

Addressing Black Maternal Health Disparities: A Simulation-Based Approach

Ryan Damm, BA¹, Rukhsana Khan, MPH¹, Kiran Kavipurapu, DO, JD, MPH², Kirsten Jensen, MD²,
Chiquita Melvin, MFA¹, and Yue Ming Huang, EdD¹

UCLA Simulation Center

UCLA Simulation Center¹ and Department of Obstetrics and Gynecology²

UCLA David Geffen School of Medicine



Background

Black maternal mortality in the United States remains disproportionately high, with Black birthing individuals being about three times more likely to die from pregnancy-related complications compared to their white counterparts.¹ This alarming disparity is driven by multiple factors, including systemic racism, inequities in healthcare access, and implicit biases among healthcare providers.² Simulation provides a valuable platform for teaching healthcare learners about their own biases.³ Our project aims to educate healthcare providers on the impact of implicit bias on patient care and to equip them with skills for bias mitigation.

Learning Objectives

1. Demonstrate proficiency in the diagnosis and medical management of complex obstetrical cases like eclampsia, postpartum sepsis, and pulmonary embolism
2. Demonstrate effective communication skills between patient, family/support person, and team members during emergency obstetrical scenarios
3. Recognize personal and interprofessional implicit biases that may influence patient care decisions and interactions
4. Apply the following evidence-based strategies to mitigate implicit bias: individuation; metacognitive practices; mindfulness practices; and perspective-taking

Design

We modified a manikin-based eclampsia scenario from our existing OBGYN *In Situ* curriculum. We targeted an interprofessional group of learners, including OBGYN residents, anesthesia residents, L&D nurses and medical students. We incorporated Standardized Patients (SPs) to play the roles of the Black birthing person and their husband to enhance the realism of the scenario. The SPs were trained to decline all medical interventions and continuously escalate their affect in an attempt to challenge learners to build rapport with a patient who may trigger their implicit biases.

Scenario Events

- Orientation to set expectations and create a psychologically safe space
- Patient presents to OB triage for a severe range blood pressure
- Admission for management of severe range blood pressure recommended
- Patient refuses an IV, labs and antihypertensive agents
- Care team attempts to build rapport with patient and escalates help as needed
- Patient develops headache
- Patient decompensates into an eclamptic seizure after repeated refusal of medical interventions
- Resolution of seizure with appropriate treatment
- Session concludes with facilitated debrief by DEI subject matter expert (SME), SPs, OBGYN and anesthesia faculty

Results

We conducted two pilot sessions with thirteen learners and received ten post-course evaluation surveys (Figure 1, Table 1).

Qualitative Findings

Learner Feedback:

“Will be more mindful of language and techniques to use to build rapport...Love the standardized patients instead of the plastic model. Love addressing racism in the sim.”

Standardized Patient Feedback:

“Witnessing the team coming together so cohesively toward the execution of the simulation was kind of magical...having all of [this] happen inside the hospital, made it feel all the more authentic. I agree that these types of simulations, conversations, reflections and introspections can have life-or-death impact. And I'm proud to be a part of this important work.”

Lessons Learned

- Simulation allowed learners to engage in challenging conversations about racism and disparities in care, fostering open dialogue in a way that can be difficult in real clinical settings
- The experience highlighted the need for more frequent use of simulation as a method to address health disparities.
- The complexity of the session required more time than was originally accounted for
- It was difficult to address the complexities of both a medical emergency and DEI in one scenario
- It is necessary to train multiple DEI SMEs and have at least two co-debriefers at each training session

Next Steps

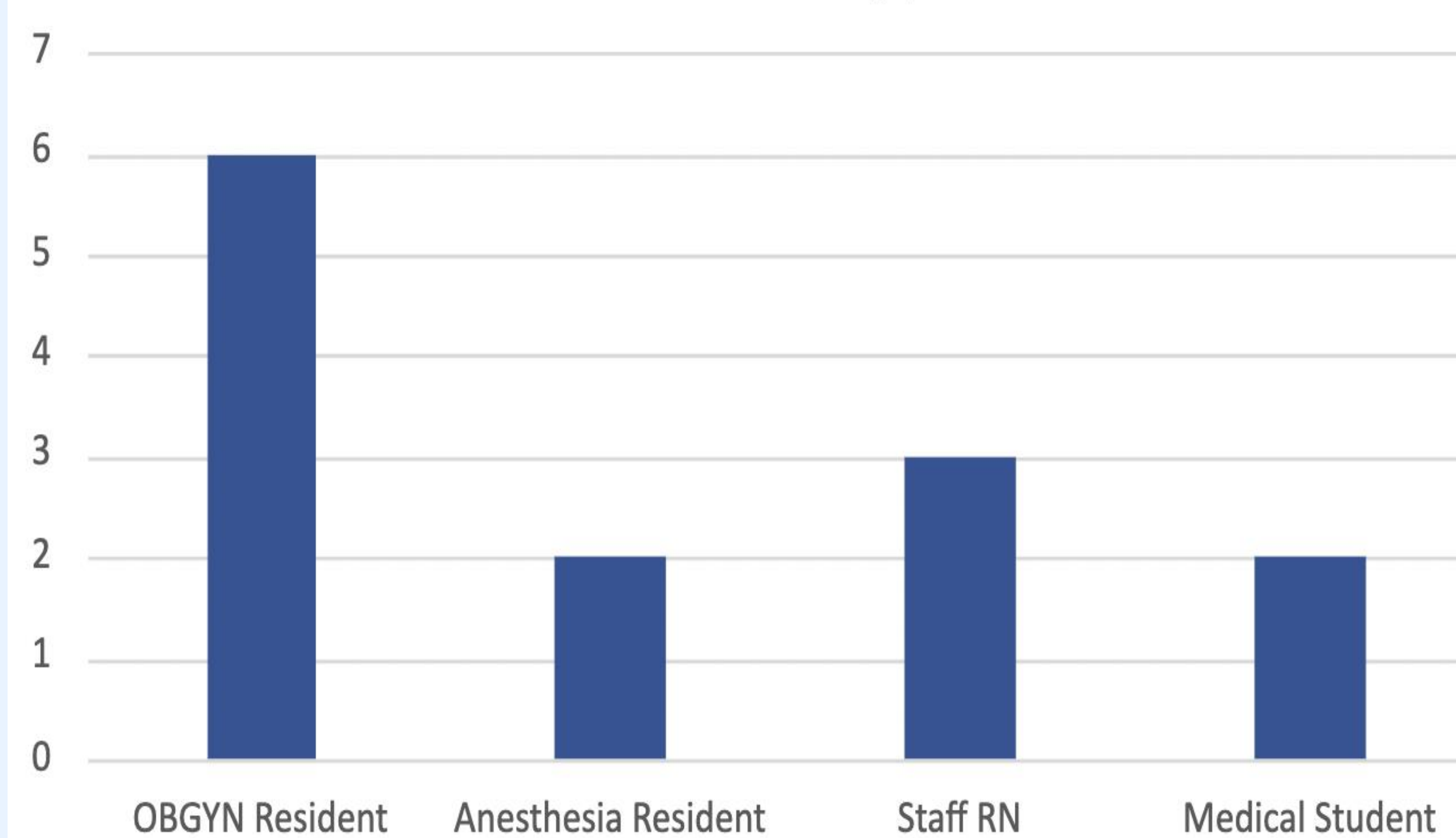
- Finalize DEI elements of debriefing script
- Finalize assessment checklist of both DEI and technical skills to help guide the debriefing
- Complete IRB to collect longitudinal knowledge and confidence data
- Develop additional scenarios that integrate DEI topics (i.e., post-partum sepsis, pulmonary embolism, hemorrhage, etc.)
- Collaborate with other specialties, such as emergency medicine, to create a broader library of DEI simulation trainings

References

1. Maternal mortality rates in the United States, 2020. Centers for Disease Control and Prevention. Published February 22, 2022. Accessed September 12, 2024. <https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2020/maternal-mortality-rates-2020.htm>.
2. Villarosa L. Why America's Black mothers and babies are in a life-or-death crisis. The New York Times. Published April 11, 2018. Accessed September 12, 2024. <https://www.nytimes.com/2018/04/11/magazine/black-mothers-babies-death-maternal-mortality.html>.
3. Barber Doucet H, Wilson T, Vrablik L, Wing R. Implicit bias and patient care: mitigating bias, preventing harm. MedEdPORTAL. 2023;19:11343. Published September 19, 2023. doi:10.15766/mep_2374-8265.11343.

Learner Types

Figure 1



Course Evaluations

Table 1

1. This was a positive learning experience and effective use of my time.	2. The course content was relevant to my training level or practice.	3. The simulation center staff was helpful and responsive.	4. I learned information/skills that I would incorporate into my practice.	5. I would recommend this course to my colleagues.
5.0	4.9	4.9	4.9	5.0

Mean Scores (n = 10)

Five-Point Scale (1 = Strongly Disagree, 5 = Strongly Agree)