This little baby has a MOTHER

Maternal Mortality in Georgia

Findings from the Georgia MMRC 2012-2013 Reviews

This little baby has NONE
This little baby has a MOTHER

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Objectives

• Describe the maternal mortality review process in Georgia

• Highlight Georgia’s leading causes of pregnancy-related and pregnancy-associated deaths

• Review recommendations for reducing maternal deaths
Definitions

• Pregnancy-associated maternal death: the death of a woman while pregnant or within one year of the end of pregnancy, due to a cause unrelated to pregnancy (e.g., motor vehicle accident, homicide or cancer, as determined by the Georgia MMRC)

• Pregnancy-related maternal death: the death of a woman while pregnant or within one year of the end of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by her pregnancy or its management, but not from accidental or incidental causes

• Maternal deaths would include both pregnancy-associated and pregnancy-related
Introduction

• **World wide**
  • 830 women die each day from preventable causes related to pregnancy and childbirth
  • In 2015, 303,000 women died during and following childbirth
  • 99% of maternal deaths occur in developing and low-resource settings
  • Causes – hemorrhage, infections, complications from delivery and unsafe abortion
  • Access to antenatal care, skilled care during delivery and good postpartum care could reduce these numbers
Worldwide Maternal Mortality

Worldwide Maternal Mortality: 1990-2013

Maternal mortality ratio per 100,000 live births
Globally and by WHO region, 1990-2013

- Global
- South-East Asia
- Africa
- Europe
- Eastern Mediterranean
- Western Pacific

North & South America
Maternal Mortality in US


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

Georgia Maternal Mortality Rate
2002-2012

Source: Georgia Vital Statistics

We Protect Lives.
Georgia’s Concerning Maternal Mortality – Beginning of the MMRC

- 2010 Amnesty International published “Deadly Delivery: The Maternal Health Care Crisis in the USA”
- Georgia noted to be worst state for maternal mortality – 50th
- CDC’s Healthy People Goal 2020: 11.4/100,000 live births
- Georgia’s pregnancy-related maternal mortality ratio
  - 2001 – 2006 20.2 deaths/100,000 live births
  - 2010 23.2 deaths/100,000 live births
  - 2011 28.7 deaths/100,000 live births
  - 2012 19.2 deaths/100,000 live births
• Between 2001-2011 the Georgia pregnancy-related maternal mortality ratio was 4 x higher in Black, non-Hispanic women than in White, non-Hispanic women
  • 39.1 deaths/100,000 live births for Black, non-Hispanic women
  • 9.6 deaths/100,000 live births for White, non-Hispanic women
• A meeting at ACOG District IV and revelation of the staggering rates and underlying racial and ethnic disparities in Georgia served in part as the impetus for creation of a statewide maternal mortality review committee (MMRC)
Maternal Mortality Review in Georgia – Beginning of the MMRC

- MMRC is the result of 3 year collaboration which began in 2010
  - Georgia Obstetrical and Gynecological Society
  - Georgia Department of Public Health
  - Centers for Disease Control and Prevention
  - Georgia General Assembly and Governor Nathan Deal
  - Key individuals committed to reestablishing the committee and review process
Maternal Mortality Review in Georgia and the Current Review Process

- 45 members, multidisciplinary, geographically diverse
- Meets quarterly; alternates between Atlanta and Macon
- Examines identified pregnancy-associated deaths
- Reviews in detail those caused by pregnancy complications and other selected deaths
- Identifies medical and nonmedical factors that potentially contribute to a maternal death
- Determines if the death could have been prevented
- Formulates possible interventions
- Makes recommendations to further reduce maternal mortality in Georgia
- Publishes periodic publically available updates on findings
Publications
Case Identification
Maternal Mortality Review in Georgia and the Current Review Process

- The complex case identification process:
- Georgia death certificate has a check box identifying if the deceased died while pregnant or within one year of pregnancy.
Maternal Mortality Review in Georgia and the Current Review Process

• The complex case identification process:
  • Passive surveillance reports submitted by mandated reporters (including hospitals, physicians, other healthcare providers, coroners, ME, EMS and police)
  • Vital Records Section of DPH links death certificates of reproductive age women (14-44 years) to birth/fetal death certificates by matching on a combination of identifiers
  • Maternal and Child Health section of DPH also links death certificates of reproductive age women to birth and fetal death certificates in a similar manner to Vital Records but uses a probabilistic match
• Other methods
Maternal Mortality Review in Georgia and the Current Review Process

- The case abstraction process:
  - Small subcommittee reviews the identified cases/causes of death and determines which cases will be fully abstracted
  - The MMRC abstractors request records and collect all available pertinent information
  - Information collected is entered into a computerized template to allow for standardized summary presentations for members to facilitate review
  - Case summaries (de-identified) synthesize all available information and are distributed to committee members at meetings
Maternal Mortality Review in Georgia and the Current Review Process

• The committee review process:
  • Full committee meets quarterly to review cases selected by the subcommittee. The committee:
    • Reviews all pregnancy-related deaths as well as pregnancy–associated deaths due to suicide, drug overdose or accidents within 6 months of pregnancy end
    • Designates cases as pregnancy-associated, pregnancy-related or “not a case”
    • Identifies medical and nonmedical factors that contribute to the death
    • Attempts to determine preventability
    • Makes recommendations for interventions to reduce maternal mortality
Preventability

• Per CDC “a death is considered preventable if the committee determines that there was at least some chance of the death being averted by one or more reasonable changes to patient, community, provider, family and/or system factors”
Maternal Mortality Review – Summary Findings 2012

- Maternal deaths in 2012; 26 (29%) were pregnancy-related and 60 (71%) pregnancy-associated.
- 32% of pregnancy-related deaths occurred while pregnant or within one day of the end of pregnancy.
- 52% of the pregnancy-related deaths occurred within the first 42 days after the pregnancy ended.
- 67% of the pregnancy-related deaths occurred among women 29 years of age or younger; youngest death was to a 17-year-old.
- 68% of the pregnancy-related deaths occurred among African-American women.
Maternal Mortality Review – Summary Findings 2013

• 79 maternal deaths in 2013 compared with 86 deaths in 2012, 32 were pregnancy-related and 47 pregnancy-associated
• 16 (50%) of the 32 pregnancy-related deaths were determined by the MMRC to be preventable
• 60% of the pregnancy-related deaths occurred within the first 42 days after the pregnancy ended
• 50% of the pregnancy-related deaths occurred among women 29 years of age or younger
• 69% of the pregnancy-related deaths had a pre-existing medical condition
• Of the 79 total maternal deaths 52% were Medicaid recipients and 18% had private insurance
Causes of Pregnancy-Related Deaths

2012 (26)
- Hemorrhage (28%)
- Hypertension (16%)
- Cardiac (16%)
- Embolism (16%)
- Seizures (12%)
- Other (12%)

2013 (32)
- Cardiomyopathy (25%)
- Hemorrhage (16%)
- Embolism (16%)
- Cardiovascular and coronary conditions (6%)
- Infections (6%)
- Pregnancy-specific condition (6%)
- Anesthesia complications (6%)
- Mental health conditions (6%)
- Other (13%)
Causes of Pregnancy-Associated Deaths

2012 (60)
- Motor vehicle accidents (15%)
- Homicide (15%)
- Suicide (15%)
- Heart disease (13%)
- Cancer (12%)
- Drug toxicity (12%)
- Other (18%)

2013 (47)
- Motor vehicle accidents (19%)
- Drug toxicity (15%)
- Homicide (13%)
- Respiratory conditions (11%)
- Non-peripartum or postpartum cardiomyopathy (6%)
- Other cardiovascular (6%)
- Suicide (6%)
- Cancer (4%)
- Diabetes (4%)
- Sepsis (4%)
- Other (12%)
Georgia Maternal Mortality – Key Opportunities for Prevention

• After two full years of review, many opportunities for improvement were identified and fall into 2 major categories:
  • Education of providers, patients and community regarding potential or actual problems that most commonly lead to poor maternal outcomes/death
  • Early identification of risk factors associated with maternal mortality and appropriate follow up of these problems
Additional Areas of Concern Associated with Poor Maternal Outcomes

- **Obesity**
  - 58% of reviewed maternal deaths had documented BMIs of >30
  - Co-existed with chronic medical conditions such as DM and cHTN and postpartum complications
  - Appears to be inadequate monitoring of obese pregnant/postpartum patients
  - Lack of referral to MFM or cardiologist for morbid obesity
  - Lack of documentation of height/weight/BMI in chart so obesity may be under-recognized
  - Inadequate embolism prophylaxis for obese patients on bedrest or with decreased mobility
Additional Areas of Concern Associated with Poor Maternal Outcomes

• **Chronic medical conditions**
  • Women with chronic medical conditions often did not receive referrals to treat those chronic medical conditions during pregnancy or postpartum
  • Women with high risk or chronic conditions often did not receive preconceptual or early pregnancy counseling on their increased risks during pregnancy

• **Cardiomyopathies and cardiovascular conditions such as hypertension**
  • Risk factors and symptoms of cardiomyopathy not recognized or assessed by patient or provider
  • Inadequate follow-up of cardiovascular symptoms or chronic cardiac disease
Additional Areas of Concern Associated with Poor Maternal Outcomes

• **Drugs in pregnancy**
  - Inappropriate usage of prescription, nonprescription and illicit drugs during pregnancy and postpartum
  - Lack of prescription history being available to providers
  - Inappropriate mixing or adding of medications to those prescribed
  - Lack of documented screening for prescription and/or illegal substance abuse

• **Availability of high risk care**
  - Lack of transfer or referral to a higher level of care when indicated
  - Inability of incarcerated pregnant women to get the appropriate level of care
  - Lack of standardization for treatment and referral of high risk pregnancies
Additional Areas of Concern Associated with Poor Maternal Outcomes

- **Hemorrhage**
  - Delayed recognition and treatment of hemorrhage in postpartum women by both patients and providers

- **Anxiety/depression**
  - Inadequate screening of pregnant and postpartum women for depression and other mental health issues
  - Possible lack of access to mental health services
  - Potential lack of awareness by patients or providers of benefits and safety of antidepressant therapy during pregnancy and postpartum period
Recommendations from 2013 Case Review
Recommendations from 2013 Case Review

- **Medical education opportunities**
  - Partner with GaPQC to implement AIM patient safety bundles related to CV disease and hemorrhage
  - Consider appropriate consults for high risk patients
  - Encourage interconceptual and postpartum f/u and care
  - Encourage depression screening during pregnancy/postpartum
  - Encourage taking/recording of complete medical history
  - Encourage patients to take medications as directed
  - Prescribe affordable medications
Recommendations from 2013 Case Review

• **Community education opportunities**
  - Partner with community agencies to promote prenatal care and evidence-based programs such as centering pregnancy
  - Publicize importance of following provider recommendations to ensure a healthy pregnancy
  - Publicize healthy eating habits/maintenance of healthy weights
  - Support contraception education/LARCs
  - Publicize dangers of smoking during pregnancy
  - Promote Georgia’s regional perinatal system for referral and treatment of high risk pregnancies
Recommendations from 2013 Case Review

• **Policy recommendations**
  • Support legislation to preserve women’s health care system including rural labor and delivery units so that all pregnant women will have access to care within a reasonable distance
  • Maintain and increase funding for Public Health Departments when possible
  • Work to extend insurance coverage into months after delivery to manage high risk comorbidities
every mother counts
References


References