

Maternal Mortality in the U.S.

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Advancing Policy Dialogue on Maternal Health

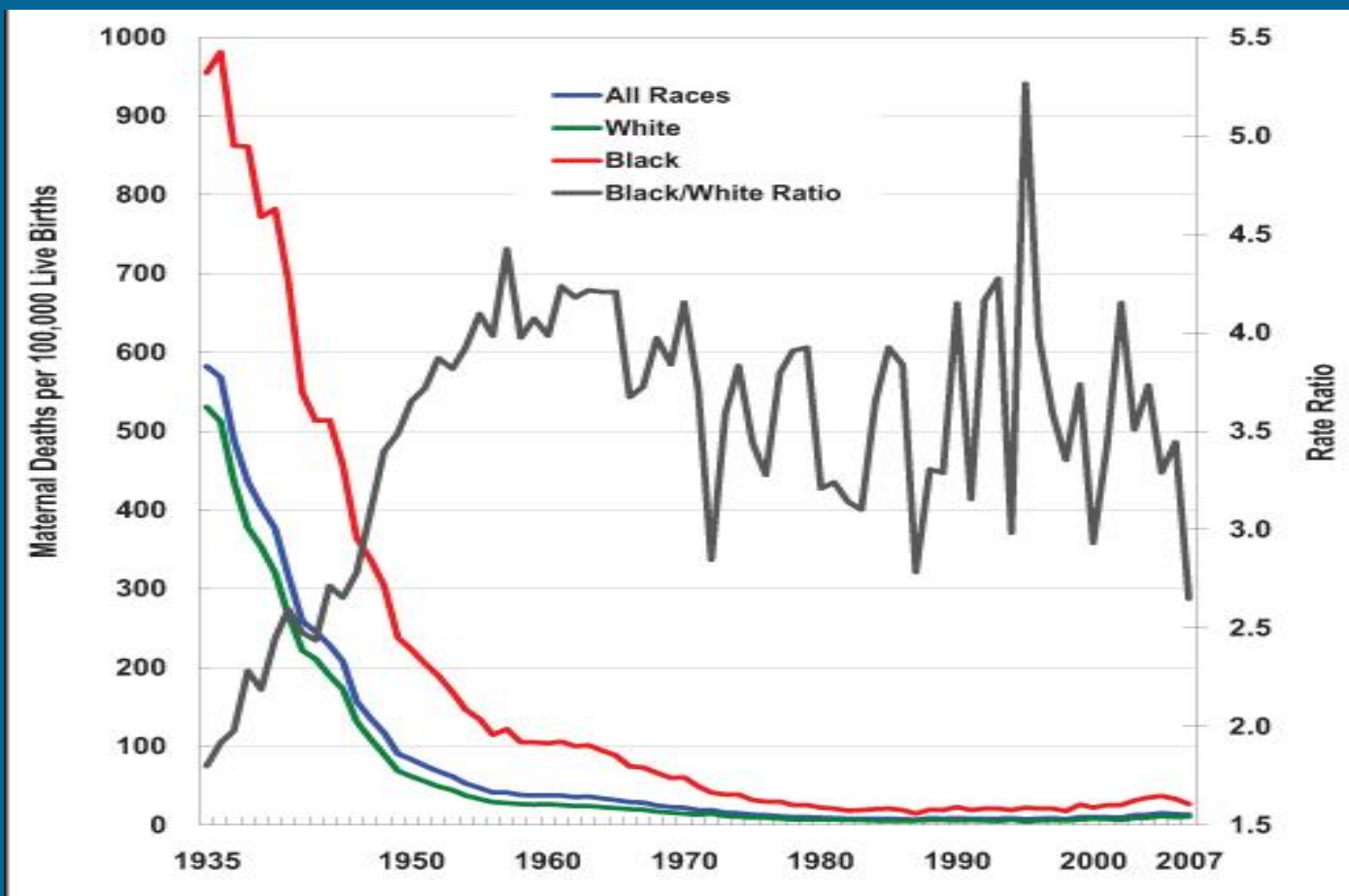
Woodrow Wilson International Center for Scholars

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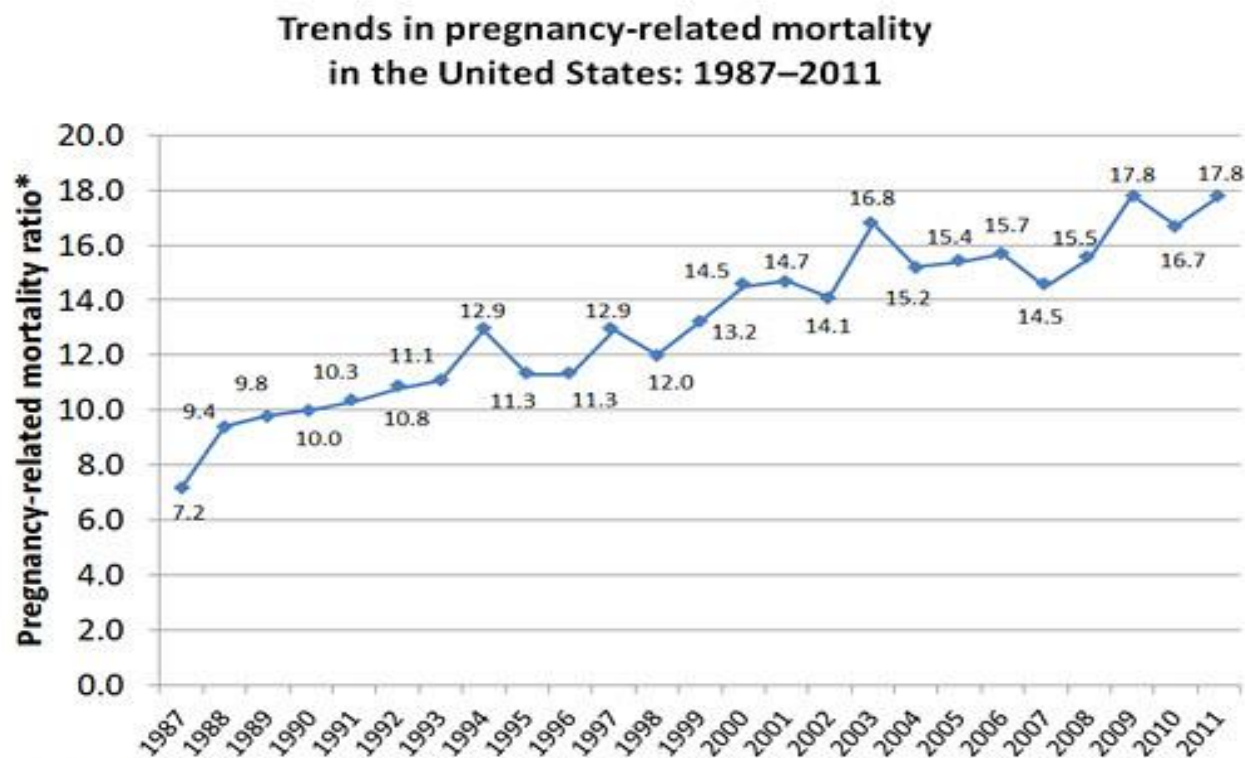
U.S. Maternal Mortality Ratio

1935-2007



U.S. Maternal Mortality Ratio

1987-2011



*Note: Number of pregnancy-related deaths per 100,000 live births per year.



Source: Centers for Disease Control and Prevention.
<http://www.cdc.gov/reproductivehealth/MaternalInfantHealth/PMSS.html>

An iceberg floating in a dark blue ocean under a clear blue sky. The small tip of the iceberg is above the water line, while the much larger, jagged mass is submerged below. The water surface is a sharp horizontal line separating the two parts.

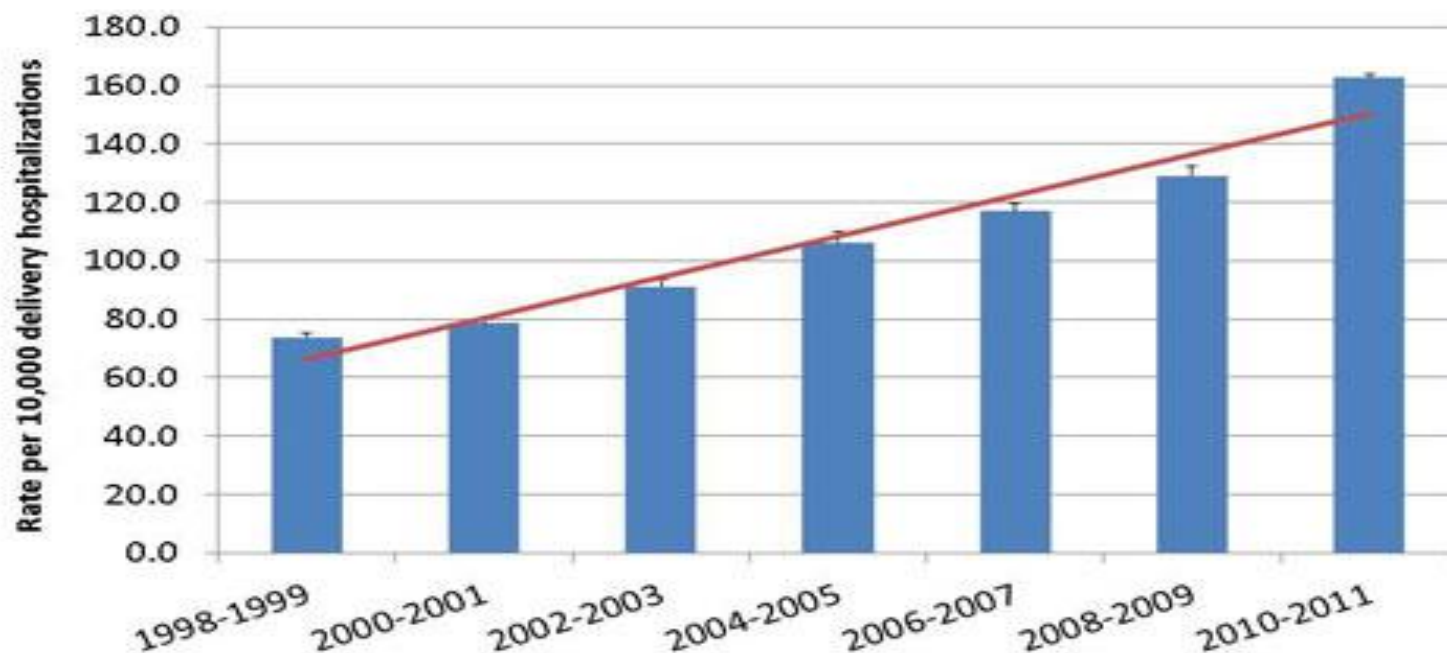
Maternal Mortality

Maternal Morbidity

U.S. Severe Maternal Morbidity

1998-2011

**Severe Maternal Morbidity During Delivery
Hospitalizations: United States, 1998-2011**



CDC defines severe morbidity as a potentially life-threatening maternal condition or complication during a delivery hospitalization

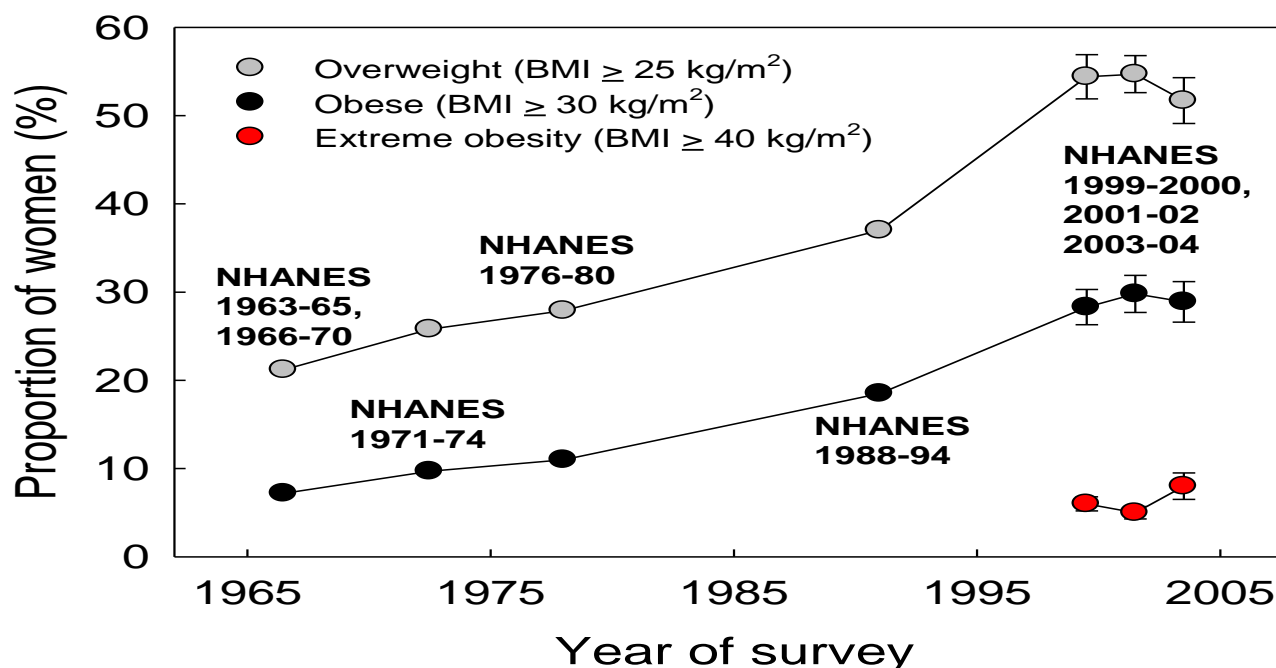


Source: Centers for Disease Control and Prevention.
<http://www.cdc.gov/reproductivehealth/MaternalInfantHealth/PMSS.html>



Increasing overweight & obesity among U.S women of childbearing age; 1965-2005

Prevalence of overweight, obesity and extreme obesity among women 20-39* y old:
US, 1963-2004

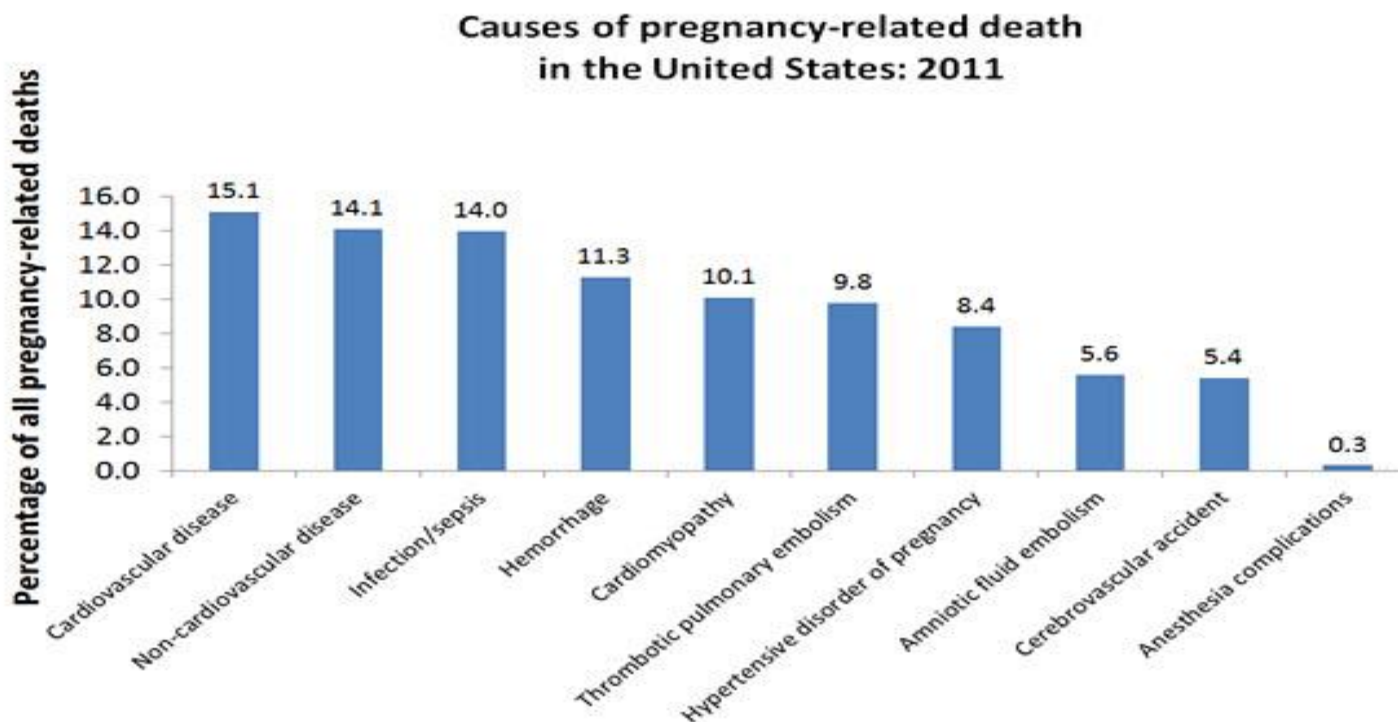


From: *Health, United States, 2005* and Ogden CL, *et al.*
JAMA 2006;**295**:1549.

*Ages 20-35 through NHANES 1988-94



Leading Causes of Maternal Deaths in U.S. 2011



Note: The cause of death is unknown for 5.9% of all pregnancy-related deaths.

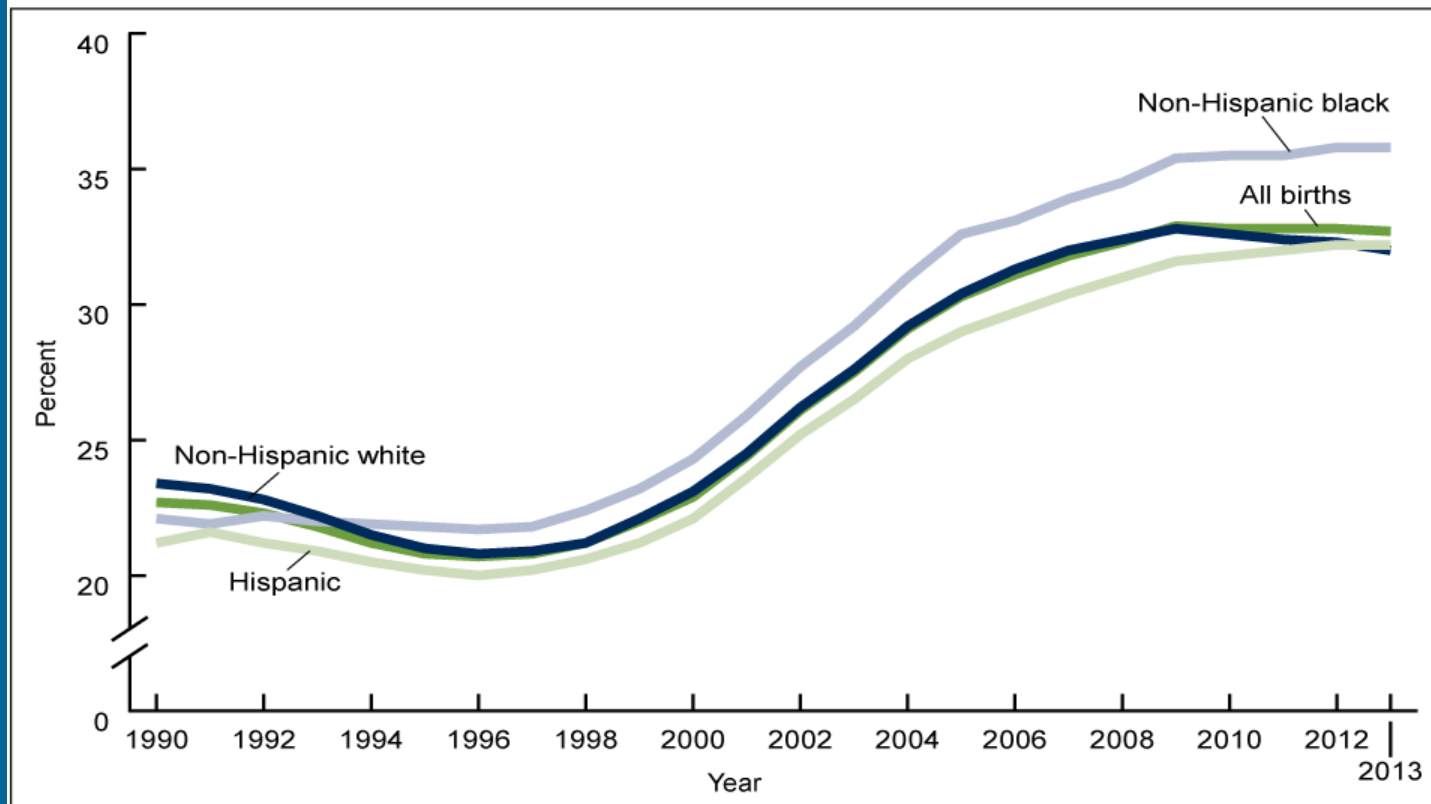


Source: Centers for Disease Control and Prevention:
<http://www.cdc.gov/reproductivehealth/MaternalInfantHealth/PMSS.html>



Cesarean Delivery Rates, U.S

Figure 3. Cesarean delivery, by race and Hispanic origin: United States, 1990–2013



NOTES: Data for 1990–1992 exclude New Hampshire, which did not report Hispanic origin; data for 1990 exclude Oklahoma, which did not report method of delivery. Access data table for Figure 3 at: http://www.cdc.gov/nchs/data/databriefs/db175_table.pdf#3.

SOURCE: CDC/NCHS, National Vital Statistics System.

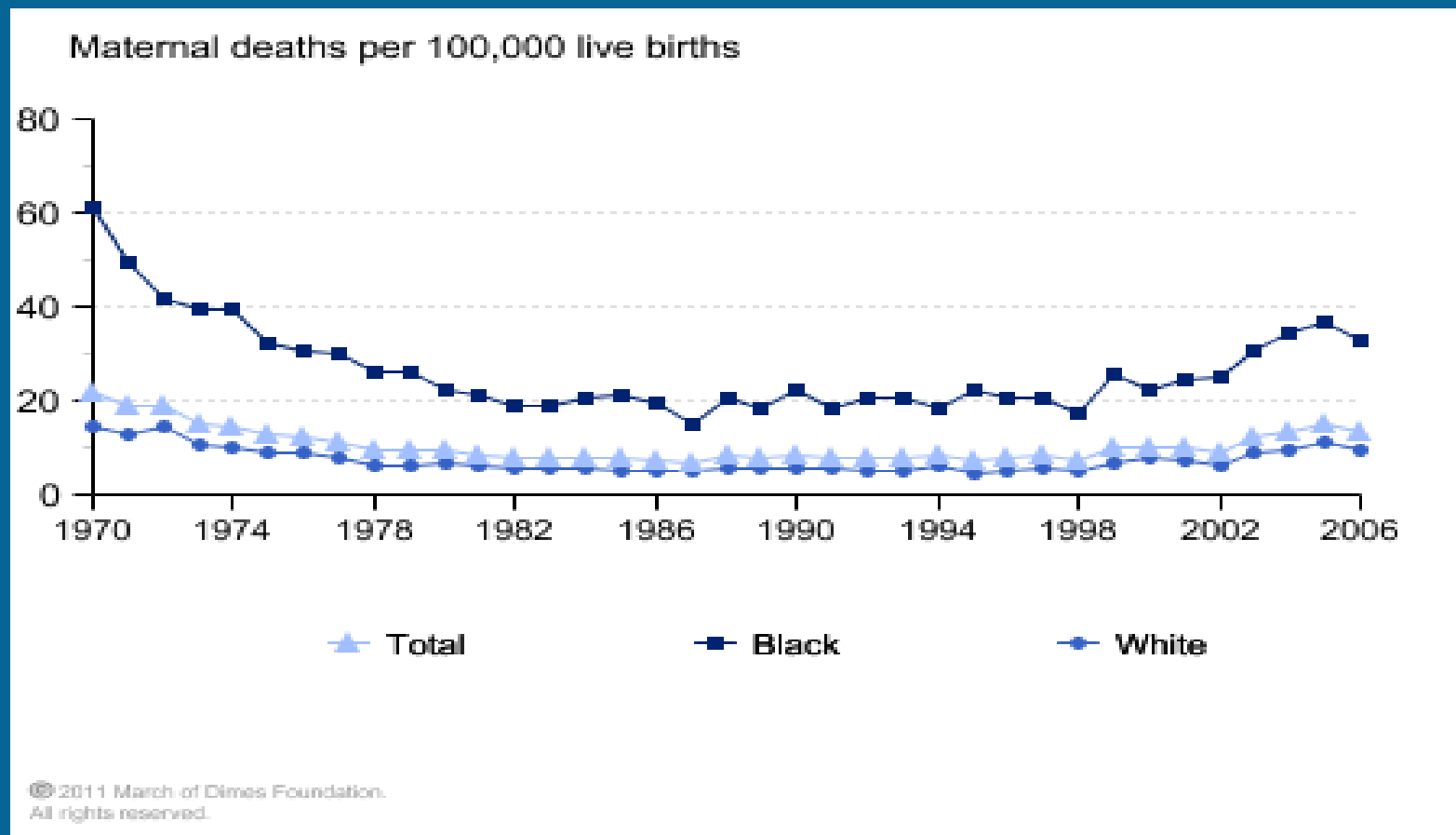


Menacker F, Hamilton BE. Recent trends in cesarean delivery in the United States. NCHS data brief, no 35. Hyattsville, MD: National Center for Health Statistics. 2010



U.S. Maternal Mortality Ratio

Racial Gap



Source: March of Dimes Peristat
<http://www.marchofdimes.com/peristats/>



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COMMENTARY

Putting the “M” Back in the Maternal and Child Health Bureau: Reducing Maternal Mortality and Morbidity

Michael C. Lu · Keisher Highsmith ·
David de la Cruz · Hani K. Atrash





Maternal Health Initiative

Healthy Women, Healthy Mothers, Healthy Babies



Maternal Health Initiative

Strategic Priorities

- **Improve women's health before, during, and after pregnancy**
- **Improve the quality and safety of maternity care**
- Improve systems of maternity care including clinical and public health systems
- Improve public awareness and education
- Improve research and surveillance



Improve Women's Health



Improve Women's Health

- **Affordable Care Act & Women's Health**
 - Prohibits gender rating
 - More than **7.7 million** women under 65 signed up for health insurance coverage during the first Open Enrollment period.
 - More than **1 million** women between the ages of 19 and 25 who would have been uninsured now have coverage under their parent's plan.
 - As many as **65 million** women with pre-existing conditions can no longer be discriminated against or charged higher premiums for their health coverage.
 - An estimated **8.7 million** women with individual insurance coverage gained coverage for maternity services because of the health care law.
 - An estimated **55 million** women with private health insurance have access to recommended preventive services



Improve Quality & Safety



Maternal Health Initiative

Patient Safety Bundles



READINESS

Every unit

- Hemorrhage cart with supplies, checklist, and instruction cards for intrauterine balloons and compressions stitches
- Immediate access to hemorrhage medications (kit or equivalent)
- Establish a response team - who to call when help is needed (blood bank, advanced gynecologic surgery, other support and tertiary services)
- Establish massive and emergency release transfusion protocols (type-O negative/uncrossmatched)
- Unit education on protocols, unit-based drills (with post-drill debriefs)

RECOGNITION & PREVENTION

Every patient

- Assessment of hemorrhage risk (prenatal, on admission, and at other appropriate times)
- Measurement of cumulative blood loss (formal, as quantitative as possible)
- Active management of the 3rd stage of labor (department-wide protocol)

RESPONSE

Every hemorrhage

- Unit-standard, stage-based, obstetric hemorrhage emergency management plan with checklists
- Support program for patients, families, and staff for all significant hemorrhages

REPORTING/SYSTEMS LEARNING

Every unit

- Establish a culture of huddles for high risk patients and post-event debriefs to identify successes and opportunities
- Multidisciplinary review of serious hemorrhages for systems issues
- Monitor outcomes and process metrics in perinatal quality improvement (QI) committee

PATIENT SAFETY BUNDLE

Obstetric Hemorrhage



100,000 Mothers

Alliance for Innovation on Maternal Health (AIM)

- **Goal:**

- Prevent 100,000 U.S. maternal deaths and severe morbidity in 5 years

- **Strategies**

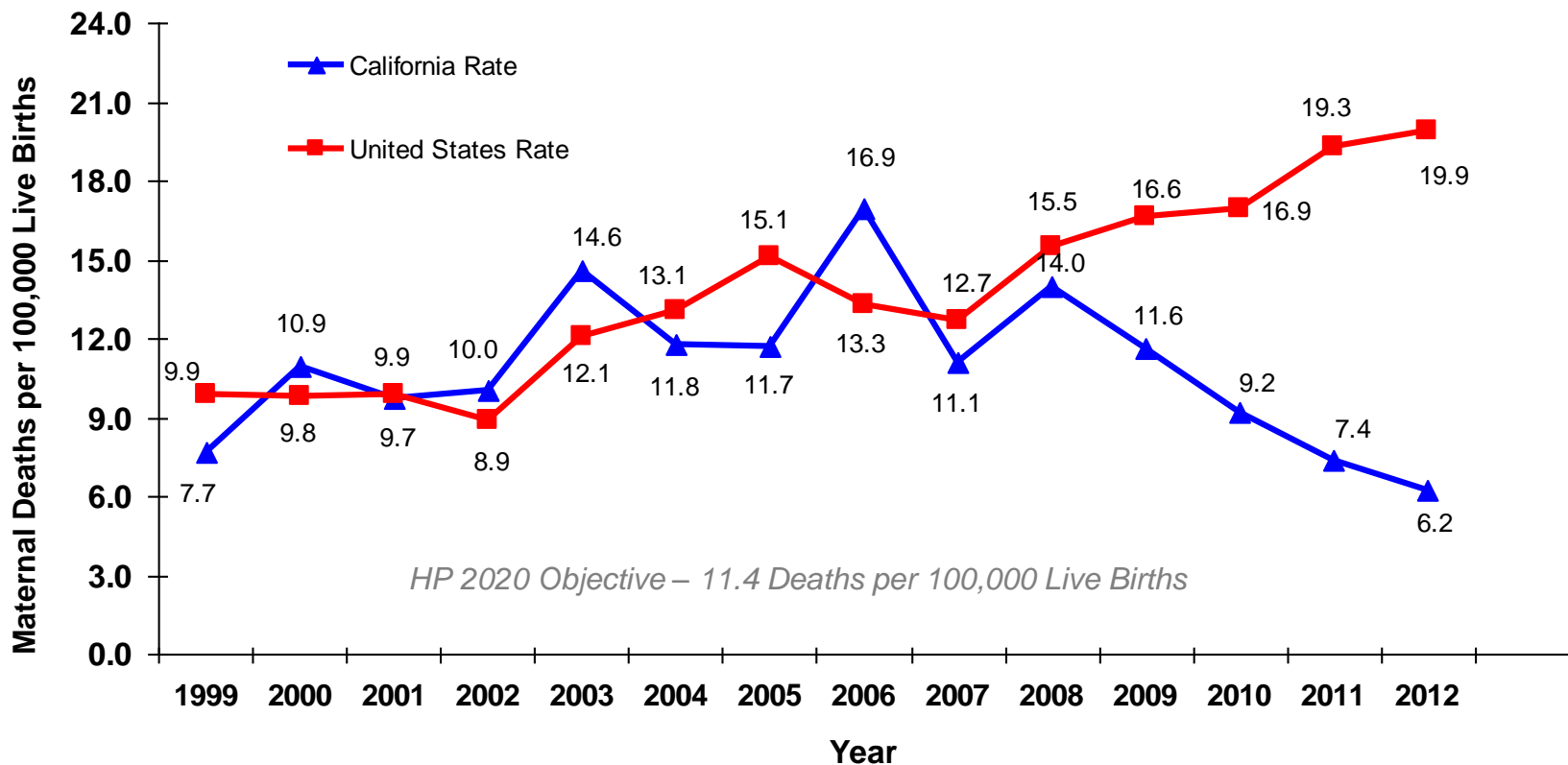
- Improve women's health before and between pregnancies
- Reduce low-risk (NTSV) cesarean deliveries
- Disseminate and integrate patient safety bundles into every birthing hospital across the U.S.



ALLIANCE FOR INNOVATION
ON MATERNAL HEALTH **AIM**

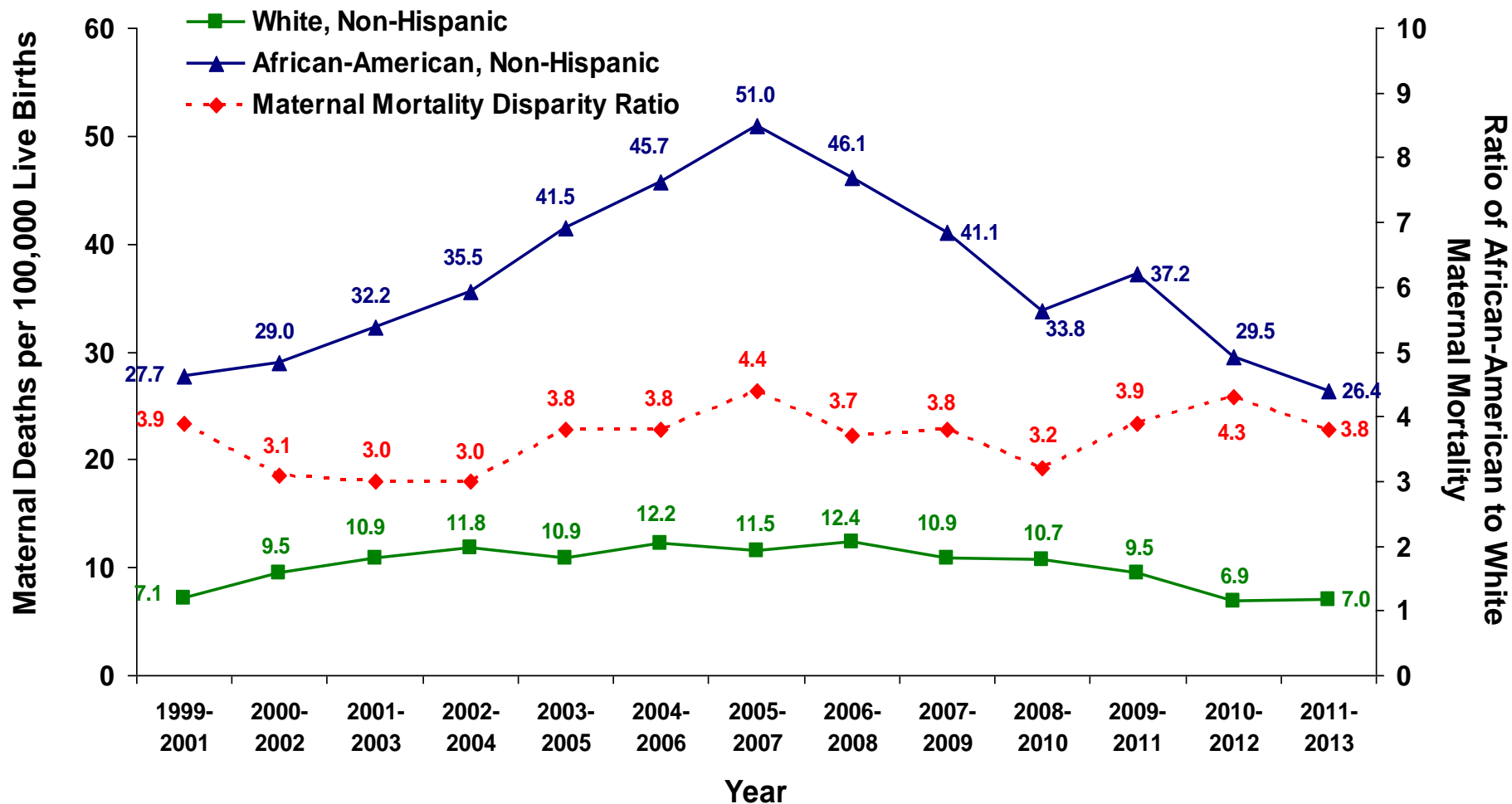


Maternal Mortality Rate, California and United States; 1999-2013



SOURCE: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1999-2013. Maternal mortality for California (deaths \leq 42 days postpartum) was calculated using ICD-10 cause of death classification (codes A34, O00-O95, O98-O99). United States data and HP2020 Objective use the same codes. U.S. maternal mortality data is published by the National Center for Health Statistics (NCHS) through 2007 only. U.S. maternal mortality rates from 2008 through 2013 were calculated using CDC Wonder Online Database, accessed at <http://wonder.cdc.gov/on> March 11, 2015. Produced by California Department of Public Health, Center for Family Health, Maternal, Child and Adolescent Health Division, March, 2015.

Disparities in Maternal Mortality by Race/Ethnicity, California Residents; 1999-2013



SOURCE: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1999-2013. Maternal mortality rates for California (deaths \leq 42 days postpartum) were calculated using ICD-10 cause of death classification (codes A34, O00-O95, O98-O99). Produced by California Department of Public Health, Center for Family Health, Maternal, Child and Adolescent Health Division, March, 2015.

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