

4th Annual NIH Vivian W. Pinn Symposium

Maternal Health: Knowing the Numbers

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May 15, 2019



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DEFINING MATERNAL MORTALITY & MORBIDITY



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Multiple definitions presents challenges



“A **pregnancy-related death** is ... the death of a woman while pregnant or **within 1 year** of the end of a pregnancy – regardless of the outcome, duration, or site of the pregnancy – from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.”¹



Maternal
Morbidity
Working Group

Maternal morbidity is “any health condition attributed to and/or aggravated by pregnancy and childbirth that has a negative impact on the woman’s wellbeing.”³



“**Maternal death** is the death of a woman while pregnant or **within 42 days** of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.”²



“**Severe maternal morbidity** can be thought of as unintended outcomes of the process of labor and delivery that result in significant short-term or long-term consequences to a woman’s health.” “It also can be considered a **near miss for maternal mortality**”.⁴

¹ www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-mortality-surveillance-system.htm

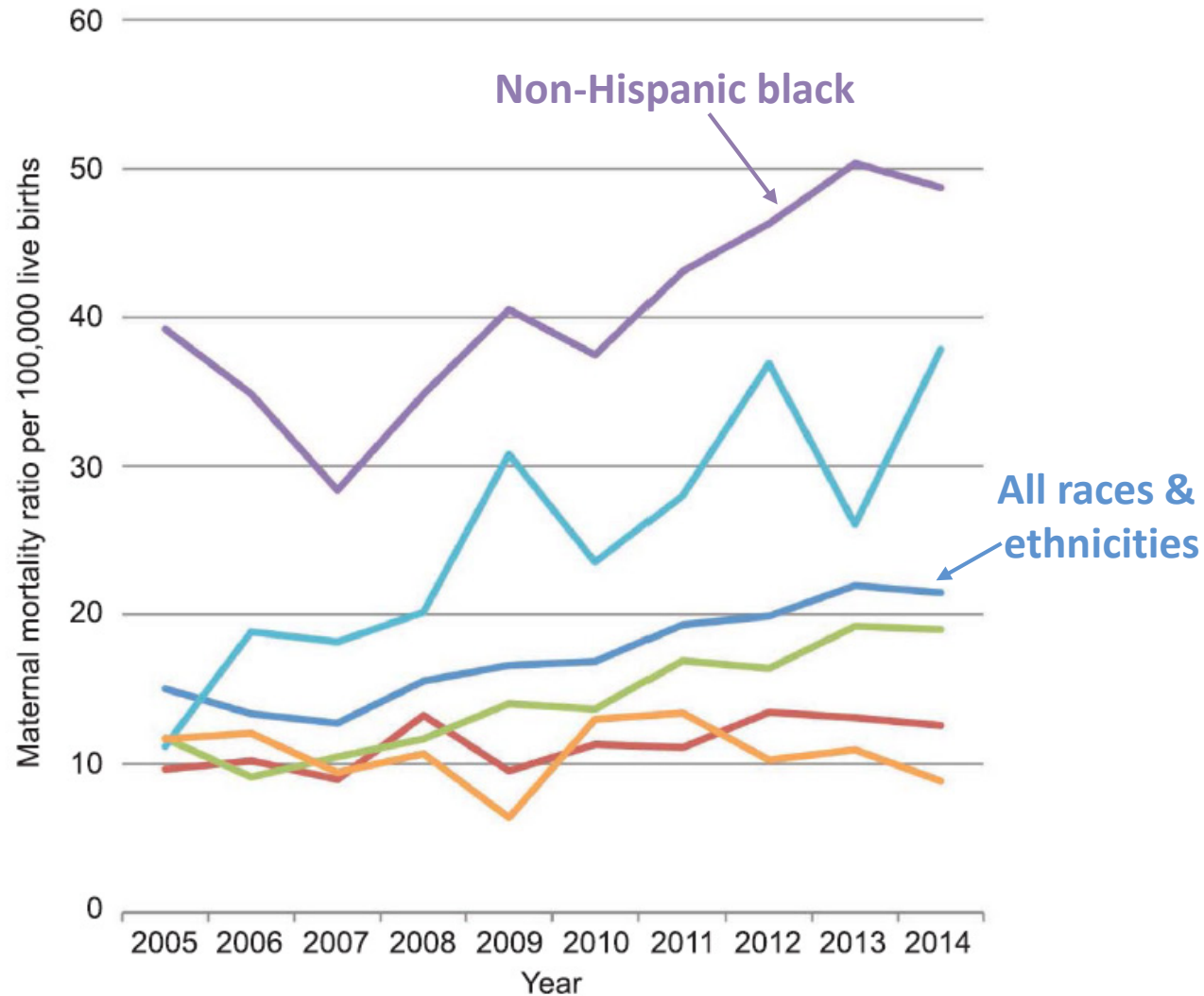
² www.who.int/healthinfo/statistics/indmaternalmortality/en/

³ Firoz et al. 2013. Measuring maternal health: focus on maternal morbidity. Bull World Health Organ. 91:794–796.

⁴ American College of Obstetricians & Gynecologists and Society for Maternal-Fetal Medicine. 2016. Severe maternal morbidity: screening and review. Am J Obstet Gynecol. 215: B17-22.

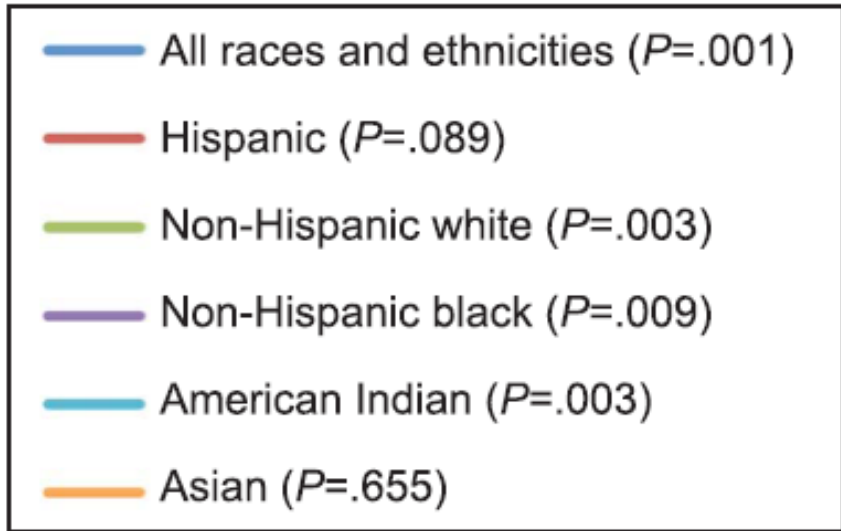


Increasing trend in U.S. reflects higher m-mortality rate among non-Hispanic Blacks



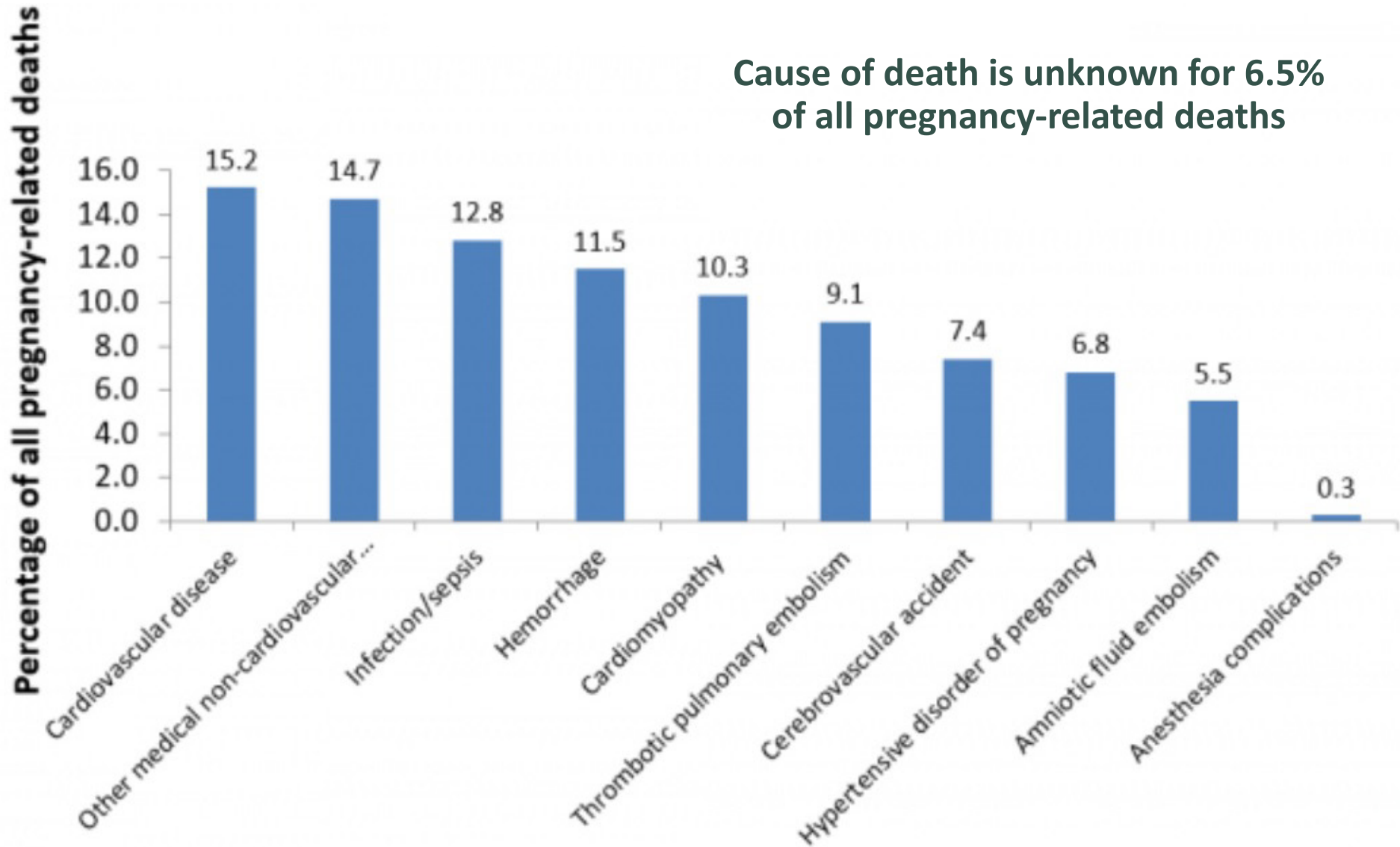
Trends in m-mortality ratio

(maternal deaths / 100,000 live births)
By ethnic group and race (U.S., 2005 – 2014).
P-values are from Jonckheere trend tests.



Moaddab et al. 2018. Health care disparity and pregnancy-related mortality in the U.S., 2005-2014. *Obstet Gynecol.* 131 (4): 707-712.

Major causes of pregnancy-related death in U.S. (2011–2014) as reported by the CDC





Putting U.S. SMM in perspective

- Each year, **more than 50,000 women have severe pregnancy complications** (e.g., hemorrhage), also known as **severe maternal morbidity (SMM)**.
- SMM has been steadily increasing in recent years, and the rate **more than doubled** from 2000 to 2010.
- **Chronic conditions**, such as **high blood pressure, diabetes, heart disease, and obesity**—may put women at higher risk of pregnancy complications.





IMPROVING MATERNAL HEALTH TAKES A VILLAGE



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Photo Credit: Ms. Patricia Deal (Army Medicine)

Many groups working to improve maternal health

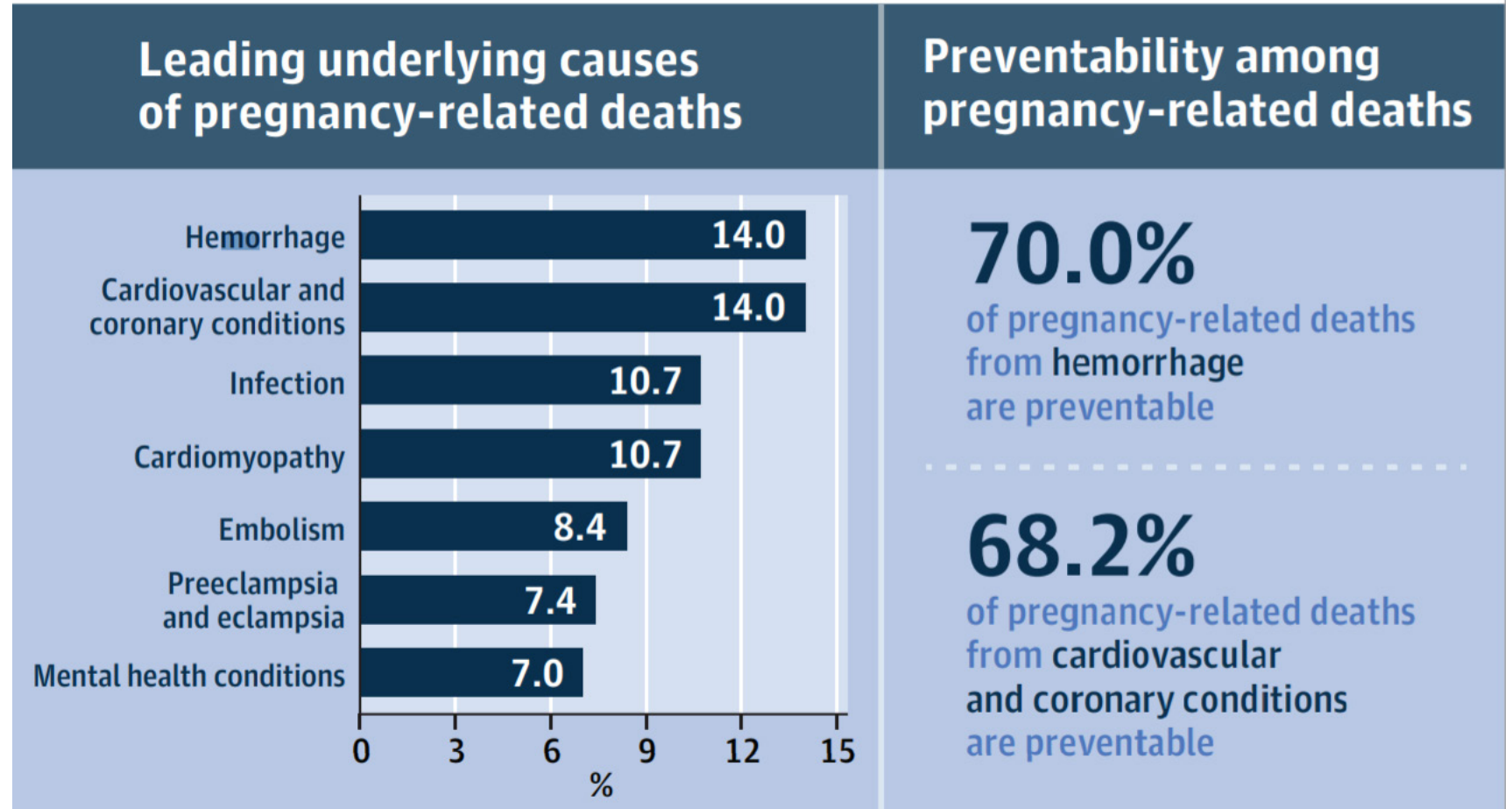


- These numbers set the stage.
- Groups represented here today are working to improve maternal health. Notably, the American College of Obstetricians and Gynecologists (keynote address)
- Panel discussion will highlight specific problems and efforts to advance the research agenda to address them.
- Federal partners will provide an update on their activities to address maternal health.



Pregnancy-Related Deaths in the US

Major causes of pregnancy-related death (2018)



Source: Review to Action. *Report From Nine Maternal Mortality Review Committees*. <https://reviewtoaction.org>. Published 2018.



Thank You



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