Editorial

Gloving up for the fight against racial and ethnic disparities in obstetric anesthesia care

Racial and ethnic disparities in obstetric anesthesia care are persistent and have been well documented [1]. In a cohort of 50,974 women who underwent cesarean delivery between 1999 and 2002, Butwick et al. [2] reported significantly higher rates of general anesthesia among black women (11.3%) vs. other groups, particularly compared to white women (5.2%), despite the fact that neuraxial anesthesia is the preferred anesthetic technique for cesarean delivery. Black and Hispanic women are also significantly less likely to receive neuraxial analgesia for labor compared to white women, although this technique is known to be the most effective modality for management of labor pain [3–5].

In this issue of the *Journal of Clinical Anesthesia*, Tangel et al. [6] report the findings from their retrospective cohort study using 2007–2014 administrative data from the state inpatient database (SID) Healthcare Cost and Utilization Project (HCUP) from 5 geographically and demographically diverse states: New York, Florida, Maryland, California and Kentucky. The aim of their study was to evaluate racial and ethnic disparities with respect to the 18 Centers for Disease Control and Prevention's (CDC) measures of overall severe maternal morbidity (SMM). Their report is the largest study of its kind (encompassing > 6.8 million births) to use multilevel modeling and assess effect modification through stratification on patient and hospital-level variables that affect the risk of SMM. Consistent with previous reports, the authors found that black women were more likely than white women to experience any SMM [adjusted odds ratio (aOR): 1.38 (95% CI: 1.35–1.41)]. This finding persisted in stratified analyses.

Exploratory analyses were also performed with New York State data regarding anesthesia type. Black women were more likely than white women to receive general anesthesia for cesarean delivery [aOR: 1.44 (95% CI 1.39–1.49)] and to receive no analgesia for vaginal delivery [aOR: 1.45, (95% CI: 1.43–1.47)]. Furthermore, black women were more likely to experience SMM regardless of whether they did or did not receive regional anesthesia [aOR: 1.47 (95% CI: 1.32–1.64); aOR: 1.3 (95% CI: 1.27–1.52), respectively].

The higher odds of SMM among black women persisted even after adjustment for a range of covariates, including primary insurance and median household income, suggesting that the higher risk of complications cannot be completely explained by unequal access to healthcare. This theme has been consistent in the literature. Glance et al. [4] (New York State Perinatal Database 1998–2003; 81,883 patients) similarly found that when they tested the interaction between patient race/ethnicity and insurance status in a multivariate model, the rate of epidural analgesia did not vary for black patients regardless of type of insurance coverage. These authors acknowledged that although black patients may be less likely to request epidural analgesia compared to other racial groups, this, alone, is also unlikely to account for the disparity in epidural analgesia use.

Tangel's study sits in a broader context of racial disparities both within and outside of maternal health care. A growing number of reports confirm the higher rates of hospitalization and death related to SARS Co-V-2 infection among non-Hispanic black persons, Hispanics and Latinos, and American Indians/Alaska Natives compared to white persons [7]. In addition, recent events have triggered thousands to take to the streets internationally to march for social justice and to protest structural racism and excessive use of force by police [8]. Academic institutions have joined corporations in affirming their solidarity with the Black Lives Matter movement and the growing White Coats for Black Lives movement [9,10].

So what is our role as anesthesiologists?

This moment provides us with both an opportunity and a call to action. The issues underlying racial and ethnic disparities in healthcare are long-standing, deeply embedded in our healthcare systems and complex in nature to solve. Progress begins with actions at the patient, provider and healthcare-system levels [11].

Broad adoption and implementation of existing safety initiatives such as the Council on Women's Healthcare Maternal Patient Safety Bundles and the California Maternal Quality Care Collaborative (CMQCC) toolkits can help to raise the level of care for all patients [12,13].

Electronic platforms, which are quickly replacing large in-person annual professional meetings, can provide impactful vehicles for provider and patient education. The presence of an obstetric anesthesia fellowship trained provider has been associated with a lower chance of receiving general anesthesia for unplanned cesarean delivery [14]. Increasing the pool of obstetric anesthesia sub-specialists may positively impact disparities in peripartum anesthesia and augment the quality of obstetric anesthesia care. Togioka et al. [15] reported that a language-concordant educational program about labor epidural analgesia increased use among Hispanic women, and reduced misconceptions regarding epidural analgesia in both Hispanic and non-Hispanic women. This data supports renewed efforts to provide easily understandable information (grade 6 reading level) that also serves non-English speaking patients [16]. Increasing the availability of online materials is key, since many patients seek information on the internet [16]. Increasing public outreach on social media platforms and employing popular tools such as infographics could be an innovative way to "meet patients where they are", improve healthcare literacy and expand access to information.

A research agenda focused on further understanding of the causes underlying healthcare disparities will inform the development of evidence-based, targeted measures to effect change. Tangel et al.'s [6] analysis of anesthetic techniques is an important contribution, but it is inherently limited by available data and lack of detail. More granular patient-level information collected through large-scale, multi-

institutional or state-based registries is needed for a more thorough and nuanced understanding [17].

Finally, we must reflect on implicit or unconscious bias in the healthcare workforce, which is notoriously difficult to rectify and requires a multidimensional approach [18,19]. Diversity in the healthcare workforce is linked to improved access for minority patients, greater patient satisfaction, stronger cultural competence and sensitivity among healthcare workers, and overall higher academic performance for students of the health professions [19].

Institutions and academic societies must redouble their efforts to recruit, retain, mentor, sponsor and promote diverse team members from underrepresented groups. Inclusivity should be a core organizational value, especially when seeking to fill leadership roles.

Whereas Tangel's findings of disparities in obstetric anesthesia care are alarming, we are optimistic that the current momentum will inspire meaningful long-term changes in the healthcare sector. It's time for obstetric anesthesiologists to glove up and use their expertise to fight for an end to racial and ethnic disparities in maternal healthcare.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

[1] Lange EMS, Rao S, Toledo P. Racial and ethnic disparities in obstetric anesthesia. Semin Perinatol 2017;41:293–8.

[2] Butwick AJ, Blumenfeld YJ, Brookfield KF, Nelson LM, Weiniger CF. Racial and ethnic disparities in mode of anesthesia for cesarean delivery. Anesth Analg 2016;122:472–9.

[3] Toledo P, Sun J, Grobman WA, Wong CA, Feinglass J, Hasnain-Wynia R. Racial and ethnic disparities in neuraxial labor analgesia. Anesth Analg 2012;114:172–8.

[4] Glance LG, Wissler R, Glantz C, Osler TM, Mukamel DB, Dick AW. Racial differences in the use of epidural analgesia for labor. Anesthesiology. 2007;106:19–25. [discussion 6-8].

[5] Rust G, Nembhard WN, Nichols M, Omole F, Minor P, Barosso G, et al. Racial and ethnic disparities in the provision of epidural analgesia to Georgia Medicaid beneficiaries during labor and delivery. Am J Obstet Gynecol 2004;191:456–62.

[6] Tangel VE, Matthews KC, Abramovitz SE, White RS. Racial and ethnic disparities in severe maternal morbidity and anesthetic techniques for obstetric deliveries: a multi-state analysis, 2007–2014. J Clin Anesth 2020;65:109821.

[7] Centers for Disease Control and Prevention. COVID-19 in racial and ethnic minority groups. https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/racial-ethnic-minorities.html, Accessed date: 3 July 2020.

[8] Worland J. America's long overdue awakening to systemic racism. Time Mag June 22, 2020;195(23).

[9] Charles D, Himmelstein K, Keenan W, Barcelo N. White coats for black lives: medical students responding to racism and police brutality. J Urban Health 2015;92:1007–10.

[10] Smith T. White coats and black lives: health care workers say 'racism is a pandemic too'. ABC News https://abcnews.go.com/Politics/white-coats-black-lives-health-care-workers-racism/story?id=71195580, Accessed date: 3 July 2020.

[11] Jain JA, Temming LA, D'Alton ME, Gyamfi-Bannerman C, Tuuli M, Louis JM, et al. SMFM special report: putting the "M" back in MFM: reducing racial and ethnic disparities in maternal morbidity and mortality: a call to action. Am J Obstet Gynecol 2018;218:B9–17.

[12] Ozimek JA, Kilpatrick SJ. Maternal mortality in the twenty-first century. Obstet Gynecol Clin North Am 2018;45:175–86.

[13] Council on patient safety in women's healthcare. https://safehealthcareforeverywoman.org, Accessed date: 3 July 2020.

[14] Wagner JL, White RS, Mauer EA, Pryor KO, Kjaer K. Impact of anesthesiologist's fellowship status on the risk of general anesthesia for unplanned cesarean delivery. Acta Anaesthesiol Scand 2019;63:769–74.

[15] Togioka BM, Seligman KM, Werntz MK, Yanez ND, Noles LM, Treggiari MM. Education program regarding labor epidurals increases utilization by Hispanic Medicaid beneficiaries: a randomized controlled trial. Anesthesiology 2019;131:840–9.

[16] Patel SK, Gordon EJ, Wong CA, Grobman WA, Goucher H, Toledo P. Readability, content, and quality assessment of web-based patient education materials addressing neuraxial labor analgesia. Anesth Analg 2015;121:1295–300.

[17] Creanga AA. Maternal mortality in the United States: a review of contemporary data and their limitations. Clin Obstet Gynecol 2018;61:296–306.

[18] Institute of Medicine (US) Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce. In the nation's compelling interest: ensuring diversity in the health-care workforce. Washington (DC): National Academies Press (US); 2004.

[19] Anerican College of Physicians. Racial and ethnic disparites in healthcare updated https://www.acponline.org/system/files/documents/advocacy/current_policy_papers/assets/racial_disparities.pdf;; 2010, Accessed date: 3 July 2020.

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