


# **AN URBAN APPROACH TO REVIEWING MATERNAL MORTALITY**

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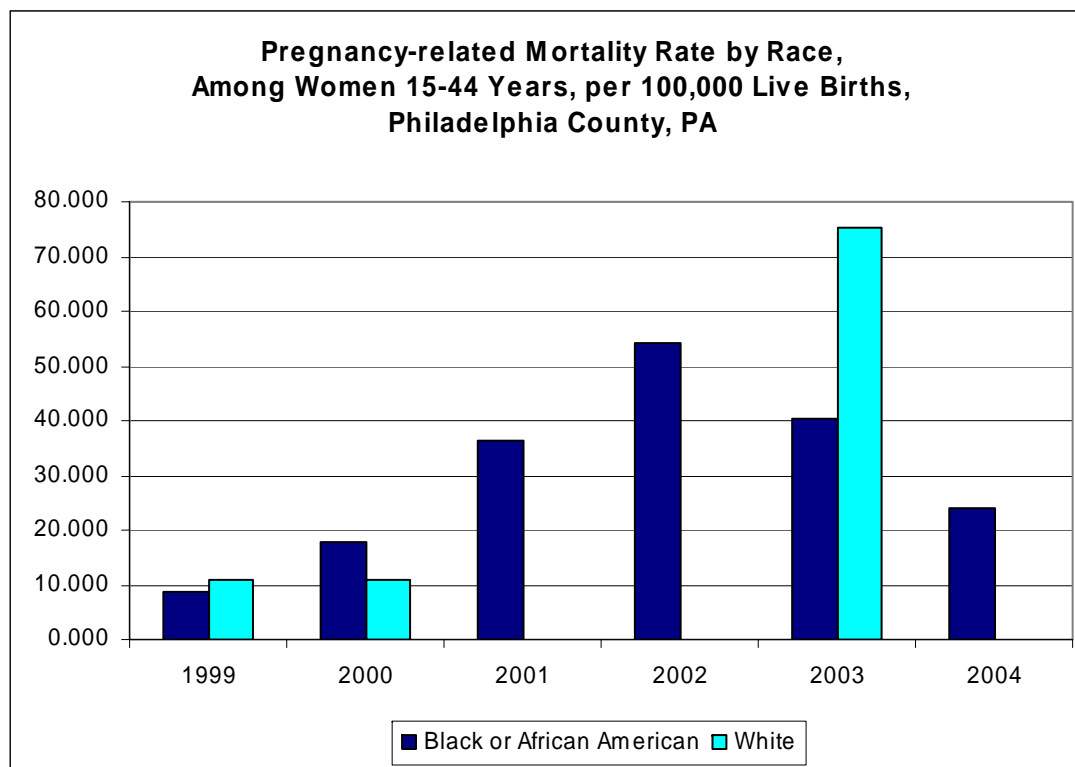
# What is Maternal Mortality?

- Pregnancy-related deaths
- Pregnancy-associated deaths
- Defined by the National Center for Health Statistics (NCHS) and WHO
- Ratio in U.S. (2005):
  - 15.1/100,000 live births
- Black women in U.S. (2005):
  - 36.5/100,000 live births
  - 3.3 x white rate

# Maternal Mortality Ratios-Philadelphia

- Ratio in Philadelphia (2005):  
18/100,000 live births (death within 42 days)
- Black women in Philadelphia:  
27.6/100,000 live births
- Pregnancy-related deaths within one year:  
22.7/100,000 live births  
36.8/100,000 live births for black women

# Pregnancy-Related Mortality Rate in Philadelphia



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Compressed Mortality File, 1999-2005.

## Philadelphia MMR: A 3-Year Moving Average

- 2003-2005 38.5/100,000 live births
- 2002-2004 43.5/100,000 live births
- 2001-2003 42.3/100,000 live births
- 2000-2002 20.2/100,000 live births
- 1999-2001 12.4/100,000 live births
- 1998-2000 12.2/100,000 live births

# Why is it important?

- It is the measure of a woman's health
- It reflects a woman's ability to find prenatal care and general health care including preconceptional care
- It is the tip of the iceberg, representing significant morbidity (severe complications)
- It helps identify gaps in services and strengths in the system of care

## History of Maternal Mortality Review

- Early in 20<sup>th</sup> century, most states had MMR
- As number of deaths decreased and fear of liability suits increased, they were disbanded
- Many states now have legislation to protect the review process
- There are approximately 15 states with MMR

# How Philadelphia Developed a Maternity Review Process

- Worked with CDC and reviewed their materials
- Identified state and city laws that would protect members
- Developed staff: Coordinator, Data Analyst, Clerk, Clinical Abstractor, Facilitator
- Met with another team (New Jersey)

## Invited People from the Community

- Physicians
- Nurses
- Social Workers
- Administrators
- Advocates

## Defined the MMR Process

- Anonymous
- Confidential
- Non-judgmental

# An Actual Maternal Mortality Review

- Written de-identified summary is reviewed by the Clinical Abstractor
- A 36 y/o G1P0 was admitted at 34 weeks in early labor with diagnosis of PIH. Her BP 144/94, +4 proteinuria and +4 reflexes. She was induced and delivered without complications. After delivery, patient's BP continued to be elevated and she complained of gastric pain and nausea. Her lab values were consistent with a more severe form of preeclampsia.

## MMR Case, continued

- Treatment included magnesium sulfate and monitoring on a regular postpartum floor. Approximately 40 hours after delivery she had multiple grand mal seizures. Her condition deteriorated and she never recovered. Postmortem findings were consistent with eclampsia and DIC.\*

\*Berg C, Danel I, Atrash H, Zane S, Bartlett L, Strategies to Reduce Pregnancy-Related Deaths: from identification and review to action. Atlanta: CDC: 2001

# Recommendations

- Preeclampsia must be managed aggressively
- If the patient's condition worsens, transfer to a unit with more staff
- Recommendations for treating hypertension of pregnancy were reviewed
- Is the case pregnancy-related? Yes

# Lessons Learned

- If the state review process is not available, the City Health Department is an ideal place to house an MMR
- It is best to collect data for a few years to see patterns. There may be a small number of cases in one year.
- Have your staff in place; all members of staff and committee should have a full understanding of the process.

# Wrapping Up

- Maternal mortality is a measure of the health of women of reproductive age, and reflects health disparities in the community
- We can identify factors that contributed to the death: patient, provider or systems
- Consider starting your own urban MMR