

IAP Title: Moving the Needle: Assessing Perioperative Outcomes to address Health System Anesthesia Inequities

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Diversity among healthcare providers has been shown to improve patient care and outcomes, especially among underrepresented minorities and marginalized populations. Within the perioperative space, however, there are few studies that reveal the impact of diversity on anesthesia outcomes, and even fewer studies support the importance of recognizing race, ethnicity, language, gender and gender identity as important to perioperative preparation and management. Additionally, unconscious bias is likely to influence provider perceptions of illness and pain in under-represented populations, potentially impacting the treatment delivered to these populations.

The University of Wisconsin School of Medicine and Public Health and UW Health healthcare system serves a population of limited but growing patient diversity, in addition to limited diversity among our healthcare providers. Our medical school and health care system are committed to DEI, respect for all people, and to the best possible outcomes for all patients. The Department of Anesthesiology holds the same commitments and seeks to better understand equitable care for patients in our system undergoing surgery, procedures and pain management.

My IAP project focused on the assessment of perioperative outcomes within under represented patient groups, with the aim of understanding inequities in outcomes and treatment, and with the ultimate goal of providing equitable, perioperative preparation, and intraoperative and post-operative management. This goal is likely to impact generalized best practice, potentially changing perioperative management disparate populations.

The overarching hypothesis of my IAP project was that non-English speaking patients, patients of color, and other marginalized populations have poorer outcomes than white, non-Latino, English-speaking patients. To test this hypothesis, following institutional IRB approval, we captured data from our Electronic Medical Record on all adult patients receiving anesthesia for a surgical procedure over the past five years. Within this data set, we examined a multiplicity of endpoints, including perioperative and post-operative outcomes, pain management details, mortality data and type of anesthetic used during the surgical procedures within under-represented groups. Within our system of care, a majority of our patients are white non-Hispanic Latino (WnHL), and a small percentage of our patients are Black-African American (BAA) and fewer are white Hispanic/Latino (WHL) and Asian. The surgical/anesthesia data captured, revealed similar percentages: 89.9% WnHL, 4.1% BAA, 2.7% WHL, and 1.6% Asian. The type of anesthesia received (general, neuraxial, or a combination) was similar across all patient groups. The post-operative survival rate trended lower in the BAA. Our analysis of post-operative complications amongst under-represented groups, we found that

the rate of re-intubation and death within 24 hours post-operatively was 5 times higher amongst BAA. Similarly, BAA were more likely to require intubation and Intensive Care Unit admission than their WnHL or WHL counterparts. Additional analysis of the complications and mortality rates related to specific surgical types among these groups, as well as related pain management is still underway.

While this data represents a snapshot of potential discrepancies in healthcare outcomes between racial groups within a patient population of mostly white, English-speaking individuals, it does indicate that further study must be undertaken to examine the factors that led to the higher death frequency and requirement for ICU admittance amongst Black African-American patients in our system of care. As we continue to evaluate the trends noted, we will consider next steps to include specific, robust perioperative processes that recognize race and ethnicity as perioperative risk factors that require preoperative and intraoperative attention.