

**INDIANA UNIVERSITY SCHOOL OF MEDICINE
OFFICE OF FACULTY AFFAIRS AND PROFESSIONAL DEVELOPMENT**

WOMEN IN ACADEMIC MEDICINE AND SCIENCE REPORT

In order for the IUSM to achieve its vision and accomplish the goals set forth in the “Strategic Plan for the Year 2000 and Beyond” and the “Life Sciences Strategic Plan,” the institution must equip itself with faculty who can achieve their full potential and whose talents are maximized. In today’s rapid, competitive, global environment, IUSM cannot afford to under-use any portion of the talent pool. Evidence shows, however, that academic medicine as a whole is not maximizing the talents of women faculty.

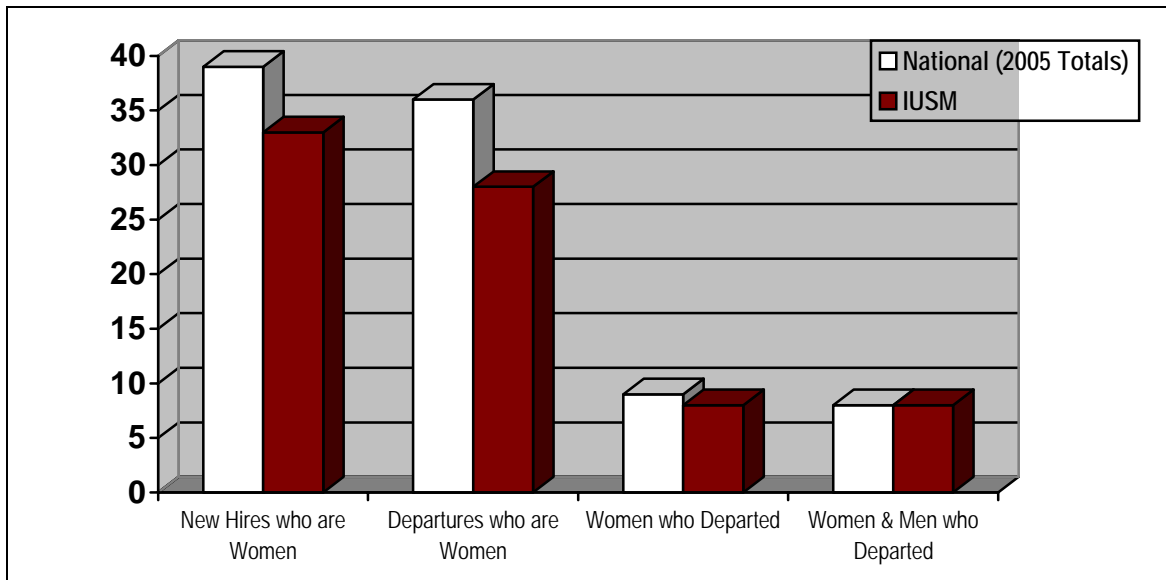
Despite equity in admission rates for women entering medical school (now approximately 50%), the pipeline of women entering and achieving advanced academic careers has not been significantly impacted. Over the past 15 years, the proportion of women full professors in academic medicine has only increased nationally by 1%.¹ Further, while the numbers of women faculty, chairs, and deans have never been higher, significant gender differences exist in promotion, compensation, and advancement of women.

The lack of women among the faculty and leadership positions comes with significant cost. Human capital and leadership talent are critical and scarce resources. In the business world, as diversity increases, so does resilience and stability. Fortune 500 companies with the highest percentages of women executives deliver greater earnings compared with companies with the fewest women leaders.^{2,3} In academic medicine, women students tend to seek women faculty for role models, just as women patients tend to seek women providers.⁴ Thus, as the number of women students remains high, only those schools able to recruit and retain women faculty in all departments will have the best students and housestaff.⁵ The absence of women in key positions is a negative recruitment signal for women faculty candidates.¹ To maintain a leading edge, institutions must build and support capacity among its entire faculty – men and women, underrepresented minority, and majority. In order to do so, systemic interventions across the culture of the institution are needed for segments of the faculty who have traditionally faced cumulative career disadvantages.

How do women at IUSM compare with national benchmarks?

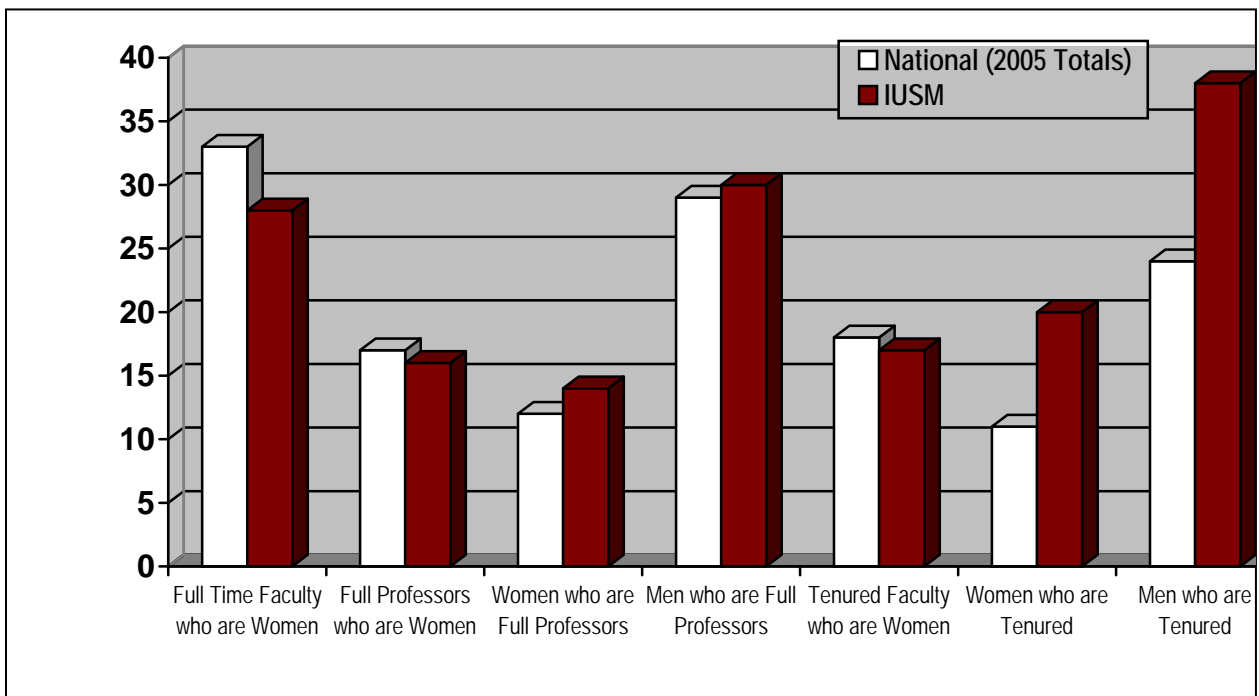
Benchmarking IUSM with National Statistics

Figure 1. New Hires and Departures



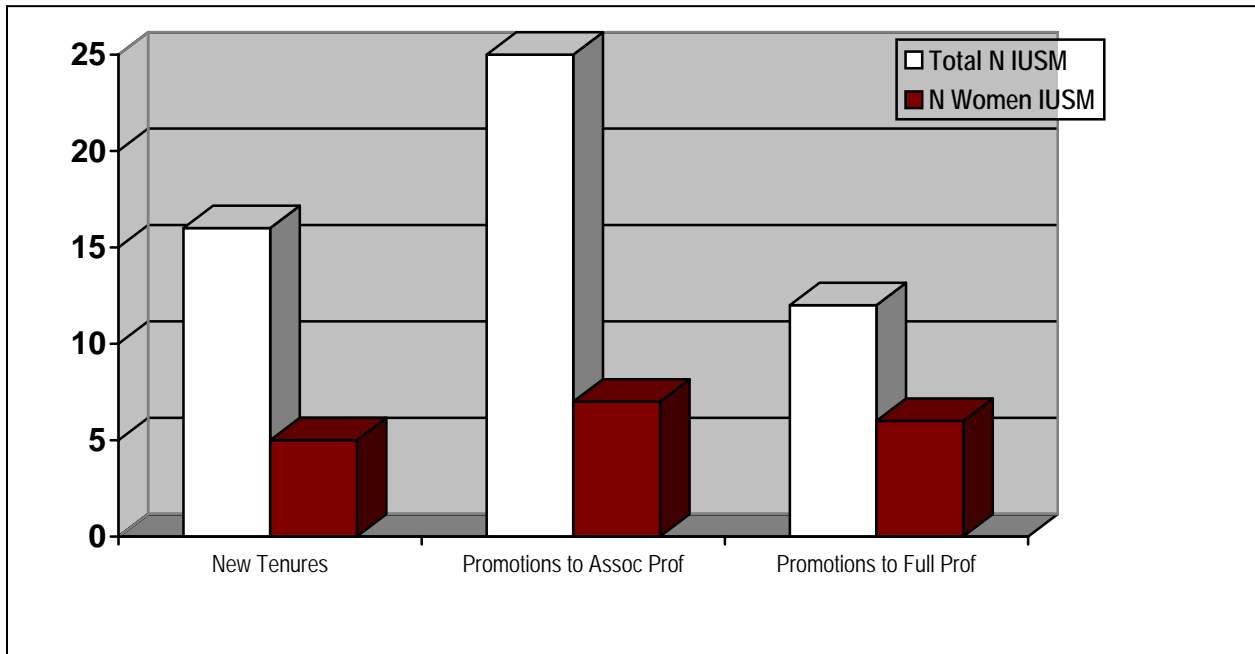
Note: National Data from AAMC Women in Medicine Benchmarking Report, 2005-2006. Columns represent percentages

Figure 2. Full Time Faculty by Gender, Rank, and Tenure



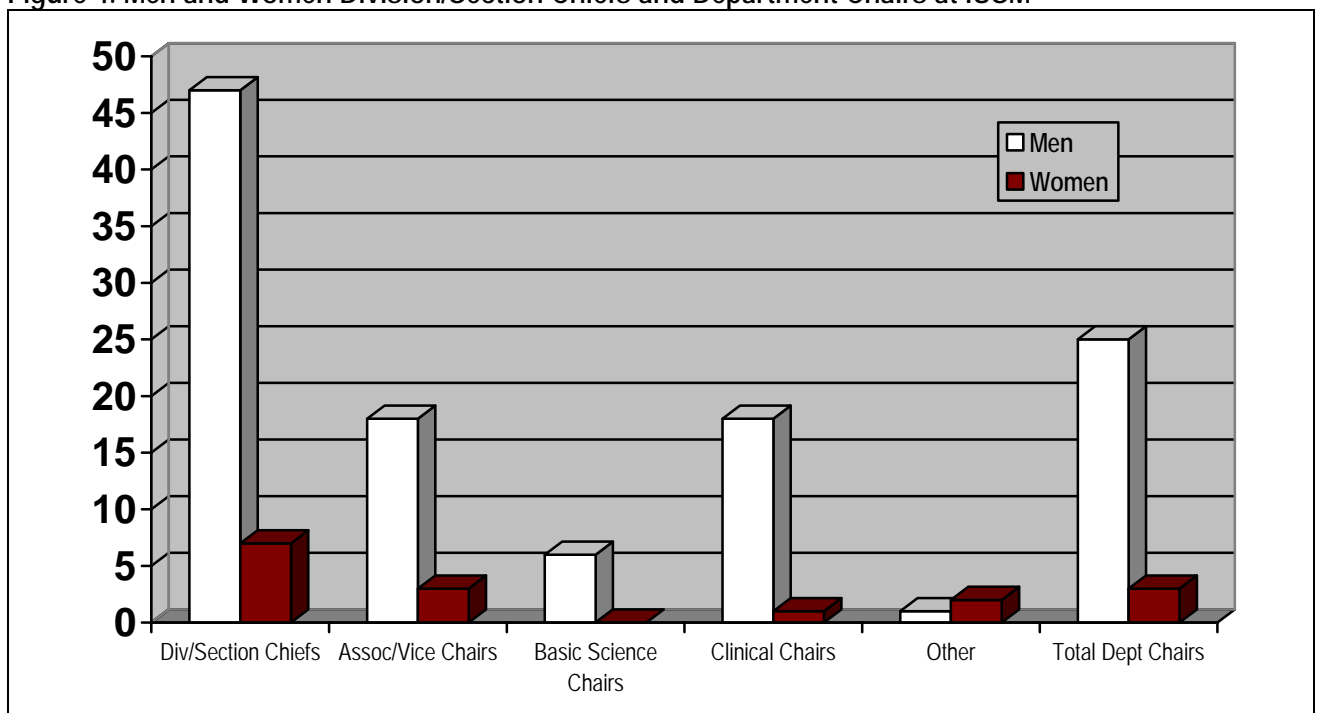
Note: National Data from AAMC Women in Medicine Benchmarking Report, 2005-2006. Columns represent percentages

Figure 3. New Tenures and Promotions at IUSM



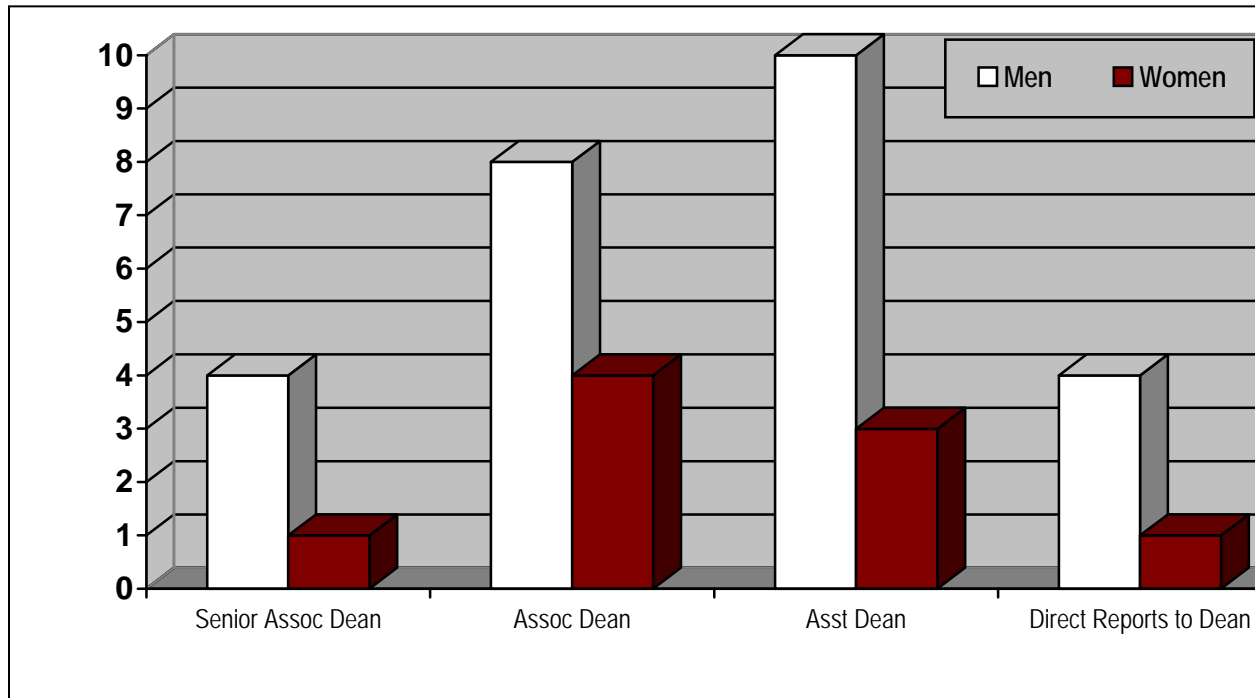
Note: Data from AAMC Women in Medicine Benchmarking Report, 2005-2006. Columns represent absolute numbers at IUSM

Figure 4. Men and Women Division/Section Chiefs and Department Chairs at IUSM



Note: Data from AAMC Women in Medicine Benchmarking Report, 2005-2006. Columns represent absolute numbers at IUSM.

Figure 5. Men and Women in Decanal Positions at IUSM



Note: Data from AAMC Women in Medicine Benchmarking Report, 2005-2006. Columns represent absolute numbers at IUSM.

Women in Academic Medicine and Science Face Cumulative Career Disadvantages

Women faculty face a variety of barriers to career advancement in academic medicine and science. Lack of effective mentoring, gender stereotypes and biases that impact both the day-to-day working climate and leadership opportunities; institutional promotion and tenure practices that force “either advancement/or family” choices, and disparities in compensation and rank all impact women in academic medicine. Women from racial and ethnic minority backgrounds face even more barriers to success.⁶ All of these issues add up to cumulative career disadvantages.

Promotion and Compensation Disparities between Men and Women Faculty

Several studies using a variety of methodologies have shown that promotion rates among women faculty lag behind the rates of male faculty.^{7,8} In one of the best designed studies for statistically controlling for factors that predict promotion, (such as role, number of publications, etc.), Ash and colleagues found that women were much less likely to be promoted to full professors than men despite similar achievements and roles. Sixty-six percent of men but only 47% of women with 15-19 years of seniority were full professors. At all levels of productivity, women were less likely to be full professors than are their male peers.⁹

Moreover, this study found significant inequity in compensation between men and women. Female physician faculty had a noticeable deficit (-\$11,691). For women faculty with greater

seniority, the salary deficits were even larger (-\$485 per year of seniority). As the cohort aged and assumed more leadership roles, deficits increased. Women chairs and chiefs received \$14,000 less than expected. Women faculty thus started out with a salary differential that increased as seniority increased.

These results are not unique to this study. In June 2004, a U.S. Census Bureau report showed that female physicians averaged 63 cents per every dollar earned by their male colleagues.¹⁰ While some have argued that the gap is due to women choosing lower paying specialties,¹¹ the difference in pay remains even when studies match samples based on specialty choice and other factors. For example, in studies of plastic surgeons and cardiothoracic surgeons,¹² no gender differences were found in background, hours worked, or professional activities, yet women made lower salaries, were less likely to be tenured or hold higher academic ranks. Among internists, women earned 14% less per hour than men, even after adjusting for multiple variables.¹³ Similar results were found in a study of academic pediatricians.¹⁴

Work/Family Balance Issues Differentially Impact Women Faculty

The fact that several studies find inequities in promotion and compensation rates despite statistically controlling for a multitude of variables, stands counter to the notion that promotion rates and salary differences are attributed to simply a matter of choice among women. While studies have documented that women in academic medicine work fewer hours than men on average,⁷ women also tend to face greater role strain than men. For example, studies show that women, whether working outside the home or not, whether in dual career relationships or not, shoulder the lions share of caring for children and aging parents. The academic timetable of promotion and tenure can create a struggle to balance time spent on academic pursuits with family obligations, and may be particularly difficult for women with young children. The tenure clock traditionally coincides with this phase of life. Indeed, female faculty with children report greater obstacles to career advancement and less institutional support when compared to male faculty with children.¹⁵ The traditional assumption that a faculty member has almost unlimited time to engage in professional endeavors or has significant spousal support to manage one's home and family impacts all junior faculty, men and women alike, in today's society. The majority of faculty today do not have such spousal support; close to half the spouses of male faculty work full time, while about 90% of the spouses of women faculty in science and engineering are employed full-time.⁶ Thus, while work/family balance is not solely a "women's issue," the issue does differentially impact women faculty due to extent to which women generally have caregiving roles and are in dual career relationships. In general, the promotion and tenure timeline conflicts with the career trajectories of many women, who tend to be most productive between the ages of 50 and 60.¹

Gender Bias and Stereotyping Remain

Women's work in general tends to be undervalued.¹⁶ A substantial body of controlled experimental studies shows that men and women both hold implicit biases and unconscious mental models of gender. For example, despite identical qualifications and accomplishments, on average, people are less likely to hire a woman than a man, and are more likely to give credit or the benefit of the doubt to a man than a woman.⁶

In a system such as academic medicine, which relies to a great degree on recommendations and external reviews of one's work, these tendencies can have significant "gate keeping" impact. Consider the following examples. Women applicants to a postdoctoral fellowship program revealed that they had to be 2.5 times as productive – an equivalence of three extra papers in a prestigious journal – just to receive the same "competence scores" as male applicants to the same program.¹⁷ In a similar study of letters of recommendation for faculty hired at a large U.S. medical school, letters for women were shorter, more often contained "minimal assurance" language (15% compared to 6% of letters for men) and gendered terms (i.e. "intelligent young lady;" 10% vs. 5%). Twice as many letters for women contained "doubt raisers" (24% vs. 12%) and letters for women contained fewer "standout phrases" (such as "outstanding" or "excellent").¹⁸

Both men and women are guilty of gender stereotypes getting in the way of evaluating another person's work, and it happens across many professional fields. Men and women who were asked to rate works of art, articles, and CVs gave higher ratings when they believed they were rating the work of men.¹⁶ Such findings have profound implications for promotion and tenure and the advancement of women in leadership positions.

In fact, women are often stereotyped as lacking the very qualities associated with effective leadership. Yet, in more than 40 studies of leadership behavior spanning 15 years, researchers find many more similarities than differences between women's and men's leadership styles and abilities. The differences that have been found are small and are mainly in the use of democratic decision-making processes. However, biases about gender differences in leadership do exist among all levels of institutional personnel - including senior leaders - and the impact of men's stereotypes of women leaders can be substantial simply because men so far outnumber women in leadership roles.¹⁹

One study found that many senior business leaders maintained gendered stereotypes that could be characterized as thus: "women take care" (women leaders are believed to be better than men at supporting and rewarding subordinates); while "men take charge" (male leaders are believed to be better at behaviors such as delegating and problem solving). Differences in perceptions of problem-solving abilities by women leaders is particularly problematic, since this can lead to resistance which may seriously undermine a woman leader's ability to motivate followers, build teams, and inspire others. This study also showed that these gender stereotypes were strongest when the women worked in predominantly "male" fields, and in those employees with women supervisors. This finding implies that simply hiring more women into leadership positions won't eliminate stereotypes. Exposure to women leaders isn't enough; organizations must take proactive steps to eliminate such bias. In traditionally "male" fields (such as academic medicine),

women generally have to spend considerable effort motivating and negotiating with subordinates to get their buy-in. In such fields, the role and demands of leadership may be far more difficult for women than for their male counterparts.¹⁹

Indeed, leadership can be quite a challenge for women in academic medicine and science. When department chairs at academic medical institutions were interviewed about the continued shortage of women, the following themes emerged: constraints of traditional gender roles and sexism in the environment, and few effective mentors. Women chairs reported that they personally experienced a lack of recognition, resistance from those reporting to them, limitations on leadership and decision-making, and received inappropriate attention.¹

Lack of Effective Mentors

One issue that consistently predicts greater success in academics is mentoring. However, effective mentors for women faculty are frequently lacking. One study found that mentors more actively encouraged men than women protégées, and women were three times more likely to report that their mentors took credit for their work.²⁰ Yet, women's need for mentoring is as great as or possibly greater than the need for men.²¹ In two areas where effective mentors can make a significant difference, recommendations for top positions and networking, women are at a distinct disadvantage if they lack a good mentor, since others may be less apt to view women as qualified for top positions even when their credentials are equivalent or superior²² and since women's networks are often less extensive due to sheer numbers.²³ Men can have difficulty mentoring women for a variety of reasons, however and the pool of available senior women to serve as mentors is smaller and smaller the higher one moves up the leadership chain. This issue has several implications for the development of junior women faculty. A recent study examined original articles in six prominent medical journals between 1970 and 2004. Women represented 16% of first authors and 10% of senior authors. Examined over time, the proportion of women first authors increased from 6% in 1970 to 29% in 2004, and the proportion of senior authors increased from about 4% to 19%. Although increasing over time, the data suggest that a gender gap in authorship remains, and is particularly evident among senior authors and editorial commentators.²⁴ This shows that the pool of women eligible to serve as senior authors, implying mentorship of others, remains limited.

The lack of effective mentors may also relate to compensation and promotion differences between men and women. Women are generally not socialized to be good negotiators, are less likely to initiate salary discussions, and are more likely to accept whatever is offered.²⁵ Mentors, however, can provide support and information regarding salary data. The obstacles women face in obtaining mentoring can translate into lack of essential information, isolation,²⁶ fewer leadership opportunities, publications, and in general, less knowledge of academic career "survival tips."

The Institutional Climate For Women Faculty

Such issues as lack of mentoring, inequities in promotion and compensation, and negative stereotypes clearly impact the overall institutional climate for women. Climate issues also manifest themselves in many day-to-day issues. For example, one study found that women

faculty were less likely to have office or laboratory space, to have protected time for research, or to have begun their careers with grant support.⁷ Similarly, studies of academic surgeons found that women relative to men, reported inadequate clerical support, technical support, and non-research startup funds, as well as isolation from peers and fewer career advancement opportunities.²⁷ A survey to specifically assess the gender climate at a U.S. medical school determined that women respondents, compared to men, were less likely to “feel like a welcome member of the academic community” or to feel as though their advice was sought. Overall, women reported two to three times as many barriers to career advancement than males.²⁸

Gender bias and institutional culture also impact everyday educational and clinical environments as well. For example, students tend to judge women faculty who lack a “nurturing” approach much more harshly than they do male professors who are similarly tough.²⁹ In the clinical arena, women physicians face extra difficulties in the doctor-nurse relationship, often receiving less help than men and being treated with less respect.³⁰ Additionally, compared to men, women physicians have more patients with complex psychosocial problems and report substantially less work control (i.e, volume of patient load, office scheduling). It is no surprise then, that the women in this study were 1.6 times more likely to report burnout than men, with the odds of burnout increasing by at least 12% for each additional 5 hours worked per week over 40 hours.³¹

Culture Change is Needed

The features of a supportive gender climate include: equitable salary and resources; respect for diverse roles to create a collaborative environment; clear and consistent communication and expectations; inclusive processes of decision-making and supportive leadership; commitment to mentoring and faculty development at all levels; a flexible work environment without negative consequences for faculty with care giving responsibilities. Of course, these issues are not limited to women faculty. Indeed, *what is good for women faculty is good for all faculty, and is good for the institution as a whole.*³²

School of Medicine Programs

In 2001, only 13% of medical schools have formal women faculty organization; an additional 31% have an informal one. At 69% of schools, the Dean allocated some annual funding for women in medicine initiatives. At about one third of schools, there was no financial support from the dean’s office.¹

Recommendations for Change

- Some institutional change interventions must come from the top down. Those in the most senior leadership positions (i.e., Presidents, Chancellors, Deans, etc) must provide clear vision for changing the culture and structure of their institutions to recruit, retain, promote women and minorities into faculty and leadership positions. Such university leaders should, as part of their mandatory overall management efforts hold leadership workshops that address diversity and strategies to overcome gender bias for deans, department chairs, search committee chairs, and other faculty with personnel management responsibilities.

- Departments are the seat of change for many of the day-to-day climate issues. Thus, Chairs must be held accountable for the advancement of women faculty. Examples include a) award chairs who achieve diversity goals a bonus or some other important form of recognition; b) offer assistance and support to chairs who are having difficulties developing a diverse workforce. Data comparing climate issues between departments may also be helpful. One example of a within-department intervention increased the proportion of women associate professors from 4 to 26 over three years (with no change in promotion criteria).²⁰
- Leaders should take responsibility for creating a productive and inclusive environment and implement programs and strategies shown to be successful in minimizing the effect of gender biases. Discussions of climate issues should be recurring items on department and school meeting agendas, and all faculty and students need education about unexamined biases, such as integrated into department meetings and retreats and professional development sessions.
- Hiring, tenure, and promotion policies must be developed that take into account the flexibility that all faculty need across the life course, allowing integration of family, work, community responsibilities.
- Search committees effectiveness must be enhanced in the ability to attract and evaluate women candidates. This should include assessments of how candidates' qualifications are evaluated and how group process and decision-making occurred. Evidence of a fair, wide, and aggressive search should be shown before appointments are approved.
- Since top leadership positions in academic medicine are largely populated by men, women and minorities are often underrepresented on high-level committees and other decision-making bodies. Diverse faculty representation on such committees will be important to include the voices of women and minorities on procedural issues and policy decisions.
- What organizations measure, they tend to improve. Climate and needs assessments must be ongoing with comparisons between the responses of men and women faculty. Studies of compensation and promotion must also be ongoing, and such information should be widely shared, particularly among senior leaders.
- Women in Medicine programs should be financially supported, and the professional development needs of women faculty should be targeted, within the context of helping all faculty, and the institution itself, maximize their potential.

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