EXECUTIVE SUMMARY

Each academic medical center celebrates its own successes and faces its own unique challenges with regard to the status and advancement of women in the health sciences. UC Davis Health’s Women in Medicine and Health Sciences (WIMHS) strategic plan aims to enrich the user’s understanding of the state of women faculty in our health system by providing the context of a national perspective from multiple data sources, referencing scholarly work from our own faculty experience, and identifying actionable strategic priorities resulting from a strategic planning process, with the goal of catalyzing change in our health system. Data and recommendations presented in this plan are designed to equip those advocating for the advancement of women in medicine and health sciences with a baseline from which to examine institutional practice, advocate for the five (5) identified strategic priority areas, and support further scholarship to address pipeline issues and barriers to the path to leadership for women. By advancing women in the health sciences, we advance the excellence and diversity that is so vital to achieving our academic mission.

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BACKGROUND: Women are integral to academic excellence, diversity, and all missions of the UC Davis Health system. Yet, women face unique challenges in academia and experience attrition from the advancement pipeline. Dedicated strategies are needed to support the careers of women in biomedical science and medicine and ensure the success of women in all aspects of academic life. The Women in Medicine and Health Sciences (WIMHS) Program at the UC Davis Health system was created in 2000 to support the careers of women in academia (for additional history, past activities and accomplishments of the WIMHS program please refer to the recent manuscript published in Academic Medicine provided in the Data Supplement section). The position of WIMHS in our school has been recently formalized (please refer to MOU in Data Supplement) and the program charged with formulating a strategic plan and budget to help guide its future activities and programmatic expansion.

The MISSION of UC Davis WIHMS Program is to ensure the full participation and success of women faculty and women in the biomedical training pipeline in all roles within academic medicine.

The VISION for WIMHS is to become a national leader and model program in the support of women’s careers in biomedical sciences, within a broader institutional context of inclusion and faculty development, attain high institutional impact and value, and stem the leaky advancement pipeline for women.

STRATEGIC PLANNING PROCESS: A strategic planning retreat was held on February, 2015 from 1-4 pm to solicit broad input and guidance in formulating the strategic plan for WIMHS. Desired outcomes for the retreat were to raise awareness of the attendees and through the plan about important issues facing women in biomedical sciences; develop strategic planning priorities for WIMH; identify actionable items; and discuss sustainability and capacity. The planning retreat consisted of a power point presentation that reviewed the following topics: national data on women’s careers/recruitment/advancement; the status of women in academic medicine; the casual factors in women’s attrition from the advancement pipeline; and barriers to advancement and options for career flexibility. The presentation was also informed by results of our NIH RO1 grant for our institution specific data. (For details, please refer to the power point presentation provided in the Data Supplement section). Small group breakout sessions ensued to address each of the strategic priority goal areas, followed by a group presentations and discussion to help prioritize and integrate the concepts. The planning retreat was attended by a diverse group of faculty including members of our health system leadership team as follows: Robin Steinhorn, Amparo Villablanca, Veronica Martinez-Cerdeno, Ed Callahan, Sheryl Catz, Melissa Bauman, Shadi Aminololama-Shakeri, Lydia Howell, Adrienne Thompson, Sandhya Venugopal, Ulfat Shaikh, and David Acosta.

STRATEGIC PLAN: The overarching GOAL of WIMHS is to support and encourage the advancement of women at all levels (student, resident, fellow, post-doctoral, and faculty) in the Schools of Medicine and Nursing to attain their full academic potential via mentorship, sponsorship, personal and professional development, leadership, innovation, inclusiveness, and
a welcoming and supportive institutional climate. Five (5) strategic priority goals were identified in the strategic planning process focused on recruitment, retention, culture and environment, leadership, and scholarship as follows:

**Strategic Priority Goal 1: **RECRUITMENT - Become a AAMC Leader in the Recruitment (and Retention) Especially for Women at the Rank of Associate Professor and Higher.

*Issue:* Under-representation persists for women Associate and Full Professors. Women are less likely to be hired at the ranks of Associate or Full Professor in the SOM, and this difference is reflected in the gender distribution across ranks in the School of Medicine.

*Impact:* Increase women faculty (physicians and researchers) at mid-and later career stage to serve as mentors and potential leaders.

(Dr. Robin Steinhorn; Dr. Amparo Villablanca; Dr. Veronica Martinez-Cerdeno)

**Strategies:**

1. Advocate for personalized recruitments (precision recruitment): culture shift for who we want to hire
   a. Target approach to academic rank of recruitment
   b. Tailor recruitment to highlight both our academic and community advantages
   c. Focus on our family/personal life advantages for Assist Prof and focus on individual recruit’s life needs
   d. Focus on leadership advantages for Associate Prof and their mentoring experience to serve as mentors to others
   e. Attend to culture (understand candidate’s cultural needs based on their race/ethnicity and leverage our academic culture to emphasize what's special about UCD to attract high quality candidates)
   f. Help recruit visualize themselves at UCD
   g. Highlight that HSCP track is treated with respect at UCD vs other institutions

2. Leverage our academic culture – advertise/promote our diversity and make it apparent to recruits

3. Data Needs
   a. Women at high academic ranks
   b. Smaller pool overall at higher ranks- grow pool internally through retention/advancement of Assist Profs
   c. Bias literacy (https://www.aamc.org/initiatives/diversity/contact/)
   d. Important non-tangibles (compensation for women and recruitment packages)

**Issue:** The percentages of men and women faculty hired is near parity at the Associate Professor level, but nearly 50% of new faculty hires leave within 5 years of hire. Rank is the primary driving force for advancement and separation in our SOM, with faculty being less likely to separate once they achieve the rank of Associate Professor, and still less likely at Full Professor.

**Impact:** Reduce faculty turnover to retain talent, increase morale and satisfaction especially in units with low retention, minimize costs associated with re-recruitment.

(Dr. Ed Callahan; Dr. Sheryl Catz; Dr. Melissa Bauman)

**Strategies:**

1. **Data needs:** Improve data collection to identify vulnerable populations.
   a. Administer faculty surveys by gender, series, and rank to identify vulnerable populations
   b. Encourage performance of exit interviews
   c. Faculty forward data: encourage the SOM to collect every 3 yrs to help inform the recruitment process
   d. Obtain and track data regarding # of women faculty and # of women faculty participating in faculty development opportunities and training

2. **Improve use of mentoring (WIMHS in conjunction with the Mentoring Academy)**
   a. Increase use of mentoring and number of mentors per individual and encourage mentors across Dept. lines
   b. Increase peer mentoring (women focused) and personalize mentors to mentee needs
   c. Encourage training for mentors to recognize faculty burn-out early before faculty decides to leave
   d. Adopt mentoring teams for scientific careers and for work/life balance
   e. Increase faculty resilience and focus on how to grow resilience
   f. Develop close partnership between mentoring academy and WIMHS
   g. Encourage women to include unmet mentoring needs in the context of career goal discussions at annual evaluation meetings (to help facilitate connections with potential mentors)

3. **Promotion process:** provide guidance (WIMHS in conjunction with Academic Personnel)
   a. Increase education about the promotion process
   b. Make guidance more women specific (team science, recognize contributions by women faculty)
   c. Provide packet preparation advice (merits/promotions)
   d. Create a pool of advisors to advise Asst. and/or Assoc. level professors on merits & promotions
4. Accountability and Rewards

   a. Encourage information sharing and monitoring of Dept. rate of success and process for supporting women faculty by holding Dpts/Chairs accountable for retention
   b. Encourage providing incentives/rewards to chairs to achieve accountability (e.g., SOM contribution to Dpt’s faculty development fund)
   c. Recognize and reward efforts to promote and support the careers of women faculty (e.g., via a new Dean’s Excellence in 'Talent Development’ Award)
   d. 5 yr. chair reviews and mid 5 yr. chair reviews should include # of faculty sponsored to attend Faculty development courses (internal programs and external programs such as ELAM/AAMC)
   e. Encourage support for mentors: academic advancement credit, showcasing the mentors when their mentees are successful, and increasing the visibility of the Mentoring Awards

**Strategic Priority Goal 3: CULTURE AND ENVIRONMENT - Enhance/Improve the Current Culture to Promote Women’s Careers.**

**Issue:** SOM faculty report multiple barriers to career satisfaction, use of career flexibility options, and inclusion that relate to culture, environment and unconscious biases.

**Impact:** Improve career satisfaction among women faculty, minimize separations, increase engagement.

(Dr. Shadi Aminololama-Shakeri; Dr. Lydia Howell; Dr. Adrienne Thompson)

**Strategies** (to overcome barriers/raise awareness):

   a. Address barriers and improve bias literacy (consider bias disrupters such as creating a platform to celebrate accomplishments of women faculty -- e.g., on WIMHS Facebook)
   b. Disseminate barrier data from our NIH grant findings
   c. Form a Steering Committee for WIMHS (role and function)
      i. Provide advice to SOM leadership on institutional policies and priorities (updates to existing policies and development of new policies)
      ii. Identify mechanisms to gather and disseminate data on women faculty at UCDHS, including data related to barriers
      iii. Create and implement an annual event with workshops/posters on career development and leadership, and that will showcase scholarly projects and achievements of women faculty at UC Davis Health (Link to Strategic Priority Goal 4)
      iv. Partner with Mentoring Academy, particularly focused on addressing gaps in programs for women at associate professor rank and higher
v. Assist WIMHS leadership with implementing strategic priority goals

**Strategic Priority Goal 4: LEADERSHIP - Develop Navigation Roadmaps to Leadership Excellence for Women.**

**Issue:** The percentages of women faculty in top leadership positions in our Health system remains low compared to men and there are few perceived leadership advancement paths for women faculty. "Making Room" for women leaders requires system change, succession planning, and creating a pipeline and pathways to leadership.

**Impact:** Increase pool of women role models for earlier career faculty, increase participation of women in leadership and team science, increase their visibility and voice, reduce isolation and improve sense of empowerment.

(Dr. Sandhya Venugopal; Dr. Ulfat Shaikh; Dr. David Acosta)

**Strategies:** Outcomes data

a. Obtain data on outcomes of past SOM AAMC and ELAM fellows
b. Educate stakeholders about our data and the culture changes needed
c. Use exit interview data to help identify solutions (e.g.; did faculty member leave due to lack of leadership opportunities?)
d. Use current leaders/chairs/deans/CEO as leadership models for others through structured interviews and showcasing their paths to leadership (WIMHS blog, WHIMS leadership conference, other formats)
e. Encourage development of internal leadership succession plans so that women don’t have to leave the institution to attain leadership positions
f. Highlight accomplishments of our women leaders on the WIMHS blog, Facebook site and other internal/external communications
g. Make the case for women in leadership
h. Hold a signature event: national and/or UC-wide Women in Health Sciences Leadership Conference/Congress sponsored by UCD SOM (Link to Strategic Priority Goal 3.c.iii)
  i. Showcase women leaders at UCD (CAMPOS scholars, BIMSON and SOM leadership, WIMHS, our past AAMC and ELAM fellows, Dpt Chairs, Chancellor, our AAMC GWIMS representatives)
  ii. Identify sponsors/partners for conference (including AAMC?)
  iii. Showcase UCDHS models of leadership excellence, resilience, sponsorship and mentoring via panel discussions
iv. Increase visibility of our leaders and recognize their value added
v. Poster presentations to encourage networking and broad participation
vi. Keynote speaker: ? Janet Napolitano
Strategic Priority Goal 5: SCHOLARSHIP - Provide Advocacy/Seek Opportunities for Scholarly Contributions.

**Issue:** The causal factors impacting women’s careers in biomedical sciences are becoming better understood, but there are continued knowledge gaps about effective interventions for stemming attrition.

**Impact:** Opportunities for funding, advocacy, and scholarship.

1. Identify NIH and other funding opportunities (e.g., RO1 Diversity and/or Sex Differences research supplements; K mentoring awards; RWJ; T32; others)
2. Explore opportunities to more broadly integrate WIMHS activities with women’s health/women’s health research issues
3. Support women’s participation in team science and encourage direct support of women’s careers in science
SUPPLEMENTARY DATA

1. WIMHS PLANNING RETREAT POWER POINT PRESENTATION

2. WIMHS MANUSCRIPT

Melissa D. Bauman, Lydia P. Howell, and Amparo C. Villablanca. Women in Academic Medicine and Health Sciences (WIMHS): Innovation and Change at the UC Davis School of Medicine. Academic Medicine, 2014; 89(11):1462-66
WIMHS STRATEGIC PLANNING RETREAT

Amparo Villablanca, MD and Lydia Howell, MD
Facilitator: Sue Barton, PhD

The Status of Women in Academic Medicine
- Women comprise 40% of full-time medical school faculty (UCD: 34%)
  - Assistant: 44%
  - Associate: 34%
  - Full: 22%
- Top Leadership: Prof 15%, Dean 19%
- New hires that are women: 44% (UCD: 42%)
- Female faculty department 46% (UCD: 54%)
- Professors:
  - Associate: 37% (UCD: 39%)
  - Professor: 21% (UCD: 19%)

(Source: AAMC: The status of women in academic medicine, Feb 10, 2014)

We Have Made Progress at UCD!

Academic Career Path for Women

Obstacles to Academic Success
- Individual (sex, generation)
- Family/Work-Life
- Institutional
- Sociocultural
- Biases
- Others

What Happens to Women Who Leave? They leave academic, not science or medicine.
Pressures in academic medicine

- Average clinical work-day = 62.2 hrs/wk
- Competition for research funding.
- Minimal compensation for teaching.
- Economic pressures due to declining reimbursement for clinical services.
- As a result, much attrition among assistant professors.
  - 5-year survival = 50%; higher loss of women

Attrition and Retention: Two sides of the same coin?

- Unchanged in past 25 yrs
- Proportion of women who are leaving up 56% since 2002
- Proportion of women who are entering medicine is declining
- Why it's important to retain women faculty.
  - Excelence
  - Role models
  - Diversity
  - Leadership

Interacting Factors Affecting Successful Career Progress

- INDIVIDUAL
- INSTITUTION
- POSITIVE INFLUENCES
- TIME, RESOURCES, DRIVE, PRODUCTIVITY, SATISFACTION

Why Does WIMHS Exist?

- To ensure full participation and success of women faculty and women in the biomedical training pipeline, in all spheres of academia and in leadership.
- To value and encourage the advancement of women at all levels via mentoring, sponsorship, personal/professional development, innovation, and stability.
- Support women's careers in biomedical sciences by promoting a welcoming, satisfying, inclusive and flexible environment and culture for women.

What is a Supportive Culture for Women?*

- Requires some kind of shared belief that women's careers and contributions matter
- One where women faculty feel valued
- Freedom from gender bias
- Supportive of work-life balance

* correlated with satisfaction, commitment to one's dept., and has a protective effect/buffer on work-life conflict

The History of WIMHS

- 1992-1997
- 1998-2003
- 2004-present
- Involvement:
  - Biennial Faculty Development Conference
  - Faculty Development Office in the Office of the Provost
  - Biennial Faculty Development Conference
  - Outstanding Teachers/Innovators awards
  - Community Outreach
  - Departmental 5% Culture Change, Faculty Development Program (2004-2007)
Examples of UCD’s WIMHS Activities and Events:

<table>
<thead>
<tr>
<th>Category</th>
<th>Example</th>
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<tbody>
<tr>
<td>Clinical</td>
<td>Development, education, research, advocacy, mentoring</td>
</tr>
<tr>
<td>Research</td>
<td>Training, data analysis, literature reviews</td>
</tr>
<tr>
<td>Teaching</td>
<td>Clinical, curriculum, didactics, simulation, workshops</td>
</tr>
<tr>
<td>Community Engagement</td>
<td>Outreach, community involvement, partnerships</td>
</tr>
</tbody>
</table>

Medical Schools Providing Support for the Professional Development of Female Faculty:

<table>
<thead>
<tr>
<th>Type of Resource</th>
<th>2009</th>
<th>2011</th>
</tr>
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<tbody>
<tr>
<td>Salary support for patient care</td>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td>Financial support for programs</td>
<td>20%</td>
<td>30%</td>
</tr>
<tr>
<td>Gender-based office space</td>
<td>20%</td>
<td>30%</td>
</tr>
<tr>
<td>Early-care coaching/mentoring</td>
<td>5%</td>
<td>15%</td>
</tr>
<tr>
<td>Executive coaching/mentoring &amp; external</td>
<td>25%</td>
<td>20%</td>
</tr>
<tr>
<td>Consistency</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The ‘New’ Excellence:

- Clinical
- Research
- Teaching
- Community Engagement

Recruitment, Retention, Advancement, Satisfaction, Well-Being, Flexibility, Diversity & Inclusion

Approaches to Support Women’s Careers:

- Team environments
- Compensation
- Support for research careers
- Advocacy, mentoring, sponsorship
- Skill building (negotiation and others)
- Conscious efforts to address unconscious bias (e.g., attitudinal models—AAMC’s learning lab)
- Systemic constraints (e.g., lack of on-site childcare)
- Career Flexibility

Flexibility: Integrating work and life:

- Defining how, when and where work gets done, and how careers are organized.

Forms of Flexibility:
- Flexibility of time: alternate work schedules or job sharing, leaves for family or personal reasons
- Flexibility of place: working from home or other places

2014 Medscape Physician Lifestyle Survey: Burnout by specialty:

Percentage of Physicians for “Burnout” by specialty.
2014 Medscape Physician Lifestyle Survey: Burnout by gender & age

Can flexible career policies make a difference?
- 2010 Villablanca & Howell: NIH R01, $1,274M to study awareness, attitudes & use of UCSD's policies
  - Baseline survey
  - Acceleration intervention
  - Evaluation:
    - Change in awareness, attitudes, use
    - Professional outcomes
    - Personal & professional characteristics (profile) affecting the above.
  - ACE-Visit Innovation Award for Medical School Faculty Flexibility

Grants build from UCSD pioneering history in faculty career flexibility
  - Term/leave
  - Childcare leave
  - Active, active modified, leave
  - Family leave (caregiv)
- 2004: Work Life Program Directive from UCSD Provost to increase awareness & use
- Supported by UCSD "Best Faculty Career Flexibility Award"
- 2005: Medical school faculty excluded from policies -- "Too different!"
- 2004: UCSD develop own standard policies
- 2006: Adopted UC-systemwide

NIH Baseline Survey Results (2010)

Policy Awareness and Use: Low, Won't ask, Not enough time

- Awareness: Low (<5 of 5)
- Highest use: young women (maternity)
- Wanted to use, but didn’t: 35% of younger women, 40% of older women.
- Men want more time off: 92% older men, 79% younger men.

Many barriers to policy use: none dominant

- "Looking less committed": slightly higher.
- Young women: more concerned re: barriers.
- Women more concerned re: burdening others.
A pleasant surprise: Policies increase satisfaction in all faculty groups
- Male: 50% Female: 30%
- Male: 56% Female: 49%
- Male: 58% Female: 53%
- Male: 62% Female: 56%
- Male: 64% Female: 58%
- Male: 66% Female: 60%

- Substantial percentage satisfied because:
  - Policies exist.
  - Might use policies.

Policies are important to all for similar reasons
- Male: 50% Female: 30%
- Male: 56% Female: 49%
- Male: 58% Female: 53%
- Male: 62% Female: 56%
- Male: 64% Female: 58%
- Male: 66% Female: 60%

- High importance by all for:
  - Recruitment
  - Retention
  - Advancement
  - More so for women
  - Rank (1 = low, 5 = high)

Difference exist among faculty groups – but many surprising similarities, too!
- Communicating shared attitudes and values can be important to reducing barriers and creating a flexible team culture.

Four years later
Post-intervention (Newsletter article, presentations, brochures, website development)

Mean awareness of flexibility policies improved
- Scale: 1-5 (low to high)

In 2013, women still more aware than men (p = .003)

Reported barriers also increased for both genders
- Both show similar increases:
  - Financial
  - Surplus on colleagues
  - Impaired service role
  - Women's greatest increase in:
    - Not linking constrained
    - Mentally difficult
    - Barriers to collegues
    - Material resources needed
    - Work less demanding (time, resources)
    - Working as part of project with colleagues
    - Women's greatest increase in:
      - Low water pressure
Focus #1: At-risk groups for work-life conflict
- At risk groups: Younger men and older women faculty.
- Lower overall satisfaction, high perceived need.

Our Interventions for at-risk groups
- 103 Workshops series topics:
  - "Working Dad Need Career Flexibility too: How to Integrate Work, Life, and Family?"
  - "Balancing Elder and Family Care and a Faculty Career: Work Life Integration is Not Just About Children"  
  - 2014 Elder Care series (three-part series)
  - 2015 "Big" event with "rock star" speaker Joan Williams in June
  - Distinguished Professor and founding director of Center for Work Life Law, Berkeley
  - Recipient of the Families and Work Institute Work Life Legacy Award (2014)

2012 ACE-Sloan Foundation Innovation Award
- Addressing cultural challenges identified in NIH grant.
- Cultural change model related to 2 focus areas:
  - At-risk groups and barriers

Focus #2: Barriers related to perceptions re: commitment, visibility
- Substantial percentages for men and women, though greatest for women.
The Women in Medicine and Health Science Program: An Innovative Initiative to Support Female Faculty at the University of California Davis School of Medicine
Melissa D. Bauman, PhD, Lydia P. Howell, MD, and Amparo C. Villablana, MD

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 (WMHS) 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 WMHS 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 WMHS 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 WMHS program will continue to advocate for broader institutional change to support female faculty, like creating an on-site child care program. Other institutions seeking to address the challenges facing female faculty may consider using the WMHS 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 full-time faculty are full professors, compared with 30% of male full-time faculty. Recent data from the Association of American Medical Colleges (AAMC) show a modest increase in the percentage of female medical school faculty from 29% in 2001 to 37% in 2012.

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. 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 50 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.

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. 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 Sciences (WIMHS) program at the University of California Davis School of Medicine, and 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.F.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).

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**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**

<table>
<thead>
<tr>
<th>Type of event</th>
<th>Activities</th>
<th>Purpose</th>
<th>Scheduling</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Networking/social/legacy</strong></td>
<td>Annual WIMHS fall welcome reception, Meet the leaders (deans, etc.), Founding women events (published book on the school of medicine’s founding female faculty)</td>
<td>Welcome and introduce new female faculty, Introduce faculty to the school of medicine leadership, Honor and celebrate founding female faculty</td>
<td>Held in the evening at a local restaurant or the home of WIMHS leadership (yearly), Breakfast with the dean (quarterly), Special activity scheduling</td>
</tr>
<tr>
<td><strong>Internal career development</strong></td>
<td>Leadership clinics, Lessons from business, Merits and promotions seminars, Leadership and diversity events</td>
<td>Provide early-career faculty with feedback and advice on CVs, career crossroads, academic career tracks, leadership opportunities, and skills</td>
<td>Scheduled for one hour at lunchtime in a central location at the medical center, monthly or quarterly</td>
</tr>
<tr>
<td><strong>External career development</strong></td>
<td>Public speaking, Salary negotiations, Time management, Career advancement, Other seminars</td>
<td>Provide personal and professional development skills to female faculty</td>
<td>Scheduled for one hour at lunchtime in a central location at the medical center, monthly or quarterly</td>
</tr>
<tr>
<td><strong>Work/life balance</strong></td>
<td>Elder care workshop, Mommy and me gatherings in the park, Faculty dads panel discussion</td>
<td>Address the needs of faculty dealing with elder care and child care responsibilities, Address the needs of younger male faculty</td>
<td>Scheduled for one hour at lunchtime in a central location at the medical center or outside facility, monthly or quarterly</td>
</tr>
<tr>
<td><strong>General interest</strong></td>
<td>Authors of popular books; book club, Women’s health and research</td>
<td>Bring topics of general interest to female faculty, Network with campus Women’s Resource and Research Center, Integrate activities with Women’s Center for Health at the school of medicine</td>
<td>Scheduled for one hour at lunchtime in a central location at the medical center or main campus, monthly or quarterly</td>
</tr>
<tr>
<td><strong>WIMHS leadership</strong></td>
<td>Planning meetings with WIMHS leadership to plan programs, schedule and recruit speakers for the upcoming year, set strategic direction</td>
<td>Involve school of medicine leaders in WIMHS leadership activities, Integrate programs (WIMHS, BICWH, AMWA, CTS, Mentoring Academy)</td>
<td>Early morning or lunch meetings scheduled with advance notice, yearly or twice yearly for annual planning meetings, monthly for WIMHS directors</td>
</tr>
<tr>
<td><strong>Mentoring</strong></td>
<td>Mentored leadership development experience (early- or midcareer faculty)</td>
<td>Create a pool of future female leaders, Career development project and plan (scholarship, social media, other), 20% salary effort</td>
<td>Competitive, rotating one- to two-year experiences with WIMHS directors</td>
</tr>
</tbody>
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Abbreviations: BICWH indicates Building Interdisciplinary Research Careers in Women’s Health program; AMWA, American Medical Women’s Association; CTS, Clinical and Translational Science Center; ELAM, Executive Leadership in Academic Medicine fellowship.
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 (BIRCHWH) 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 academics 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 noon time 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.7 To broaden participation in WIMHS activities, we reached out and delivered content to the broader community of female faculty through e-mail and social media. In 2000, we created a dedicated listserv for all female faculty, which we continue to use to disseminate information about WIMHS events. Shortly after, we created a Web site (https://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 listserv 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.

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 have steadily increased, as have 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 (62% UCDHS versus 46% AAMC) and of faculty promoted to associate professor who are women (39% UCDHS versus 37% AAMC) are comparable to national AAMC data. Although we cannot determine whether 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. 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 (CAChE).
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, because 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, house staff, 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. 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 workplace 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 on-site child care 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). As an interim measure, in 2012, the University of California started offering faculty discounted access to child care resources online. As we look toward the future, the WIMHS program will continue its
efforts to secure on-site child care 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 interinstitutional activities and collaborations.

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References


