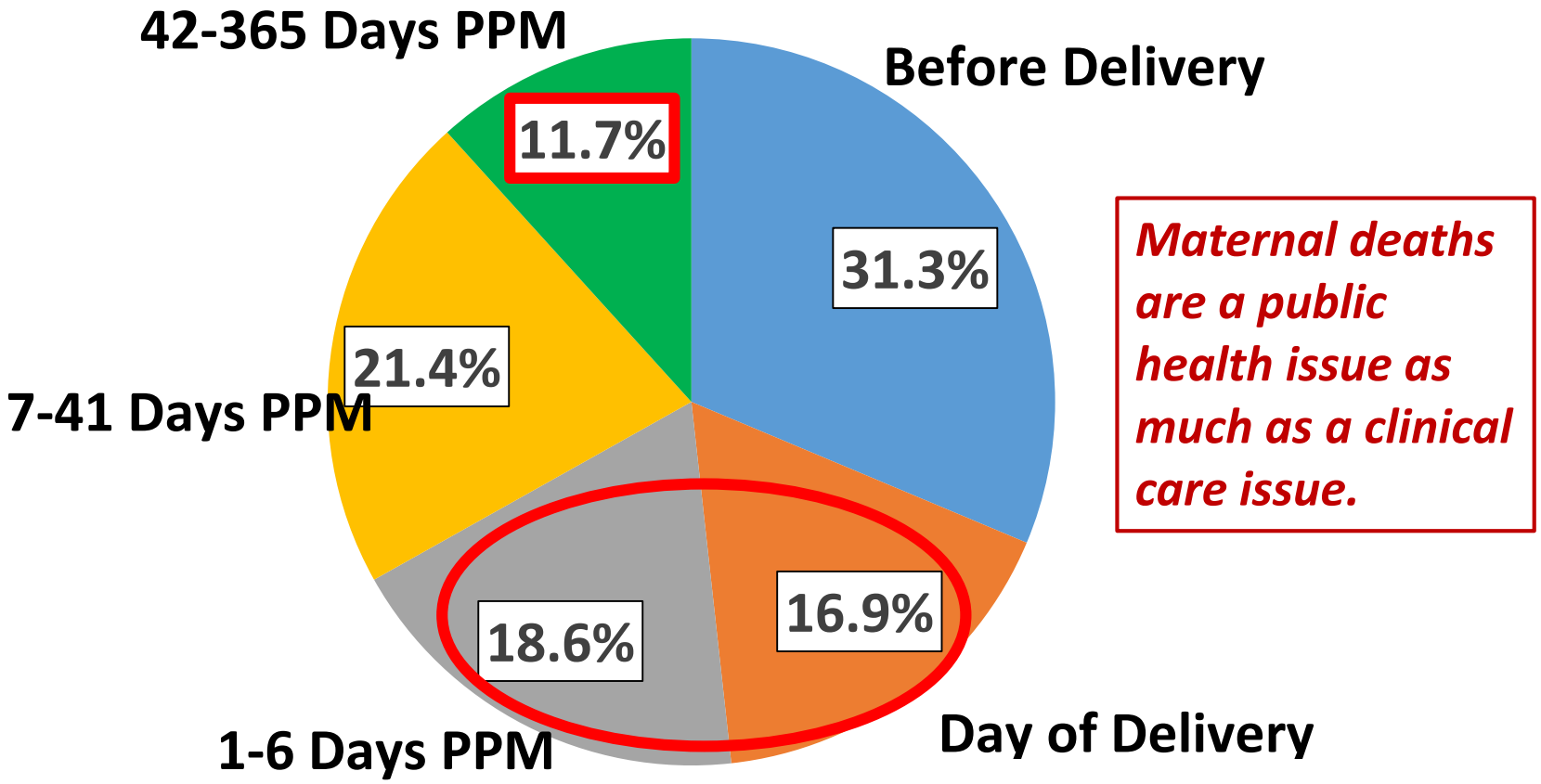
* Countries with **300,000**+ births (2015): Australia, Canada, France, Germany, Italy, Japan, S. Korea, Spain, United Kingdom

Sources: OECD Health Data 2019; NCHS. 2009. *Deaths, Final Data, 2007 and adapted from* Creanga. *Obstet Gynecol 2017 & Petersen, MMWR, 2019.* ..

3. Maternal mortality is a public health problem more than a clinical one

Remember this chart?

Timing of Pregnancy Related Deaths

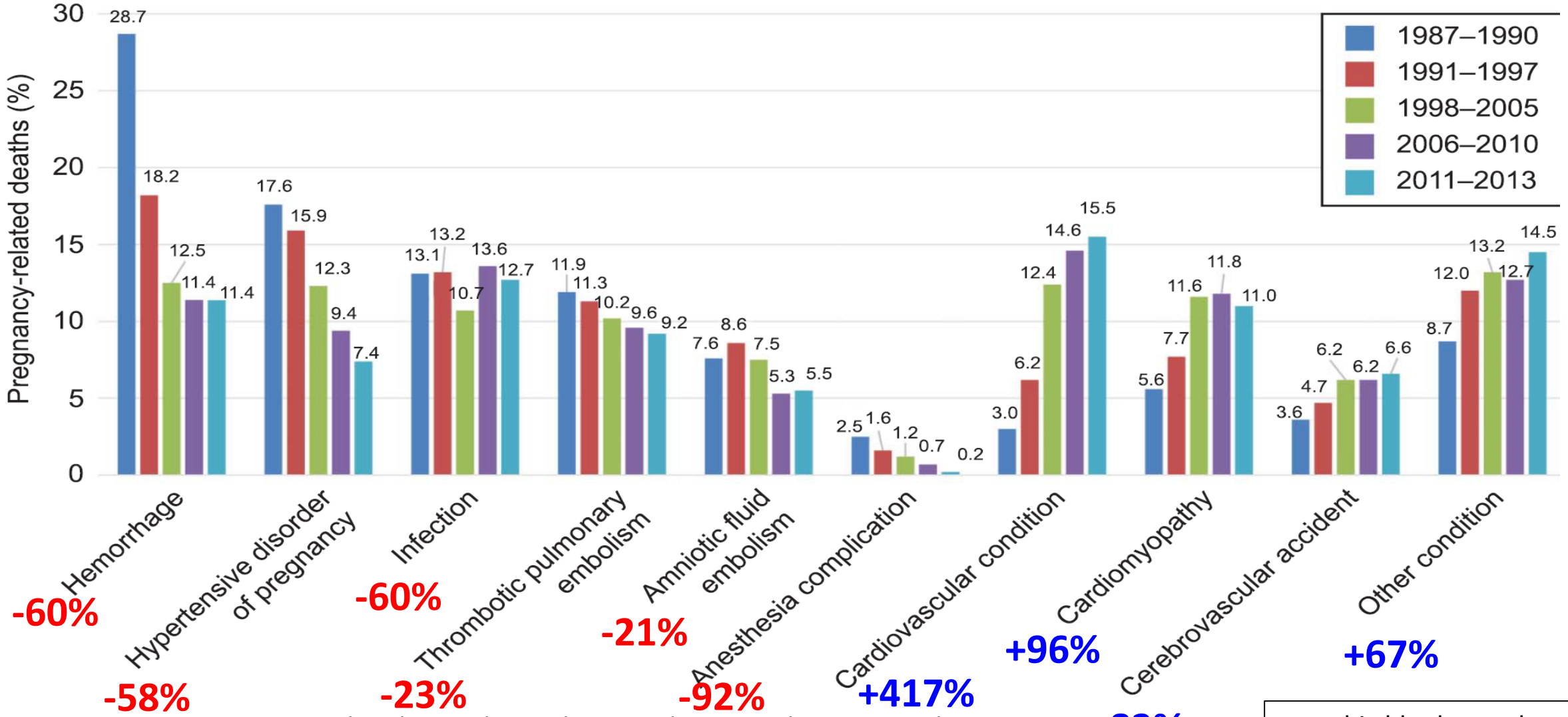


Maternal deaths are a public health issue as much as a clinical care issue.

Source: Petersen E. et al. Vital Signs: Pregnancy-Related Deaths, United States, 2011–2015, and Strategies for Prevention, 13 States, 2013–2017. *MMWR* .vol.68. May 7, 2019. 1-7.

(3) Moving to a Public Health Approach

Cause-specific proportionate Pregnancy-Related mortality: United States, 1987–2013.



Source: Creanga. Pregnancy-Related Mortality in the United States. *Obstet Gynecol* 2017.

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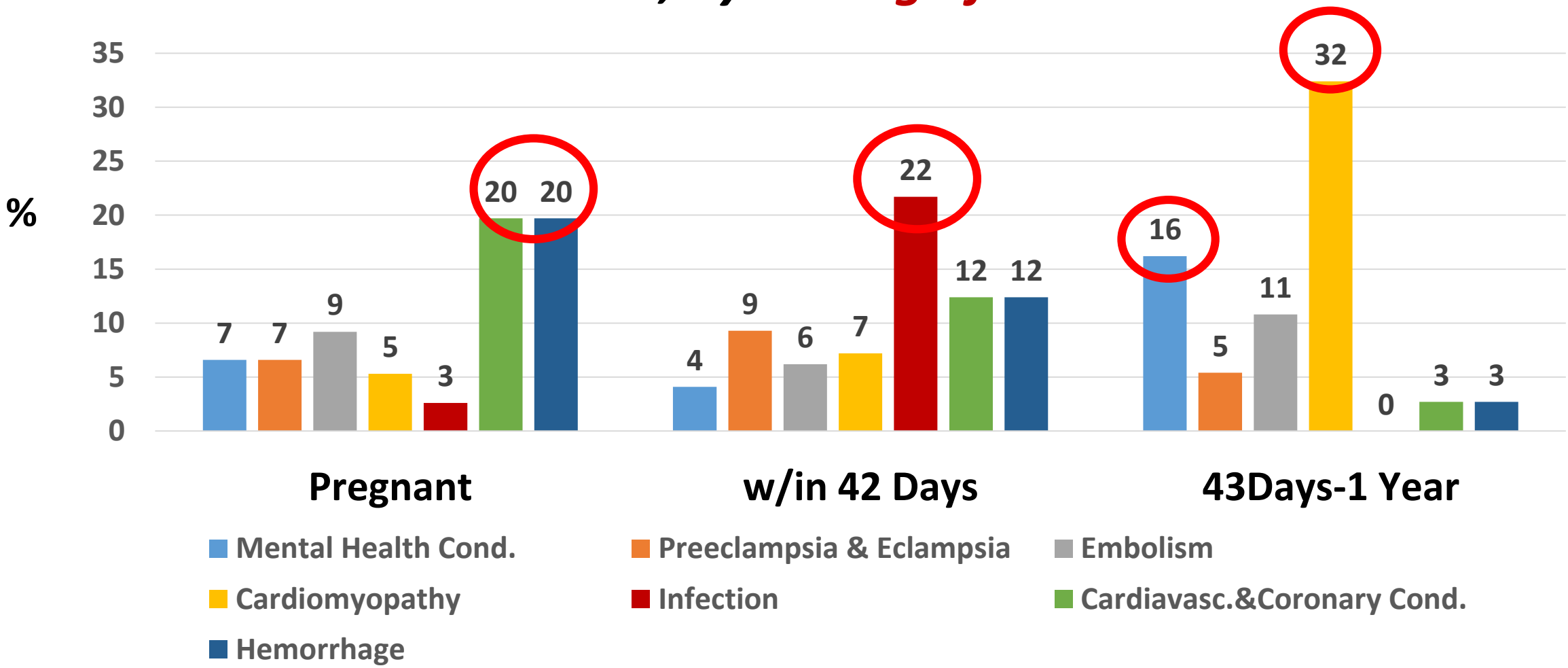
Moving to a Public Health Approach

Leading Underlying Causes of Pregnancy- Related Deaths, by Timing of Death



Source: CDC. 2018. *Report from 9 Maternal Mortality Review Committees.*

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4. The problem is much bigger than maternal deaths

Not just about maternal mortality

National Vital Statistics Reports

Volume 68, Number 9 June 24, 2019

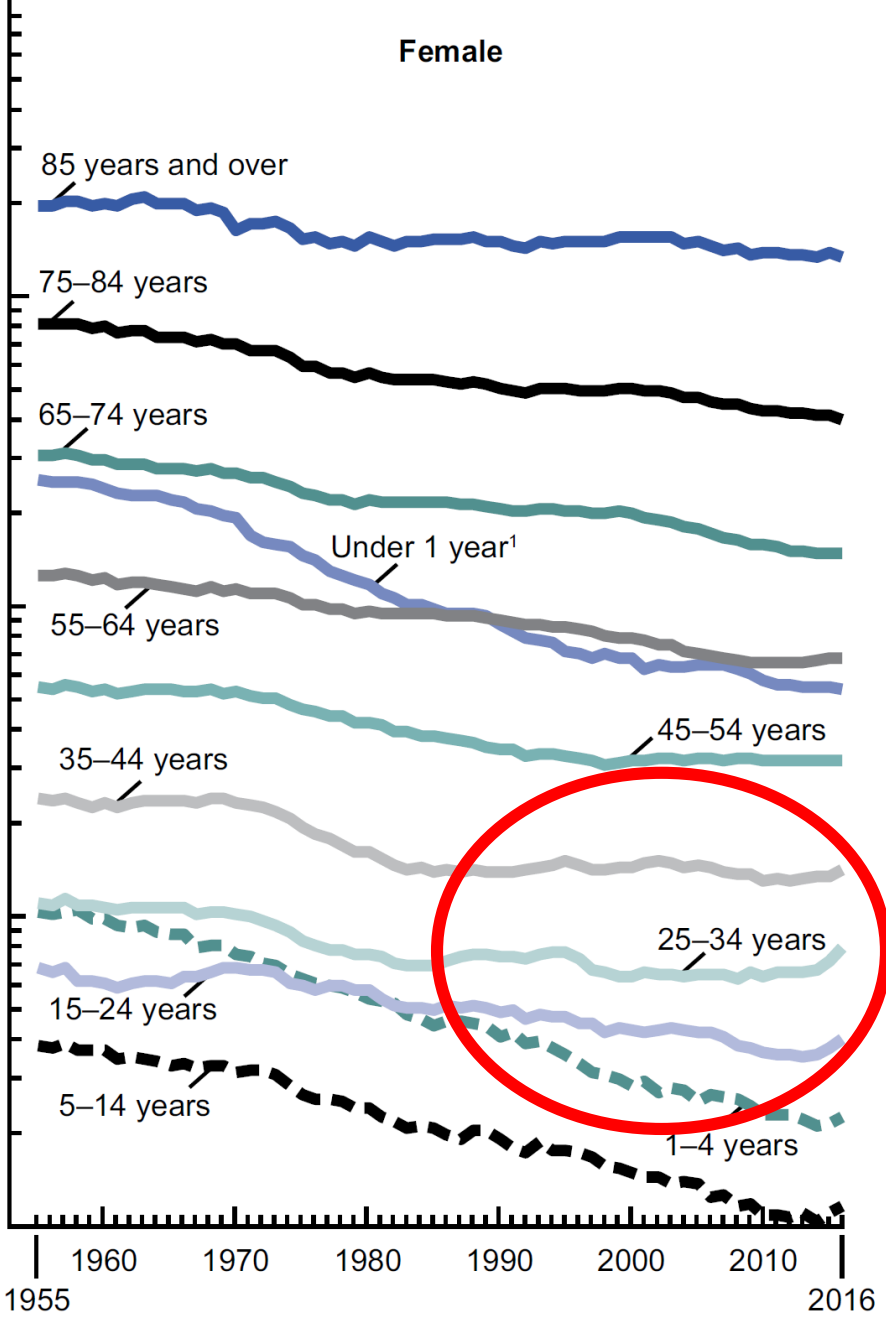
Deaths: Final Data for 2017

STAT

Maternal deaths represent the canary in the coal mine for women's health

By Eugene Declercq *and* Neel Shah

August 22, 2018



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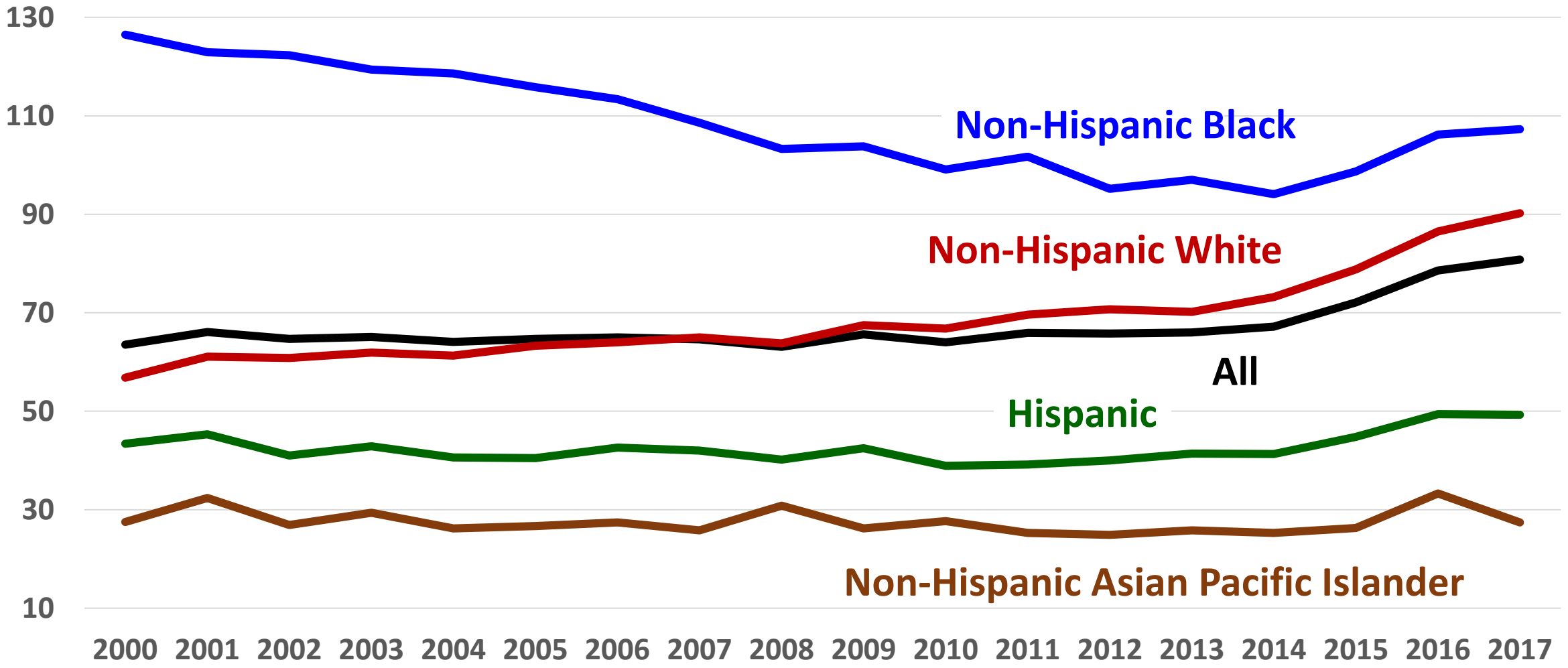
Births in U.S. by Maternal Age, 2018

Age	# Births	%
<20	181,607	**4.8%**
20-24	726,175	**19.2%**
25-29	**1,099,491**	**29.0%**
30-34	**1,090,697**	**28.8%**
35+	693,742	**18.3%**
Total	3,791,712	**100.0%**

The Problem is Bigger than Maternal Mortality

Overall Deaths rates (per 100K), Females 25-34, by Race/Ethnicity, 2000-2017



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The Problem is Bigger than Maternal Mortality

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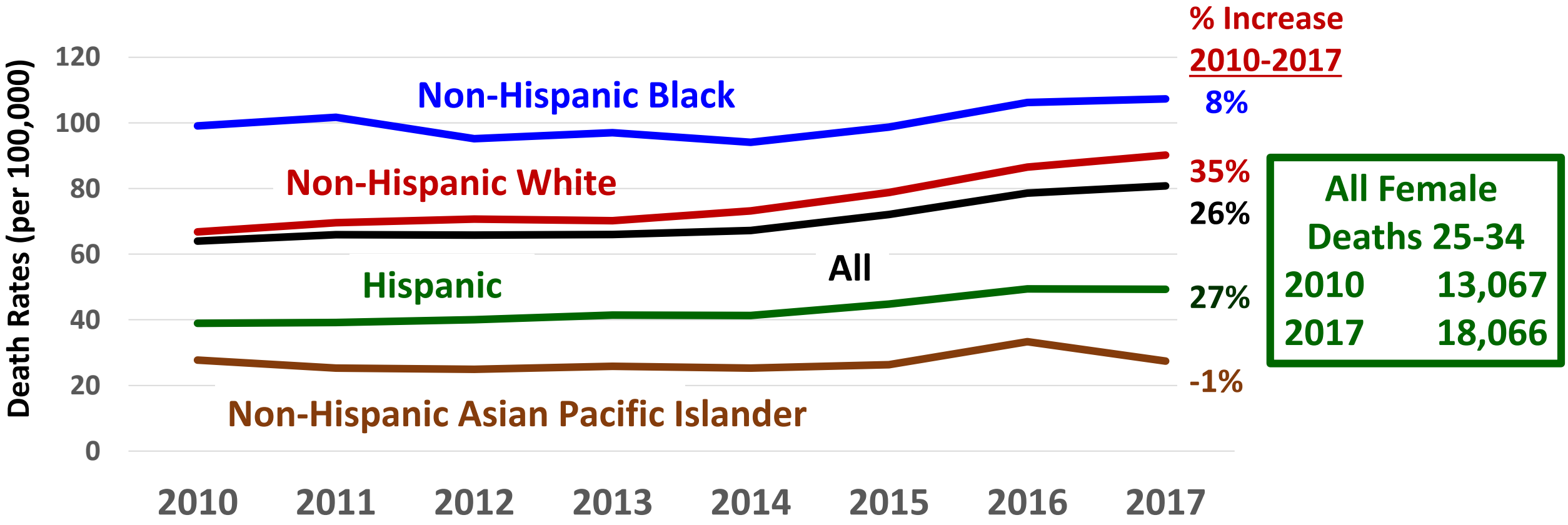

NOTE: Pregnancy related mortality rate increased by <1% 2010-2017

Source: NCHS.CDC Wonder Online Database

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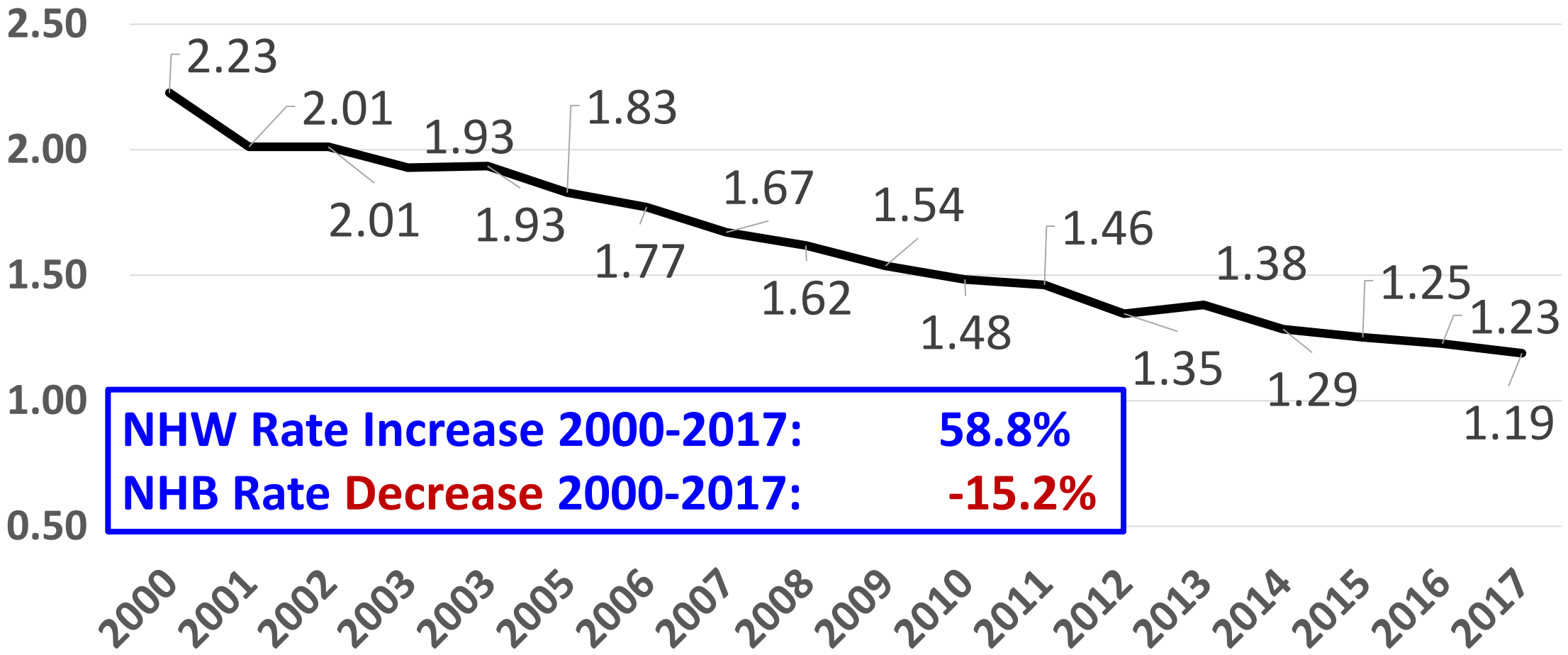
Ratio of Black/White Female Death Rates, Women 25-34, 2000-2017



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(4) Problem is Bigger than Maternal Mortality

Top 10 Causes of Death for Women 25-34 in 2017

	Total Deaths	% of total	Rate per 100 K	% Change in rate 2010-2017	Proportion of 2010-17 Increase
All causes	18,066	100.0	80.8	**26.3%**	---
Accidents (unintentional inj.)	6,668	36.9	29.8	61.1%	58.0%
Malignant neoplasms	1,926	10.7	8.6	-4.4%	1.8%
Intentional self-harm (suicide) .	1,600	8.9	7.2	35.8%	10.2%
Diseases of heart	1,232	6.8	5.5	12.2%	4.4%
Assault (homicide)	881	4.9	3.9	18.2%	3.9%
Pregnancy, childbirth & puerperium	512	2.8	2.3	27.8%	2.9%
Chronic liver disease and cirrhosis	367	2.0	1.6	23.1%	2.1%
Diabetes mellitus	352	1.9	1.6	23.1%	1.9%
Cerebrovascular diseases	254	1.4	1.1	-8.3%	0.0%
Septicemia	192	1.1	0.9	0.0%	0.2%
All other causes (residual)	4,082	22.6	18.3	11.6%	

Sources: Heron M. *Deaths: Leading causes for 2010*. National vital statistics reports; vol62 no 6. Hyattsville,MD: National Center for Health Statistics. 2013 & 2017 data from CDC, NCHS, Underlying Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018; Accessed 11/7/2019.

5. Potential policy solutions

116TH CONGRESS
1ST SESSION

H. R. 4995

To amend the Public Health Service Act to improve obstetric care and maternal health outcomes, and for other purposes.

A BILL

To amend the Public Health Service Act to improve obstetric care and maternal health outcomes, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Maternal Health Quality Improvement Act of 2019".

SEC. 2. TABLE OF CONTENTS.

The table of contents for this Act is as follows:

116TH CONGRESS
1ST SESSION

H. R. 4996

To amend title XIX of the Social Security Act to provide for a State option under the Medicaid program to provide for and extend continuous coverage for certain individuals, and for other purposes.

A BILL

To amend title XIX of the Social Security Act to provide for a State option under the Medicaid program to provide for and extend continuous coverage for certain individuals, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Helping Medicaid Offer Maternity Services Act of 2019" or the "Helping MOMS Act of 2019".

HR 4995

TITLE I—IMPROVING OBSTETRIC CARE IN RURAL AREAS	
'SEC. 764. RURAL MATERNAL AND OBSTETRIC CARE TRAINING DEMONSTRATION.	**$3,000,000 yr 2020-2024**
SEC. 105. GAO REPORT.	**$5,000,000 yr 2020-2024**
TITLE II—OTHER IMPROVEMENTS TO MATERNAL CARE	
SEC. 201. INNOVATION FOR MATERNAL HEALTH.	**$10,000,000 yr 2020-2024**
"SEC. 763. TRAINING FOR HEALTH CARE PROVIDERS.	**$5,000,000 yr 2020-2024**
SEC. 204. PERINATAL QUALITY COLLABORATIVES.	**$65,000,000 yr 2020-2024**
SEC. 205. INTEGRATED SERVICES FOR PREGNANT AND POSTPARTUM WOMEN.	**$15,000,000 yr 2020-2024**

Need is for public health approaches involving improving access for women to preconception, prenatal and postpartum care.

Three components

1. *Expanded coverage for Medicaid to fund care – if 12% of the deaths are postpartum why not cover women out to a year?*
2. *Coverage doesn't mean anything unless there's someone to go see – vastly expand midwifery training opportunities in general and for women of color in particular. Likewise expand opportunities for certified doulas to help fill in gaps in the system.*
3. *Keep women in the system. Problem of loss from the system postpartum.*

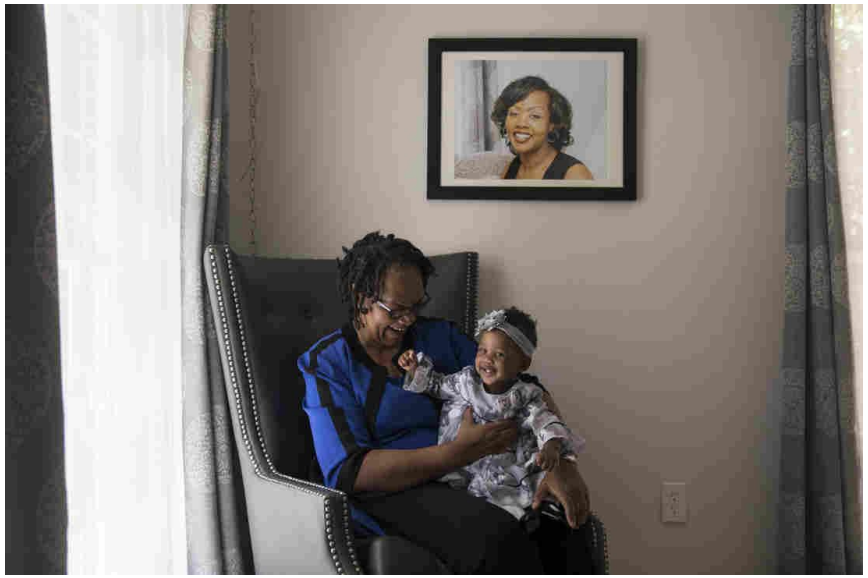
WHAT WILL DRIVE THE POLICY PROCESS?

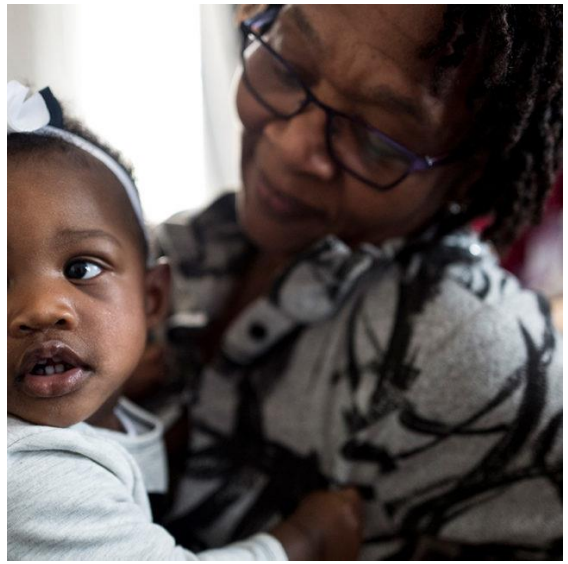
POLITICAL WILL & MEDIA COVERAGE

PROPUBLICA'S LOST MOTHERS SERIES

Nothing Protects Black Women From Dying in Pregnancy & Childbirth

Not education. Not income. Not even being an expert on racial disparities in health care.





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MARCH for MOMS

FAMILY FRIENDLY

DC NATIONAL RALLY

A PRE-MOTHER'S DAY MOVEMENT TO MAKE SURE ALL MOMS GET THE CARE THE

Saturday M

On the National Mall,

1:00 - 3:30 PM

Our country's most inspiring moms
(and their families)...
sounding off...
on a rock concert stage...
in the heart of the nation's capital.

Learn more at www.MarchforMoms.org

May 3, 2020

NATIONAL MATERNAL HEALTH WEEK

MAY 5th-12th, 2019

forMoms

#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

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