Women in Academic Medicine Leadership: Has Anything Changed in 25 Years?

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Abstract

Over the past 25 years, the number of women graduating from medical schools in the United States and Canada has increased dramatically to the point where roughly equal numbers of men and women are graduating each year. Despite this growth, women continue to face challenges in moving into academic leadership positions. In this Commentary, the authors share lessons learned from their own careers relevant to women's careers in academic medicine, including aspects of leadership, recruitment, editorship, promotion, and work–life balance. They provide brief synopses of current literature on the personal and social forces that affect women's participation in academic leadership roles. They are persuaded that a deeper understanding of these realities can help create an environment in academic medicine that is generally more supportive of women's participation, and that specifically encourages women in medicine to take on academic leadership positions.

Twenty-five years ago, one of us (W.L.) published the results of a survey that was among the first to explore the challenges women face in balancing a career in academic medicine and family.[1] Over 70% of the women surveyed responded, and many submitted photos, cartoons, and comments. Three observations of the then-current environment set the stage for that article: (1) The number of women graduating from medical school was increasing rapidly, (2) women were underrepresented in academic leadership positions, and (3) women lacked role models. A great deal has changed since then for women in academic medicine, yet many of these challenges remain.

We share here lessons learned from our experience moving through academic careers, experiences that are different yet complementary. One of us (W.L.) served as chair of a research-intensive department of medicine—one of few women to do so; another (P.A.R.) is a clinician–scientist who is vice president of research at a teaching hospital; and the other (F.D.) is a (male) internist who was the editor of a high-circulation, English-language general medical journal. We complement these personal accounts with a synopsis of current literature relevant to our experiences.

Our experiences may help to deepen our understanding of the academic and social forces that influence women's roles in academic medicine. In writing this update we hope to support and encourage women to move into leadership roles, engage our colleagues, and in general help to make the culture more receptive to women in academic medicine.

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Careers in Academic Medicine: Experiences, Observations, and Lessons Learned

Leadership: Who is in the executive elite or "C-suite"? (W.L.)

As a chair of medicine, I attended the Association of Professors of Medicine's annual meeting attended by chairs of medicine at the medical schools in the United States and Canada. At one meeting a special session was held for chairs from research-intensive medical schools. As we sat down, the man next to me exclaimed with some surprise, "You're the only woman in the room!" Of course I knew this, but was glad that someone had noticed! Some years later, I became president of the association—the second woman president in its history. At that point I was no longer the only woman in the room, but to this day we remain just a handful.

Data from the report "The State of Women in Academic Medicine," published by the Association of American Medical Colleges (AAMC), found that by 2014 almost half (48%) of all students graduating from U.S. medical schools were women.[2] At that time, in contrast, only 16% of medical school deans were women.[2,3] Data from the 2015 report "Canadian Medical Education Statistics" were similar: More than half of graduates (55%) were women[4], yet only one dean (6%)[4] and two chairs of medicine (12%)[5] were women. These data make it clear that despite the sizeable number of women in the medical school pipeline over the last three decades, academic leadership positions in medicine continue to be filled mainly by men.

Recruitment: Recruiting women into leadership roles (W.L.)

One of my most important and challenging tasks as a chair of medicine was recruiting faculty to serve as chiefs of departmental divisions. Recruiting women was almost impossible, and I failed routinely. I frequently met with women faculty members to discuss the possibility that they might apply for a leadership position. These women were outstanding scholars, typically well respected by colleagues. But when I asked them to apply, I frequently heard, "I prefer to focus on my scientific work and not take on that role. I don't think I would be good at it. I have too many commitments to my kids and

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parents so I just don't have the time. It doesn't seem like the right time in my career—maybe later." Despite explaining how much I enjoyed these roles, voicing my recognition of their concerns, and promising to support and mentor them, I was repeatedly turned down. Rarely did men in similar situations turn me down.

Furthermore, when I ran search committees for leadership roles, women were rarely suggested in the first list of candidates. Only on asking the committee to revisit the list and add women candidates did women's names appear. Many reasons for this blindness to potential women candidates have occurred to me, but they are hunches rather than based on specific data. Men are more often assertive about wanting leadership roles and may tell search committee representatives that they would like to be considered. Women rarely do this. Committee members may have asked women colleagues about their interest, but over time become reluctant to ask because they often got turned down. Or, unconsciously, they may have thought of men to fill their shoes rather than women because this is the model they had seen. Whatever the reason(s), the pool of potential candidates usually contained very few women, if any. As a woman in a senior leadership role once told me, "No woman wants to be the 'token' woman on the short list."

A number of initiatives have been aimed at developing women leaders in academic medicine. The Executive Leadership in Academic Medicine program in the United States has been effective in increasing the representation of women up to the level of assistant dean.[6] Sponsorship programs in the corporate world that have facilitated the movement of women into leadership positions have become available as models for medical academia. Sponsors differ from mentors in that they hold positions of power that allow them to advocate for, and advance the positions of, promising faculty.[7] Sponsorship has been proposed as a more effective way to accelerate women in academic medicine pursuing the highest-level executive positions (sometimes referred to as the "C-suite").

Editorship: Leadership of biomedical journals (F.D.)

During my years as editor of a major general medical journal (1995–2001), I witnessed the transition of the editorial leadership of biomedical journals from a group made up entirely of men to one that included a notable number of women. Over the years a substantial number of associate editors of biomedical journals have been women, but the number of women editors-in-chief was, until recently, extremely small. In view of this history it is particularly noteworthy, therefore, that women were appointed as editors-in-chief of three of the five largest-circulation, English-language general medical journals in the late 1990s and early 2000s, and that, as of this writing, two of the editors of those journals are women. It appears that a tenuous equity has been reached in this one small area of the academic medical universe—at least for a time.

Looked at more generally, however, the news is less encouraging: A 1998 study found that fewer women held editorial positions (13%) in public health journals than served as authors (29%) or reviewers (28%),[8] while in 1999 the percentage of women on fewer than half of the editorial boards of 12 major specialty journals had reached parity with the percentage of women in the respective specialties.[9] Moreover, in 2007 the proportion of women on the editorial and governing boards of 7 out of 24 specialty societies was significantly smaller than the proportion of women in those specialties.[10]

In 2012 the journal *Nature* assessed the ways in which its activities reflected women's contributions to science.[11] Of their 70 editors and reporters, over half (54%) were women. However, of the scientists that *Nature* profiled, only 18% were women, and only 19% of the commissioned articles they published included a female author.[11] The likelihood of women being invited to write commissioned articles, including editorials, is closely related to women being in more senior academic roles.[12]

Promotion: Moving up the academic ladder (P.A.R.)

At the time of my promotion to full professorship I was invited to give a talk that reflected on the success of my career as a clinician–scientist. In preparing the talk I had a difficult time deciding what story to tell. Rather than focusing on the many factors that helped me reach this milestone, I decided to tell the more truthful and less glamorous story that reflected the daily challenges of developing an academic career, and the slow progression to promotion—an experience shared by many women.

The story became clearer when I plotted the number of years since my first academic appointment against the number of my peer-reviewed publications (see Figure 1), and included on the graph the birthdates of my children.

This graph makes evident several key messages about careers for many women in academic medicine. First, the time following initial academic appointment is likely to be the busiest and one of the most stressful times of a woman's entire professional career. Three years into my academic appointment, I not only had three children under the age of five (as shown in Figure 1), but I was also establishing myself as a clinician–scientist, applying for my first grants, entering into collaborations, and writing my first publications. In spite of the expectation that clinician–scientists demonstrate their academic potential through receipt of independent grant funding and first-author publications during the initial five years of an academic career, my publications during this time period were represented (not surprisingly) by a fairly flat line.

Second, it is not unusual for scientific productivity to begin increasing years later, when one's children are older. This was clearly the case for me, as it took me eight years to advance from assistant to associate professorship. In contrast, when my children were older, it took me less time to advance to full professor.

In conversations with colleagues, I have come to understand that my experience was not unusual—women often have a slower start as they balance career and family responsibilities. This initial phase, when family needs and career demands are at their highest, deters some women from even considering careers in academic medicine, and the lack of academic success in this early period is responsible for the decision of many

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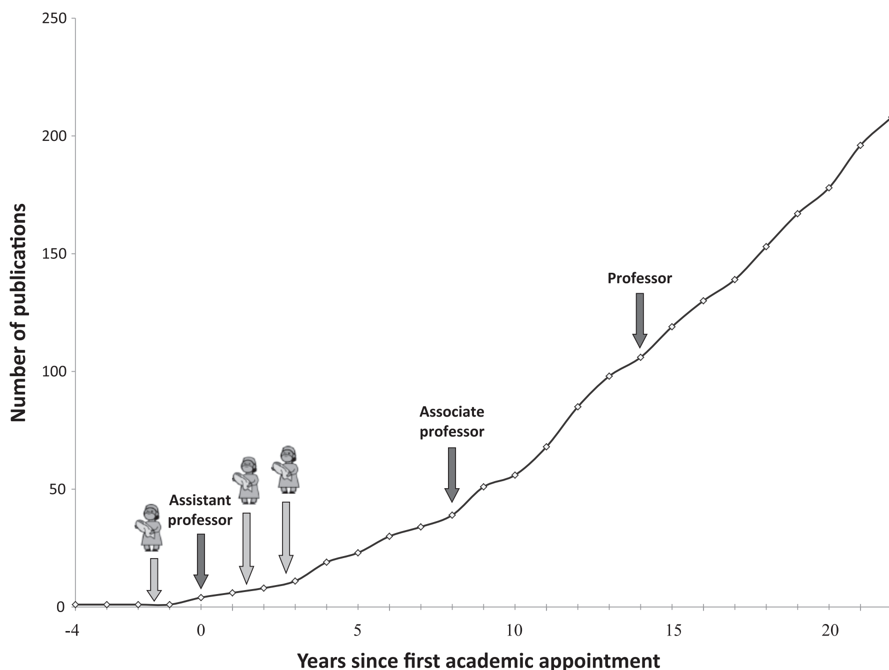

Figure 1 One author's (P.A.R.'s) publication record visualized over time, with academic appointments and birth of her children included. Her publication record shows a relationship between research productivity and the birth of her children.

medical women in academic positions to leave research.

Interviews with women who left research early in their careers have noted several factors associated with their decisions.[13] They lacked role models for combining career and family responsibilities, were frustrated with research, struggled with work–life balance, and were challenged by an institutional environment that they described as noncollaborative and biased in favor of male faculty.[13]

Women in academic medicine are promoted at a slower rate than their male colleagues. According to the 2014 AAMC report,[2] only 5% of full-time faculty at the professor level were women, and the percentage of faculty at the professorship level who were men was almost four times greater than that of women (18% men vs. 5% women).[2] These numbers were virtually unchanged from the prior 2012 report.[3]

Work–life balance: Making choices (P.A.R.)

When my children were young, I actively developed strategies to prioritize family time. For me, this meant working focused hours. The fact that I was also a physician magnified the caregiving role, particularly when my children were ill. Taking my children to school and returning home for dinner was a very high priority. Doing these simple tasks meant making choices; for example, I consolidated my research activities into a defined period each day, and sharply focused my efforts. (This strategy has been recommended as being extremely important for productivity in academic writing.[14])To maximize my productivity, I focused on publishing full papers and did not submit abstracts. I often worked on manuscripts late at night. I minimized travel to attend conferences, as I wanted to stay close to home, which compromised my ability to network and may have delayed the dissemination of my research. My goal at that point was not primarily to advance my academic rank, but to achieve a work–life balance in which I could pursue research while having quality time with my young family. During this phase of my career, few women were available to whom I could turn for guidance.

A 2006 article captured the issue very well by pointing out that moving up the academic ladder as quickly as possible may not be the goal for many in academic medicine.[12] There is always potentially an important element of choice in academic careers, and women may choose to spend more time with their families.[15] Women physician–researchers, more often than men, had partners who were employed full-time. In these relationships, women were more likely than men to take time off when there was a disruption in their child care (42.6% women vs. 12.4% men), and women took on more domestic roles.[16] The title of a recent article by Cooke and Laine,[15] "A woman physician–researcher's work is never done," nicely captures these realities. Not surprisingly, these choices appear to be reflected in the professional disciplines chosen by women physicians. In Canada in 2014, more women than men were geriatricians (56.6% women vs. 43.4% men), a career in which the hours are more flexible; conversely, fewer women were represented in surgical specialties (24.6% women vs. 75.4% men).[17]

Discussion

Our personal experiences and a brief sampling of the literature indicate that, more than 25 years after W.L. published her article, the social and professional environment of academic medicine has become more inclusive of women, but that women who pursue academic medical careers also continue to face substantial challenges. In the early 1990s, the fact that half of medical graduates were women suggested that this abundance of women in the pipeline would soon lead to the proportionate representation of women in academic leadership roles. So far, the promise of this "pipeline theory" has not been fully realized.

The challenges we experienced represent only a tiny sample, but they provide some insight into the reasons that the increased number of women in medicine has not translated into more women leaders. Many women's career trajectories do not occur in a straight line; many are deterred by other priorities. How can we structure opportunities for women to make their scholarly careers maximally productive while also meeting their personal goals? An important positive step would be to restructure women's academic career paths in ways that allow them, particularly clinician–scientists, to remain in those paths. More specifically, when academic and family demands compete, it may be difficult for women to meet the criteria for academic success within the traditional time limits, which usually overlap with the competing demands on their time in

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their early career. Flexibility in structuring career paths in academic medicine is already beginning to happen. Universal availability of this feature, if provided without compromising standards of scholarship, could therefore be an important strategy for retaining women in academic careers, and help them move into leadership positions. Rethinking women's careers in science in terms of a long-distance run rather than a sprint could not only increase the contribution of their talents and energy to medical academic work but also serve as the model for a constructive rethinking of other traditional aspects of careers for both men and women in academic medicine.

Some initiatives have been developed at the institutional and national levels to promote the advancement of women to senior leadership positions. For example, the editors of *Nature* decided that before commissioning an invited article they would ask themselves, "Who are the five women I could ask?" This strategy did not mean that a woman was necessarily invited to write the article; it meant that women were considered and encouraged to contribute. Similar strategies can be employed by academic organizations to ensure that women are represented on, and considered by, search and award committees. Another example is the AAMC report "The State of Women in Academic Medicine."[2] This provides metrics on women entering the pipeline (medical school and residency positions), those in the pipeline (workforce numbers), and those leading the pipeline (from division leads to dean). This provides data from which others can benchmark.

Compared with their virtual exclusion from medicine in past centuries, women are now an integral part of the medical community.[18] Unfortunately, however, many of the challenges that women have faced in academic medicine over the past 25 years remain unresolved. Initiatives at the individual, institutional, and national levels have been and will continue to be important in promoting increased leadership roles and professional productivity for women in medical careers, by creating an environment that accepts the realities of work–life balance while maintaining the highest scholarship standards. The issues surrounding the relative absence of women leaders in academic medicine are complex,[19] remain unresolved, and deserve continued serious attention.

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