

EDITORIAL

# Women Authorship in Cardiovascular Science: A Call to Track and Report to Achieve Equity

Mary Cushman , MD, MSc

**T**he #MeToo movement stimulated renewed interest in furthering gender equity in science and medicine. Lack of diversity in who is leading scientific discourse is a detriment to advancing medical knowledge and solving health disparities. For example, the low proportion of Black people in science reduces our ability as a science community to effectively address the most important questions required to solve racial disparities in health affecting Black people. The same is true for women; one symptom of this includes the sad and unexplainable truth that women in the United States remain unaware of the simple fact that heart disease is their leading cause of death, a finding that is most striking for women of color and might be ameliorated if more women were involved in science.<sup>1</sup>

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**See Article by Rai et al.**

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The currency of scientific discourse is publication. Because our population is about 50% female, it would follow that lower than 50% representation of women in scientific publishing is a symptom of impaired representation and career progression of women. In this issue of the *Journal of the American Heart Association (JAHA)*, Rai et al report longitudinal trends in women authors of cardiology guidelines from 2006 to 2020.<sup>2</sup> The authors evaluated North American guidelines (from the American College of Cardiology/American Heart

Association [ACC/AHA] and Canadian Cardiovascular Society) and European guidelines (from the European Society of Cardiology). From dozens of guidelines, findings revealed that among 1288 authors of ACC/AHA guidelines, 28% were women, whereas among 988 Canadian Cardiovascular Society authors, 26% were women, and among 1157 European Society of Cardiology authors, only 16% were women. The percentage of women authors for ACC/AHA guidelines increased dramatically from 12.6% in 2006 to 42.6% in 2020, whereas for the Canadian Cardiovascular Society the percentage increased from 20.6% to 36.3%, and for the European Society of Cardiology from 7.1% to 25.8%. Having a woman chair for a guideline was also directly correlated with having more women coauthors; however, there were relatively few women writing group chairs (22.4% for ACC/AHA, 16.9% for the Canadian Cardiovascular Society, and only 7.2% for the European Society of Cardiology).

What is the cause of these disparities and how do we find a path forward to equity? It is simple to hypothesize that one reason for lower representation of women authors of guidelines is that women are less involved in the field—either they are not in the field or are not engaged with the organizations producing guidelines. This is certainly the case in cardiovascular research; cardiology is but one specialty contributing to cardiovascular research, but it is among the largest, and although the proportion of women entering cardiology is slowly rising, it remained quite low at <25%

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The opinions expressed in this article are not necessarily those of the editors or of the American Heart Association.

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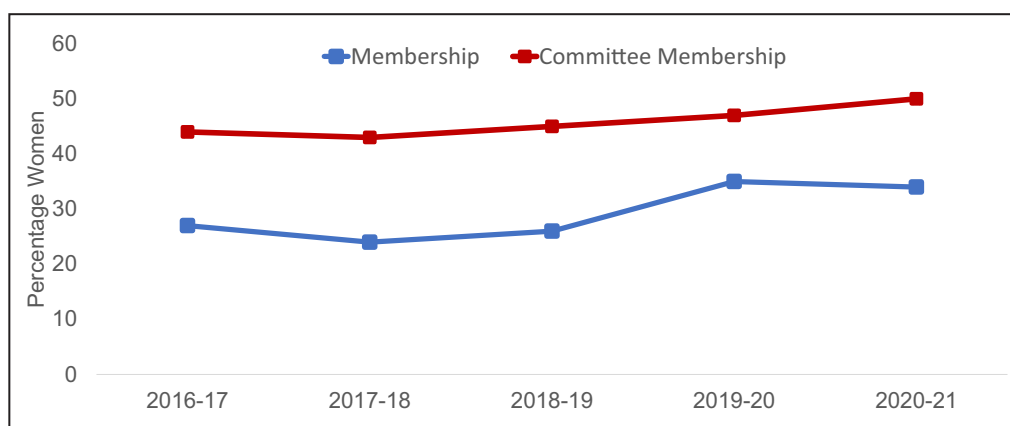
JAHA is available at: [www.ahajournals.org/journal/jaha](http://www.ahajournals.org/journal/jaha)

in 2018.<sup>3</sup> The AHA Council Operations Committee and its Go Red for Women in Science and Medicine subcommittee tabulated self-reported gender in AHA membership and volunteer positions in recent years (Figure). Some progress is being made as the proportion of women members of AHA rose from 27% in fiscal year 2016 to 2017 to 34% in 2020 to 2021. At the same time, across its 16 councils (each with many committees), volunteer committee membership by women grew from 44% to 50%. A caveat of this reporting is that for the membership as a whole, there was a decline over time in the proportion unwilling to report gender, while committee members had consistently high reporting. This is likely because committee members better understood the importance of reporting gender. It is difficult to predict whether men or women members were less likely to report gender in years past, but going forward future data will be important to monitor. There are also no data on nonbinary gender. Despite limitations of these data, findings are encouraging. As a women physician scientist who has been heavily engaged in volunteerism for AHA and other professional organizations, I can attest that volunteerism provides advantages to career progress in myriad ways including the development of professional relationships, ability to influence policy, and opportunities for learning leadership skills. It might be concerning that women are overinvolved as volunteers relative to their representation as members, which might impose a type of “tax” on their time, but it is hoped that equal representation of women to men in volunteer service will lead to an increase in women engaged in the field over time. It was wonderful to see that the author team led by Rai included women and men because the allyship of men in solving issues of gender equity is needed for success.

Based upon my personal experience in AHA volunteer leadership, I know that the increase in women authors of ACC/AHA guidelines is intentional. When guideline writing groups are formed, effort is taken to ensure a balanced writing group and representation of women and persons from diverse backgrounds and different career stages. Based on the findings of Rai et al, from the AHA perspective this process is working as the proportion of women authors of guidelines is greater than the proportion of women members.

I would like to see similar efforts extend to other areas of scientific publishing. As a society journal editor in chief, I set a goal to create a publishing culture of diversity, equity, and inclusion, including for representation of women as authors. The goal was simple; that the proportion of women overall and women senior authors should be equivalent to the proportion of women members in the society, at 45%. Like any effort in quality improvement, achieving such a goal requires planning, execution, measurement, and action to change. Transparent reporting is critical to this; to remain accountable each year we report the proportion of women authors, both for uninvited and invited articles.<sup>4-7</sup> Over 4 years, the proportion of women authors has risen to at or above goal for all but senior authors of uninvited manuscripts, where we are very close to goal. We believe that public reporting and discussion of results by the editorial team, including how to overcome unconscious bias in peer review, are reasons for this success. We hope that other journals will undertake similar activities, noting that a few have committed to it.<sup>8</sup>

The research of Rai et al and similar prior studies they cited shine the light on disparities and provide information to help improve representation of women in science publishing. I also applaud *JAHA* for accepting



**Figure.** Percentage of women members of the American Heart Association and women members of its scientific council committees, 2016 to 2021.

Note that the proportion of undeclared gender among members declined from 17% in 2016 to 17% to 6% in 2020 to 2021, and this proportion was much lower among committee members at only 2% to 3% over time.

the manuscript, because bibliometric research like this can be difficult to publish. Through similar efforts by societies, health organizations and journals to measure, report, and improve, we will find the path to equity.

## ARTICLE INFORMATION

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Dr Cushman receives an honorarium as editor in chief of *Research and Practice in Thrombosis and Haemostasis*, a journal of the International Society on Thrombosis and Haemostasis. She is chair of the AHA Go Red for Women in Science and Medicine Subcommittee of the Council Operations Committee.

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