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The Women in Medicine and Health Science Program: An Innovative Initiative to Support Female Faculty at the University of California Davis School of Medicine

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Abstract

Problem—Although more female physicians and scientists are choosing careers in academic medicine, women continue to be underrepresented as medical school faculty, particularly at the level of full professor and in leadership positions. Effective interventions to support women in academic medicine exist, but the nature and content of such programs varies widely.

Approach—Women in medicine programs can play a critical role in supporting women's careers and can improve recruitment and retention of women by providing opportunities for networking, sponsorship, mentorship, and career development. The University of California Davis School of Medicine established the Women in Medicine and Health Science (WIMHS) program in 2000 to ensure the full participation and success of women in all roles within academic medicine. The authors describe the components and evolution of the WIMHS program.

Outcomes—A steady increase in the number and percentage of female faculty and department chairs, as well as a relatively low departure rate for female faculty, strong and growing internal partnerships, and enthusiastic support from faculty and the school of medicine leadership, suggest that the WIMHS program has had a positive influence on recruitment and retention, career satisfaction, and institutional climate to provide a more inclusive and supportive culture for women.

Next steps—Going forward, the WIMHS program will continue to advocate for broader institutional change to support female faculty, like creating an onsite childcare program. Other

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institutions seeking to address the challenges facing female faculty may consider using the WIMHS program as a model to guide their efforts.

Problem

Although women make up nearly half of the medical and biological sciences doctoral students in the United States, they continue to be underrepresented as academic biomedical faculty, especially at the higher ranks. Currently, only 13% of female fulltime faculty are full professors, compared to 30% of male fulltime faculty. Recent data from the Association of American Medical Colleges (AAMC) shows a modest increase in the percentage of female medical school faculty from 29% in 2001 to 37% in 2012.¹

The Institute of Medicine's landmark publication, *Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering*, explored why women are underrepresented in academic medicine.² They did not attribute women's underrepresentation to a shortage of female physicians and basic scientists entering these fields, as the proportion of female medical and doctoral students has increased dramatically over the past fifty years, but rather to the steady attrition of women throughout their careers. The reasons why the attrition rate is higher for women than men are numerous and complex but importantly include unintentional bias and the challenges of balancing career and family life, which can slow career advancement and lead to departure from academic medicine.^{3,4}

The hierarchical organization of the academic workplace may be another reason for the underrepresentation of women in academic medicine. Yet, academic medical centers are following the lead of businesses in implementing career flexibility policies as a strategic recruitment and retention strategy and as a way to mitigate work/life stress. Policy changes alone, however, have not improved the retention rate of women in academic medicine. Workplace environment, and the culture of academic medicine in particular, affects the decision of women to leave. Even when gender discrimination is not overt, unconscious gender bias in the organizational culture affects men and women differently.² Thus, identifying strategies to change the workplace culture to improve recruitment, retention, satisfaction, and advancement of female faculty is critically important for the future of academic medicine. Fully integrating women into academic medicine programs so that their perspectives and voices are heard and they are included in leadership roles provides a cost-effective means to support women's careers and can help to overcome the feelings of isolation and lack of support that contribute to female faculty attrition.

Data from AAMC benchmarking surveys indicate that a number of medical schools already have programs that support the professional development of female faculty, but the nature and extent of such support varies substantially. In this article, we describe one such program, the Women in Medicine and Health Science (WIMHS) program at the University of California Davis School of Medicine, share its evolution, including our insights, approaches, and creative solutions to the challenges we encountered, as well as plans for the future. In so doing, we hope to guide other institutions seeking to create or expand similar women in medicine programs to address the recruitment and retention challenges facing female faculty.

Approach

Program goals, scope, and evolution

Established in 2000, the WIMHS program is devoted to overcoming career advancement barriers and creating a supportive community for female faculty to ensure their full participation in the medical school and their career success. Two senior faculty members (L.P.H., A.C.V.) developed the program during their tenure as faculty assistants to the dean, as part of their Executive Leadership in Academic Medicine (ELAM) fellowship, and in concert with the school of medicine's faculty development, diversity, and mentoring programs. Since 2000, the WIMHS directors have served as the Women Liaison Officers, now the Group on Women in Medicine and Science, to the AAMC.

Activities

The WIMHS program provides an inclusive and supportive climate and unique opportunities for female faculty to network, interact, and collaborate with each other. We employed a multipronged approach to career development: (1) advocating for women's advancement and leadership in education, research, clinical practice, and administration; (2) promoting sustainable strategies to enhance an institutional climate of inclusion, equity, and opportunity; (3) collecting, analyzing, and applying data to inform institutional and individual decisions and actions; (4) developing and disseminating initiatives, resources, and mentoring and professional career development programs; (5) recognizing and celebrating women's accomplishments; (6) creating opportunities for networking; and (7) working with the AAMC and other medical schools to advance women in medicine and science nationally. Annual workshops and lecture series are key components of the WIMHS program (see Table 1).

The WIMHS directors initially planned all events; now they meet once or twice a year with a planning committee of junior and senior female faculty from the schools of medicine and nursing. The committee includes ELAM graduates and leaders of University of California Davis Health System (UCDHS) programs, who cosponsor events including the Mentoring Academy, the Building Interdisciplinary Research Careers in Women's Health (BIRCWH) program, the American Medical Women's Association (AMWA), and the student wellness program. One of the major challenges facing women in medicine programs is simply finding time for busy academicians to meet. Clinical responsibilities, ongoing research projects, and personal and family life outside of academia can result in overwhelming schedules. Thus, WIMHS events typically are held at noontime with a catered lunch provided to minimize conflict with family time or clinical duties.

Special projects and social media

Celebrating the accomplishments of female faculty and raising their visibility as leaders and role models are other important goals of the WIMHS program. To this end, in 2008, we embarked on a unique project to produce and publish a book, entitled *Under the Plane Tree-- Celebrating Our Founding Women in Medicine*, devoted to honoring the careers and the stories of the school's founding female faculty.⁵ To broaden participation in WIMHS activities, we reached out and delivered content to the broader community of female faculty

through email and social media. In 2000, we created a dedicated list serve for all female faculty, which we continue to use to disseminate information about WIMHS events. Shortly after, we created a website (<http://www.ucdmc.ucdavis.edu/wimhs/>), which we update quarterly. Then, in 2011 and 2012 respectively, we established a Facebook page and a dedicated blog. Both are highly visual modalities and enhance communication as well as provide a forum for celebrating the accomplishments of female faculty. Our Facebook page, for example, reaches hundreds each week in up to 19 countries, and our blog recorded more than 8,000 visits in the first year and is one of the most active blogs in our health system. Faculty are regularly introduced to the WIMHS social media tools through announcements on the list serve and at WIMHS events, through fliers distributed at new faculty orientation, and at the annual WIMHS-sponsored fall welcoming reception for all new female faculty.

Mentorship

In addition to providing career development training, networking opportunities, and recognition of accomplishments, the WIMHS program advocates for women's advancement and leadership in education, research, clinical practice, and administration. Since its inception, the WIMHS program has supported leadership training opportunities for female faculty by assisting with the selection of the school's participants in national career development and leadership programs, including the AAMC's Early- and Mid-Career Women's Professional Development Seminars and Drexel's ELAM. In addition, we encourage the school to financially support female faculty who attend such programs, including covering registration fees. In 2010, the WIMHS program developed and added a new mentored leadership development opportunity. This one- or two-year rotating program provides an early career faculty member (MD, PhD, or MD/PhD) with the opportunity to participate in the planning process for WIMHS events, develop their own WIMHS related project(s), receive mentoring from the WIMHS directors, meet with WIMHS leaders, and attend the AAMC's Early-Career Professional Development Seminar. We provide salary support for up to 20% effort. Less formal mentorship opportunities include the popular annual lunchtime drop-in clinics open to all female faculty.

We also mentor students interested in careers in academic medicine by cosponsoring classes, workshops, and events for female undergraduate, graduate, and medical students. In 2012, the WIMHS program played a central role in restarting our previously inactive medical student chapter of AMWA. We partnered with AMWA to provide roundtable mentoring discussions in a "speed dating" format and panel discussions by female leaders at our school on how to achieve career goals and leadership skills. We also cosponsored a panel discussion with AMWA representatives for undergraduate students interested in applying to medical school and provided speakers for an annual "women in science" undergraduate freshman seminar on the university's main campus.

Outcomes

Impact

Under the leadership of the WIMHS directors and with the support of our partners, the WIMHS program has become an innovative, inclusive, and collaborative program seen by

our health system leadership as key to the school's strategic goals to enhance excellence and diversity among our students, faculty, and staff. Since the program's inception, the number and percentage of female faculty at the school of medicine has steadily increased, as has the number of female full professors and the percentage of female department chairs (see Figure 1). In addition, the percentages of new hires in our health system who are women (42% UCDHS vs. 44% AAMC) and of faculty promoted to associate professor who are women (39% UCDHS vs. 37% AAMC) are comparable to national AAMC data. While we cannot determine if the increase in the number of female faculty over time is directly related to the WIMHS program or simply reflects broader institutional changes, we are encouraged by the upward trajectories of the women at the school of medicine. Still, department chairs cite the WIMHS program as an important tool in recruitment and retention, and new hires cite it as a reason for joining the faculty. Therefore, the program likely provides and promotes a more inclusive, supportive, and welcoming climate for female faculty.

In addition to these quantitative benchmarks, we also recognize the importance of the workplace environment, and the culture in academic medicine in particular, as a critical factor in supporting women's careers.⁴ Although our numbers are small, the institutional climate facilitated by the WIMHS program has improved for women--for example, the departure rate for women at the school of medicine (34%) is lower than the national rate reported by the AAMC (40%) in 2011–2012. Furthermore, anecdotal accounts from female faculty who attended WIMHS events, admittedly a potentially biased sample, and from the school of medicine leadership suggest that having an active women in medicine program has a positive influence on career satisfaction.

Indeed, the school of medicine was one of 29 to participate in the 2011 Collaborative on Academic Careers in Higher Education survey. Results from this survey as well as from the American Council on Education/Alfred P. Sloan Foundation survey demonstrated that the majority of faculty at the school of medicine were "satisfied" to "very satisfied" with their careers. Although we cannot directly link faculty satisfaction to the WIMHS program, many of our department chairs highlight it during recruiting and refer female faculty to WIMHS programs and events to support their career growth. Thus, although we cannot directly measure the impact of the WIMHS program, since multiple factors are involved in faculty recruitment and retention, it is seen throughout our health system as an important contributor to the culture of inclusiveness. In addition, the WIMHS program is aligned with the health system's strategic goals surrounding organizational excellence, faculty satisfaction, mentoring, diversity, and inclusion.

Lessons learned

The WIMHS program has grown in scope over the years. At the start, the focus was on developing personal and professional skills to support academic career advancement, creating a safe and supportive environment, and providing advice and mentorship. We have come to recognize over the years, however, that the WIMHS program is most effective when it serves a diverse group of basic scientists, clinicians, and health professionals, including students, housestaff, and administrative staff, of both sexes. In addition, we have forged valuable partnerships with the newly established school of nursing, the Clinical and

Translational Science Center, the BIRCWH program, and AMWA. This more inclusive philosophy has increased attendance as well as energy at WIMHS events and created important allies who support the program. Our program implementation and design strategy is generalizable to other institutions and can be tailored to the unique resources available.

Over the past decade, we also have learned that a successful WIMHS program should sponsor a broad spectrum of events including social events, skill-building workshops, and specialized activities targeting the needs of specific groups (e.g. our recent elder care and balancing motherhood workshops). In addition, we have come to understand the importance of using new methods to engage female faculty, including creating a virtual community. Our recent outreach using social media, for example, has been particularly successful in connecting with early-career faculty members, linking to new but distant friends and alumni, and sharing content. Each of these lessons learned has allowed us to better advocate for institutional support to sustain and grow WIMHS activities, including garnering support for WIMHS leadership.

Next Steps

Although the WIMHS program is focused on supporting female faculty in academic medicine, it contributes to broader institutional change and to scholarship at the university. For example, the WIMHS directors have successfully obtained R01 funding from the National Institutes of Health to evaluate awareness of career flexibility and family friendly practices at the school of medicine.⁶ The WIMHS program has improved awareness and acceptance of flexible work policies among the faculty, thereby enhancing our academic culture. Previously unrecognized faculty groups who are at risk for work/life conflict have been revealed (i.e. younger male and older female faculty, as well as those simultaneously starting a career and a family). The unique needs of these groups are being addressed through workshops and other targeted interventions. Future efforts will include more formal evaluations of the WIMHS program, allowing us to more directly measure the impact of the program on career satisfaction and advancement metrics.

Creating an onsite childcare program has been an important issue at our school of medicine, as it has at many others. Over the years, the WIMHS directors and others have attempted to facilitate the creation of such a program. Efforts have been hampered by a number of barriers (e.g. resources, space, etc.). As an interim measure, in 2012, the University of California started offering faculty discounted access to childcare resources online. As we look toward the future, the WIMHS program will continue its efforts to secure onsite childcare in partnership with the school of medicine leadership, expand its collaborations with other relevant initiatives and programs to support women's careers, enhance partnerships with the university's recently funded National Science Foundation ADVANCE program award focused on Latinas in science, technology, engineering, and medicine careers, and further explore opportunities for inter-institutional activities and collaborations.

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2001	18 n=138
2006	27 n=186
2011	36 n=235

2001	5 n=1
2006	12.5 n=3
2011	22.5 n=5

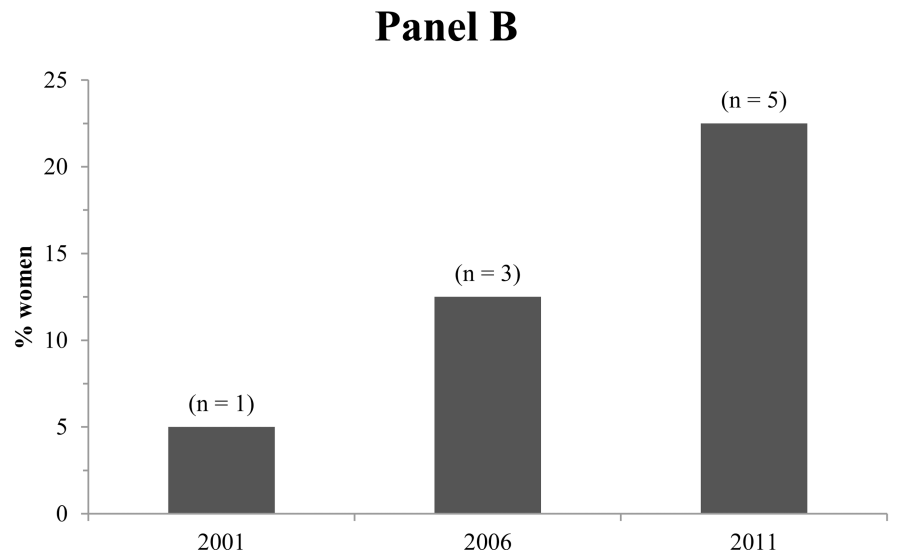
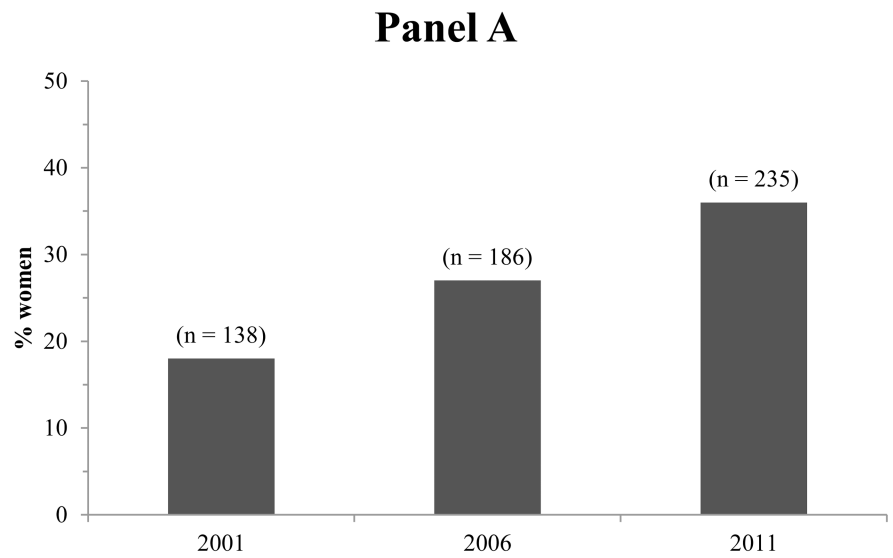


Figure 1. Changes in the number and percentage of female faculty (Panel A) and department chairs (Panel B) at the University of California Davis School of Medicine since the inception of the Women in Medicine and Health Science (WIMHS) program.

Table 1

Sample Components of the Women in Medicine and Health Science (WIMHS) Program at the University of California Davis School of Medicine, 2000–2013

Type of Event	Activities	Purpose	Scheduling
Networking/social/legacy	<ul style="list-style-type: none"> - Annual WIMHS fall welcome reception - Meet the leaders (deans, etc.) - Founding women events (published book on the school of medicine's founding female faculty) 	<ul style="list-style-type: none"> - Welcome and introduce new female faculty - Introduce faculty to the school of medicine leadership - Honor and celebrate founding female faculty 	<ul style="list-style-type: none"> - Held in the evening at a local restaurant or the home of WIMHS leadership (yearly) - Breakfast with the dean (quarterly) - Special activity scheduling
Internal career development	<ul style="list-style-type: none"> - Mentorship clinics - Leadership clinics - Lessons from business - Merits and promotions seminars - Leadership and diversity events 	Provide early-career faculty with feedback and advice on CVs, career crossroads, academic career tracks, leadership opportunities, and skills	Scheduled for one hour at lunchtime in a central location at the medical center; monthly or quarterly
External career development	<ul style="list-style-type: none"> - Public speaking - Salary negotiations - Time management - Career advancement - Other seminars 	Provide personal and professional development skills to female faculty	Scheduled for one hour at lunchtime in a central location at the medical center; monthly or quarterly
Work/life balance	<ul style="list-style-type: none"> - Elder care workshop - Mommy and me gatherings in the park - Faculty dads panel discussion 	<ul style="list-style-type: none"> - Address the needs of faculty dealing with elder care and child care responsibilities - Address the needs of younger male faculty 	Scheduled for one hour at lunchtime in a central location at the medical center or outside facility; monthly or quarterly
General interest	<ul style="list-style-type: none"> - Authors of popular books; book club - Women's health and research 	<ul style="list-style-type: none"> - Bring topics of general interest to female faculty - Partner with campus Women's Resource and Research Center - Integrate activities with Women's Center for Health at the school of medicine 	Scheduled for one hour at lunchtime in a central location at the medical center or main campus; monthly or quarterly
WIMHS leadership	Planning meetings with WIMHS leadership to plan programs, schedule and recruit speakers for the upcoming year, set strategic direction	<ul style="list-style-type: none"> - Involve school of medicine leaders in WIMHS activities - Integrate programs (WIMHS, BIRCWH, AMWA, CTSC, Mentoring Academy) 	Early morning or lunch meetings scheduled with advance notice; yearly or twice yearly for annual planning meetings; monthly for WIMHS directors

Type of Event	Activities	Purpose	Scheduling
		<ul style="list-style-type: none"> - Plan inter-professional activities - Leverage experience and expertise of ELAM graduates 	
Mentoring	Mentored leadership development experience (early- or mid-career faculty)	<ul style="list-style-type: none"> - Create a pool of future female leaders - Career development project and plan (scholarship, social media, other) - 20% salary effort 	Competitive, rotating one- to two-year experience with WIMHS directors

Abbreviations: BIRCWH indicates the Building Interdisciplinary Research Careers in Women's Health program; AMWA, the American Medical Women's Association; CTSC, the Clinical and Translational Science Center; ELAM, the Executive Leadership in Academic Medicine fellowship.