



Georgia Department of Public Health

Maternal Mortality in Georgia: Through the Public Health Lens

Presenter: Maria Fernandez

Healthy Mothers, Healthy Babies Annual Meeting
Oct 7, 2014



We Protect Lives.

IN 2013

MATERNAL
MORTALITY

85 WOMEN DIED

GEORGIA RANKS

50

NATIONALLY

Overview

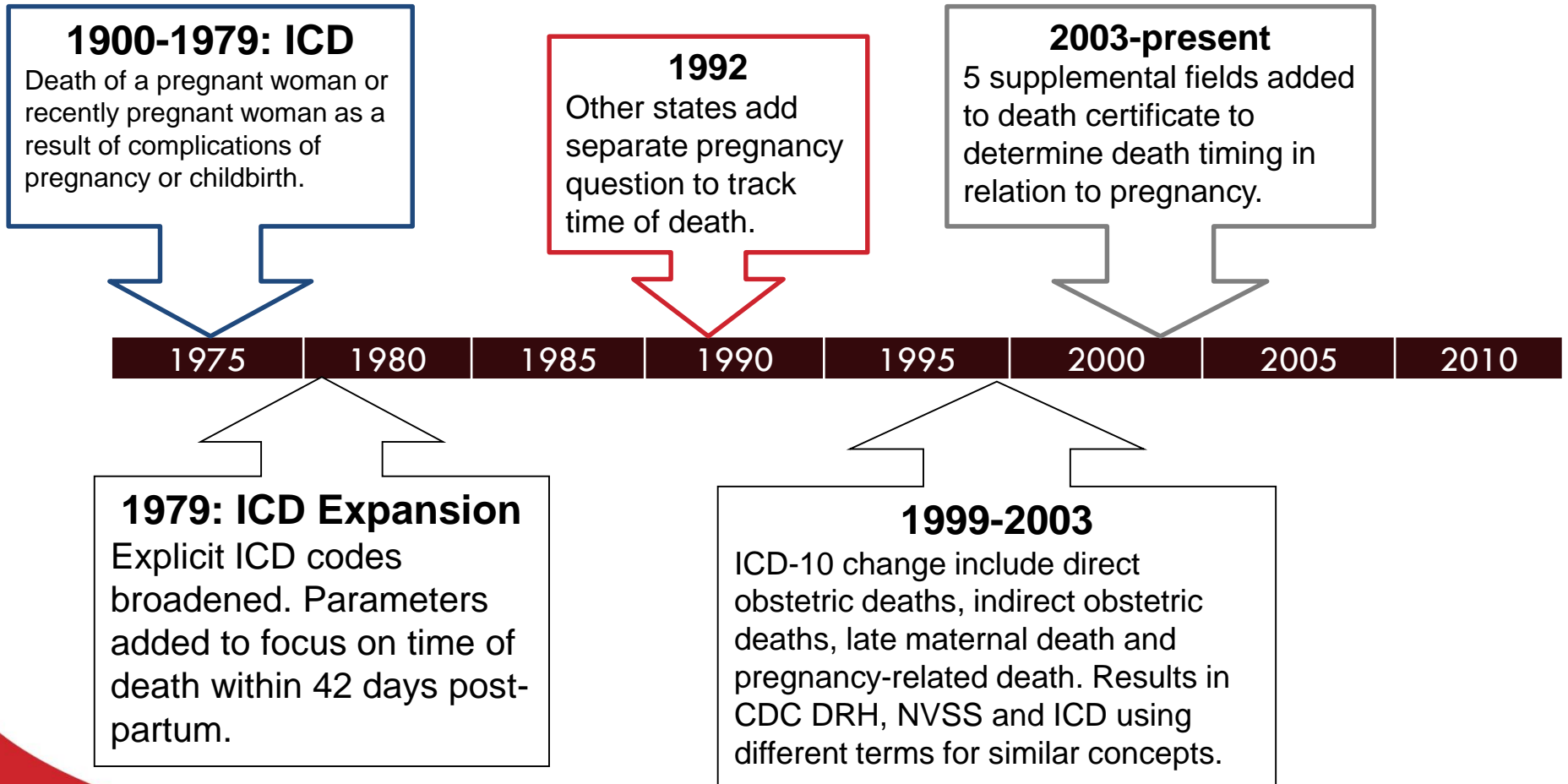
Inform

Protect

Prevent

COLLECTIVE IMPACT

Evolution of Maternal Mortality Definition

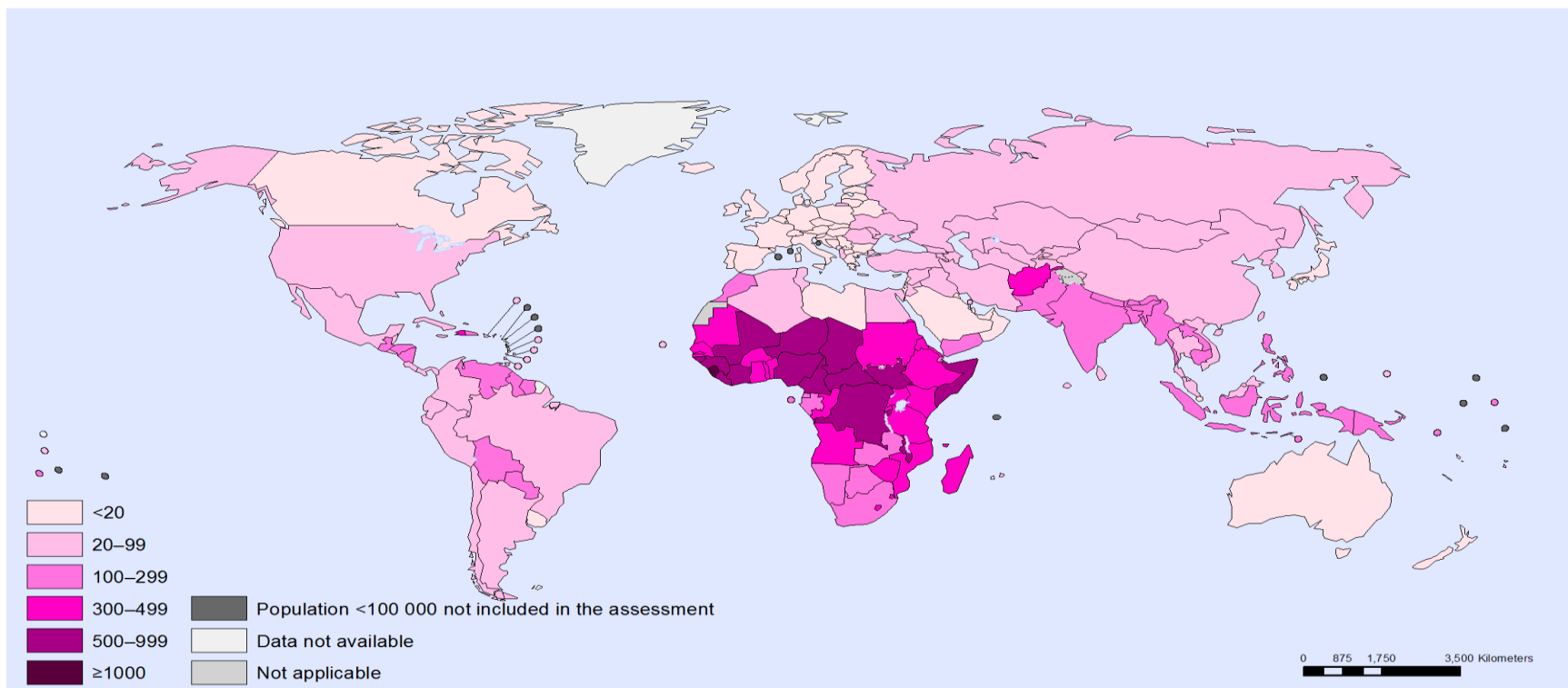


INFORM:

Epidemiology of Maternal Mortality

Worldwide Maternal Mortality: 2013

Maternal mortality ratio (per 100 000 live births), 2013



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

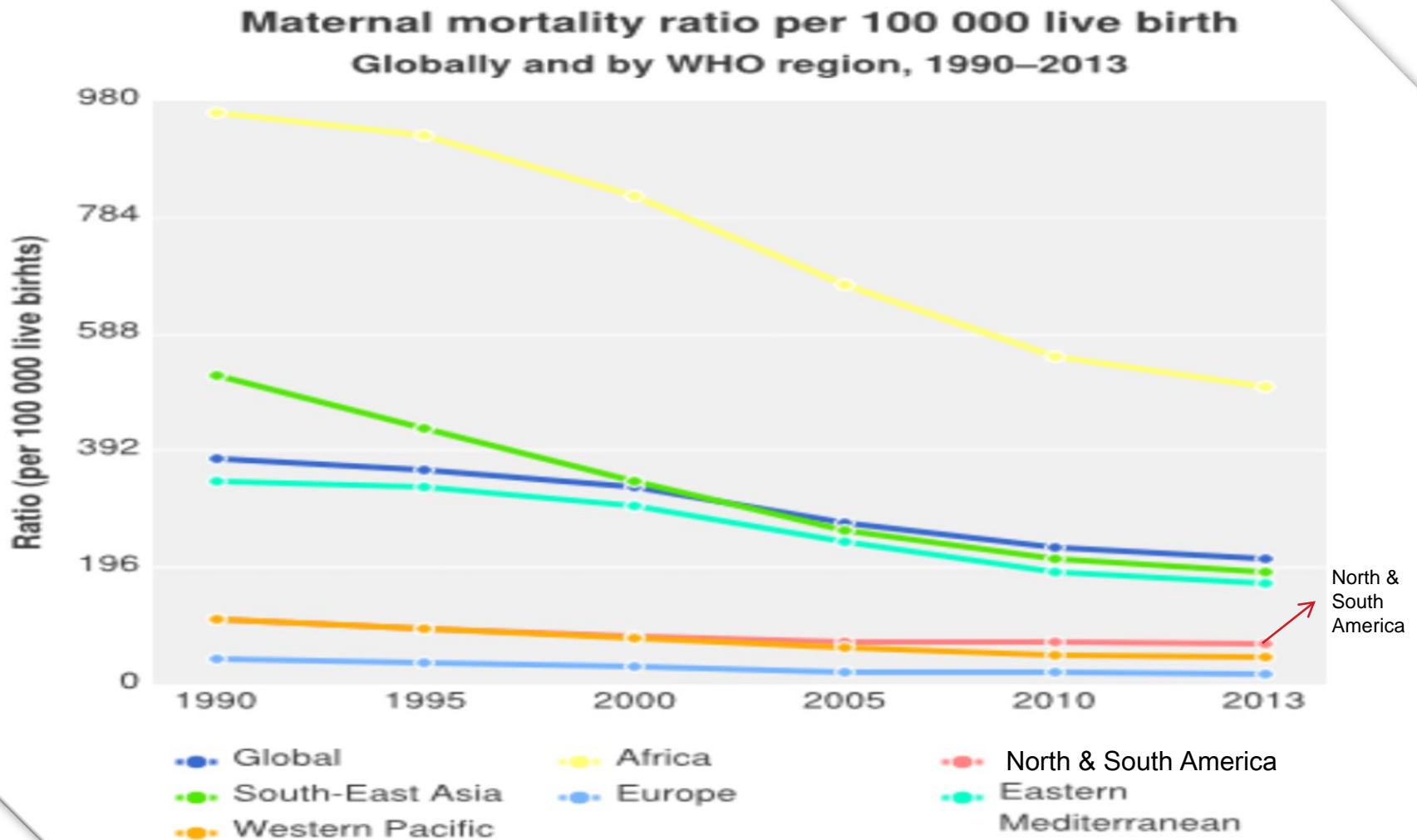
Data Source: World Health Organization
Map Production: Health Statistics and Information Systems (HSI)
World Health Organization



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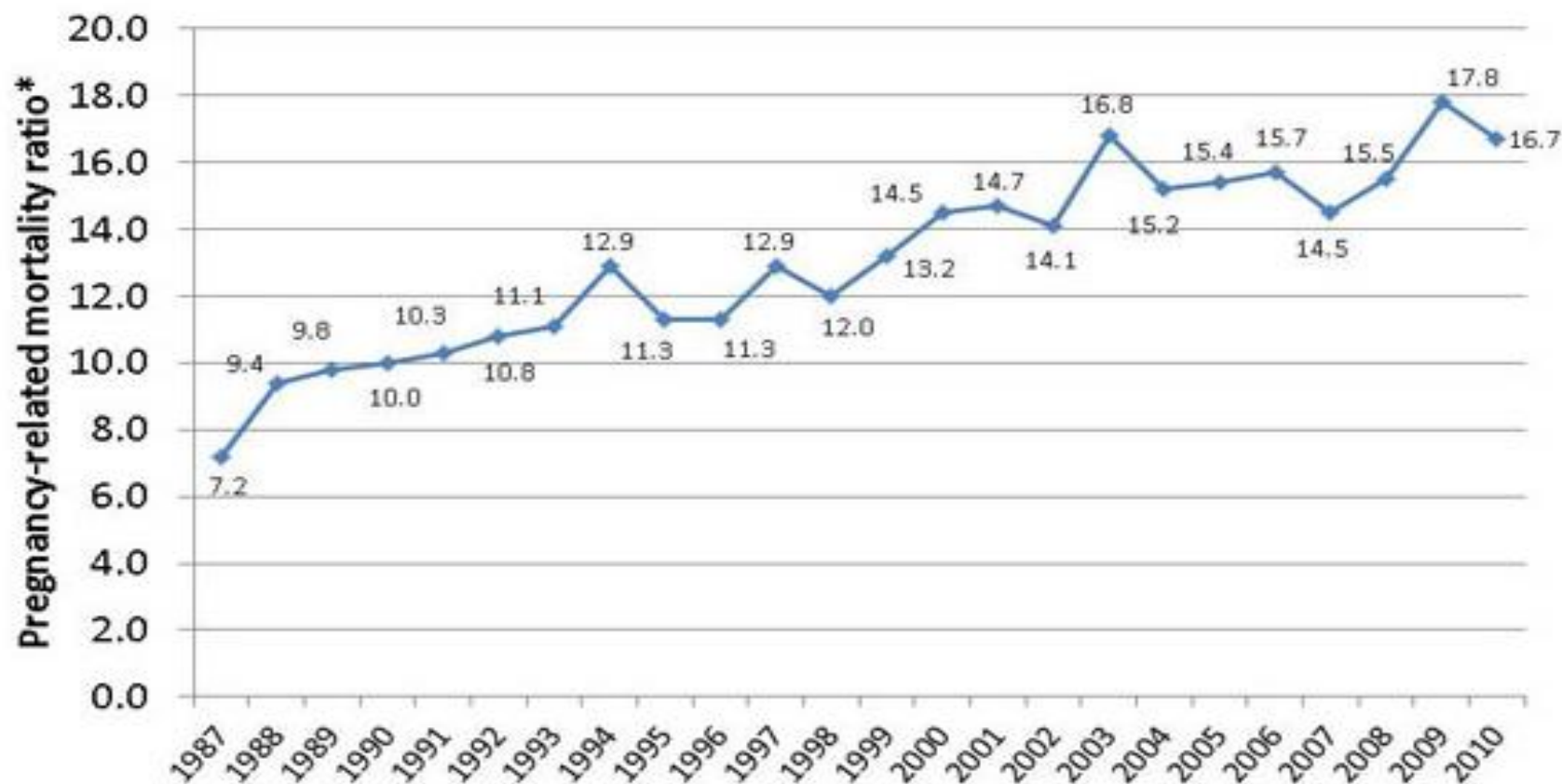
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Worldwide Maternal Mortality: 1990-2013



United States Maternal Mortality: 1987-2010

Trends in pregnancy-related mortality in the United States: 1987-2010



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

Maternal Mortality: United States

For women in the United States, each year:

50,000

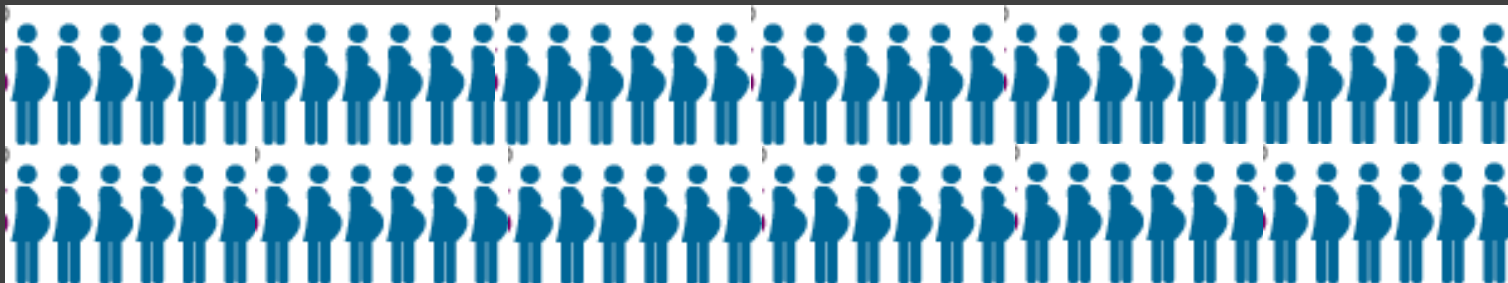
suffer severe morbidities
due to pregnancy-
related complications

650
die

due to
pregnancy-
related
complications

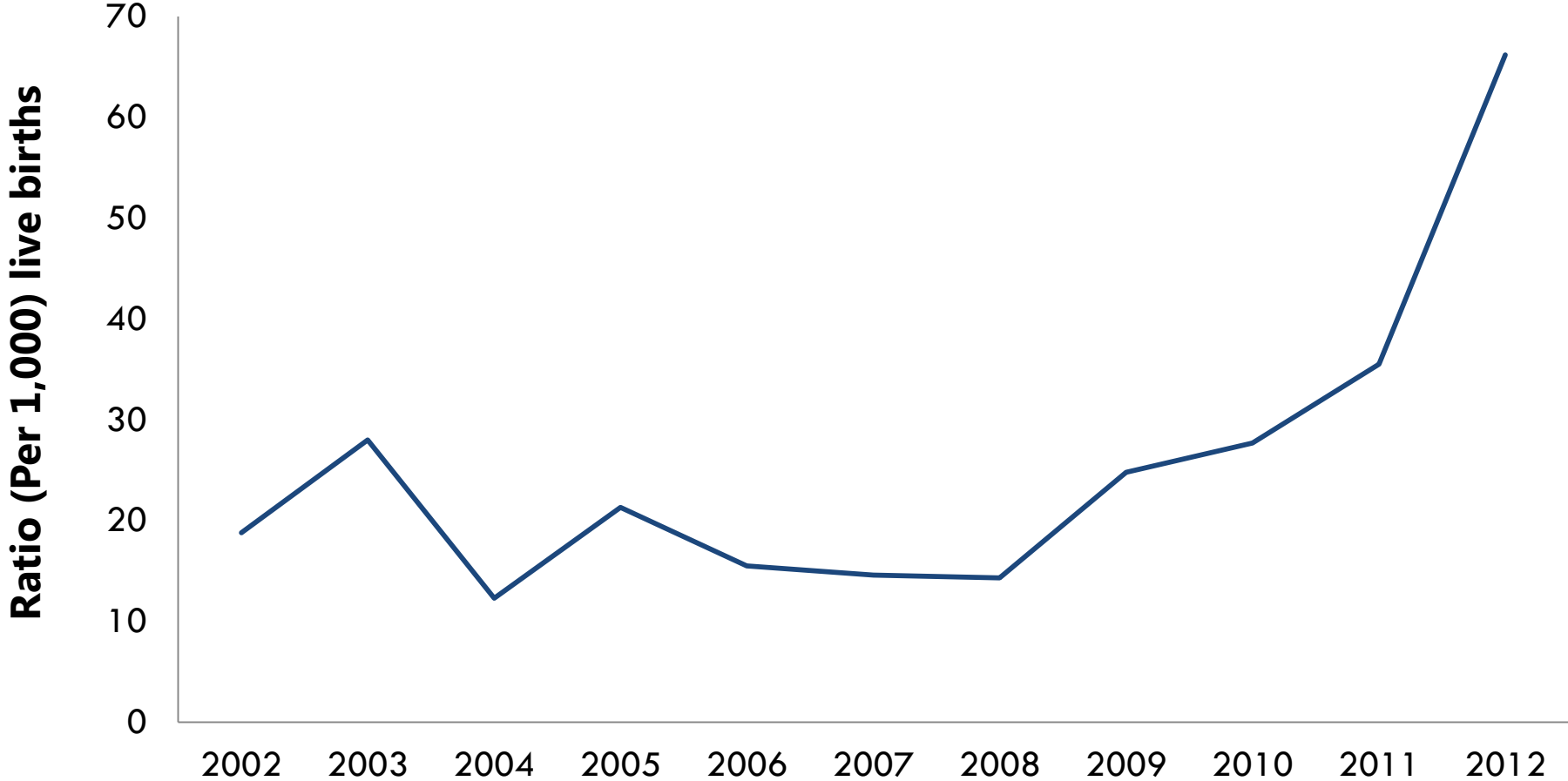


This means that for every 1 woman who dies due to a pregnancy-related condition, another 76 women experience a severe co-morbidity.



70%
in
20
years

Georgia Maternal Mortality Rate 2002-2012



Georgia Maternal Mortality Initiatives

Georgia Maternal Mortality Initiatives

1

Partnership with Emory University

Working with Emory to expand midwifery training programs

2

Medicaid Policy Changes

- P4HB to increase family planning
- Payment for LARCs at delivery

3

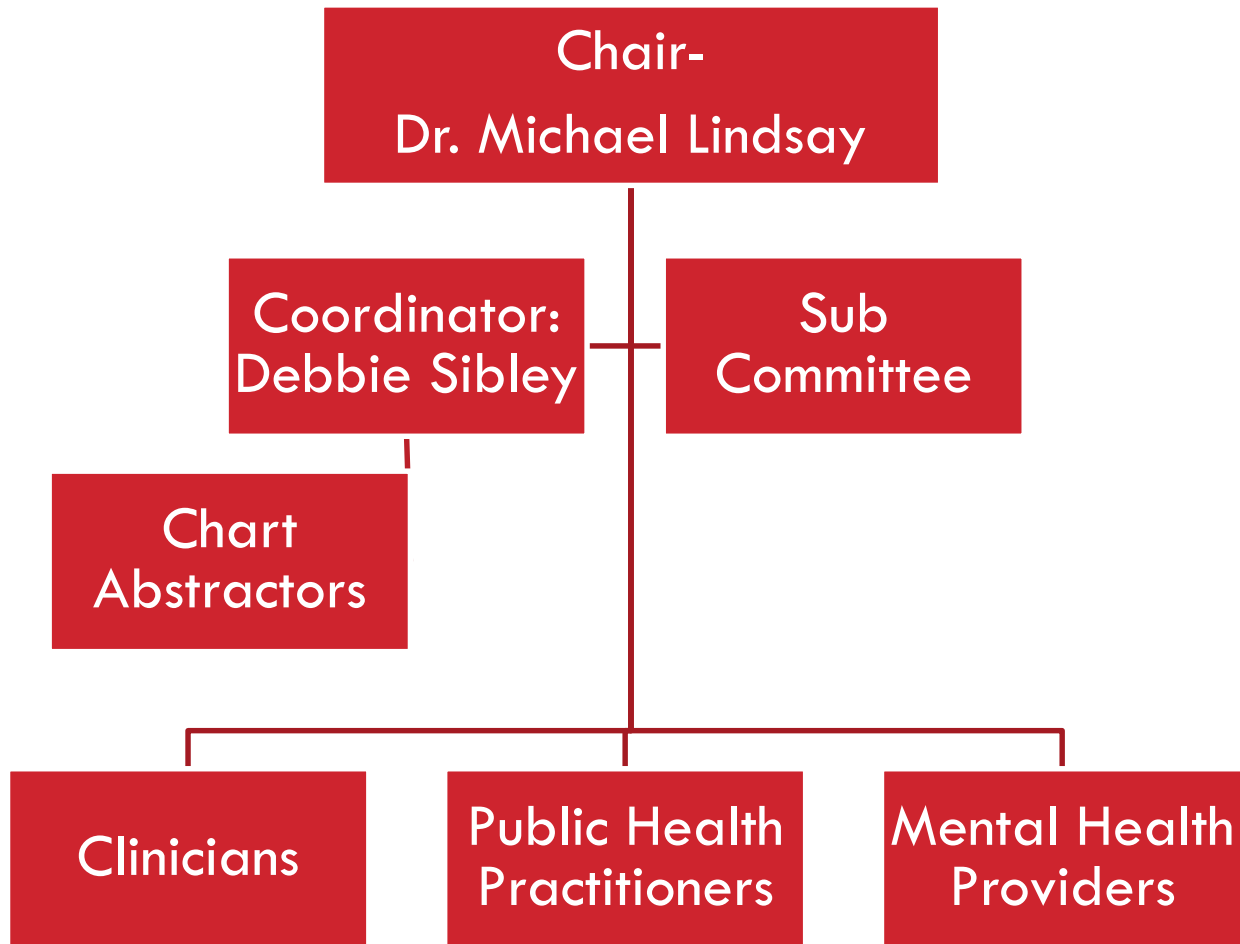
Maternal Mortality Review Committee

Partnership with the Georgia OB/Gyn Society to lead the MMRC

Georgia

Maternal Mortality Review Committee

MMRC Members



Purpose of the MMRC

- Identify all maternal deaths in Georgia
- Review maternal deaths that are/may be pregnancy-related
- Determine modifiable factors related to the death
- Develop non-punitive actionable recommendations
- Reduce maternal death

Case review criteria

Maternal Death

- Death must have occurred to a woman who was either pregnant at time of death or within one year

Pregnancy-Related Maternal Death

- Suicides and drug overdoses within six months
- Motor vehicle accidents within six months
- Intentional and unintentional injuries not routinely reviewed

Maternal Death

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graph TD; A[Maternal Death] <--> B[Pregnancy Related Mortality]; A <--> C[Pregnancy Associated Mortality]; B --- D{ }; C --- D;
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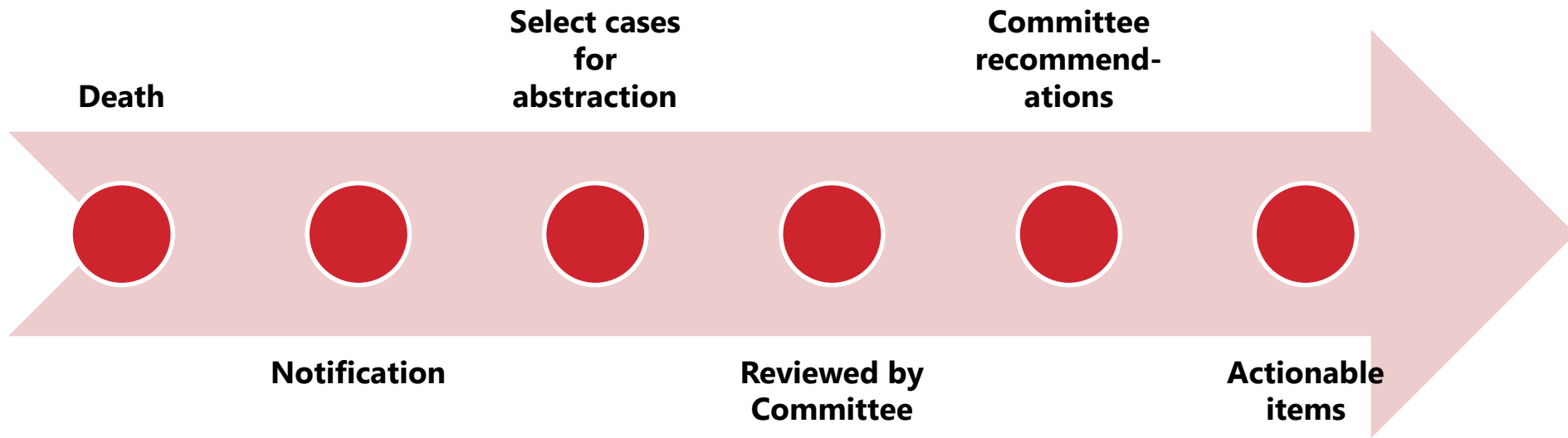
**Pregnancy
Related
Mortality**

**Pregnancy
Associated
Mortality**

Maternal death identification process



MMRC Process



Limitations on identification process

Identification of maternal deaths are complicated

- What happens if a mom was a resident of a different state at delivery?
- Do you capture deaths related to induced terminations?

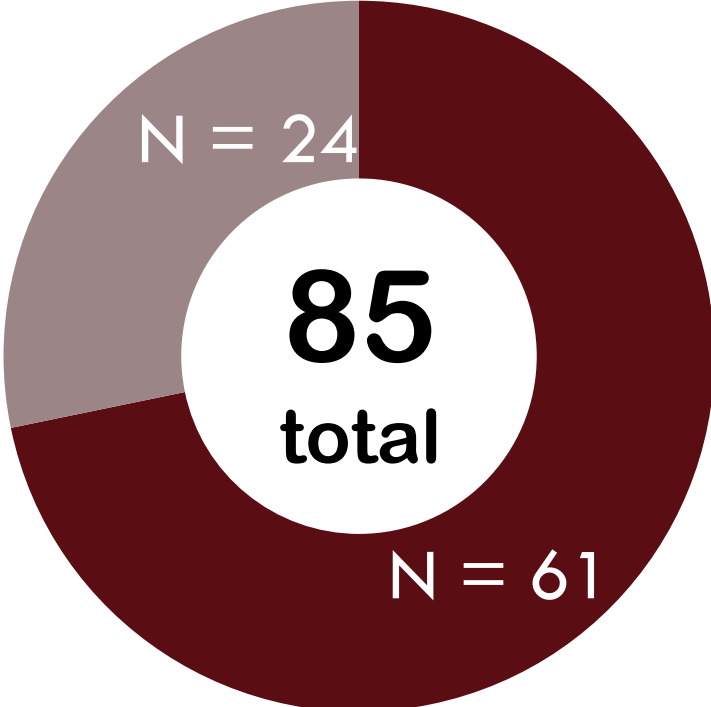
Death certificates are not always complete and/or accurate

Fetal death certificates are not routinely completed

Findings from MMRC

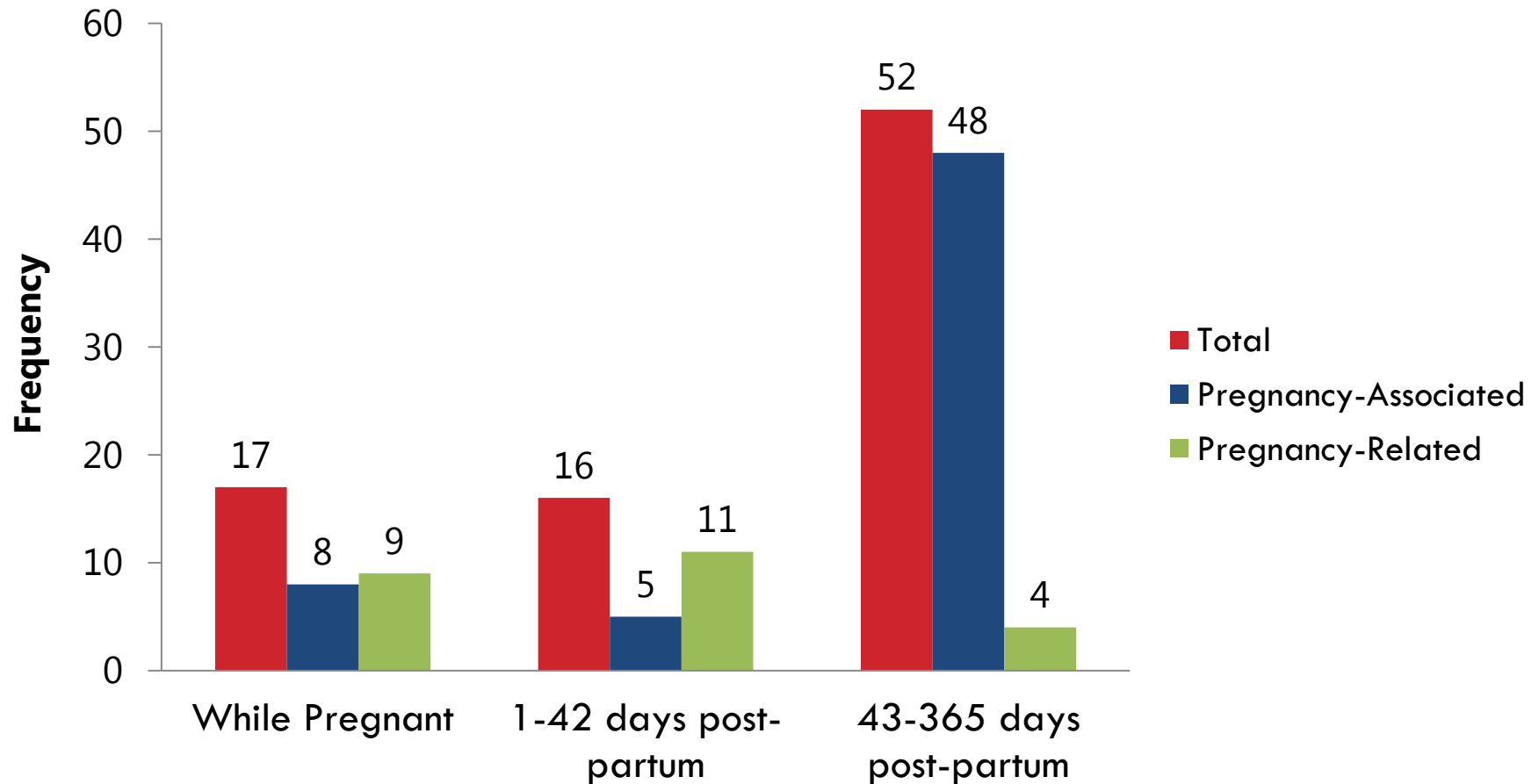
Georgia 2012 Maternal Mortality

Maternal Mortality, Georgia 2012

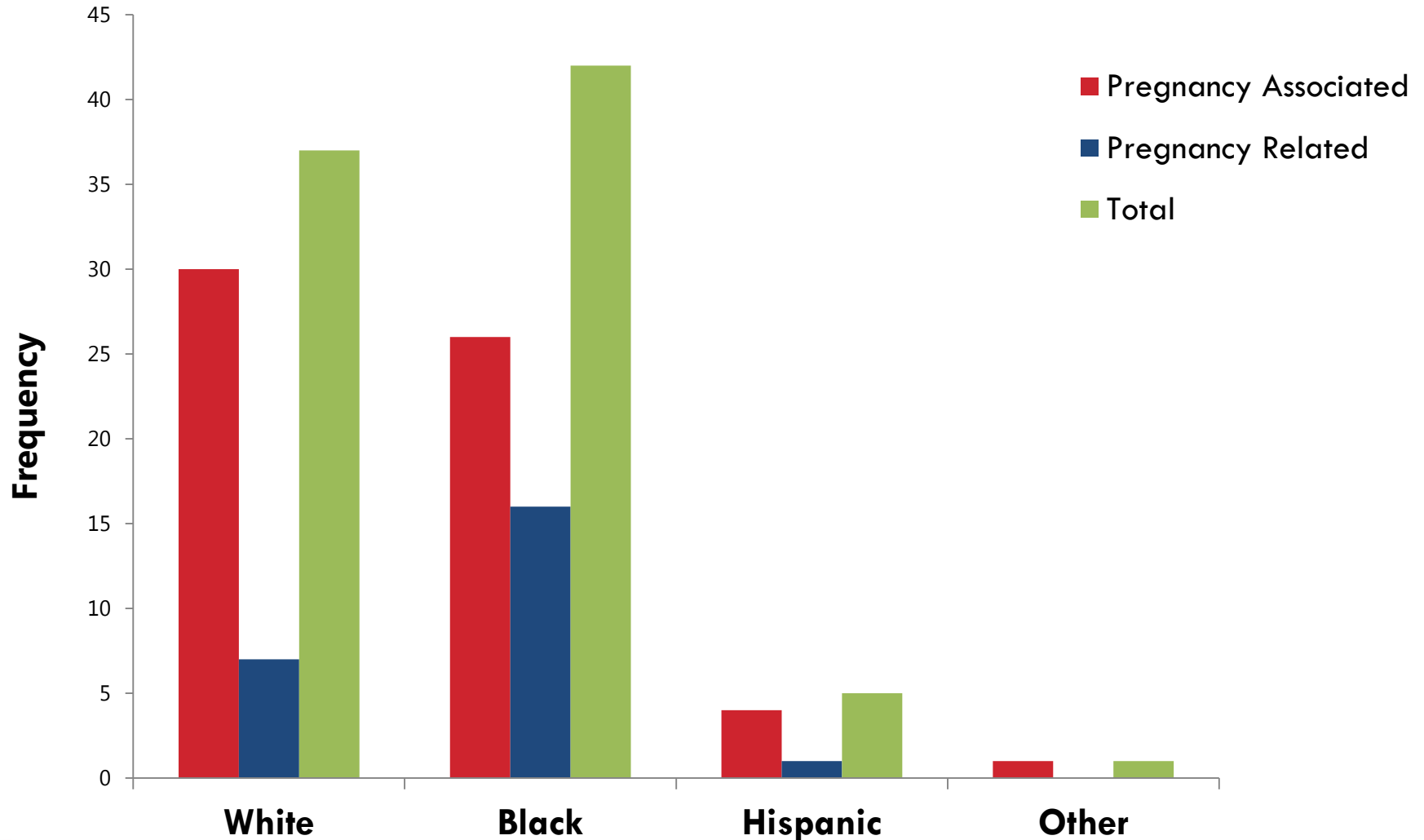


■ Pregnancy-Associated ■ Pregnancy-Related

Maternal mortality by timing of death Georgia, 2012

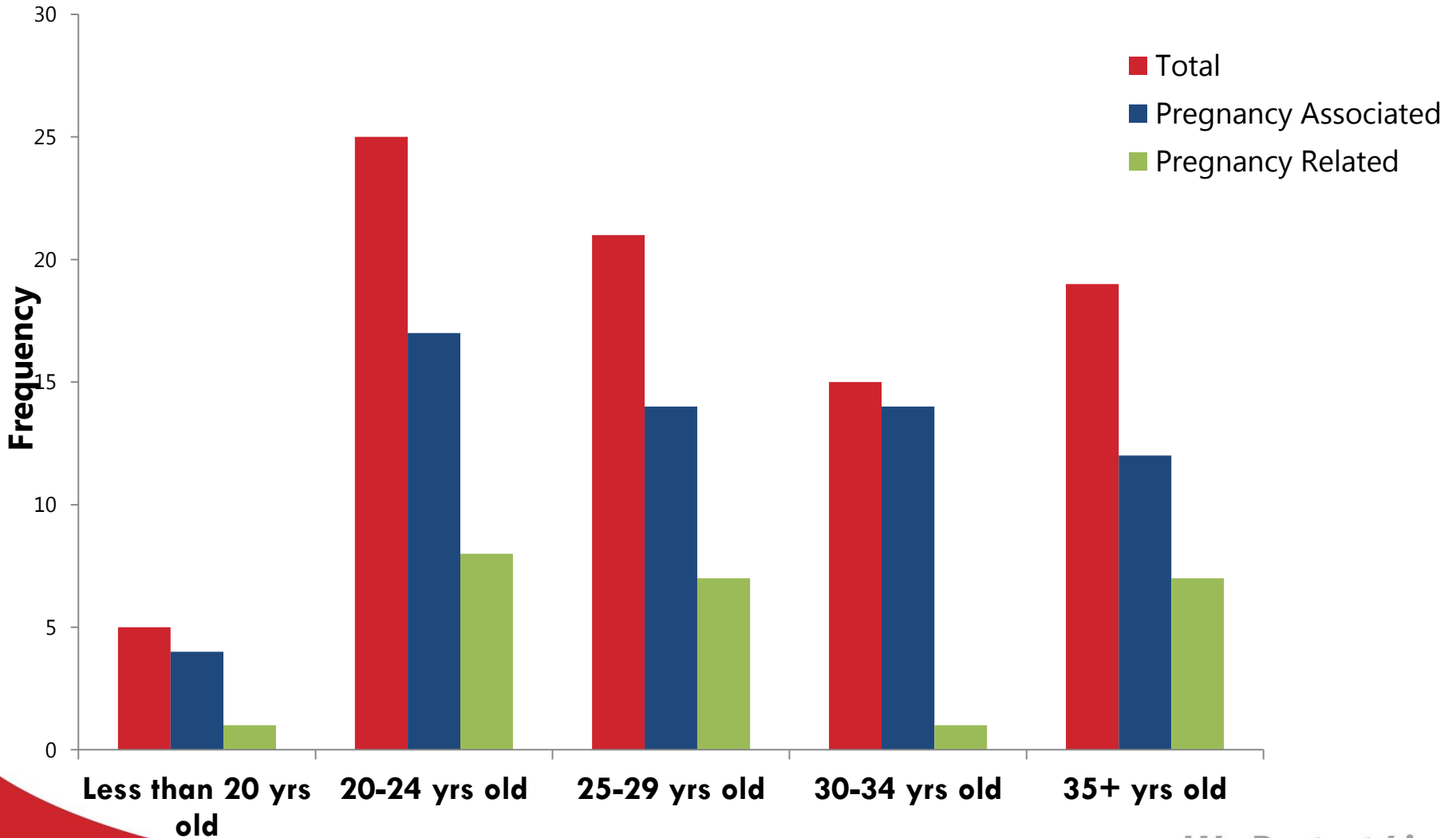


Maternal mortality by race Georgia, 2012



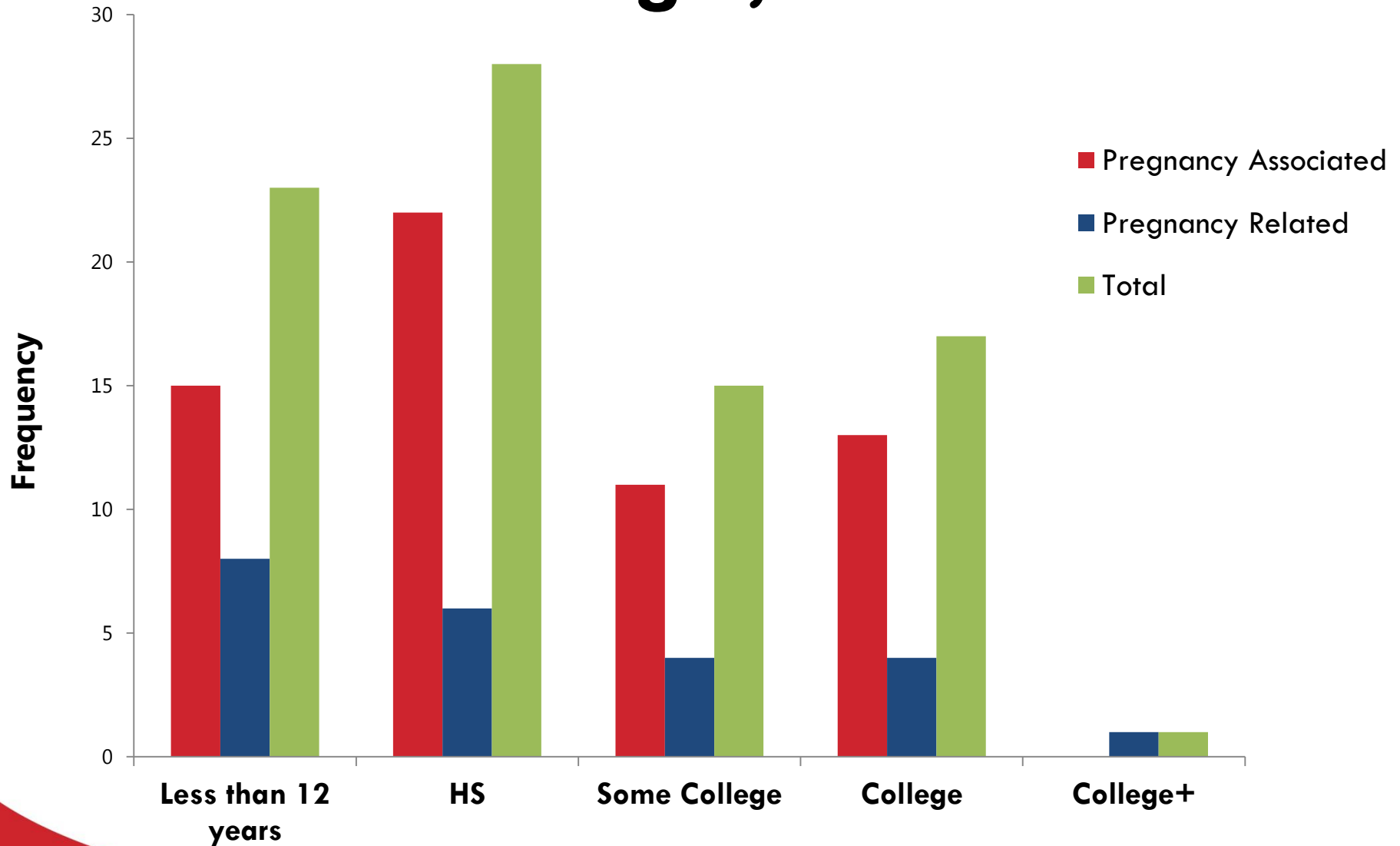
Maternal mortality by age

Georgia, 2012

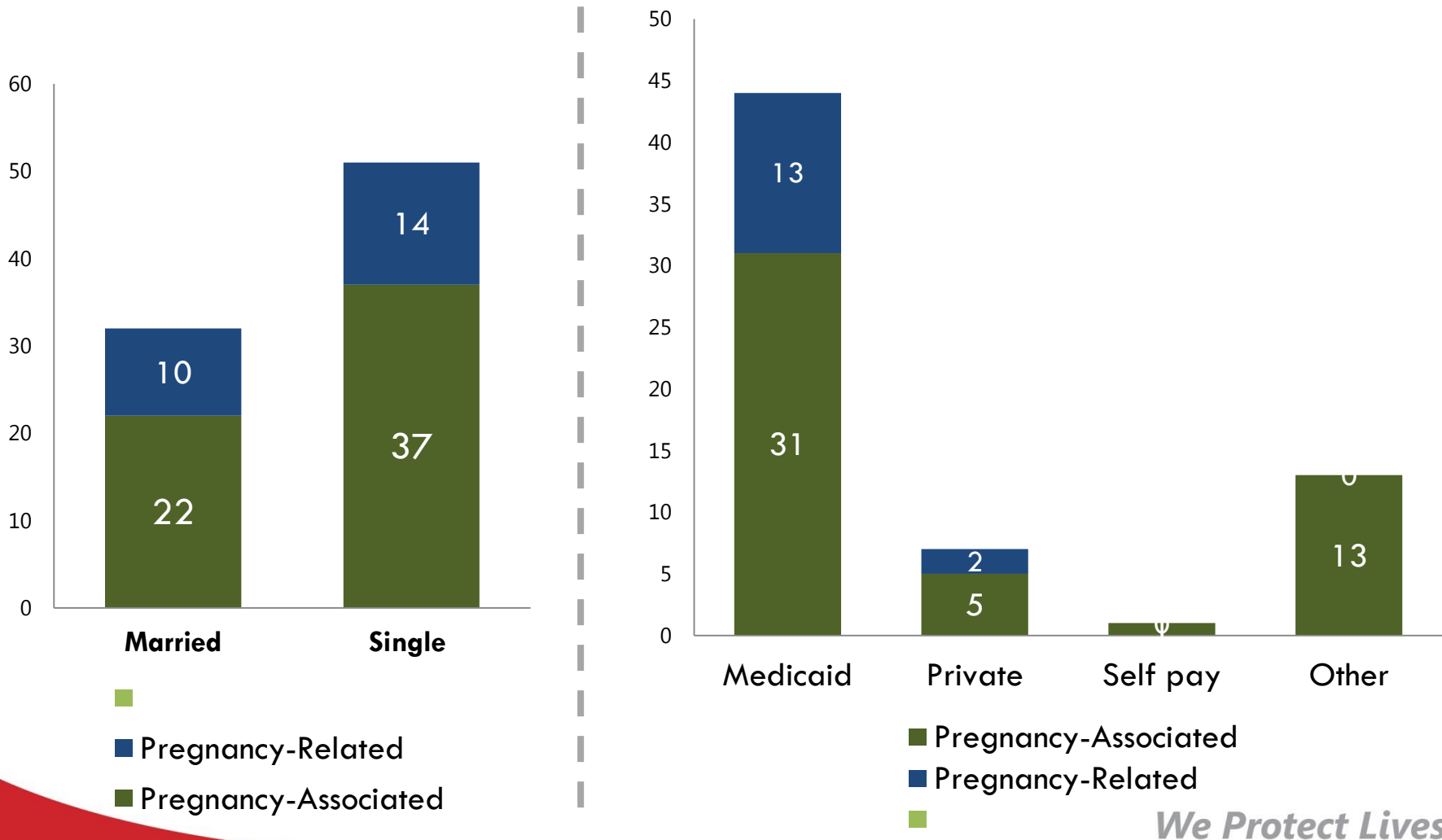


Maternal mortality by education

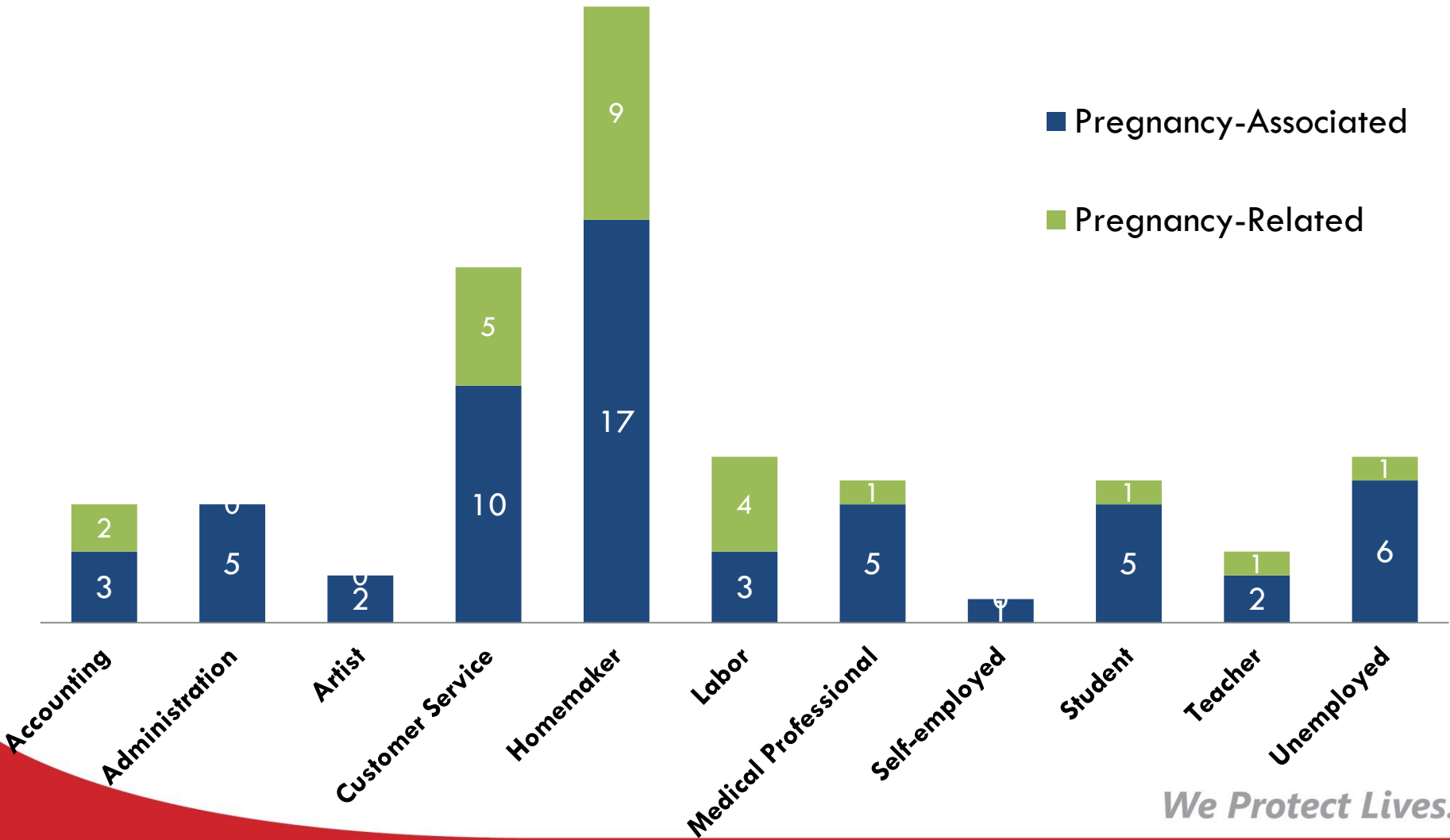
Georgia, 2012



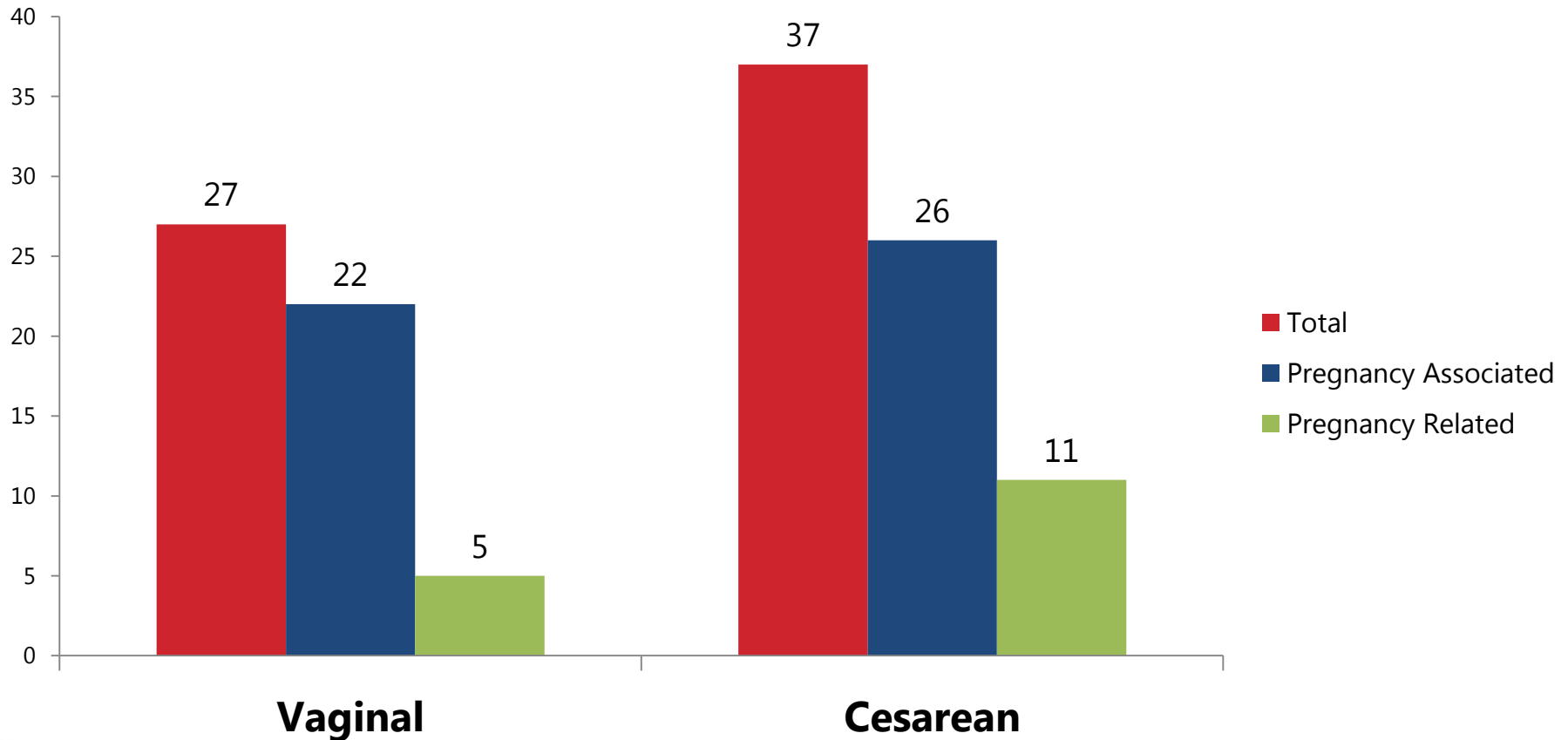
Maternal mortality by marital status Georgia and payor, 2012



Maternal mortality by occupation: Georgia, 2012

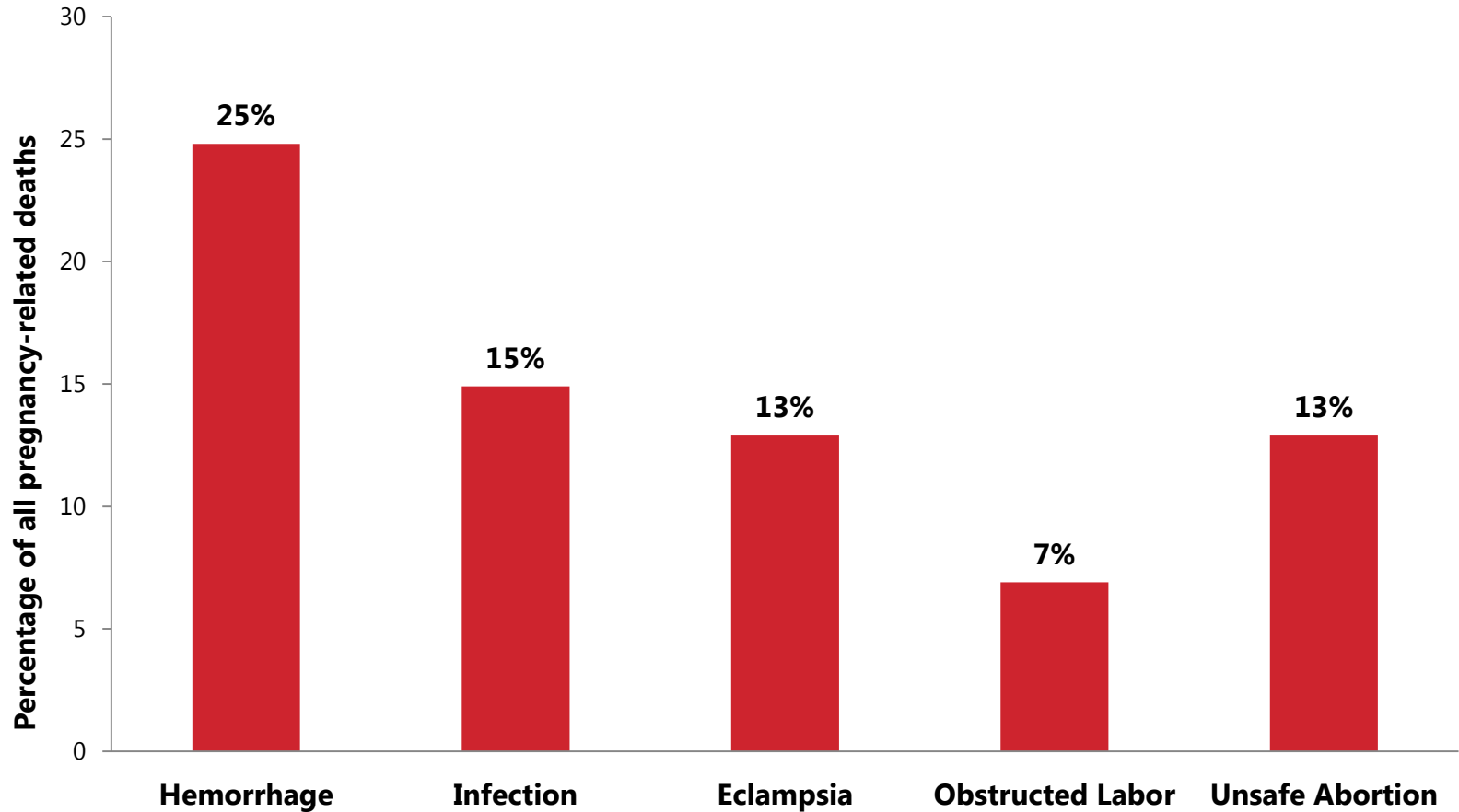


Maternal mortality by mode of delivery: Georgia, 2012 N=68

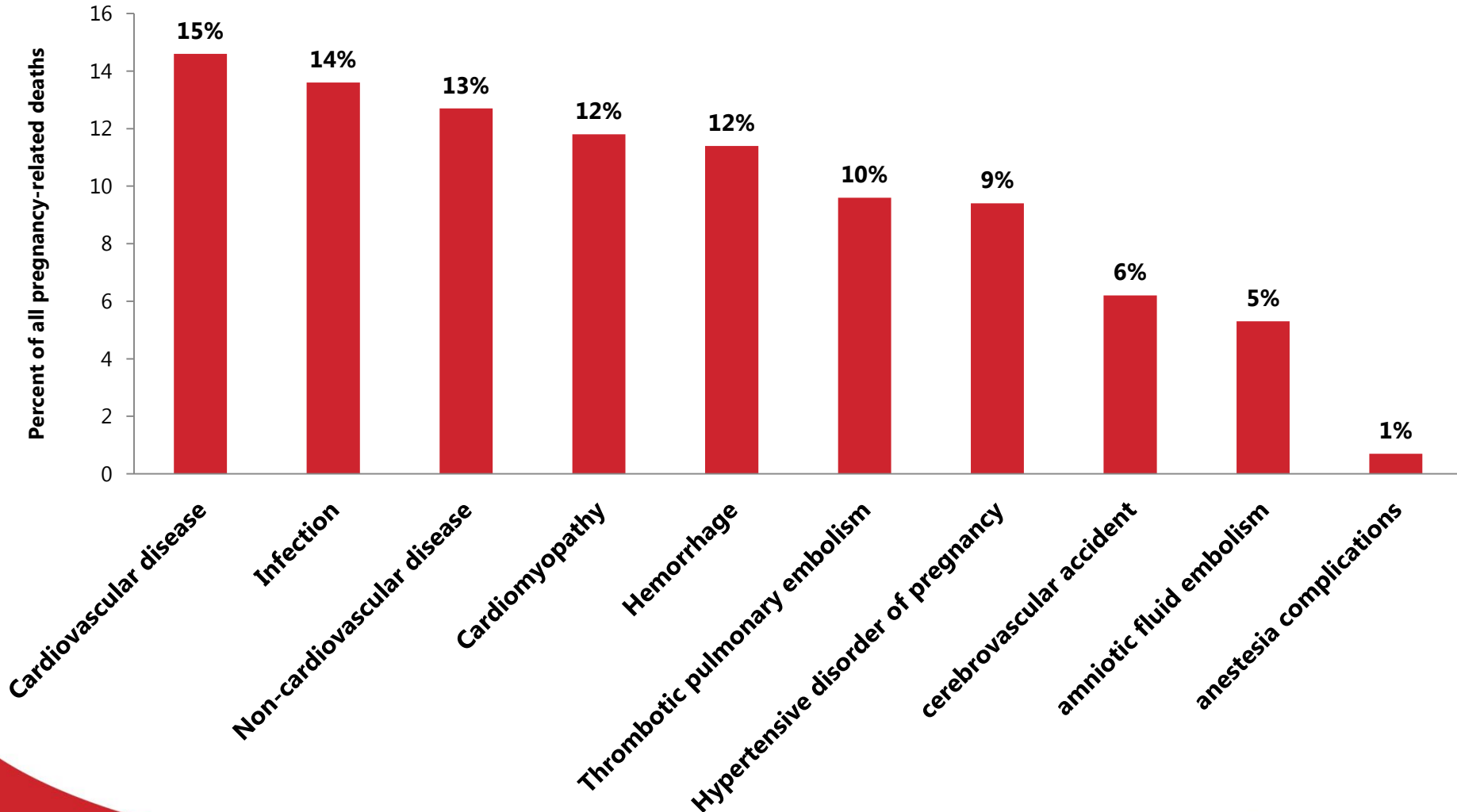


Leading Causes of Maternal Mortality

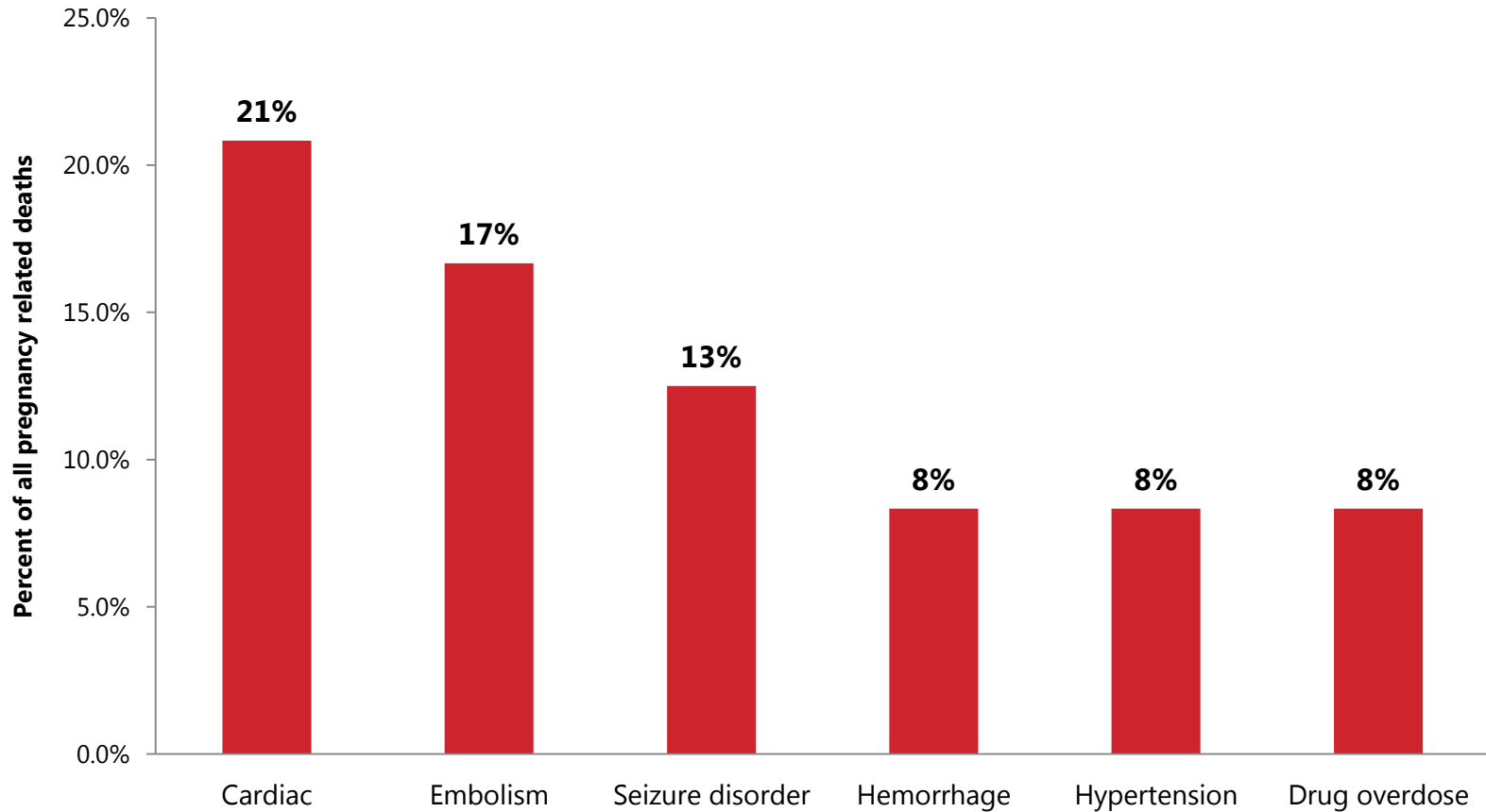
Maternal mortality by cause of death: Worldwide



Maternal mortality by cause of death: United States



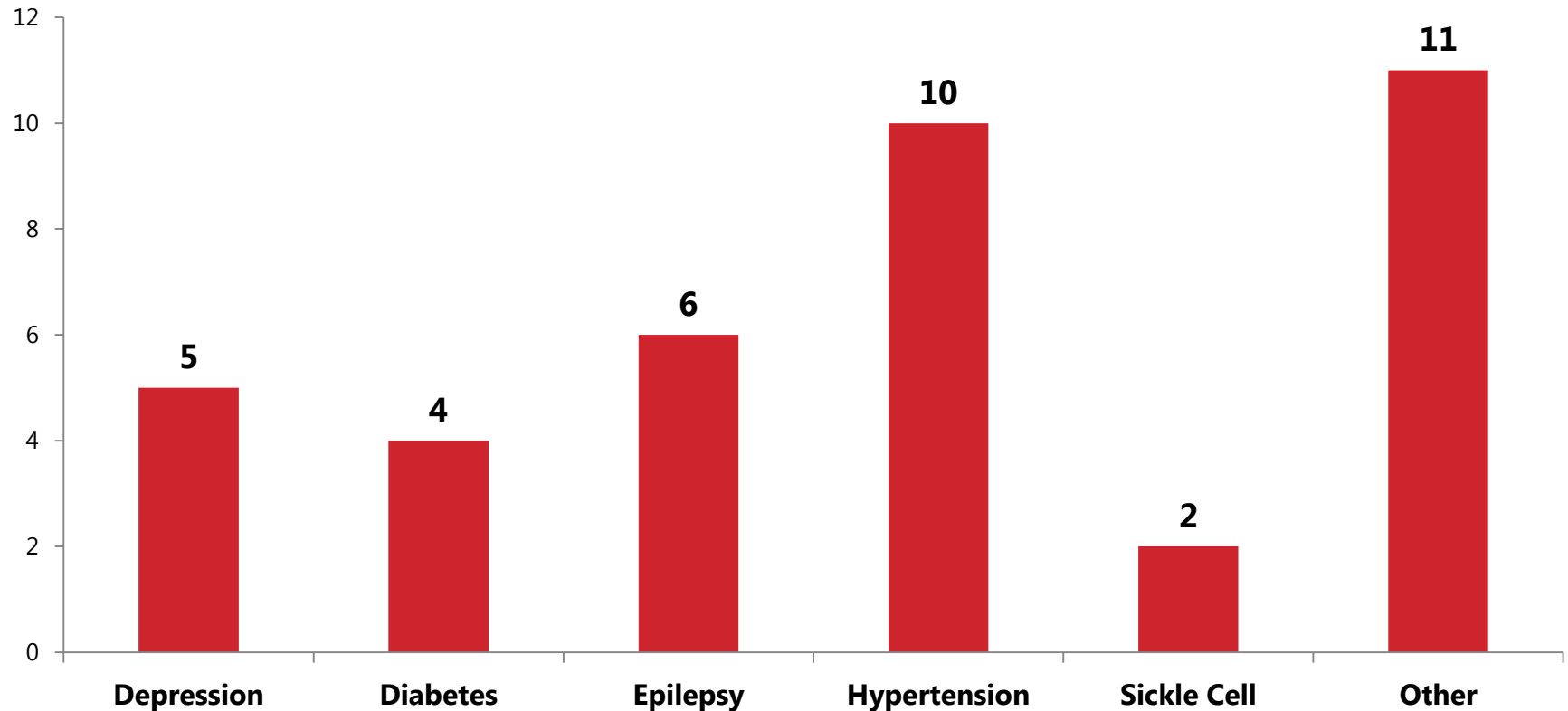
Maternal mortality by cause of death: Georgia



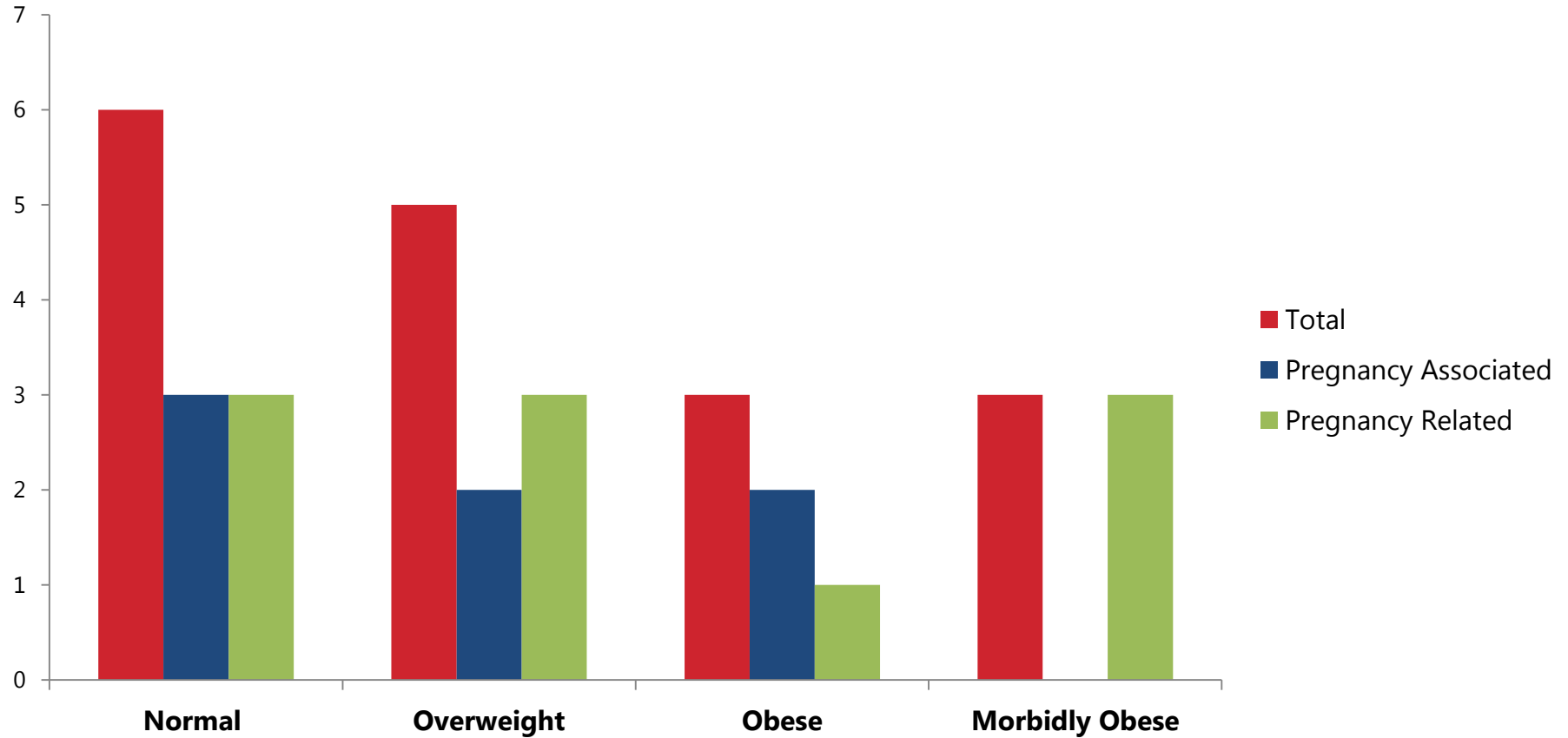
An In-Depth Review of Initially Identified Cases

Chronic Diseases Apparent During the Prenatal Period, Georgia 2012

N = 34



Maternal Mortality by pre-pregnancy weight: Georgia 2012 (N=17)



Georgia Maternal Mortality Health Promotion Initiatives

Chronic Disease & Pregnancy Awareness

<http://youtu.be/K02eLJotaU>

Cardiac Brochure



Cardiac Conditions and Pregnancy

Women diagnosed with cardiac conditions such as congenital heart defects, chronic high blood pressure and irregular heart rate have an increased risk for complications due to pregnancy, including death. Pregnancy increases the amount of blood circulating in the body and greatly increases the pressure put on the heart. Be sure to ask about delaying pregnancy until your chronic disease is under control.



Chronic Disease Poster

Chronic Diseases and Pregnancy



A chronic disease is a type of illness that cannot be spread from one person to another. Chronic diseases develop slowly and may take a long time to cure. Some chronic diseases are not able to be cured, and can only be managed. Stroke, hypertension, diabetes, asthma, and neurological disorders and cancers are examples of common chronic diseases. These conditions can negatively affect health in several ways, including increasing complications during pregnancy. Be sure to ask your doctor today about delaying pregnancy until your chronic disease is under control.

How do chronic diseases put my health at risk during pregnancy?

Risks to you

- Preeclampsia)
- Eclampsia
- HELLP Syndrome
- Cardiomyopathy
- Gestational Diabetes

Risks to your baby

- Premature birth
- Low birth weight
- Cesarean delivery

In some severe cases, these conditions can put the mother or baby at risk of death.

Planning your pregnancy with both your cardiologist and your OB/GYN can decrease your risk of complications during and after pregnancy.

All women should ask their doctor:

I want to get pregnant within the next year:

- Is my chronic disease controlled enough to consider pregnancy?
- How can I make sure I do not become pregnant until my chronic disease is controlled?
- Are the medicines I'm currently taking safe for pregnancy?

I do not want to get pregnant within the next year:

- Can you help me identify the best birth control method for me?
- Are there other steps I should be taking so I can stay as healthy as possible?



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SCD Brochure

Sickle Cell and Pregnancy

- How can sickle cell put my health at risk during pregnancy?

Risks to you

- Congestive heart failure
- Kidney disease
- Anemia
- Increased number of infections (ex: UTI)
- Death

Risks to your baby

- Premature birth (born too soon)
- Low birth weight

In some severe cases, these conditions can put the mother or baby at risk of death.

Planning your pregnancy with both your sickle cell doctor and your OB/GYN can decrease your risk of complications during and after pregnancy.

- All women should ask their doctor:

I want to get pregnant within the next year:

- Is my condition controlled enough to consider getting pregnant?
- Are the medicines I'm currently taking safe for pregnancy?
- Should I meet with a genetic counselor to discuss the risk of passing sickle cell to my child?

I do not want to get pregnant within the next year:

- Can you help me identify the best birth control method for me?
- Are there other steps I should be taking so I can stay as healthy as possible?

Diabetes Brochure



Diabetes and Pregnancy

Women diagnosed with diabetes are at an increased risk for complications due to pregnancy, including death. Pregnancy hormones can increase insulin resistance and may require additional medication to manage high blood sugar. Be sure to ask your doctor today about delaying pregnancy until your chronic disease is under control.



We Protect Lives.

Georgia Maternal Mortality Gap



**October:
Domestic
Violence
Month**

We Protect Lives.

Prevent

Prevention Strategies

- Expansion of midwives
- Increase family planning
- Risk screening through prenatal care
 - Early detection of problems can lead to better preparation at birth
 - If no risks are found could provide a false sense of security

MMRC current action item

AMCHP Grant

- Every Mother's Initiative grant (\$30,000: 1 year)

Focused on risk factors

- Chronic diseases

Two arms

- Provider education
- Patient education

Protect

Maternal Mortality Law

SB 273 – Senator Burke

- Requires public health to establish a maternal mortality review committee
- Provide legislative findings
- Provide data
- Provide confidentiality and limited liability of reviews

Collective Impact

Collective Impact

- The risk factors associated with whether a woman lives or dies as a result of pregnancy are the same risk factors that are associated with if a baby lives or dies.
- Understand and address the role of social determinants on maternal death
 - Housing?
 - Education?
 - Finances?

How you can help?

Providers:

- Report maternal deaths
- Join our perinatal quality collaborative
- Every woman, every time

Public:

- Encourage healthy behaviors and lifestyles
- Encourage early and regular prenatal care
- End domestic violence
- Address mental health concerns
- Advocate for paid maternity leave

Food for thought

- What role does the father play in preventing maternal death?
- Social support decreases infant death, what about maternal death?
- What about the mom after the baby is born?
 - Program support is usually focused on baby
 - Family support is usually focused on baby
- How can we better focus on women who were recently pregnant, and not just mothers?



Pregnancy is SPECIAL, Let's make it SAFE

~Safe Motherhood



We Protect Lives.