

A Case Report of Maternal Death and Disparities in Obstetric Health Care

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Introduction

- Racial disparities exist throughout the U.S. Health Care System, including maternal and perinatal medicine.
- Sheikh et al published a meta-analysis comparing the effects of race and ethnicity on perinatal outcomes in high and middle-income countries.
- They found that globally, babies born to black women had poorer outcomes than babies born to white women when controlling for other maternal characteristics (1).
- Gyamfi-Bannerman found in a retrospective cohort study that black women were at a higher risk for severe morbidity and mortality than women of other races with postpartum hemorrhage (2).
- Data published by the CDC suggests a wide discrepancy in pregnancy-related deaths by race/ethnicity (see Figure 1). (3)

Pregnancy-Related Mortality by Race/Ethnicity, 2016-2018
Per 100,000 Births

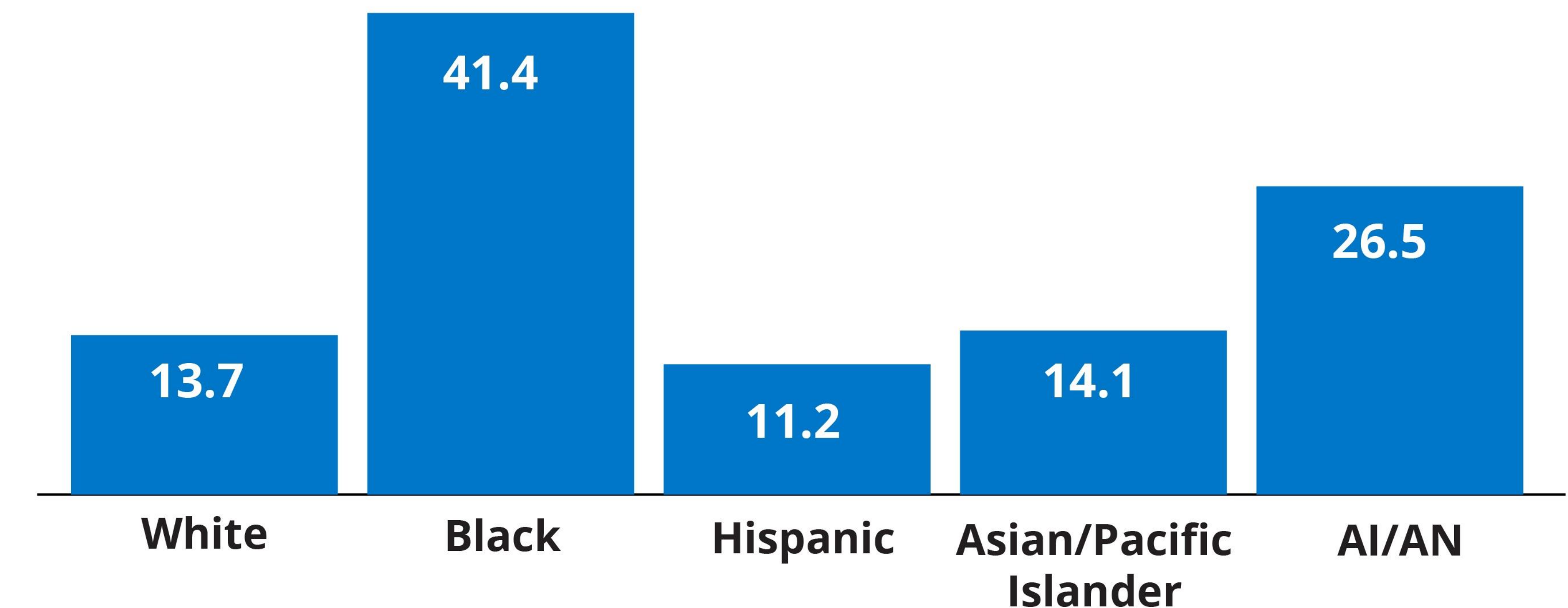


Figure 1. CDC- Maternal Health- Pregnancy Mortality Surveillance System (3).

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Case Report

Patient: A 28y G2P1001 black female at 36w1d presented to the ED in cardiac arrest after a witnessed collapse at home. She was unresponsive and pulseless on EMS arrival. ACLS was initiated and continued upon arrival to the ED. Resuscitative hysterectomy was performed by OBGYN providers, and 2u packed RBCs and pitocin were administered. ACLS was continued with no improvement in clinical status. Time of death was pronounced.

Known Medical History: tobacco use, gestational diabetes, anemia, limited prenatal care.

Cause of Death: ruptured intracranial aneurysm, discovered via autopsy.

Chart Review: At her last prenatal visit, the physician had noted concern for pre-eclampsia. She failed to present again for further evaluation.

Infant Course: The infant was initially intubated and underwent targeted temperature management without subsequent improvement. They were diagnosed with hypoxic ischemic encephalopathy and care was withdrawn.

0652: Hospital "OB stat" alert for patient incoming
CPR and LMA placement initiated by EMS before arrival



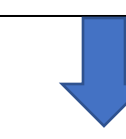
0709: In-hospital code start



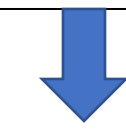
0711: 1mg epinephrine and 1g CaCl2 administered



0712: Resuscitative hysterotomy performed
Neonatal resuscitation initiated, maternal code continues



0714: 1mg epinephrine administered



0716: 10u oxytocin and 2 pRBCs administered



0717: 1mg epinephrine administered



Eval: No cardiac activity, spontaneous breaths,
movement, movement, or reflexes. **Code Ended**



0722: Time of Death Pronounced

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Discussion

- The cause of death may have been non-preventable: physiologic changes of pregnancy could have caused the aneurysm to rupture. However, poorly controlled hypertension from pre-eclampsia with lack of follow-up may have contributed.
- Racial disparities in health care may have contributed to poor prenatal care and preeclampsia in our patient, thus contributing to our patient's death.
- As providers, obstetric anesthesiologists have a unique opportunity to identify and treat high risk patients, and reduce disparities in our healthcare system.

References

1. Sheikh J, Allotey J, Kew T, et al. Effects of race and ethnicity on perinatal outcomes in high-income and upper-middle-income countries: an individual participant data meta-analysis of 2 198 655 pregnancies [published correction appears in *Lancet*. 2023 Jan 14;401(10371):104]. *Lancet*. 2022;400(10368):2049-2062.
2. Gyamfi-Bannerman C, Srinivas SK, Wright JD, et al. Postpartum hemorrhage outcomes and race. *Am J Obstet Gynecol*. 2018;219(2):185.e1-185.e10.
3. Pregnancy mortality surveillance system. Centers for Disease Control and Prevention. <https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm#:~:text=Since%20the%20Pregnancy%20Mortality%20Surveillance,100%2C000%20live%20births%20in%202018>. Published June 22, 2022. Accessed March 29, 2023.