



Maternal Mortality in The United States

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Objectives


- ▶ 1) Understand why mothers continue to die in childbirth
- ▶ 2) Identify factors that contribute to adverse outcomes in pregnancy
- ▶ 3) Discuss statewide initiatives to help decrease maternal mortality



Definition

- ▶ Pregnancy-related death is defined as a death of a woman during or within a year of a pregnancy d/t complications of the pregnancy or a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy
- ▶ Pregnancy-associated death: death of a woman during pregnancy or within the first postpartum year irrespective of whether the fatality is truly pregnancy-related

CDC. Division of Reproductive Health (2014)



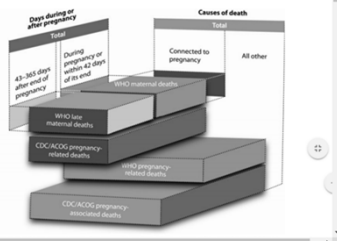
Definition (cont'd)

- ▶ Maternal death: death of a woman while pregnant or less than 42 days of termination of pregnancy, irrespective of duration and site of pregnancy from any cause related or aggravated by the pregnancy or its management (Vital Statistics)
- ▶ Maternal Mortality Ratio: (MMR) Number of deaths per 100,000 live births
- ▶ Maternal Mortality Rate: (MMR) Number of maternal deaths in a given period per 100,000 women of reproductive age (15–49 years) during the same time period

Contemporary OB/GYN's maternal mortality coverage (Lockwood, 2019)

International Classification of Maternal Death

Fig. 1 Indicators of a woman's death during or shortly after pregnancy



WHO International Statistical Classification of Diseases and related Health Problems, Tenth Revision, 2019. Retrieved from: <https://icd.who.int/detailed>

Amnesty International

- ▶ On March 12, 2010, Amnesty International sounded an alarm by issuing a report entitled: *Deadly Delivery: The Maternal Health Care Crisis in the USA*
- ▶ Despite increase in health care spending U.S ranked 41st in maternal deaths
- ▶ According to Amnesty International, half of these deaths are preventable. This is not just a matter of public health, but a human rights issue

Amnesty International (2010)

Scope of the Problem (cont'd)

- ▶ Risk for a woman dying from pregnancy complications is higher in the United States than in Europe
- ▶ Some women in the United States are at higher risk to die from pregnancy related causes
- ▶ Black women are 3-4 times likely to die than white women from complications related to pregnancy and childbirth 56.3 vs. 20.3 maternal deaths per 100,000 live births in 2013-2014 (Lu, 2018)

CDC. Division of Reproductive Health (2014)

Scope of the Problem

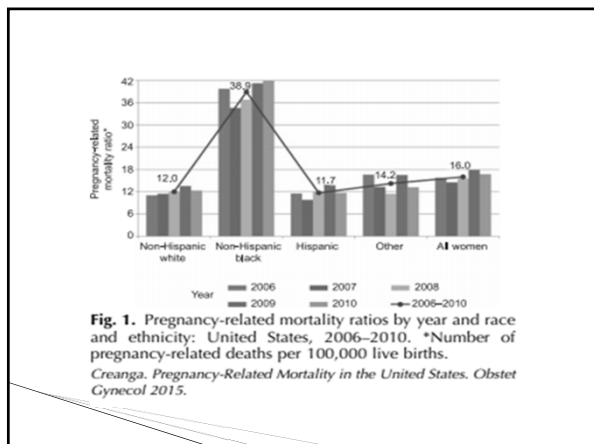
- ▶ Every year in the United States, more than 700 women die of complications r/t pregnancy and childbirth
- ▶ More than 50,000 women experience life threatening complications (severe maternal morbidity)
- ▶ Maternal Mortality in the U.S. more than doubled between 2000 and 2014, from 9.8 to 21.5 maternal deaths per 100.000 live births

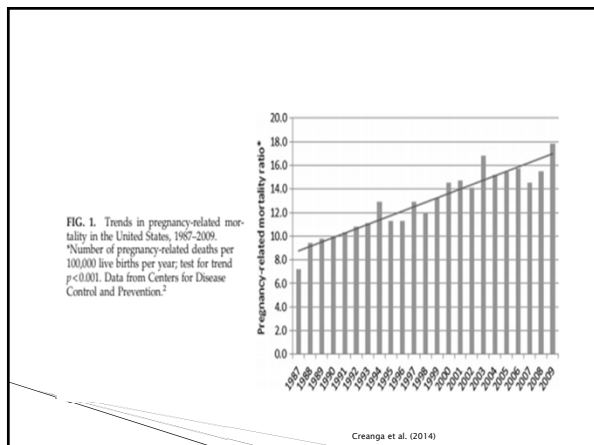
Lu M. (2018). Reducing Maternal Mortality in the United States

Causes of maternal mortality

- ▶ Known causes from ancient time
 - 1) Bleeding
 - 2) PIH
 - 3) Obstructed labor and its complications
 - 4) Abortion complications (including ectopic)
 - 5) Blood clots/embolism
 - 6) Pre-existing conditions include: Obesity heart disease, cancer etc.

Midwifery Today!
midwiferytoday.com/Autumn 2015

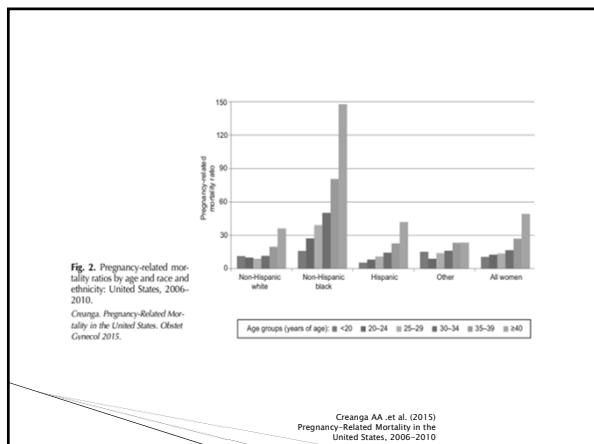


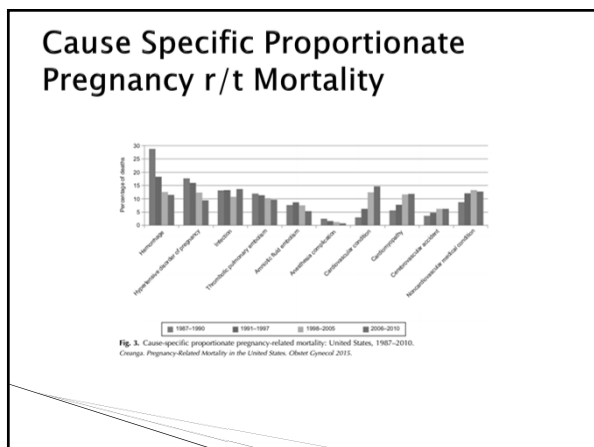


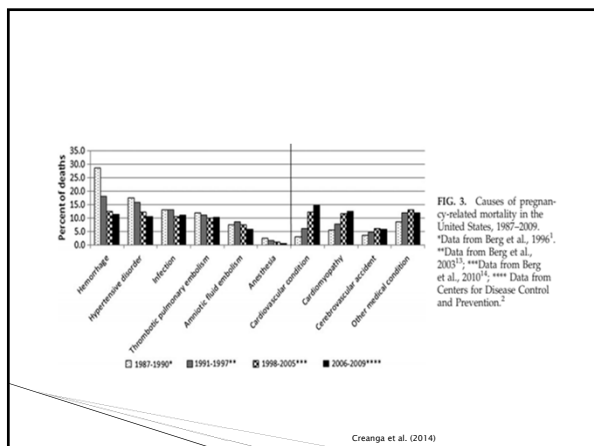
Pregnancy-related deaths

- ▶ Among women with PRD, percentage of cases during pregnancy cases 38%
- ▶ Up to 42 days postpartum (delivery or termination of pregnancy) 45% of cases
- ▶ 43 days up to one year 18% of cases
- ▶ Cardiovascular /coronary conditions (20%)
- ▶ Embolism (9.2%)
- ▶ Mental conditions (6.6%)
- ▶ Infection (21.7%)
- ▶ Hemorrhage (12.4%)
- ▶ Cardiovascular /Coronary Conditions (12.4)
- ▶ Cardiomyopathy (32.4%)
- ▶ Mental Health Conditions (16.2%)
- ▶ Venous Thromboembolism (VTE) 10.8%

Maternal Mortality Special Series (Lockwood, 2019)







If Americans Love Moms, Why Do We Let Them Die

- ▶ New York Times, July 29, 2017 by Nicholas Kristoff
- ▶ He spent a day in Texas following Dr. Lisa Hollier providing care to patients (At the time Dr. Hollier was the president – elect of the American Congress of Obstetricians and Gynecologists) who had just lost one of her patients.
- ▶ A 23 year–old arrived at the hospital with her husband collapsed suddenly. The baby was saved but mother did not

Nicholas Kristof (2017). The New York Times

The last Person You'd Expect to Die in Childbirth

- ▶ The death of Lauren Bloomstein, a neonatal nurse, at Monmouth Hospital in New Jersey where she worked was a chock to everyone
- ▶ Age 33, she was having her first baby. At time of birth developed Hypertensive Disorder of pregnancy/HELLP undiagnosed until it was too late

Nina Martin (2017). ProPublica

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Factors contributing to all PRDs

1) Systems of care	<ul style="list-style-type: none"> • Lack of policies and procedures • Unavailable personnel • Inadequate training • Lack of coordinated care (36% of cases)
2) Provider factors	<ul style="list-style-type: none"> • Missed or delayed diagnosis • Ineffective treatment (accounted for 31% of cases) • Poor coordination between clinicians
3) Patient factors	<ul style="list-style-type: none"> • Lack of knowledge of warning signs or failure to seek care (accounted for 26% of contributing factors)

Lu M.(2018). Reducing Maternal Mortality in the United States

Interventions to prevent PRD

- ▶ Adequate public policies to address social determinants of care
- ▶ Ensure that patients receive appropriate level of care for their conditions
- ▶ Access to care and patient/provider communication
- ▶ Standards of assessment, diagnosis, and treatment
- ▶ Language translation (medical literacy)
- ▶ Prevention initiatives, including substance abuse screening and treatment programs

Pregnancy Mortality Surveillance System (PMSS)

- ▶ ACOG/CDC Maternal Mortality Study Group 1986
- ▶ Pregnancy-associated all deaths during the pregnancy and up to one year following pregnancy.
- ▶ Pregnancy-related
- ▶ Complication of pregnancy
- ▶ or aggravation of an unrelated condition by the physiology of pregnancy or chain of events initiated by the pregnancy
- ▶ Pregnancy-related mortality ratio (PRMR)

CDC: Meeting the Challenges of Measuring and Preventing Maternal Mortality in the United States (2017) Date 3/31/2019

Racial/Economic Disparities

- ▶ On the other hand, black Mothers are 3-4 times more likely to die in childbirth- Several cases are illustrated in the News:
- ▶ Shalon Irving's Story Explains Why
- ▶ Erica Garner, Activist and daughter of Eric Garner dies at age 27
- ▶ Kira Johnson, Daughter in Law of Judge Glenda Hatchett died in childbirth on April 12, 2016 at Cedars- Sinai Medical Center in Los Angeles

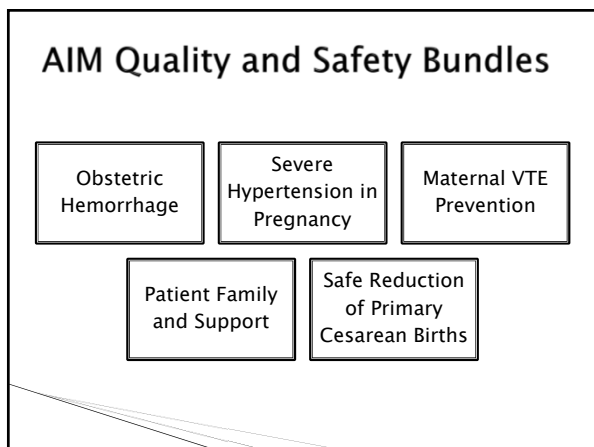
Preventable causes of Maternal Death

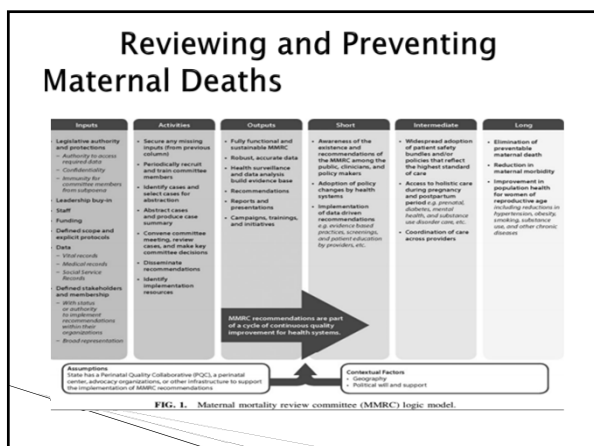
- 1) Obstetric Hemorrhage
- 2) Hypertensive Disorders of Pregnancy
- 3) Venous Thromboembolism

Action plan to prevent these conditions as it follows:

- ▶ Recognize early warning signs or symptoms
- ▶ Internal case review to identify improvement opportunities
- ▶ Support tools for patients, families, and staff experiencing adverse outcomes

Creanga AA et al. (2015)
Pregnancy-Related Mortality in the United States, 2006-2010





Capacity Building to Reduce Maternal Mortality

- ▶ Alliance for Innovation on Maternal Health (AIM) launched by the Federal Resources Service Administration (HRSA)
- ▶ Maternal Child Health Bureau led by the American College of obstetricians and Gynecologists (ACOG)
- ▶ Preventing Maternal Deaths Act of 2017, bill that directs the Department of Health and Human Services (HHS) to make grants available to states to decrease PRDs
- ▶ Merck for Mothers: Global initiative that supports Safe Motherhood around the world so no woman dies giving life

A Call to Action

- ▶ Globally, many organizations have worked since 1987 to implement the Safe Motherhood Initiative. WHO reported on the success of that initiative in 2014
- ▶ Elements of the Safe Motherhood Initiative:
Provide a trained birth attendant at every birth and funding for adequate staff and supplies in hospitals and birth centers

Midwifery
Today:midwiferytoday.com
Autumn
n. 2015

Take Home Message

- ▶ The United States has the highest rates of pregnancy-related deaths in the industrialized world despite the use of cutting edge medical advances
- ▶ No woman deserves to die in pregnancy and childbirth
- ▶ We need to continue to investigate each maternal death to ensure quality and safety of maternal care for all women
- ▶ We need to improve women's health care across their life span
- ▶ We need more Midwives and Nurse Practitioners in Women's Health as front line providers

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