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Striving for Gender Equity in Academic Medicine Careers: A Call to Action

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Abstract

Women represent approximately half of students entering medical schools and more than half of those entering PhD programs. When advancing through the academic and professional fields, however, women continually face barriers that men do not. In this Commentary, the authors offer ideas for coordinating the efforts of organizations, academic institutions, and leaders throughout the scientific and medical professions to reduce barriers that result in inequities and, instead, strive for gender parity. Specific areas of focus outlined by the authors include facilitating women's access to formal and informal professional networks, acknowledging and addressing the gender pay gap as well as the lack of research funding awarded to women in the field, and updating workplace policies that have not evolved to accommodate women's lifestyles. As academic institutions seek access to top talent and the means to develop those individuals capable of generating the change medicine and science needs, the authors urge leaders and change agents within academic medicine to address the systemic barriers to gender equity that impede us from achieving the mission to improve the health of all.

Women represent approximately half of students entering medical schools and more than half of those entering PhD programs, yet a collection of articles in this issue¹⁻⁸ suggest that women continue to confront career barriers unbeknownst to many of their men counterparts in academic medicine. Women continue to be paid lower salaries, receive less funding, have less opportunity to publish, and be promoted at slower and lower rates. Looking at these examples, highlighted by the articles in this issue, women are more likely to experience bias in formal and informal settings. Unconscious gender bias can account for a large part of the challenges women face, in addition to other systemic organizational policies or activities. We hope this special issue of *Academic Medicine* will highlight opportunities in the scientific and medical community to create more inclusive and equitable working environments, recognizing the talent and benefit that these practices will provide to academic medicine institutions.

The authors are members of the Association of American Medical Colleges' (AAMC's) Group on Women in Medicine and Science (GWIMS), whose mission is to make advancements in gender equity, recruitment and retention, recognition, and career advancement for women in medicine and science. We believe that reducing inequities requires a concerted effort across many organizations and institutions as well as those in leadership roles. Throughout this Commentary, when we refer to "equity" we are referring to the concept of fair processes for men and women in medicine and science careers; "parity" is the concept of men and women receiving equal pay for equal work in those careers. As the articles in this special edition highlight, there are several areas of particular importance to address in achieving equity: salary parity; mentorship and sponsorship; research funding; and recruitment and retention.

Addressing Salary Parity

Gender pay disparities have been demonstrated in most professions, and they are likely to exist in academic medicine.⁹ Gathering and understanding salary data, such as the salary data collected by the AAMC, are critical to understand these inequities. These data can provide assistance in understanding the numbers of equity markers in the complex formulas that make up salary figures at academic health centers. Engaging in a conversation with medical school administrators and leaders to discuss these data, and inviting institutions that have effectively addressed parity to share their experience and promising practices at the highest levels, would be first steps in addressing systemic issues related to pay equity.

Salary disparities may begin at the time of the initial appointment of a faculty role and continue to disproportionately disadvantage those who were offered less initially throughout their career. Consequently, we suggest transparency of starting salaries to better equip all early-career faculty to make professional decisions. In addition, professional organizations that serve science and medicine are well positioned to develop programs to train women to overcome social and systemic gender norms that prevent many women from initiating negotiation, both for starting salaries and for packages to support their academic goals. Such training is likely to benefit women and their institutions, as effective negotiation skills can lead to adequate access to the resources necessary to achieve the success that is critical for academic advancement. Finally, to address biases in the hiring and negotiating process, we recommend that all members of institutional leadership who play roles in determining salary and rank in academic medicine undergo implicit bias training to help them recognize and understand implicit bias and its potential impact.

Availability of Mentorship and Sponsorship

Mentorship and, perhaps even more important, sponsorship—defined as the action of key leaders to advocate for opportunities for specific individuals who are at a more junior level—is central to the advancement of women in academic medicine.¹⁰ Although mentorship is an important aspect for career advancement regardless of gender, women face considerable barriers in accessing mentors, given the small numbers of women in some specialties, especially in the sciences. Carapinha and colleagues¹ found that 13% of women faculty have never had a mentor, and another 34% had prior but not current mentors. Again, professional

societies can play a role by sponsoring cross-institutional mentorship programs, and AAMC Professional Development Groups related to faculty development, including GWIMS, can contribute to this. We also urge member institutions to perform faculty development needs assessments and institute mentorship programs focused on women. Successful programs include specific programming that advances skills in scholarship, grant writing, and leadership. Finally, sponsorship is an emerging concept but one that is central to the advancement of women. Increased awareness at institutions and encouragement for senior faculty to sponsor emerging women leaders will contribute to equity among the top levels of institutional leadership and give women access to informal sponsorships traditionally made available to men.

Disparity in Research Funding

The gender disparity in research funding is particularly complex to address but clearly evident. A recent study in JAMA found that the startup package funding difference between men and women junior investigators was nearly \$400,000 for those performing basic research ($P < .001$) and more than \$580,000 for all junior faculty with solely a PhD degree ($P < .001$).¹¹ These are critical differences that can affect an investigator's success in establishing a research program and competing for national research grants. In fact, some research, such as the example above, has identified lower NIH funding awards for women compared with men.¹¹ However, it is not clear whether this is because women asked for less grant support or whether they asked for a similar amount of support in their grant applications but the award was lower. What is clear from this research is that early disparities in funding between women and men have major career implications that may explain why women do not seem to advance through the scientific career ranks as quickly as men.

One solution could be more research of the grant award process and development of programs that address potential disparities in the grant award process. Plank-Bazinet and colleagues² describe several NIH initiatives that develop women at particularly critical inflection points. These programs are effective at hiring, advancing, and retaining women but reach only a small number of women faculty. Kaatz and colleagues⁶ suggest that grant panels may show bias against female applicants. Unconscious bias by both men and women has long been suspected to be an important factor in the review system. As an alternative to the current application process, the gender of the principal investigator could be masked on grant applications to see whether this would result in a different outcome than Kaatz and colleagues observed. In other industries, efforts to mask reviewers to gender have substantially improved the success of women.¹² This has been shown most dramatically in auditions for musicians where the evaluators could not see or even hear footsteps of applicants—an intervention that resulted in at least a 25% increase in hiring of female musicians.¹³ Attempts to mitigate gender bias in research funding decisions by, for example, removing the candidate's name from grant applications to create a masked review process, are worthy of evaluation to see whether such efforts have an impact on funding outcomes. Recognizing that in the current funding climate applicants of all genders will often be unsuccessful, and that women are less likely than men to resubmit grants that are not

initially funded, we further recommend that individual institutions provide mentorship for proposal resubmissions.

Career Flexibility to Improve Recruitment and Retention

The continual increase in the numbers of women entering medicine and science is an important step toward achieving parity and should be celebrated. Through the implementation of equal access and holistic admissions processes, our admissions committees have clearly recognized that women bring enormous strengths to medicine and science. Although women have held faculty positions in academic medicine for decades, women still account for only 21% of full professors and 15% of department chairs.¹⁴ For more than 20 years we have seen many publications that discuss the “leaky” pipeline for women in academic medicine as well as the “glass ceiling” or the “sticky floor.”¹⁵ However, at the national level we have not yet resolved critical issues of the faculty member who may need a flexible work schedule or a revised academic advancement “clock” which, for many universities, allows individuals to stay at a junior faculty level for only a certain number of years. These two issues are often cited as reasons that an academic career may be less supportive or desirable, and they continue to disproportionately impact women. We believe that academic promotion policies need to be flexible and supportive of all of our talented faculty in order to promote excellence and diversity of all types.

Conclusion

With more women than ever entering science careers, and women continuing to make up half of all medical students, we know the face of academic medicine is changing. These changes can only benefit academic medicine, as institutions are increasingly looking for ways to access the best talent. Now is the time to address the systemic inequities that pose as barriers to gender equity in academic medicine careers, and to incorporate women as full participants in our professions. All of our faculty are a precious resource. We trust that future issues of *Academic Medicine* focused on women in medicine will highlight additional successes in our efforts toward equity, and we look forward to the time when the need to track our progress with such research will disappear.

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