CONCEPT PAPER

Gender Disparities in Academic Emergency Medicine: Strategies for the Recruitment, Retention, and Promotion of Women

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ABSTRACT

Although women comprise half of all medical students, the number of female academic emergency medicine (EM) physicians remains at approximately 27%. In addition, despite having equivalent credentials, female EM faculty remain underrecognized and undercompensated when compared to their male counterparts. Recent studies have shown superior outcomes among patients treated by EM physicians who are women; however, disparities in advancement persist. This white paper, prepared on behalf of the Academy for Women in Academic Emergency Medicine, describes recent evidence demonstrating gender disparities in the EM workforce including content presented at the 2019 Society for Academic Emergency Medicine Annual Scientific Meeting. The authors describe strategies to address the identified problems. Specific recommendations include individual as well as institutional/systems-level approaches to creating directed programming and initiatives to recruit, support, and promote women at all aspects of the career continuum.

The current political climate and dialogues stemming from the #MeToo movement have highlighted the ubiquitous presence of gender disparities across all aspects of the workforce. Academic emergency medicine (EM) is no different. The mission of the Academy for Women in Academic Emergency Medicine (AWAEM), an academy of the Society for Academic Emergency Medicine (SAEM), includes attracting women to academic EM, providing opportunities for faculty development, leadership, and mentorship to retain and elevate women, and to develop strategies to address barriers to the advancement of women in academic EM.

For over two decades, roughly half of all medical school graduates have been women.[1] Despite equal representation at the medical school level, however, 2019 ACGME data show a striking trend that while 34.9% of EM residents are female, only 27% of EM physicians and 16% of EM chairs are female.[2] In 2019, Association of American Medical Colleges (AAMC) data show that 36.2% of EM academic faculty and 12.7% of department chairs are women.[3] There is a pipeline problem: fewer women are choosing academic EM, and some that do will not stay in academic EM for the length of their careers. This substantial decline in proportion of women from medical school to leadership positions among academic EM faculty groups is troubling and speaks to larger issues in the recruitment and retention of women in EM, as has been described previously in several published articles, including Kuhn et al.[4]

A growing body of evidence has revealed substantial gender disparities that may contribute to this lack of retention, including gender gaps in academic rank,

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leadership positions, and salary.[5] An additional theory is that women are more likely to face career stagnation manifested by promotion disparities. 2018 AAMC data show a decline in female representation at each escalating faculty rank position, from instructor (46.7%) to assistant professor (39.6%) to associate professor (28.9%) and full professor (18.1%).[3,6,7] This difference in promotion is despite the fact that women are more likely to be fellowship trained, less likely to be core faculty, and less likely to hold administrative roles but work similar hours as their male counterparts. Women are less likely to be chairs, vice-chairs, or emergency department directors.[6] Most strikingly, even after adjusting for a comprehensive list of variables including race, region, rank, years of experience, clinical hours, core faculty status, administrative roles, board certification, and fellowship training, the mean salary for women is $19,418 less than men.[6] This gender salary gap has notably remained stable over the past few years.[8]

The challenges described above all contribute to physician burnout, another factor that negatively impacts physician retention. Female physicians in particular demonstrate higher levels and manifestations of burnout.[9–12] Female residents face gender-specific challenges in addition to the stress typically associated with residency. They receive quantitative and qualitative evaluations that are worse than their male counterparts from both nurses and faculty.[13–15] Similarly, female faculty receive poorer teaching evaluations from students in comparison to their male counterparts.[16] Female faculty and residents report higher rates of sexual harassment, gender bias, and discrimination directed from both patients and colleagues and ultimately higher rates of burnout and attrition from the workforce.[10,17–19] Recognizing these risk factors and addressing disparities can help decrease burnout of female physicians and lead to better retention.

There should be little doubt that these disparities contribute to under recruitment, potentially poor retention and relatively less advancement of women in academic EM. Building and maintaining a diverse workforce in EM benefits not only EM physicians, but also patient care. For example, a 2016 study of the Medicare population showed that if male physicians had the same outcomes as female physicians, there would be 32,000 fewer deaths.[20] Women are also two to three times more likely to survive a heart attack if their doctor is a woman.[21] Female physicians may confer an additional benefit to their male counterparts: the same study found that male physicians had better patient outcomes when there was a higher percentage of female physicians within their group.

In 2008, the SAEM Task Force on Women in Academic Emergency Medicine provided recommendations for the recruitment, retention, and advancement of women in academic EM. While prior articles have made similar recommendations and some progress has been made, many of these recommendations remain relevant today.[4] In this report, current leaders of the AWAEM, an academy within the SAEM, review recently published literature and present a series of strategies to address and combat these pervasive disparities.

THE FRAMEWORK

Prior literature has highlighted successful programmatic interventions for the advancement of women in academic medicine.[22–25] A literature review by Laver and colleagues[26] summarized findings, citing 18 studies that evaluated dedicated programming for women in academic medicine. Many programs were tailored to women at specific career stages and most commonly focused on mentoring, education, and professional development. They found that gender-specific programs at the national, institutional, and departmental levels had positive outcomes as measured by participant satisfaction, skill acquisition, and improvement. Data on more objective outcomes, i.e., promotion and retention, were mixed, pointing to the need for further research on institutional-level strategies that would increase the promotion and advancement of women. Not surprisingly, a few studies assessed educational interventions on gender bias in hiring practices and demonstrated an enhanced awareness of gender bias after program implementation.[26–29] Overall, some of the strategies described in the literature were flawed as they placed additional burden on individual faculty rather than targeting institutional-level strategies.

As evidenced by the wide spectrum of studies included in the review, there are many strategies to enhance the recruitment and retention of women in EM. We recommend implementing the following four concepts to guide global strategies: commitment to the education, management, and elimination of gender bias; affording women with equal access to opportunities and resources; providing leadership support and engagement; and supporting and creating a culture that strengthens work–life integration and family-friendly policies.[30–32]

These concepts can be implemented at institutional, departmental, and individual levels and should be adapted and refined as appropriate. Programs should be tailored to the stage of each individual's career, acknowledging that gender-specific challenges may be different throughout the continuum from residency to retirement. This is especially important as we consider and acknowledge the lack of equal advancement and the departure of women from academic medicine. A summary of recommendations is included in Table 1.

Table 1
Strategies for Recruitment, Retention, and Promotion of Women in EM

Topic/Subtopic	Key Strategies
Recruitment	
Medical students	- Expose students to EM early - Include female faculty in recruitment - Pair students with female mentors and arrange shadowing opportunities
Resident selection	- Implement gender-blind and holistic review of applications - Enlist a diverse selection committee - Conduct regular resident demographic audits and address imbalances
Resident inclusion	- Develop a dedicated mentorship program between female residents and faculty - Educate faculty on gender bias in evaluations, gender neutral feedback and communication - Engage with departmental, institutional, and national female professional development organizations
Hiring processes	- Provide job-specific mentorship on CV building, interview techniques, and contract negotiation - Implement gender-blind evaluations and include female faculty in hiring - Discuss family-friendly policies during interviews with all applicants
Retention	
Compensation	- Use transparent metrics and evaluation rubrics to determine salaries and bonuses - Conduct regular audits to uncover differences in salaries and bonuses - Standardize and audit nonfinancial or indirect compensation - Consider using blinded techniques and external independent auditors - Elevate any persistent pay disparities to an institutional level
Promotion	- Promote female faculty to leadership positions within the department - Assign equitable value to teaching activities for those on clinical-educator track - Use transparent and standardized promotions criteria - Track promotion rates and include female faculty on promotions committees - Identify and support a confidential liaison to address bias-related concerns - Conduct periodic blind reviews of the promotion processes
Combating burnout	- Sponsor and support wellness programming within the department - Allow faculty personal time and schedule control as needed - Establish a culture of teamwork and relationship building - Conduct periodic wellness assessments and respond to any negative findings
Faculty development	- Provide time and resources for female faculty to travel to conferences - Support workshops on grant/manuscript writing and public speaking - Give administrative time to allow for department representation - Nominate female faculty for speaking opportunities, awards, editorial positions - Publicly amplify and highlight achievements of female faculty
Family friendly	- Provide 6 to 8 weeks' parental leave and access to FMLA
Policies	- Ensure fair and transparent policies that provide adequate compensation, flexible scheduling, graduated return to work, less-than-full-time option - Offer clinical shift adjustments during and after pregnancy - Provide lactation spaces in close proximity to patient care areas - Schedule department meetings during daytime hours - Provide child/dependent care subsidies and on-site emergency care services
Professional	- Encourage involvement by covering membership fees, travel, and providing protected time for conferences
Development groups	- Support the creation of a departmental PDG

PDG = professional development group.

Each recommendation would be ideally supported by positive findings from a randomized control trial; however, as this is not realistic, readers are cautioned to trial strategies to find ones that work for them and ideally study them for the benefit of others.

STRATEGIES ACROSS THE CAREER CONTINUUM: PRIMING THE PIPELINE

Effectively addressing the stagnation and attrition of women in academic EM begins by focusing on recruitment and retention strategies for female medical students and residents and continues with interventions to support and retain female faculty through equity in hiring, resources, and career advancement. The ongoing attrition of female EM physicians even after the completion of a grueling residency indicates that the field has a serious retention issue that must be investigated and slowed.

Sparking Medical Student Interest in EM

Closing the gap between the 50% of medical students and 35% of EM residents who are female will take concerted and directed efforts. Early exposure to EM during medical school can help demystify the field and demonstrate its potential as a career choice.[33] Involving female faculty in medical student recruitment would allow future residents the opportunity to see firsthand how female EM attendings can functionally balance their academic, clinical, and personal lives. Residency leadership should consider deliberate recruitment strategies such as pairing students and other trainees with female mentors and arranging for shadowing opportunities.[34]

Resident Selection

A gender-blind review process can help remove unconscious and conscious bias from resident selection.[35] If that is not feasible, a holistic review of all applications and acknowledgment of gender bias in the review, interview, and ranking processes is important. Ensuring diverse membership and equal representation of each gender on the selection committee is also critical. Additionally, residency leadership should conduct regular audits of resident gender breakdown and planned actions to address imbalances in recruitment.

Resident Inclusion

Specific strategies to combat female resident burnout include dedicated mentorship and sponsorship programs with female faculty who could serve as potential role models for young trainees.[36–40] Female residents should be included in conversations about wellness and combating burnout during residency. Residency and departmental leadership are encouraged to provide education regarding feedback and communication techniques devoid of gender bias to faculty that focus on clinical competency and to routinely identify, evaluate, and eliminate gender bias in evaluations.[13,14,41] Engagement with departmental, institutional, and/or national female professional development groups (PDGs) provides opportunities for broadening one's network and may help identify external female mentors. Finally, to ensure that women continue to enter and excel in academic EM, female residents should be mentored closely during times of transition, especially as they explore postresidency career options.

Hiring Practices

The transition from resident to faculty can be a challenging one to navigate on both a personal and a professional level. Women making midcareer job transitions also need particular consideration.[42] Data have shown that women approach contract negotiation differently and often less effectively than men, resulting in less optimal terms or terms that do not fully reflect a candidate's capabilities, achievements, or potential.[43,44] As hiring decisions are sometimes not fully transparent and subject to implicit bias, the best way to navigate the process may not be evident. Additionally, the outcomes of an initial contract negotiation can have a lasting impact on academic rank, promotion, clinical responsibilities, and compensation. A first step is to provide job-specific mentorship to senior residents with individualized attention and coaching on CV building, interviewing techniques, and contract negotiation. In addition, improvements in the hiring process such as gender-blind evaluations and incorporating women in recruitment as well as acknowledging the existing biases could help.[45–49] Educational interventions targeting gender bias in hiring practices have demonstrated enhanced awareness after program implementation. Additionally, including family-friendly policies in all hiring discussions regardless of gender can benefit all applicants and indicate a culture conducive to gender equity.

RETENTION STRATEGIES

Fewer women are rising to leadership roles within academic EM faculty groups. Disparities in compensation

and promotion, burnout, and gender-based harassment all contribute to the substantial attrition of women from EM. Furthermore, the challenge of finding reasonable work–life integration during the dynamic journey from parenthood to empty nesting substantially contributes to this attrition.[50] Retention strategies must address these challenges.

Ensure Gender Equity in Compensation

Female academic EM physicians are paid less than their male counterparts.[51] This is the most fundamental and quantifiable of all disparities. Department chairs should use transparent metrics and evaluation rubrics and conduct regular audits to uncover gender-based differences in salaries and bonuses, perhaps using blinded techniques and external independent auditors. Nonfinancial and indirect compensation, such as buy down, continuing medical education funds, or compensated travel, should be standardized and audited. Finally, if disparities in pay persist, the issue should be elevated above the department chair to an institutional level.

Ensure Gender Equity in Promotion

As described above, women are less likely to be promoted to associate and full professors and have leadership positions than men.[51] Gender imbalances in many areas pertinent to promotions, such as authorship, grant funding, speakerships, and participation on editorial boards, have been well documented and need to be addressed.[25,47,49,52–55] To achieve gender equity in promotion, which is often set at the institutional level, women need to be equally represented in each of these activities. Promoting female faculty to leadership roles in the department and assigning appropriate and equitable value to teaching activities for those on clinical-educator tracks can ensure parity in the process, rather than only regarding traditionally defined metrics such as research publications and grants as accomplishments worthy for promotion.[56] On a departmental level, there should be transparency and standardization of the promotions process. Departments and institutions should track promotion rates to evaluate for gender discrepancies and include women on promotions committees. Departments should elect a confidential liaison to address and be the contact person for bias-related questions or concerns. Finally, a periodic blinded review of the promotion and recruitment process could ensure equity.

Foster the Development and Advancement of Female Faculty

What is more striking than the attrition of female EM physicians between residency and faculty positions is how few women rise to leadership positions. There are many strategies for leadership to make a concerted effort to promote the development and advancement of their women faculty. Providing resources and time to allow women to travel to conferences and professional development courses can increase their visibility and name recognition, allow opportunities for networking, and help them acquire necessary skills to increase their chances of being awarded grants or becoming a successful researcher, speaker, or leader in the field. Female faculty should be provided opportunities to attend workshops on manuscript writing, grant writing, and speaking, as this helps in the promotions process. They should be given administrative time to allow for department representation, leadership, and visibility inside and outside of their group. As women are often reluctant to nominate themselves for awards, speaking opportunities, editorial positions, and other competitive opportunities, faculty leadership should make a point of encouraging them or even doing so on their behalf. Female faculty should be encouraged to seek national positions and leadership should sponsor them for positions on stakeholder, promotions, or institution-wide search committees. Publicly amplifying and highlighting achievements also promotes retention and advancement.[57]

Combat Burnout

Burnout is a major issue in academic EM and contributes to attrition. Department leadership should be attentive to signs of burnout in their faculty and intervene when appropriate. Following many of the strategies outlined in this paper can help address some of the root causes of burnout in women and decrease the risk of burnout. Additionally, leadership should consider initiating wellness programming such as faculty retreats, social activities, mental health support, and recognition of service. Providing faculty with opportunities to disengage clinically and spend time with loved ones when needed without suffering consequences, including "stop-the-clock policies" for tenure and promotion, would enhance work–life integration. Additionally, allowing faculty increased control over their schedules, establishing a culture of teamwork and positive relationships, and conducting periodic

wellness assessments with reflective adjustments can also help combat burnout.[57,58]

Institute Family-friendly Policies

Family-friendly scheduling and leave policies benefit all residents and faculty as they offer flexibility, encourage wellness, and contribute to a safe and productive workplace culture. When not standardized, highly variable family leave and lactation policies can add additional stress during and after pregnancy.[59] While leave policies are often set at the institutional or medical school level, department leadership can be strong advocates for fostering change to institutional policies. Faculty leadership should consider a 6- to 8-week parental leave policy separate of vacation or sick leave, access to FMLA regardless of level of training, and parental leave for non–birth parents.[60] Fair and transparent family leave or significant life event policies should provide adequate compensation and the option for flexible scheduling and graduated return to work.[57] Additionally, clinical adjustments during pregnancy and after delivery, specifically with regard to shift timing and acuity, would contribute to wellness. Lactation spaces should be in close proximity to patient care areas and equipped with the resources needed for pumping mothers. Other family-friendly scheduling considerations include offering a less than full-time work option, scheduling department meetings during daytime hours, and providing child care subsidies and emergency child care or dependent care services.[61]

Foster PDGs

Dedicated female PDGs have been shown to positively impact women at all stages of their career.[22,23] Participants report a range of benefits including academic advancement, career retention, mentorship and sponsorship, and fostering a network of peer support.[24,62] Departments should support involvement in national PDGs by paying membership fees, encouraging involvement at both member and at leadership levels, and supporting travel and protected time for national conferences. Many institutions and departments have created their own PDGs with allocated financial and leadership support, which provide opportunity for local collaboration and recognition.[36]

Identify and Address Gender-based and Sexual Harassment

Sexual harassment in academic medicine remains highly prevalent and creates a culture that is not conducive to the advancement of women at any stage.[63] While specific strategies to address and stop sexual harassment are outside the scope of the paper, we must recognize that sexual harassment is an organizational and institutional problem that until eliminated will continue to exacerbate many of the gender disparities highlighted in this paper. Women cannot excel in an unsafe environment that allows for sexual harassment and sends a message that they are not equal and valued.

IMPLICATIONS FOR EDUCATION AND TRAINING IN EM

A culture of equity for female physicians is beneficial for patients, for trainees, and for the physician workforce in general. Female physicians often employ unique and collaborative engagements with patients and trainees and advocate for family centered policies that promote work–life integration and workforce equity. Female trainees will often look to female faculty as mentors and role models. A diverse workforce enhances the learning and teaching environment for all trainees, and efforts to promote it through the recruitment and retention of female faculty should be cultivated and supported.

FUTURE STEPS

While there has been some improvements in gender inequities in academic EM, progress has been slow moving and so far insufficient. More robust data supporting the above proposed strategies would provide the evidence some departments need to make effective changes in their approach to supporting their female faculty. Intensified advocacy efforts by individual departments, PDGs and EM specialty societies would help maintain a dialogue about persistent inequities and highlight best practices that can lead to productive change.

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