

# Women in Leadership: Why So Few and What to Do About It

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## Abstract

The numbers of women in medical school and in medical training have increased dramatically and are near 50% overall, but the number of women who advance to senior and leadership positions is not nearly this high. There are many reasons why the number of women in leadership roles in academic medicine has not kept pace with the number of women entering the field of medicine. Two popular themes are the glass ceiling (referring to an invisible barrier to advancement) and the leaky pipeline (the loss of women faculty along the path, or pipeline, to advancement). I believe that both come into play. Glass ceiling issues tend to be of two types: those related to the institutional culture and those related to problems of bias, especially unconscious bias. Leaky pipeline issues include the challenges of work–life integration and the need for leadership development for women. There are solutions to all of these challenges. These include improving institutional culture; making sure women advance as quickly as men and are paid equitably; ensuring that there are resources to help with work–life balance, related not only to family but to all aspects of life; and providing adequate mentoring and leadership training. These measures will help all faculty, as factors that hamper women’s advancement may hamper men as well. Although these themes are broadly applicable, there are strategies that can address them all. We just need to be aware, and be proactive, and we will succeed in breaking the glass ceiling and patching the leaky pipeline.

**Key Words:** Leadership, unconscious bias, women faculty, “glass ceiling,” “leaky pipeline”

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## INTRODUCTION

There has been a dramatic increase in the number of female physicians since I was in medical school in the early 1970s, when women represented about 10% of the class in most medical schools. They now account for about one-half of the class in most medical schools in the United States. However, we do not see a parallel expected increase in women in senior faculty and leadership positions in academic medicine. For example, in the 2014 Women in Medicine and Science report from 129 medical schools performed by the Association of American Medical Colleges (AAMC), women accounted for 46% of applicants to medical school, 47% of graduates from medical school, 46% of residents, and 38% of medical school faculty, but only 21% have reached the

rank of full professor and only 16% of medical school deans are women [1]. According to data from the AAMC faculty database of full-time faculty, women are relatively well represented at the level of junior faculty (24% men and 19% women at the assistant professor rank), but the numbers drop off at the associate professor rank (14% men, 7% women) and there are even fewer women at the rank of full professor (18% men, 5% women). If we combine associate professors and full professors, we see the disparity: 52% men and 30% women [1]. The remaining 12% are faculty in other ranks, such as instructor. There has been a small increase in women in leadership roles. For example, from 2004 to 2014, the percentage of female department chairs rose from 10% to 15% and deans from 10% to 16%. This is a very slow rate of increase.

Focusing on radiology, let’s compare radiology with the two disciplines with the largest number of female faculty (obstetrics/gynecology and pediatrics) and the two with the lowest number of female faculty (general surgery and orthopedic surgery).

The number of female faculty in radiology at all ranks is in the middle of this spread, but in all five disciplines

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we see a real drop-off at the associate and full professor levels, even in those departments with large numbers of female faculty. However, for department chairs, radiology is actually doing well at 18%, only a bit lower than obstetrics/gynecology (22%) and pediatrics (20%) and much better than general surgery (1%) and orthopedics (none), when these data were collected in 2013-14.

## BARRIERS TO ADVANCEMENT

What is happening? Why are we losing women? Is it the glass ceiling? The “glass ceiling” is a term that describes an invisible barrier to advancement. Or is it a leaky pipeline? The “leaky pipeline” refers to the loss of women faculty along the path, or pipeline, to advancement. I believe it is both.

## GLASS CEILING

Glass ceiling issues tend to be of two types: those related to the institutional culture and problems of bias, especially unconscious bias.

### Institutional Culture

**Academic Medical Centers.** The culture of academic medical centers varies among institutions. It may be reflected in resources, rates of advancement, and recruitment and retention, among other factors.

Here are some ways to assess culture:

- Are men’s and women’s salaries equal for the same job, that is, by degree, years in rank, and job profile?
- Are men and women promoted at similar rates?
- Is there the robust mentoring that is so essential for academic success, for both men and women? It is especially needed for our clinician-teacher faculty.
- Are there family-friendly policies? For example, meetings at 6 AM or 6 PM are very difficult for faculty with young children at home or elder-care responsibilities. Is there support for child care such as onsite or nearby affordable daycare, sick child drop-in options, nanny-share networks, and backups for emergency situations? These are very important and can be crucial in helping faculty achieve the ever-elusive work–life balance (now termed work–life integration).
- Do women have equal support for their work? This can be in terms of secretarial/administrative support, time in the operating room, and nursing and clinical support staff, among other criteria. For example, in 1994 at the Massachusetts Institute of Technology, scientist Nancy Hopkins took a tape measure and measured the

laboratory space of all the faculty in her building, and found that male faculty had significantly more laboratory space than women and senior men had the most laboratory space. When she and other female scientists brought their findings to the institution in 1999, it responded in several ways, including assigning new space, adding a daycare center to a new building, and making sure women were not afraid to take family leave to have a child. The number of female faculty increased dramatically.

A key issue is the biological clock, which is often out of sync with the academic clock. Typically, the academic clock starts with appointment to assistant professor with 6 years to be promoted to associate professor. On appointment, faculty are typically in their 30s, the same decade in which they may be most interested in having a family (including adoption). This decade is a very important time for academic productivity. I don’t want to focus only on family, as it also may be the best time to achieve an important goal, like climbing a certain mountain, running a marathon, or developing a skill in a nonmedical area, among others. This creates a tension between academic productivity and other aspects of life.

Overall, according to AAMC data, the 10-year promotion rate to associate professor for men is 37%, but the rate is only 31% for women [1]. There may be many factors contributing to these figures, but I am fairly confident that the pressures between work and “everything else” (ie, life) play an important role.

What can we do about this? We should make sure that our promotion policies are fair, updated, and reviewed regularly with faculty input, and that clock extensions are given for having/adopting children or for other circumstances, including illness and eldercare. Faculty should be educated early about the promotion requirements. There must be annual faculty reviews that are honest, helpful, and well documented. Moreover, faculty should be promoted on the basis of the work they were hired to do. My advice to junior faculty is to read your offer letter carefully and make sure the job is what you want to do. Women—make sure you negotiate for an appropriate salary, as some salary inequalities can occur when women don’t negotiate, resulting in lower starting salaries. Faculty that start behind their peer group never catch up. Finally, when junior faculty are asked to take on administrative tasks, like being a program director, they should evaluate the request carefully to make sure this work will not take away from the work that is needed for promotion.

Support for work–life integration is very important, and institutions can play an important role. We should make sure there is no bias against faculty who take leave. Hiring locums is one solution for taking the pressure off faculty who must pick up the workload, especially in departments where many women are in their childbearing years, as well as when faculty are ill or need leave for other reasons.

A department culture of gender equity can be built by combining “top-down” and “bottom-up” efforts. When Dr Norman Beauchamp became Chair of Radiology at the University of Washington, he realized the need for gender equity in the department, which coincided with a proposal by one of his faculty members, Dr Yoshimi Anzai, who wanted to start a “Women in Radiology” program. Dr Beauchamp not only provided financial and administrative support but also messaged to the department faculty and trainees that promoting gender equity was a priority. The program included mentoring, regular dinner meetings with invited guest speakers, honest dialog, anonymous surveys related to gender-specific issues, and book clubs. Over 8 years, the number of female assistant professors increased from 6 to 22 and associate professors from 4 to 15, although the number of full professors only increased from 3 to 4. This impressive program resulted in an abstract presented at AAMC [2]. In short, institutions can support women in medicine and science through a number of ways, including mentoring, coaching, and leadership training. Male faculty can benefit as well, as a “rising tide floats all boats.”

**Professional Societies.** Our professional societies are another important venue to develop and support female faculty. In recognition of the disparity in the numbers of men and women in radiology, the ACR has initiated a Commission for Women and General Diversity. The commission has been active in publishing material related to their charge [3,4]. One of their publications, “Improving Diversity, Inclusion and Representation in Radiology and Radiation Oncology,” recommended a three-pronged approach: (1) advocacy and awareness; (2) professional opportunities including leadership positions; and (3) institutional performance and practices, to include mentoring, improving climate, and specific suggestions such as requiring diverse search committees for new hires.

I looked up the number of women who had been presidents of radiology societies since the year 2000 and I was very impressed: six for the Association of University Radiologists and four for the RSNA. This compares well with the AMA, with only two female presidents in the

same time period. Moreover, there is a society especially for women in radiology and radiation oncology, the American Association for Women in Radiology, founded in 1981 to provide a forum for issues unique to women in radiology and radiation oncology, to sponsor programs that promote opportunities for women, and to facilitate networking among members and other professionals.

## Bias

Let’s turn now to the topic of bias, conscious and unconscious. The conscious bias of the past is, hopefully, outdated. It openly states that leadership roles are held by men because male traits, such as dominance, confidence, and self-reliance, are a better fit for leadership than female traits. It is time to get rid of this stereotype, as well as the old axiom that “men take charge, women take care.”

A more difficult problem is unconscious bias; this is a bias that we are unaware of and that happens outside of our control. Our unconscious biases can actually be measured with an online tool, called the Implicit Association Test, available at the website [implicit.harvard.edu](http://implicit.harvard.edu). The book “Blind Spot: Hidden Biases of Good People,” by Mazarin and Greenwald, who developed the Implicit Association Test, is an informative and readable book [5]. We all have these hidden biases, including race, age, and gender, among others. A revealing study by Moss-Racusin et al [6] tested gender bias, giving male and female science professors the curriculum vitae of a student applying for a laboratory manager position. The résumés were identical except for the name; one was male, one was female. There was a significant difference in the evaluations of the résumés. Both male and female professors viewed the résumé of the woman as less hireable and less competent than the man and they offered a lower salary and less career mentoring, although they did “like” the female applicant more. The bias was modest but real.

What can we do about unconscious bias? We cannot get rid of these biases, so we need to put solutions in place to mitigate them. The first step is to acknowledge that these unconscious biases exist so that we can educate people about their destructive qualities. At the University of Washington, all search committee members are now required to undergo training about unconscious bias before starting the search process. It is also helpful to have diversity among the members of search committees.

The good news is that bias against female leaders is decreasing, traditional gender roles are changing, and both men and women want more women in leadership roles [7,8].

## “LEAKY PIPELINE”

### Work–Life Integration

Let’s frame this issue with a vignette: there will be a day when you are overbooked in clinic or your grant is due but your nanny calls in sick, your partner is out of town, you have no relatives nearby, and it looks like your first grader has head lice. These are the days when you wonder if it is really possible to do this job. We have all had such days—maybe not quite this bad, but we’ve all had days when we questioned whether the academic path was possible.

I am not going to address provider burnout, although I have written about this—it is a separate topic—and huge! But let’s look at what can be done. We need to have support networks—family, friends, neighbors, colleagues. We all need friends we can count on, and who know they can count on us on those dreadful days. There are some myths—that you have to choose between work and family (here you can insert any other major activity or goal in life); they can coexist, but you may have to make decisions and choices, and these are very individual. My advice for decades has been to do whatever decreases your guilt the most. When my children were young, my women friends and I all felt guilty—those who were working felt guilty for working and those who weren’t working felt guilty for not working.

One solution is flexible work policies and part-time work. Unfortunately, part-time work was not an option for me when my children were young. I am glad that has changed. Of the many faculty who now work part-time, 45% are women and this is usually on account of dependent children. In contrast, 55% are men who usually work part-time because they have other professional positions.

Other solutions include mentoring and networking. The importance of mentoring is now well established and should include multiple mentors, for both professional and personal goals, as well as peer mentoring, which can be invaluable. You may be able to talk and problem solve with peers better than with others. Mentors can be long distance, too. Finally, don’t forget to give back and be a mentor, too. Mentors often gain as much as mentees.

### Leadership Development

We all need to develop our leadership skills. Another myth is that women don’t want to be leaders. I’ve heard men say of women, “Women are too smart to want to be dean or chair—those are terrible jobs.” Yes, those are hard jobs, but women deserve the chance to tackle them as often as men. Maybe those jobs need to change and maybe women are meant to make those changes. Research shows that

women have excellent qualifications to be leaders. One study identified nine behaviors that improve organizational performance. Of these, women used the following traits more than men: people development, expectations and rewards, role model, inspiration, and participative decision making. And men used the following traits more: control and corrective action and individualistic decision making. Both men and women were similar in intellectual stimulation and efficient communication [9].

When my friend Trisha Davis, PhD, became chair of biochemistry at the University of Washington, she was advised that she should only do two things: she could administer, she could do research, or she could teach, but she could not do all three. She chose administration and research and is a successful department chair. We have always talked admiringly of the “triple threat”—the faculty member who excels at research, patient care, and teaching—or even the quadruple threat, adding administration as a fourth leg to the three-legged stool. Is this really still realistic today? Maybe it’s time to be satisfied with doing one or two things well.

Another contribution to leaks in the pipeline is the lack of role models for women—no one wants to be the first, or the canary in the mine. We should celebrate and highlight and support our women leaders. We can also look outside our profession for role models.

Finally, we all need leadership development. Some things I have found helpful:

- Attending the AAMC midcareer program for women.
- Self-awareness—in the book “Now, Discover Your Strengths” [10], you can take an online test that tells you your top five strengths. My top two are fairness and harmony; you can see that these can be a source of conflict. Things may not always be fair, and you cannot make changes without addressing conflict—the opposite of harmony.
- Learning about my conflict resolution styles using the Thomas-Kilmann conflict mode instrument [11] was revealing.
- Taking time for self-awareness and self-reflection.
- Watching when others succeed and when others fail.
- Reading books and articles from the business world, taking leadership courses, and watching online resources like TED talks.

Women have asked me if they need to be more like men to succeed in “a man’s world.” My answer is no—stay true to yourself and your values. Henry Higgins sings in *My Fair Lady*, “Why can’t a woman be more like a

man?”—but he was wrong. For today’s women, when opportunities arise, go for it if you want. Sheryl Sandberg noted in “Lean In” [12] that women were less likely to go for promotions until they felt fully prepared, whereas men went for them figuring that they would be able to learn on the job.

It’s also okay to fail—I’ve applied for positions I didn’t get. Sure, it felt a little bad to be rejected, but I learned along the way, and in both situations, those chosen for these positions I did not get did a much better job than I could have done.

## CONCLUSIONS

There are many reasons why the number of women in leadership roles in academic medicine has not kept pace with the number of women entering the field of medicine. One institution evaluated reasons why early-career female faculty left academics. The most common factors were lack of role models to combine career and family responsibilities, difficulties in research funding, competition, poor mentoring, and an institutional environment described as noncollaborative and biased in favor of male faculty [13]. Another recent study of women at multiple academic medical centers identified five themes: climate, lack of parity in leadership roles, leaky pipeline, lack of gender equity in compensation, and disproportionate burden of family responsibilities and work–life balance on women in career progression [14].

Though these themes are broadly applicable, the good news is that there are strategies that can address them all. We just need to be aware, and to be proactive, and we will succeed in breaking the glass ceiling and patching the leaky pipeline.

## TAKE-HOME POINTS

- Women lag behind men in senior positions in academic medicine.

- This is owing to both glass ceiling and leaky pipeline issues.
- The major factors can all be addressed by improving institutional culture, addressing conscious and unconscious bias, providing solutions for work–life integration, and improving leadership development.

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