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5 **Diversity, Inclusion and Equity in the Journal of Neurosurgical Anesthesiology: a look to the**
6 **future**

7 Théard MA, Flexman AM, Smith M.

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10 I can tell you, without diversity, creativity remains stagnant

11 *Edward Enniful, OBE*

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13 The *Journal of Neurosurgical Anesthesiology* (JNA) has been, and continues to be, committed to
14 publishing the most creative, innovative and highest quality perioperative neuroscience research.¹

15 Commensurate with this mission is a dedication to support the growth and development of all editorial
16 aspects of the Journal: authors who submit their work, reviewers who provide timely and expert
17 commentary, Editorial Board members, and the Editor-in-Chief who is responsible for journal policy and
18 governance. To date, ample evidence supports diversity, inclusion, and equity as advantageous to the
19 organizational structure of a number of different societal establishments, and medical journals are no
20 exception.

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22 From financial performance in business to reducing health disparities, a diverse workforce is increasingly
23 identified as essential for success. While diversity refers to the differences in experiences and
24 perspectives within a group, inclusion ensures that all members have equal access to opportunities, and
25 equity is defined by parity in processes and policies. In an analysis of over 2 million published articles,
26 those published in higher impact journals had a more diverse authorship and were cited more often.² In

27 addition, diversity within the healthcare workforce has been demonstrated to increase communication,
28 patient satisfaction, patient compliance and overall health outcomes.³ Heterogeneous groups with a
29 variety of ethnicities, perspectives and experiences have also been shown to increase accuracy and
30 innovation in finance.^{4,5} Despite these proven benefits, a lack of gender and racial diversity in academic
31 anesthesiology has been highlighted as a persistent issue^{6,7}, perpetuated by entrenched societal biases
32 and institutionalized racism.

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34 *The Journal of Neurosurgical Anesthesiology* is an international journal which serves as the official
35 journal of the Society for Neuroscience in Anesthesiology and Critical Care (SNACC), itself an
36 organization with a diverse international member base. In 2019, JNA received submissions from authors
37 in 35 countries and all continents, with a readership extending to 72 countries. The Editor-in-Chief
38 supported by the Editorial Board has an obligation to ensure that JNA content reflects a full range of
39 ideas, perspectives, and approaches to scientific inquiry. Peer review, in particular, serves as a critical
40 gatekeeper tasked with upholding the highest level of scientific rigor and quality of research published in
41 JNA.⁸

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43 The Editor-in-Chief recently reviewed the demographics of the JNA Editorial Board and Board of
44 Reviewers over three time-points during the last two decades (2006, 2012 and 2019; Figure 1). In 2006,
45 93% of Editorial Board members were based in the United States; this fell to 63% in 2019 with the other
46 37% of members representing 11 countries from all continents. Moreover, 40% of manuscript reviews
47 are now provided by colleagues outside the United States compared with only 16% in 2006. Over the
48 time period examined, women were underrepresented on the Editorial Board, making up only 20% of its
49 members, similar to other journals in Anesthesiology.^{9,10} Encouragingly, there has been a small but

50 steady increase in the proportion of women providing peer review for JNA over time, increasing from
51 17% in 2006 to 29% in 2019.

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53 The diversity of the neuroanesthesia and perioperative neuroscience community as a whole is not well-
54 defined. A glimpse into the demographics of SNACC's international membership, however, reveals a
55 group that is more reflective of today's majority white, male medical establishment in the United States.
56 A 2018 survey conducted to better understand the demographics and experiences of SNACC members
57 revealed that the majority of respondents were from the United States (76% vs. 24% non-US) and were
58 male (63%).¹¹ Regarding race/ethnicity, most of the men and women respondents self-identified as
59 white (67% and 63%, respectively). These findings are consistent with a previous analysis demonstrating
60 a relative lack of racial and gender diversity in Anesthesiology as a specialty in the United States.⁶ These
61 findings compel serious consideration of the systemic barriers to more equitable representation in
62 physician workforce, medical education, medical societies, medical research, and medical journals.
63 Targeted initiatives such as highlighting the work of minority groups and mentorship may be beneficial
64 in improving diversity. Several of these initiatives have been employed by SNACC¹², similar to many
65 medical societies around the world.

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67 Overall, while JNA has made progress towards increasing geographic diversity and gender
68 representation amongst peer reviewers, there is room for improvement going forward, particularly with
69 regard to Editorial Board membership. Furthermore, the evolution over the past two decades occurred
70 in the absence of a formal diversity and inclusion policy, an absence which we intend to address.
71 Increasing diversity and inclusion is complex and requires a sustained and intentional approach to
72 addressing many disparities. The first step is to systematically collect and analyze data, both to inform
73 strategy and inform progress going forward. Next, we need to understand the obstacles to participation

74 in neuroscience research, publishing and peer review. Finally, this information should be used to
75 develop strategies to minimize systematic barriers and increase the inclusion of members of
76 underrepresented groups. We look forward to a bright future for JNA as we strive to achieve a broader
77 more diverse platform for the publication of perioperative neuroscience research.

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120 The authors have no conflicts of interest to disclose.

121 **FIGURE LEGEND**

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123 **Figure 1**

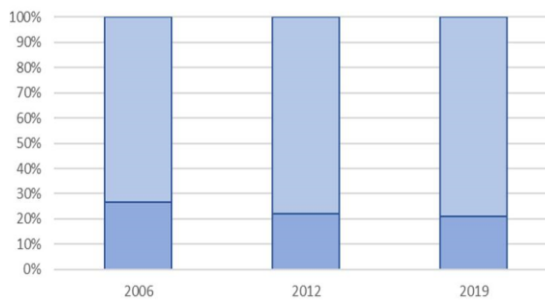
124 Gender and geographic representation of Editorial Board members and peer reviewers: 2006-

125 2019

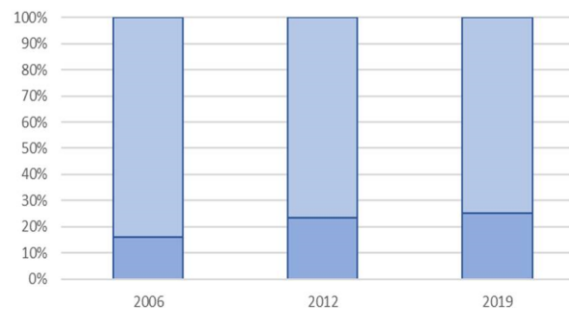
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GENDER

Editorial Board



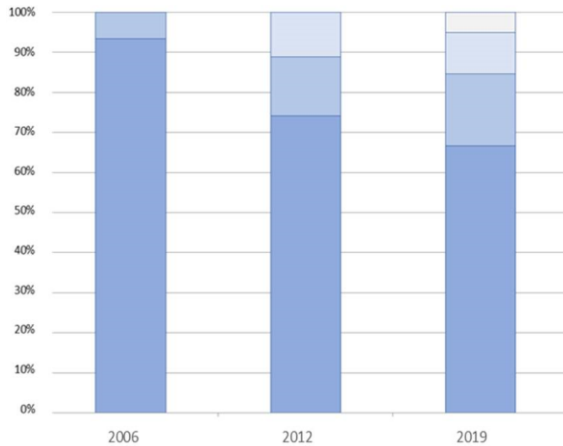
Reviewers



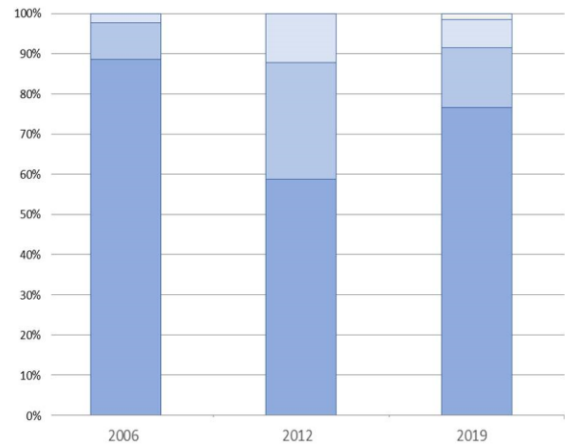
■ Female ■ Male

GEOGRAPHICAL LOCATION

Editorial Board



Reviewers



■ N America ■ Europe ■ Asia ■ Other

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