

VIEWPOINT

PHYSICIAN WORK ENVIRONMENT AND WELL-BEING

Toward Gender Equity in Academic Promotions

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Promotion in academic medicine drives career opportunities, including leadership roles and salary increases. Yet women physicians face slower promotional timelines and are less likely to reach associate or full professorship compared with their male counterparts, a gap that has not meaningfully changed in more than 3 decades.¹ In 2019, only 26% of full professors and 39% of associate professors in US medical schools were women despite representing 48% of assistant professors and 43% of all full-time US medical school faculty.² These disparities are even worse for women in underrepresented minority groups. Additionally, the COVID-19 pandemic has caused a worrisome backslide.³ In leaving unrealized the full potential of female faculty, these disparities are detrimental to medicine as a whole.

The promotion gap may be partially explained by outdated promotion processes that were developed when the physician workforce was largely male but now serve to disadvantage women throughout their academic careers. Too often we put the onus on women to change their behavior, but closing this gap will require institutions to make promotion systems and policies more equitable. In this Viewpoint, we unpack structural barriers to promotion, specifically for female junior faculty going from assistant to associate professor. We consider how institutions can rethink promotion and reverse harms that were precipitated by the COVID-19 pandemic to promote gender equity leading up to promotion and at the time of promotion.

Before Promotion

From day 1 of a faculty appointment, academics must be aware of promotion criteria, which are typically productivity and external recognition standards within set timelines. Women face several barriers during this prepromotion phase.

Productivity

Productivity, which is narrowly defined by an individual's number of research publications, is heavily weighted in promotion. Productivity requires time, research ideas, funding, data, mentorship, and collaborators. Women physicians are awarded fewer and smaller grants than men⁴; therefore, they may spend more time applying for grants to the detriment of their productivity. Women physicians are often solicited disproportionately for institutional service (eg, committees) that can detract from productivity.⁵ This issue is further amplified for those underrepresented in medicine and termed the *minority tax*.

Institutions could support productivity by training and supporting mentors and department leaders to counteract gender-specific barriers to productivity. For example, divisions could fund research assistant support for junior faculty and avoid asking women to do low-

yield committee service. Leaders should proactively identify and support women to apply for grants and supplemental funding. Institutions should also support mid-career women faculty in pursuing grants that are designed to enhance mentorship of junior investigators, effectively increasing the pool of women mentors for women junior faculty.

External Recognition

External recognition, which is defined as speaking engagements, presentations, and awards outside of one's institution that demonstrate regional and national reputation, is another criterion for which women face substantial barriers. Women physicians are underrepresented as speakers at national conferences. They are less often invited to author editorials, even when controlling for number of publications and experience.⁶

To narrow this gap, institutions should proactively nominate women, with a greater focus on those underrepresented in medicine, for internal and external awards and speaking opportunities. They should ensure that women are proportionately represented when recognizing these honors in institutional announcements. Because gender quotas create the negative perception that awards are allocated based on gender and not merit, awards committees should emphasize the role of merit. Academic departments could host cross-institutional virtual or conference-based gatherings to increase women's chances of being invited for talks. To encourage speaking engagements among women faculty who may face difficulty traveling because of domestic and childcare responsibilities, institutions should adopt policies to cover childcare, breastfeeding/pumping accommodations, and dependent travel. Academic departments should continue to offer virtual speaking opportunities even after COVID-19 pandemic travel restrictions become unnecessary.

Timing

The time when physicians seek associate professorship often coincides with having or trying to have young children, which disproportionately affects women who delay the process for maternity leave or fertility treatment.⁷ Some institutions offer women extra years to meet promotion requirements, but this well-meaning approach just slows down the process, penalizing women.⁸ Instead, departments could treat having a child as a major life event when trajectory is evaluated in lieu of clock adjustments. This would allow women physicians to be considered for promotion without delay. Thoughtful use should ensure that male faculty do not disproportionately benefit from such an approach.⁸

Promotion

To be promoted, faculty must prepare a promotion dossier and be evaluated by a promotion committee. Women face barriers in both of these steps of promotion.

Preparing the Promotion Dossier

Preparing promotion documents is an arduous process that often lacks formal guidance. Women physicians may be disadvantaged through lack of comfort in self-promotion, as well as implicit gender bias in letters of recommendation.

Institutions can take steps toward gender equity by assisting women faculty in preparing promotion dossiers. Women consistently rate their own work more poorly than men, a difference that persists even when their performance compared with others is known; therefore, generic encouragement to be self-promotional is insufficient.⁹ Sharing examples and templates can make the review more objective and less reliant on subjective assessment of junior female faculty's success.¹⁰ Departments could pair women faculty with the nearest peer male junior faculty to buffer against women's tendencies to be less self-promotional and ensure equitable timing and efficiency. Mentors should review dossiers to identify specific opportunities for women to communicate their achievements. Letter writers should be counseled to avoid gender bias by using do and do not lists, and letters should be audited for bias. Finally, institutions should not limit letter writers to professors, which, given current gender disparities, effectively limits the pool of women letter writers for junior faculty.

Time of Promotion

Promotion committees should include women proportionately, undergo implicit bias training, regularly present and discuss data on

gender, and be tasked with ensuring proportionate promotion of women to higher ranks. Because women tend to spend more time working in collaborative teams, resulting in fewer first and last author publications and grant funding, committees should formally consider team-based research and evaluate for contributions along with the number of publications. While this would be more difficult to evaluate, this approach would reward collaboration and quality over the quantity of publications. Committees should also credit time dedicated to mentorship, quality of mentorship, and diversity of mentees on par with publications and external recognition. Finally, committees should better recognize alternative contributions, such as committee service and teaching.

Conclusions

Gender disparities in promotion in academic medicine have been described for decades, and yet progress to close the gap has been untenably slow. Rather than expecting faculty to adapt to existing systems, we need to change the promotion process to work better for all. The American Association of Medical Colleges has taken a leadership role in promoting gender equity through transparent reporting and toolkits for institutions but could go further in setting clear benchmarks and delivering institution-specific feedback. Institutions should track and report promotion data that include metrics for diversity. We hope that these strategies can also be applied to more equitably promote those underrepresented in medicine and emphasize that gender equity in medicine cannot come at the cost of worsening disparities for others. Addressing disparities in promotion will require institutional commitment, time, funding, and ongoing monitoring and improvement. Achieving equity is well worth the effort.

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REFERENCES

1. Richter KP, Clark L, Wick JA, et al. Women Physicians and Promotion in Academic Medicine. *N Engl J Med*. 2020;383(22):2148-2157. doi:10.1056/NEJMsa1916935
2. Association of American Medical Colleges. Faculty roster: U.S. medical school faculty: U.S.

medical school faculty by sex, race/ethnicity, and rank. Accessed January 2, 2021. <https://www.aamc.org/data-reports/faculty-institutions/interactive-data/2020-us-medical-school-faculty>

3. Wehner MR, Li Y, Nead KT. Comparison of the proportions of female and male corresponding authors in preprint research repositories before and during the COVID-19 pandemic. *JAMA Netw Open*. 2020;3(9):e2020335. doi:10.1001/jamanetworkopen.2020.20335
4. Oliveira DFM, Ma Y, Woodruff TK, Uzzi B; Comparison of National Institutes of Health grant amounts to first-time male and female principal investigators. *JAMA*. 2019;321(9):898-900. doi:10.1001/jama.2018.21944
5. Guarino CM, Borden VMH. Faculty service loads and gender: are women taking care of the academic family? *Res High Educ*. 2017; 58:672-694. doi:10.1007/s11162-017-9454-2
6. Thomas EG, Jayabalasingham B, Collins T, Geertzen J, Bui C, Dominici F. Gender disparities in

invited commentary authorship in 2459 medical journals. *JAMA Netw Open*. 2019;2(10):e1913682. doi:10.1001/jamanetworkopen.2019.13682

7. Juengst SB, Royston A, Huang I, Wright B. Family leave and return-to-work experiences of physician mothers. *JAMA Netw Open*. 2019;2(10):e1913054. doi:10.1001/jamanetworkopen.2019.13054
8. Antecol H, Bedard K, Stearns J. Equal but inequitable: who benefits from gender-neutral tenure clock stopping policies? *American Economic Review*. 2018;108(9):2420-2441. doi:10.1257/aer.20160613
9. Exley CL, Kessler JB. The gender gap in self-promotion. Accessed November 23, 2020. https://www.nber.org/system/files/working_papers/w26345/w26345.pdf
10. Arora VM, Wray CM, O'Glasser AY, Shapiro M, Jain S. Using the curriculum vitae to promote gender equity during the COVID-19 pandemic. *Proc Natl Acad Sci U S A*. 2020;117(39):24032. doi:10.1073/pnas.2012969117