



# COVID-19 and the Slide Backward for Women in Academic Medicine

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The coronavirus disease 2019 (COVID-19) pandemic has exposed many faults in our society and has exacerbated many of the already glaring racial and gender inequities that are found in medicine. It has also disrupted the pace and productivity of academic physicians. For women in particular, because of the disproportionate role they played in domestic and childcare work before COVID-19<sup>1</sup> and now with the COVID-19–related disruptions that have led to changes in childcare and other supports, the impact may be greater than for men. Using metadata from medRxiv and bioRxiv, the study by Wehner et al<sup>2</sup> examined changes in the proportion of women corresponding authors since the onset of the pandemic, analyzing a total of 51 249 articles and determining corresponding author gender for 49 924 (97%) of them. They observed a statistically significant increase in the gender gap in medRxiv (Somers D, 0.14; 95% CI, 0.03 to 0.24) but not in bioRxiv (Somers D, 0.06; 95% CI, –0.01 to 0.12). The lack of gender gap observed in the bioRxiv metadata may have been reflective of the different populations of researchers contributing to each service. During the COVID-19 pandemic, the gender gap in medRxiv changed from a low of 23% in January 2020 to 55% in April 2020. In a similar vein, Andersen et al<sup>3</sup> found that the research productivity of women, particularly early career women, has been impacted by COVID-19 more than the research productivity of men. The study estimates that the proportion of COVID-19–related papers with a woman first author was 19% lower than the proportion of papers with a woman first author published in the same journals in 2019.

Why is it important to monitor and analyze journal authorship? Journal authorship is one of several important elements necessary for promotion. Without promotion, women cannot reach the highest levels of leadership. While women now are the majority of students in US medical schools, they are still grossly underrepresented in positions of leadership at these same institutions. Publication also leads to invitations for speaking engagements—another area of influence that is marked by lack of gender diversity. Publication and high-profile speaking engagements lead to recognition as an expert in one's field, which can lead to invitations to write commentaries that have impact and influence. Thus, the inequities in publication in journals that existed before COVID-19 can become even more damaging to women's careers during COVID-19 as they fall further behind on the career trajectory.

The COVID-19 pandemic has had a disproportionate impact on women in general<sup>4</sup>; for women in medicine, the pandemic has added an additional barrier as they juggle increased childcare and domestic duties along with their academic and clinical roles. For all of the strides academic medicine has made in recent years in improving gender equity, women now run the serious risk of sliding backward, as evidenced by the study by Wehner et al.<sup>2</sup> For Black women, the picture may be even more threatening. Because journals generally do not track race or ethnicity of authorship, we don't know the proportion of Black authors. But what we do know is that Black women are underrepresented in academic medicine. The American Association of Medical Colleges reported in 2019<sup>5</sup> that only 2% of full-time faculty at US medical schools were Black women and 1.6% of all department chairs were Black women.

As studies of the impact of COVID-19 on gender equity emerge in real time, real-time remedies can be instituted. The Parent in Science Movement published a letter in *Science*<sup>6</sup> outlining steps that can be taken immediately, including postponing deadlines for grant proposals, reports, and renewal requests and creating granting programs designed around the reality of academics with families.

Diversity creates a positive impact in the workforce<sup>7</sup> and enhances an organization's return on investment. If we want to create the best opportunity for advancement in science and the best in

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patient care and outcomes, we need to ensure that equity is operationalized. This will take commitment from journals to enforce a climate of transparency and accountability. Data can be a powerful way to tell the story of inequity. And it can also provide a clear path to change.

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#### ARTICLE INFORMATION

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