

# Maternal Mortality in the U.S.

## April 13, 2016

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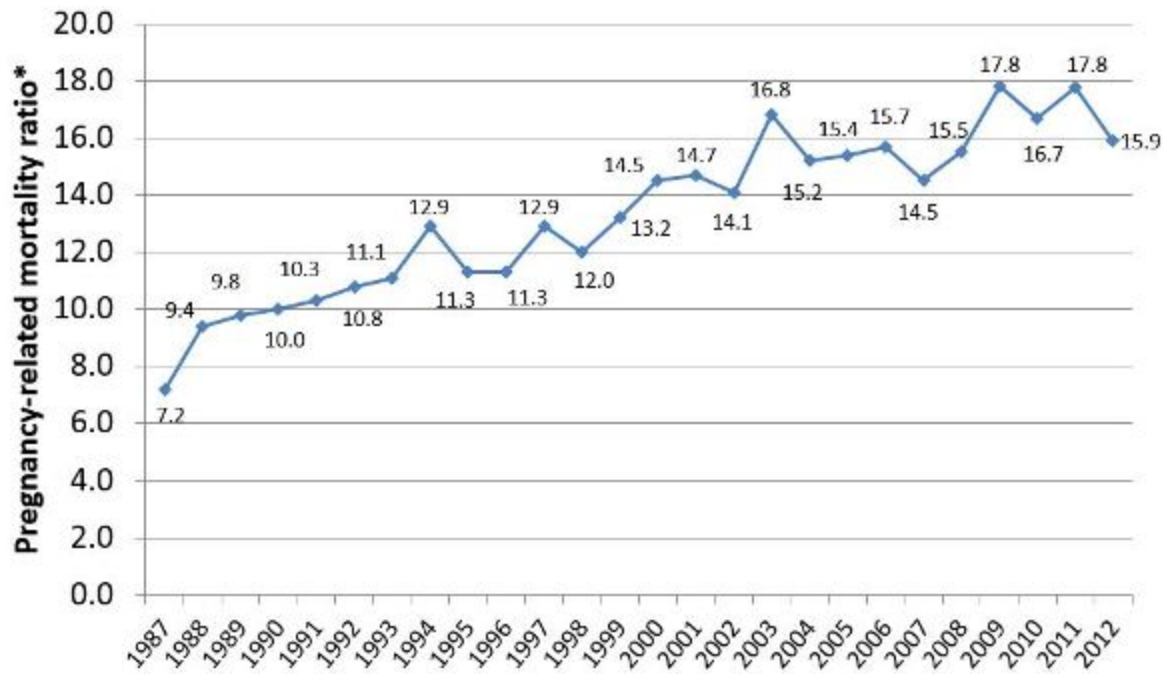
**Health Resources and Services Administration (HRSA)**

**U.S. Department of Health & Human Services**



# U.S. Maternal Mortality Ratio 1987-2012

Trends in pregnancy-related mortality  
in the United States: 1987–2012



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

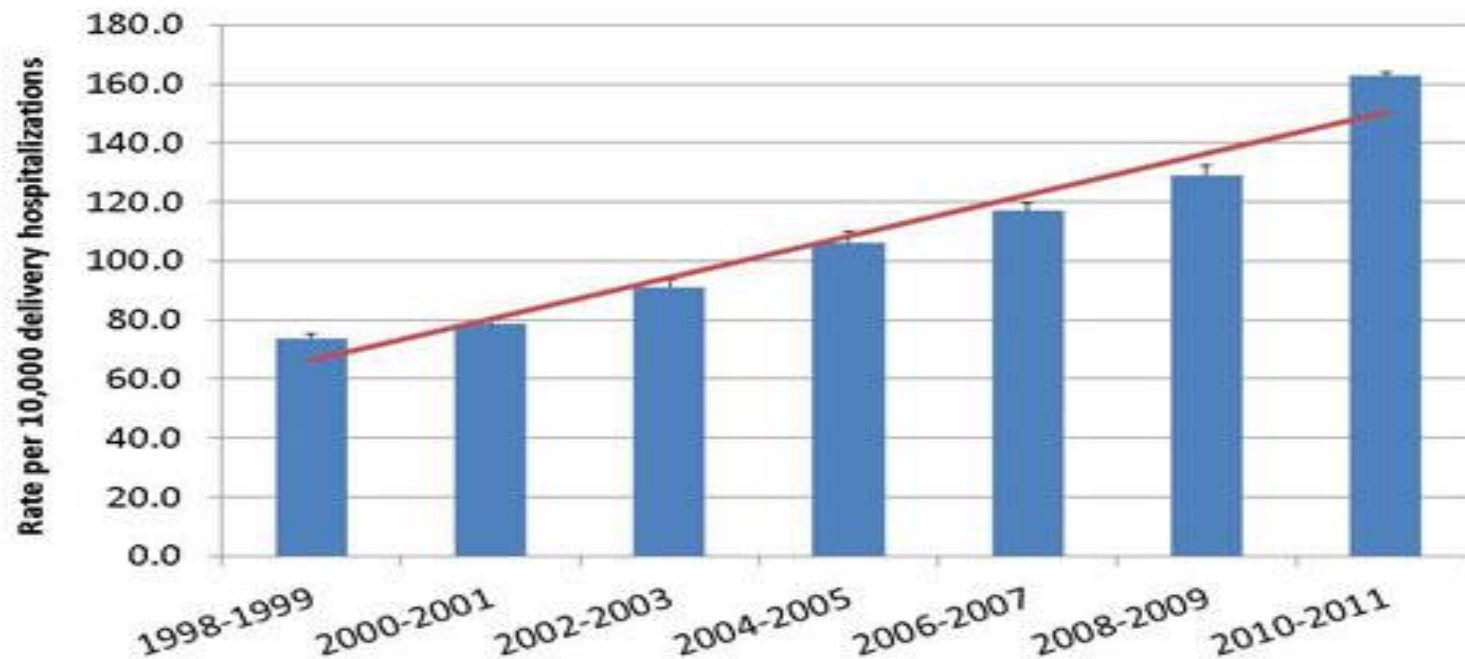
<http://www.cdc.gov/reproductivehealth/MaternalInfantHealth/PMSS.html>



# U.S. Severe Maternal Morbidity

## 1998-2011

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

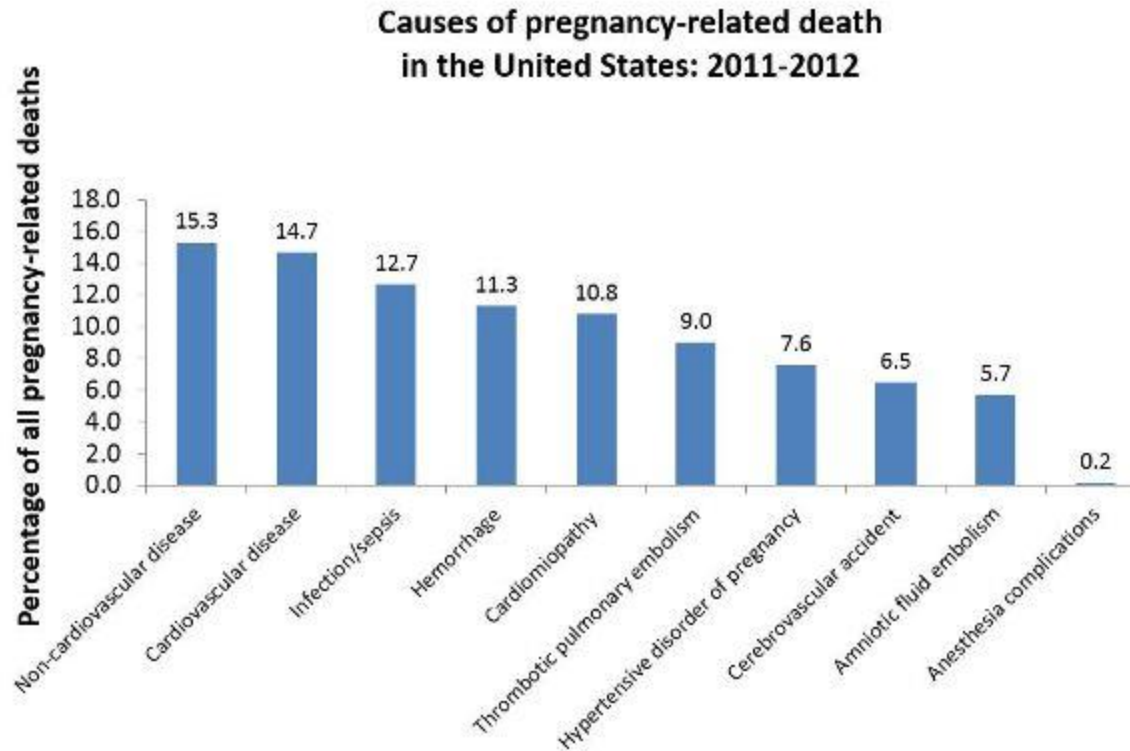


CDC defines severe morbidity as a potentially life-threatening maternal condition or complication during a delivery hospitalization

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



# Leading Causes of Maternal Deaths in U.S. 2011-2012

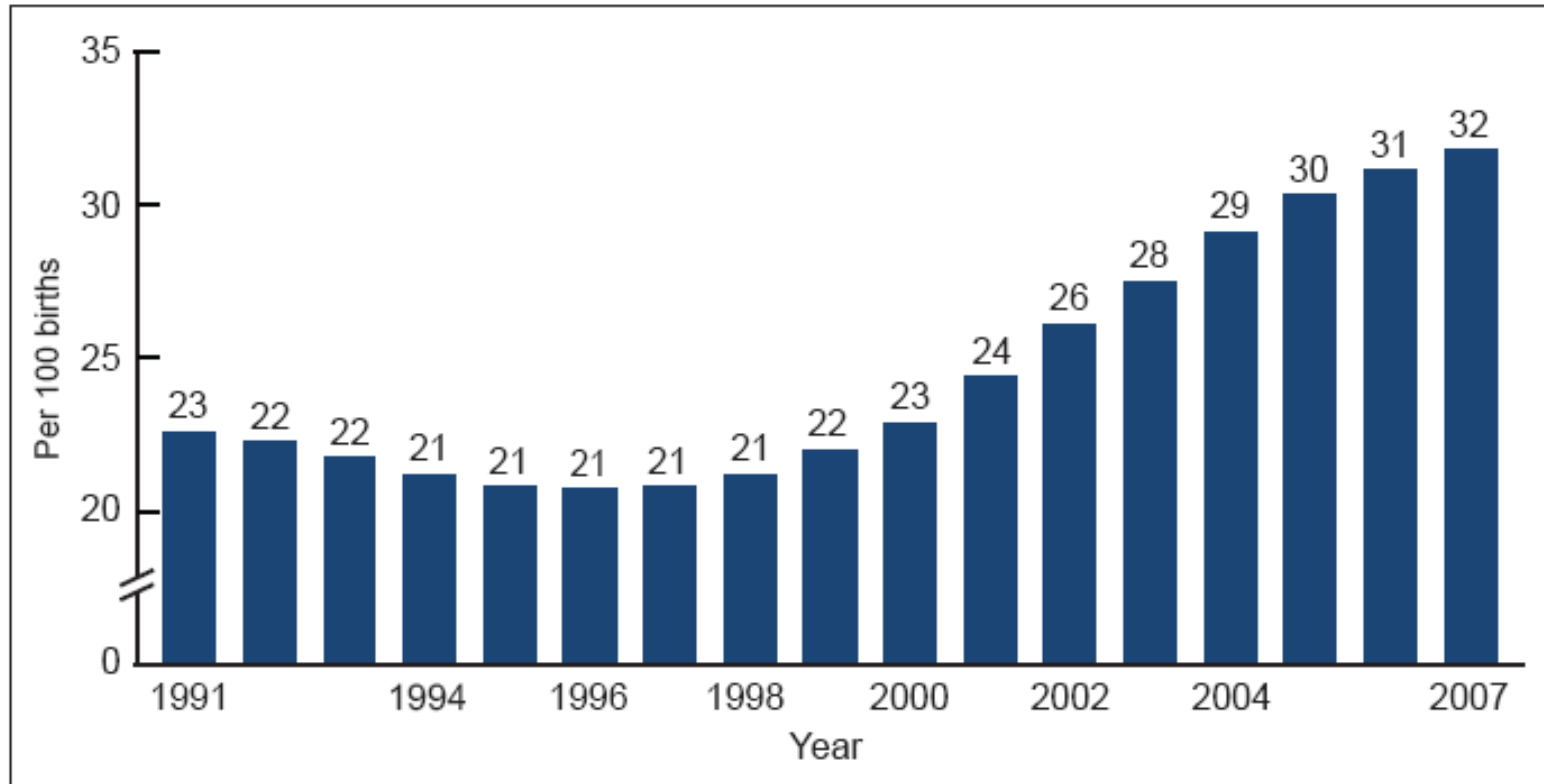


Note: The cause of death is unknown for 6.2% of all pregnancy-related deaths.

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



# Cesarean Delivery Rates, U.S



SOURCE: CDC/NCHS, National Vital Statistics System.

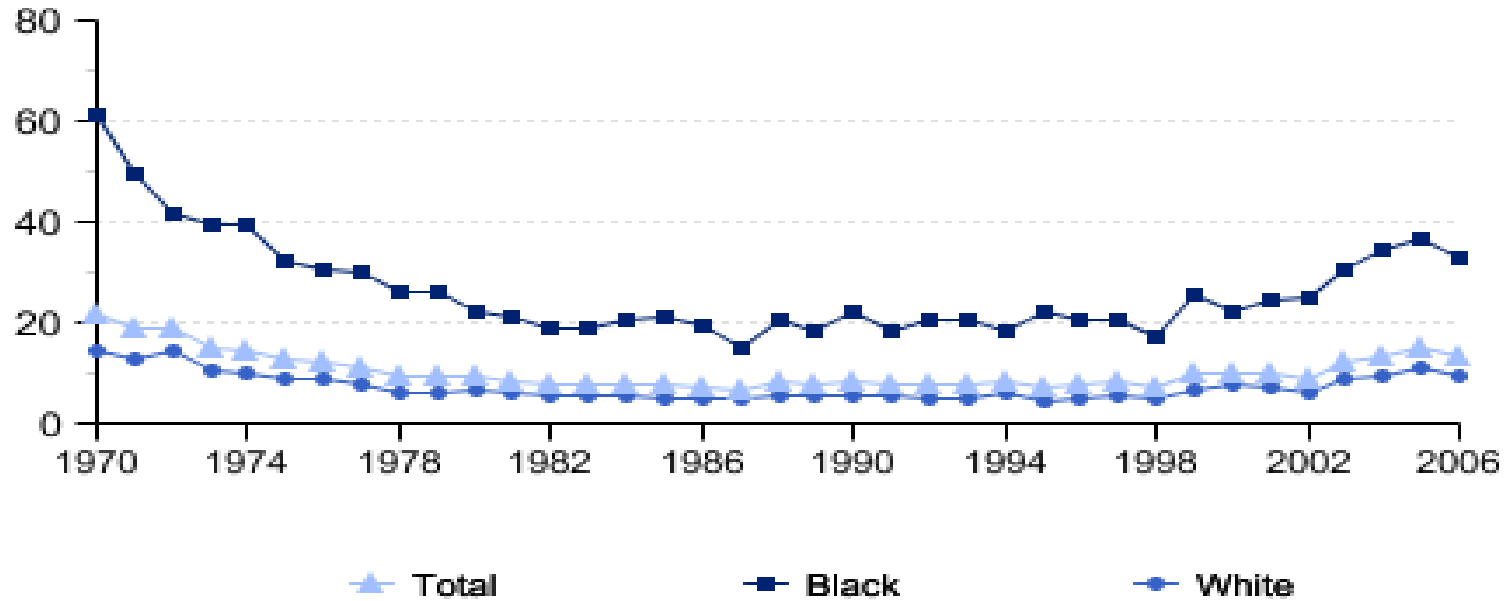
Menacker F, Hamilton BE. Recent trends in cesarean delivery in the United States. NCHS data brief, no 35. Hyattsville, MD: National Center for Health Statistics. 2010



# U.S. Maternal Mortality Ratio

## Racial Gap

Maternal deaths per 100,000 live births



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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



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



Society for  
Maternal-Fetal  
Medicine





# Maternal Health Initiative

## Strategic Priorities

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- **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**



# U.S. Maternal Mortality Ratio

## Patient Safety Bundles



**Organizations United to Provide  
Safe Health Care for Every Woman**



### 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**

# Maternal Health Initiative

## Alliance for Innovation on Maternal Health (AIM)

### Goal:

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

### Strategies:

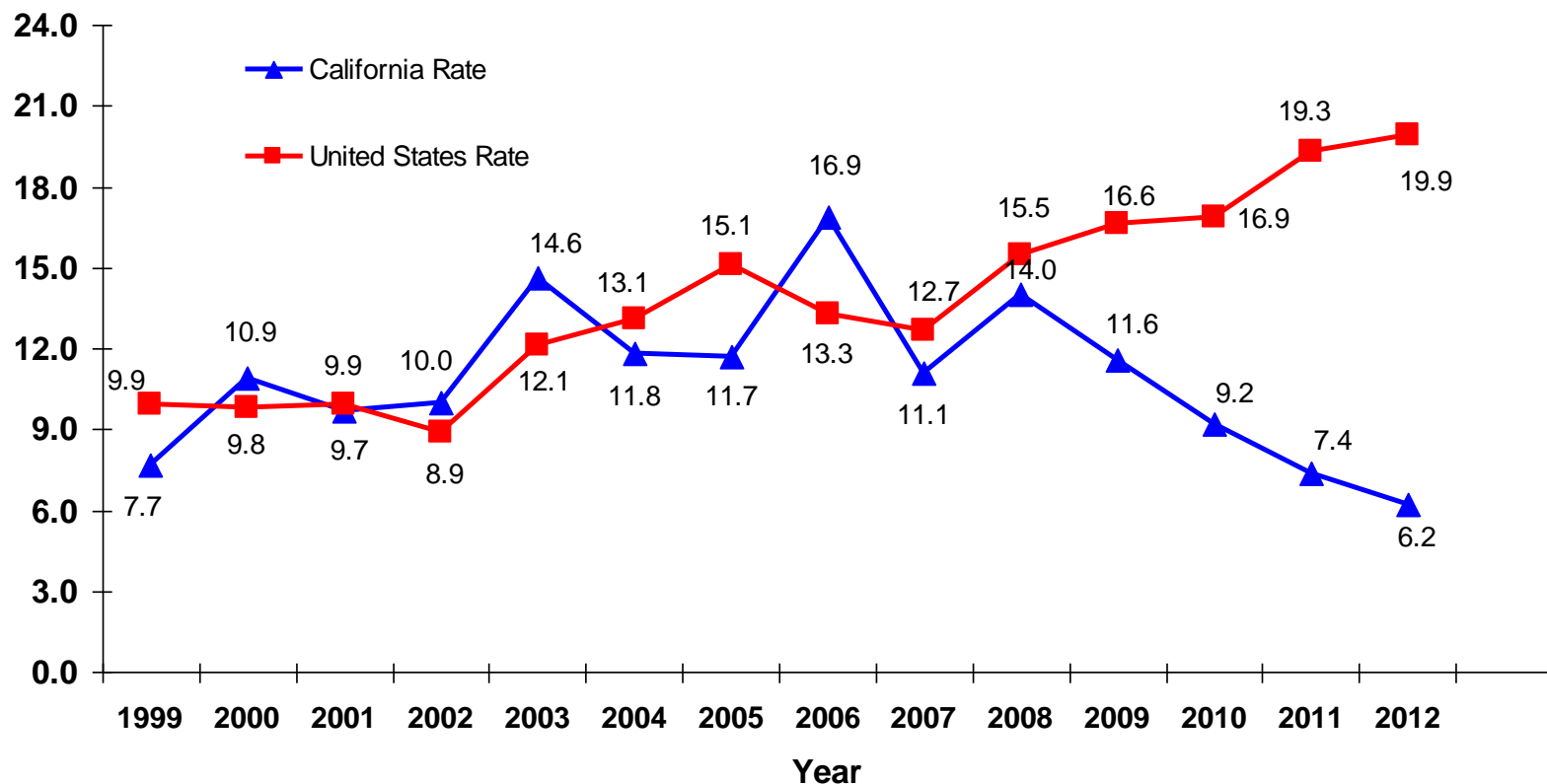
- Improve women's health before and between pregnancies
- Reduce low-risk (NTSV) cesarean deliveries
- Disseminate and integrate patient safety bundles into every birthing hospital across the U.S.



ALLIANCE FOR INNOVATION  
ON MATERNAL HEALTH **A I M**

**HRSA**  
Health Resources & Services Administration

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

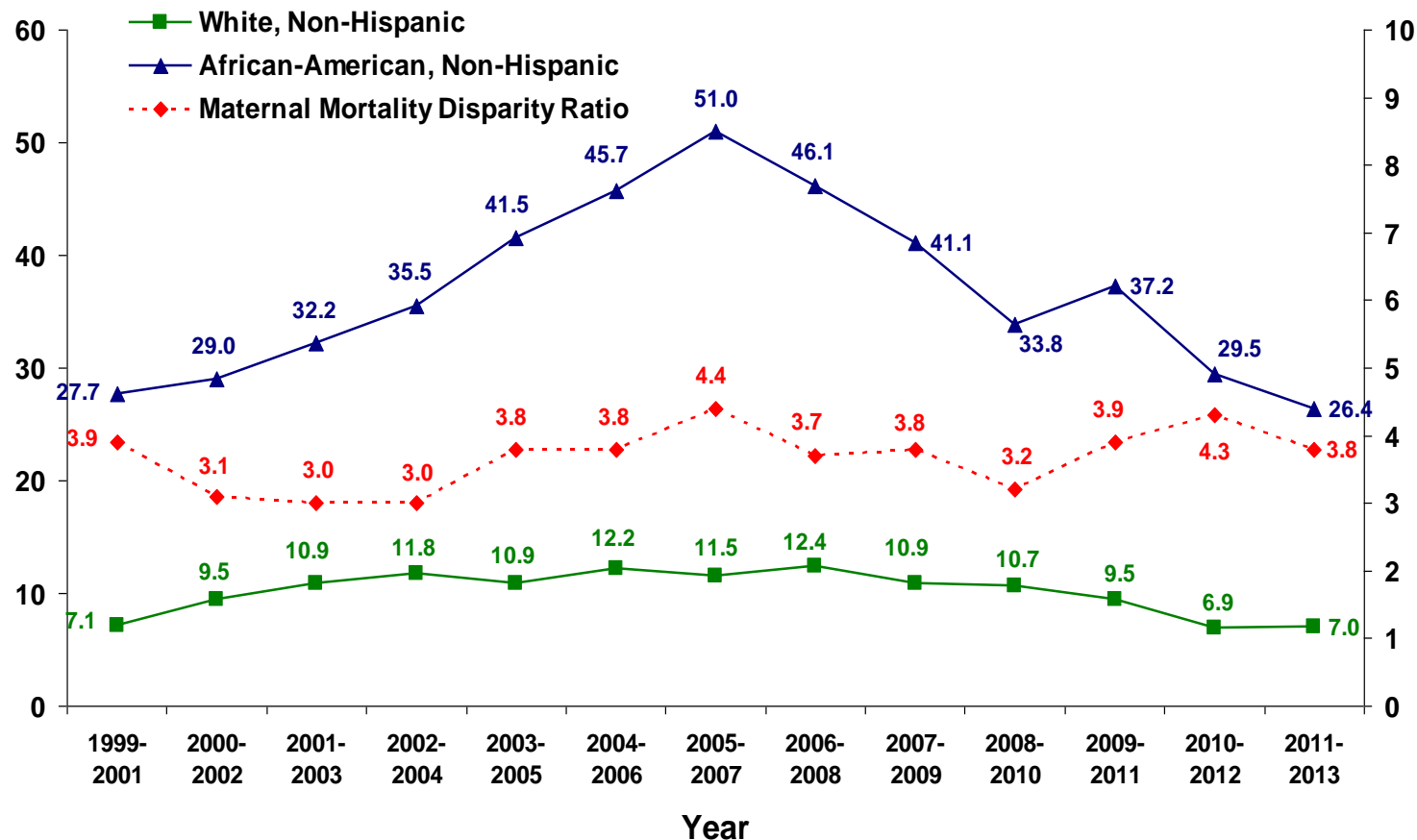


SOURCE: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1999-2013. Maternal mortality for California (deaths ≤ 42 days postpartum) was calculated using ICD-10 cause of death classification (codes A34, O00-O95, O98-O99). United States data and HP2020 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> 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

Maternal Deaths per 100,000 Live Births



Ratio of African-American to White Maternal Mortality



SOURCE: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1999-2013. Maternal mortality rates for California (deaths ≤ 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.



# Contact Information

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