EDITORIAL



Moving Towards Gender Equality in Medical Toxicology

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The unique struggles of women in academic medicine are receiving heightened attention thanks in part to the rise of the #MeToo and TimesUpTM movements which received global attention in 2017. That same year held other important landmarks for women in medicine. A JAMA publication demonstrated improved outcomes for patients cared for by female physicians, and for the first time women surpassed men in matriculation in US medical schools. (https://news.aamc.org/ press-releases/article/applicant-enrollment-2017/). With increased numbers, heightened attention, and demonstrated quality, we would expect to see women advancing into leadership and senior positions in academics. Instead, we find fewer women than anticipated in the academic rank of associate or full professor [1, 2]. Moreover, despite being more often fellowship trained, women are less likely to become core faculty or department chairs, are less likely to take on administrative roles, and mostly report experiencing some form of gender discrimination [3, 4].

One of the more influential factors affecting women's careers in academic medicine is parenthood. All four authors of this commentary are in different stages of parenthood from dealing with infertility, breast-feeding a newborn, raising young children, and parenting a teenager. Each stage brings unique challenges to achieving a successful career in medicine.

Previous presentation of data This data has not been previously presented.

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The impact of motherhood on career is apparent before the first child is even born. Fatigue, nausea, and complications during pregnancy have stalled our projects and made career-advancing academic activity beyond the minimum required feel unmanageable at times. Honors and opportunities, such as invitations to speak at national conferences, time-sensitive publications and projects, or even key meetings that provide crucial networking relationships, have been reluctantly turned down during peripartum periods. After birth, many of the same struggles remain as you try to navigate availability for academic engagements as well as for your children's milestones, school events when they are young, and activities as they grow. The desire to be present for your children conflicting with the drive to advance your academic medical career can feel like an unsolvable occupational hazard.

These conflicts are made more difficult when women encounter sexism in the workplace. In a survey of physician mothers, 36% reported experiencing maternal discrimination, frequently attributed this to maternity leave, and 48% reported discrimination surrounding breast-feeding [5]. Women returning from maternity leave report being perceived as less interested in leadership positions due to family responsibilities, being passed over for promotions and projects, and being required to make up time without pay [6]. Some choose to leave academics entirely due to these struggles. For those who stay, they face an uphill battle. Challenges include lack of alternative scheduling options and difficulty finding childcare for unusual or extreme work hours [6]. Additionally, specialty conference attendance, an important aspect of career advancement for academic physicians, can be difficult for primary caregivers of small children as childcare is not readily available [7].

Motherhood is not the only challenge women face. Implicit bias against women is pervasive and difficult to combat and may begin to affect women's careers as early as medical school and residency. Studies find gender-based differences in evaluation descriptors and scores to negatively reflect on female students and trainees [8, 9]. This bias continues once women become faculty and may impact disparities in career



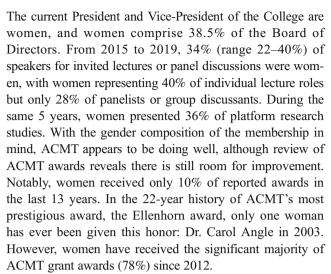
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advancement. In a survey to assess barriers to promotion, EM departmental chairs noted that women faculty may disproportionately be assigned or assume task-oriented or citizenship roles that are beneficial for the department but are less likely to lead to promotion. Female faculty were noted to have fewer peer-reviewed publications which was attributed to competing family obligations, and they were less likely to come forward for promotion despite being qualified. Additionally, women are erroneously perceived as being less interested in leadership positions particularly if they necessitate off-hour obligations [10]. Women also tend to be underrepresented as speakers in academic conferences, missing these key opportunities for broader exposure and academic advancement [11, 12].

What can be done to mitigate these obstacles? Support through networking, mentorship, and sponsorship is essential for women to succeed. A recent study found strong networks to be predictive of male business school graduates attaining leadership positions. For women to gain similar job placement, they had to have not only a strong school network but also a separate female-dominated inner circle [13]. In another study, women across multiple professions who attended "Conferences for Women," a leadership and networking conference, were found more likely to be promoted and to receive a raise than women who had not yet attended (https://hbr.org/ 2018/02/do-womens-networking-events-move-the-needleon-equality). When specifically looking at medicine, one published survey of NIH grant recipients found that sponsorship was associated with greater rates of success and that men were more likely than women to report a sponsorship experience [14].

In response to the need for systemic change, women across multiple specialties and organizations have created initiatives to bring awareness to gender equity. In this spirit, Women in Tox (WiT) was formed as a section of ACMT in 2017. Since its formation, the group has developed several successful initiatives to promote gender equality including the creation of a speaker's bank to increase the presence of female speakers at national conferences, the curation of semi-annual web-based discussions on strategies to promote women's voices and achievements, and cultivation of a social media presence. In addition, WiT has held career development workshops and recruited nationally recognized speakers to discuss gender bias, mentorship, and faculty development. Through WiT, we hope to equip and inspire both men and women in medical toxicology to break down barriers to gender equality in our field.

In order to achieve this goal, we sought to better understand how ACMT is doing, evaluating both our strengths and opportunities for improvement. We conducted a review of the ACMT website, archives, and roster to assess women's standing in the College with regard to speaking events, presentation of research, awards, grants, and leadership positions. A review of ACMT membership for 2018 reveals that 31% are women.



ACMT benefits from a diverse group of physicians with strong female leadership and supportive male allies. Engaging men in these initiatives is essential to making meaningful change. When women shatter the glass ceiling, it creates more opportunities and pathways for everyone, regardless of gender. WiT would like to harness these strengths to continue to advance women in the field of medical toxicology, and thereby advance the specialty as a whole. Given 42% of medical toxicology fellows are now women, we hope to see growth in the number of female conference speakers and to see an increase in the proportion of women award recipients in coming years. Through conscious attention and focus on gender issues, Medical Toxicology as a specialty has the opportunity to lead in creating a more gender-balanced framework for career advancement in academic medicine and a more equitable environment for all.

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Compliance with Ethical Standards

Conflict of Interest None.

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