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Supporting Mid-Career Women Faculty in Academic Medicine through Mentorship and Sponsorship

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Abstract

Mid-career women faculty face unique career challenges that may benefit from mentorship and sponsorship, yet such programs focused on the needs of this career phase are scarce in academic medicine. Many mid-career faculty require intentional and individual career planning to choose a path from the broad array of options in academic medicine. Ambiguous promotion criteria, increased workloads due to service or citizenship tasks, and a lack of sponsorship are among the barriers that inhibit mid-career faculty's growth into the high-visibility roles needed for career advancement. In addition, issues faced by women mid-career faculty members may be further exacerbated by barriers such as biases, a disproportionate share of family responsibilities, and inequities in recognition and sponsorship. These barriers contribute to slower career growth and higher attrition among women mid-career faculty and ultimately an underrepresentation of women among senior leadership in academic medicine. Here, we describe how a mentoring program involving individuals (e.g., mentors, mentees, sponsors) and departments/institutions (e.g., deans, career development offices) can be used to support mid-career faculty. We also provide recommendations for building a mentoring program with complementary support from

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sponsors targeted towards the specific needs of women mid-career faculty. A robust mid-career mentoring program can support the career growth and engagement of individual faculty members and as a result improve the diversity of academic medicine's highest ranks.

PROBLEM STATEMENT

The benefits of mentorship and sponsorship in academia are well recognized. Mentorship improves faculty engagement and career advancement, is mutually rewarding for the mentor and the mentee, and has been identified as a need by faculty across the career lifespan.[1–4] Sponsorship, in which an influential individual advocates for a faculty member, is a critical complement to mentorship for major career advancement.[5,6] Many mentoring programs are targeted toward junior faculty or other early career positions,[7,8] and data are limited on the availability and scope of programs targeted toward mid-career faculty. Of 39 benchmark institutions in 2013, 21 (54%) institutions did not have mid-career-specific mentorship programs.[9]

Exact definitions of the mid-career phase differ by institution, however, we refer to the mid-career phase as generally equivalent to an associate professor rank.[10] Recent surveys have shown low career satisfaction, happiness, and vitality among mid-career faculty.[11,12] Mid-career faculty report lacking formal feedback on progress towards promotion and vague promotional criteria not aligned with full responsibilities (e.g., service, clinical, community engagement, and teaching) – making it difficult to develop goals and progress towards promotion.[11,13] Low institutional support and engagement and high aspirations for leadership roles are associated with increased burnout and turnover of mid-career faculty.[14]

Women and underrepresented minority (URM) mid-career faculty have unique mid-career needs and challenges. To fill the gap between programs for early career faculty entering academic medicine and those intended to increase the diversity of leadership, institutions must provide support during the mid-career phase. Here, we focus on the needs of women mid-career faculty and discuss how complementary mentorship and sponsorship support can improve women's career advancement. While we focus on women given unique gender-based challenges, additional mentorship for URM mid-career faculty should also be considered to broadly increase diversity among academic medicine's highest ranks.

A lack of mentors and sponsors has been identified by women faculty as a barrier to career growth.[6,7,15–17] Data demonstrate underrepresentation among women faculty as they progress through academic ranks, with women less likely than men to be promoted to full professor or to advance to senior leadership positions and more likely to leave academic medicine.[18–25] In 2020, while 48% of full-time assistant professors at medical schools in the United States were women, only 40% of associate professors and 27% of full professors were women.[26] While all mid-career faculty face increased workloads due to service and administrative tasks, nearly 50% of women physicians perceive that they manage a greater

burden of unsupported citizenship tasks than their male colleagues.[27,28] Women faculty report facing biases and microaggressions, resulting in feelings of invisibility, isolation, and/or lack of belonging.[25,29,30] Women are underrepresented in key positions for career growth (e.g. journal editors) and for honors (e.g. national keynote speaking engagements).[24] These systemic barriers can inhibit women mid-career faculty from advancing and/or remaining in academic medicine.[20]

Women at mid-career are disproportionately faced with the dual roles of navigating a workplace not designed for them while also carrying the majority of responsibilities at home with children and aging parents.[9,18,29,31,32] Women mid-career faculty may thus face particular challenges in determining 1) what positions are available to them and how to focus their efforts accordingly; 2) how to identify, build, and leverage networks to achieve goals; and 3) how to make career progress while balancing home responsibilities.[9,13,25,33] It is important for women faculty to have space and guidance to shape their goals and develop intentional action plans, with individual and institutional support through their mid-careers and into high-level positions.[24,34]

SOLUTIONS

Mentorship and sponsorship can help women mid-career faculty build their visibility, develop their careers, and grow into high level roles.[23] Not only does this support keep mid-career faculty engaged and productive, but it may also help to build diversity among academic medicine's ranks by reducing attrition and increasing promotion rates among women mid-career faculty.[35] Aspects of successful mentoring have been previously published – for example, trust and clear communication; defined expectations, roles, and responsibilities; dedicated time and attention to mentorship activities; and institution-supported procedures for ending a mentoring relationship.[2,23,36–41] However, unique challenges faced by women mid-career faculty demonstrate the need for additional career phase-based considerations and investment from institutions.[42]

Pairing Individual Mentorship and Sponsorship with Institutional Support

Mentoring programs tailored to the needs of women mid-career faculty in academic medicine provide an opportunity for individualized, person-based support in career advancement, productivity, and personal development.[1] Mentorship structures include traditional senior-junior vertical dyads as well as horizontal formal and informal groups of mid-career peers who can provide mutual support.[43]

Multiple mentorship models and practices have been previously published.[38,44,45] As many institutions have existing mentoring programs to support junior faculty, this infrastructure can be adapted for mid-career faculty to minimize duplicated resources. For example, mentoring programs for a mid-career cohort can be housed together and share mentor trainings with an existing junior faculty program.[46] Institutions can also adapt infrastructure and practices from other institutions.[47–50] To minimize burden on mentors and increase mentor accessibility, hybrid programs of dyad, group, and peer mentors can be used.[51–54] Helping mid-career women faculty develop these mentorship networks can also address women's needs that may not be effectively supported by a single mentor.[55,56] Institutions

can also support women faculty in joining professional societies and research networks, which can provide additional external mentorship support.[57,58] Above all, institutions must systematically gather input from key stakeholders – particularly faculty – in adapting and designing a focused mentoring program to directly address women mid-career faculty needs (see *Recommendations for Effective Mentoring of Women Mid-Career Faculty*, below).

Mentorship support of mid-career women faculty is enhanced by sponsorship. A sponsor is defined as an individual who uses their influence and/or access to professional networks and key opinion leaders to advocate for a faculty member. Sponsorship can be invaluable in helping faculty take advantage of high-visibility opportunities – for example, prominent speaking opportunities or important institutional leadership positions.[5,6,59] Mentors and sponsors do not necessarily fill the same roles, yet both are critical for the career advancement of mid-career women. Thus, mentors and sponsors both fill important roles within institutional faculty development initiatives, and the importance of sponsors should not be overlooked.

In addition to providing individual support to a mentee, a formal mentoring program can also be a key driver of institutional change to better support mid-career faculty by providing opportunities for feedback about systemic concerns to the institution. This combination of individual and institutional support can play a pivotal role in retaining faculty who might otherwise leave the institution.[39] For example, a lack of clarity around promotion criteria and specifics about what is needed to fulfill these – and a lack of transparency around promotion decisions – are a concern for mid-career faculty.[9,27] This lack of transparency is a major issue for women – in one survey, 40% of women associate professors reported that promotion decisions may be impacted by gender, race, or other elements not related to performance.[27] Broader systemic issues facing women faculty can include uneven workloads, inequitable compensation, and lack of flexibility to allow for family responsibilities.[18,60,61] Individual mentoring cannot solely overcome these challenges. However, a combination of individual and institutional support through identification of issues, advocacy from mentees, mentors, and sponsors, and response from leadership can help support the development, retention, and advancement of women mid-career faculty.

Table 1 provides a sample division of responsibilities for a mid-career-focused mentoring program, showing how individual (mentor, sponsor, peers, mentee) and institutional entities (departmental and institutional leadership and support offices) can together support women mid-career faculty in three facets of development aimed towards career goals: organizational, functional, and personal development.[9] *Organizational development* includes high-visibility opportunities, e.g., leadership positions and fellowships. *Functional development* involves building a skillset, e.g., interdisciplinary trainings. *Personal development* involves personal and professional well-being, e.g., balancing work and life responsibilities. While the mentor can assist the mentee's development, departmental and institutional leadership must also push for necessary organizational changes – e.g., building governance and leadership opportunities for mid-career faculty and addressing unconscious biases that have historically kept women from these roles.[42] Likewise, mentors and mentees have a responsibility to advocate to leadership for their needs – e.g., clarity around

promotion criteria and flexibility in career paths. While the specific entities involved as well as the division of their responsibilities will differ, these bidirectional relationships can be leveraged to both provide individual-level support as well as institutional-level change to foster an environment that is conducive to mid-career faculty advancement and career satisfaction.

Recommendations for Effective Career Support of Women Mid-Career Faculty

To develop and maintain a culture supportive of mid-career women faculty in academic medicine, consider the following recommendations:

- **Ensure women mid-career faculty have access to sponsorship**.

  - Sponsorship during mid-career is critical to career advancement. Mentors can be, but are usually not, sponsors. While mentorship is generally a long-lasting, more personal relationship, sponsorship is based around specific opportunities. Mentors can assist mentees by identifying and introducing potential sponsors to mentees based on individual career goals.

  - Literature shows that sponsorship is particularly critical to developing women into high-level leadership positions.[6,62] The advocacy of a sponsor raises women's visibility among influential leaders, key for major career advancements into prominent roles, and helps to overcome unconscious biases that keep women from leadership positions. Synergy between mentor and sponsor support can thus be especially useful for women who may be less likely to self-promote.[5,6] This support can enhance leadership diversity by raising the visibility of a wider group of mid-career faculty members.

  - Lessons from corporate programs and early academic sponsorship initiatives can be applied within academic medicine.[63] Institutions should actively promote sponsorship, particularly for women who are less frequently supported by sponsors than men.[64] Formal internal or external programs to connect sponsors and mid-career women faculty (rather than relying solely on informal contacts) are important to ensure access to sponsorship.[65,66] Institutions should ensure that mid-career women faculty have resources to participate in sponsorship programs (e.g., nominations, protected time).[65] Internal sponsorship programs can be modeled on existing programs to connect sponsors and mid-career faculty.[5] Institutions can encourage senior faculty and leaders to act as sponsors through demonstrations of the importance of sponsorship in identifying and cultivating talent – and senior faculty can encourage each other as peers to continue sponsorship activities.[65] Sponsorship can be built into institutional culture through inclusion of sponsorship and advocacy activities on performance reviews and through the active solicitation of nominations from sponsors for internal roles and awards. Institutions should monitor for appropriate

representation of women faculty in panels and awards, soliciting nominations for women faculty from sponsors to ensure visibility and further advancement.[67]

- **Conduct systematic needs assessments**.

  – To adequately address the needs of mid-career women faculty, it is important to first identify their most pressing issues. What institution- or department-specific issues are faculty facing, and what could be addressed via a mentoring program? What are mid-career faculty's goals and expectations? What gaps are women faculty finding in identifying or making connections with mentors and/or sponsors, in building their networks, and/or in achieving growth opportunities? Are solutions available internally or do they need to be sought from other institutions or professional organizations? Reports of challenges in identifying or obtaining opportunities for advancement, such as leadership positions or speaking engagements, may indicate a need for mentorship and sponsorship to support career development whereas reports of bias or discrimination may require a systemic cultural review and solutions.

- **Assist women mid-career mentees in choosing mentors that can support career advancement**.

  – There is no one-size-fits-all approach for identifying a mentor. Evidence has been mixed as to whether single- or mixed-gender mentoring dyads provide better outcomes for women mentees.[68] Other markers of similarity (e.g., professional or leisure interests) may be of more importance to a successful mentoring relationship than gender.[69–71] Surveys have shown some preference to matching gender among early career faculty, and women mentors may provide more actionable information around issues such as aligning work with caregiving needs.[29,70,71] However, mentorship and sponsorship from leaders in the field become important during mid-career to promote career advancement; given the continuing gender gaps in academic medicine, these leaders tend to be male.[18] Ultimately, women mentees should seek mentors and sponsors with the career knowledge and networks that will help them obtain their goals, regardless of gender.

  – Women mentees report having fewer mentors and more difficulty identifying mentors.[16,70,72,73] Institutions can mitigate this impact by 1) broadening the pool of potential mentors through identifying candidates and providing trainings to support effective mentorship practices and reduce biases among mentors[74,75] and 2) ensuring mid-career mentoring program leadership assists women mentees in identifying and connecting with mentors and sponsors that are appropriate for their career goals.

- Institutions can also provide mentor training to mitigate "cultures of fear" around sexual harassment accusations. By creating open dialogues between men and women as well as providing expectations for appropriate interactions to mentors (e.g., addressing concerns that could be perceived as being gendered), institutions should ensure that men's concerns around mixed-gender mentoring are not preventing women faculty from accessing the mentorship needed for career advancement.[76]

- **Connect mentees with resources for their individual career development**.

  - Support with career planning has been reported as a high priority among mid-career faculty.[77] Mentors can help mentees 1) review and understand their career options, 2) determine fits for their goals and strengths, 3) develop, implement, and regularly evaluate *intentional* and *individual* career plans, and 4) determine roles and projects to advance their careers. As faculty progress into their mid-career phase with more solidified career goals, mentors should connect mentees with resources for development – e.g., individuals or programs beneficial for the mentee's career goals.

  - Institutional change is needed to increase transparency and reduce unconscious biases and favoritism in promotions and hiring – e.g., by widely posting positions and opportunities to allow for more open competition.[27] In addition, there should be active recruitment efforts to hire women, especially for more senior positions, as they are less likely to seek or be asked to consider leadership opportunities, despite their qualifications. Senior mentors or sponsors who have access to upper-level strategy and decision-making should 1) encourage institutional culture change around transparency and recruiting practices and 2) share opportunities with mentees. Mentors can also support mentees through application and interviewing processes for higher-level positions; this includes the mentor understanding their limitations during this process and encouraging mentees to seek out executive coaching, if necessary. As data have shown that women are less likely to be promoted than men despite similar productivity and interest in higher level positions, mentor support in putting together competitive application packages that leverage mentees' experience and qualifications is one step towards parity in women's career growth.[78]

- **Consider the specific professional development needs of mid-career women faculty**.

  - For effective career development and advancement, programs and mentoring need to be tailored to the specific needs of mid-career faculty members – for example, developing higher-level leadership skills to support career growth into and success in senior roles.[79,80] While programs for early career faculty may focus on more basic

needs such as obtaining grant funding and writing for publication, core competencies for mid-career faculty could include financial and personnel management, building and leveraging diversity, creating an innovative culture, building influence, strategic planning, developing negotiation skills, and cultivating a strong network.[35,79–81] This development should acknowledge the experiences that women have in these areas, as well as gender-based differences in communication, negotiation, and leadership styles.

CONCLUSION

The unique concerns and challenges faced by mid-career women faculty require institutions to develop strategies tailored to support this vital group in career advancement and satisfaction. An investment in mid-career women faculty through individual mentorship and sponsorship combined with institutional support (Table 1) is critical to 1) maintain engagement and productivity and 2) grow a diverse, effective cohort of leaders. Mentorship programs targeted towards mid-career faculty are lacking in many institutions.[43] However, mid-career women receiving formal mentorship have reported an improved understanding of promotion criteria and the benchmarks they would need to achieve to be promoted, improved perceived leadership competencies, and increased satisfaction.[27,82,83]

While mentoring relationships are typically stable and relatively long-lasting, the dynamic nature of career paths requires flexibility. As a faculty member's career evolves, they may need to identify additional mentors to support continued advancement. To effectively support mid-career faculty, mentoring programs should regularly check in with mentees to evaluate their needs, goals, issues, and desires out of mentoring. Mentoring programs should support mid-career faculty in identifying "serial" mentors and sponsors based on these evolving factors – it is unlikely that one person can meet all aspects of a mentee's support, thus the cultivation of new mentoring relationships and networks can provide additional benefit to mentees.

While we have limited this paper to women mid-career faculty, URM faculty are also less likely to be promoted and more likely to leave the field of academic medicine.[84] Women URM can face a compounding of barriers causing further isolation within their careers.[28,84] While perspectives and experience with mentoring differ among racial and ethnic groups and among genders within groups,[70] recommendations described above can also be considered to address the needs of URM. For example, systematic needs assessments can be used to understand barriers among URM and adapt mentoring programs accordingly. Research into this area is critically needed to maximize the career growth of all underrepresented groups and improve the diversity of the higher levels of academic medicine. Additional research is also needed on issues faced by and appropriate interventions for promotion of LGBTQ+ faculty. The onus to address this lack of promotions and diversity in leadership cannot solely be placed on individual mentees. Institutional change to develop women and URM into leadership must be a major component of faculty development initiatives.

Data on mid-career faculty mentorship are currently limited. Given unique challenges faced by mid-career women faculty, conclusions from evaluations of student and early career mentoring programs are not necessarily applicable to mid-career programs. Future research should identify the most effective mentorship practices to support women mid-career faculty development – ultimately addressing how career support including mentorship and sponsorship programs in addition to efforts to address unconscious biases can help to reduce gender and racial disparities in academic medicine leadership.

Conflicts of Interest and Source of Funding:

REFERENCES

1. Sambunjak D, Straus SE, Marusi A. Mentoring in academic medicine: a systematic review. JAMA. Sep 2006;296(9):1103–15. doi:10.1001/jama.296.9.1103 [PubMed: 16954490]

2. Straus SE, Johnson MO, Marquez C, Feldman MD. Characteristics of successful and failed mentoring relationships: a qualitative study across two academic health centers. Acad Med. Jan 2013;88(1):82–9. doi:10.1097/ACM.0b013e31827647a0 [PubMed: 23165266]

3. Pololi LH, Evans AT, Civian JT, et al. Mentoring Faculty: A US National Survey of Its Adequacy and Linkage to Culture in Academic Health Centers. J Contin Educ Health Prof. 2015;35(3):176–84. doi:10.1002/chp.21294 [PubMed: 26378423]

4. Nursing NLf. Position statement: mentoring of nurse faculty. Nurs Educ Perspect. 2006 Mar–Apr 2006;27(2):110–3. [PubMed: 16733976]

5. Ayyala MS, Skarupski K, Bodurtha JN, et al. Mentorship Is Not Enough: Exploring Sponsorship and Its Role in Career Advancement in Academic Medicine. Acad Med. 01 2019;94(1):94–100. doi:10.1097/ACM.0000000000002398 [PubMed: 30095456]

6. Travis EL, Doty L, Helitzer DL. Sponsorship: a path to the academic medicine C-suite for women faculty? Acad Med. Oct 2013;88(10):1414–7. doi:10.1097/ACM.0b013e3182a35456 [PubMed: 23969365]

7. Farkas AH, Bonifacino E, Turner R, Tilstra SA, Corbelli JA. Mentorship of Women in Academic Medicine: a Systematic Review. J Gen Intern Med. 07 2019;34(7):1322–1329. doi:10.1007/s11606-019-04955-2 [PubMed: 31037545]

8. Bonifacino E, Ufomata EO, Farkas AH, Turner R, Corbelli JA. Mentorship of Underrepresented Physicians and Trainees in Academic Medicine: a Systematic Review. J Gen Intern Med. Feb 2021;doi:10.1007/s11606-020-06478-7

9. Canale Anne Marie, Herdklotz Cheryl, Lynn W. Mid-Career Faculty Support: The Middle Years of the Academic Profession. Faculty Career Development Services, The Wallace Center, Rochester Institute of Technology; 2013.

10. Coleman MM, Richard GV. Faculty career tracks at U.S. medical schools. Acad Med. Aug 2011;86(8):932–7. doi:10.1097/ACM.0b013e3182222699 [PubMed: 21694565]

11. Mathews K. Perspectives on Midcareer Faculty and Advice for Supporting Them. Cambridge; 2014.

12. Pololi LH, Evans AT, Civian JT, et al. Faculty Vitality-Surviving the Challenges Facing Academic Health Centers: A National Survey of Medical Faculty. Acad Med. Jul 2015;90(7):930–6. doi:10.1097/ACM.0000000000000674 [PubMed: 25692560]

13. Baldwin R, DeZure D, Shaw A, Moretto K. Mapping the Terrain of Mid-Career Faculty at a Research University: Implications for Faculty and Academic Leaders. Change: The Magazine of Higher Learning; 2010. p. 46–55.

14. Pololi LH, Krupat E, Civian JT, Ash AS, Brennan RT. Why are a quarter of faculty considering leaving academic medicine? A study of their perceptions of institutional culture and intentions to leave at 26 representative U.S. medical schools. Acad Med. Jul 2012;87(7):859–69. doi:10.1097/ACM.0b013e3182582b18 [PubMed: 22622213]

15. Caniano DA, Sonnino RE, Paolo AM. Keys to career satisfaction: insights from a survey of women pediatric surgeons. J Pediatr Surg. Jun 2004;39(6):984–90. doi:10.1016/j.jpedsurg.2004.02.039 [PubMed: 15185240]

16. Butkus R, Serchen J, Moyer DV, Bornstein SS, Hingle ST, Physicians HaPPCotACo. Achieving Gender Equity in Physician Compensation and Career Advancement: A Position Paper of the American College of Physicians. Ann Intern Med. 05 2018;168(10):721–723. doi:10.7326/M17-3438 [PubMed: 29710100]

17. Levinson W, Kaufman K, Clark B, Tolle SW. Mentors and role models for women in academic medicine. West J Med. Apr 1991;154(4):423–6. [PubMed: 1877183]

18. Carr PL, Gunn CM, Kaplan SA, Raj A, Freund KM. Inadequate progress for women in academic medicine: findings from the National Faculty Study. J Womens Health (Larchmt). Mar 2015;24(3):190–9. doi:10.1089/jwh.2014.4848 [PubMed: 25658907]

19. Jena AB, Khullar D, Ho O, Olenski AR, Blumenthal DM. Sex Differences in Academic Rank in US Medical Schools in 2014. JAMA. Sep 2015;314(11):1149–58. doi:10.1001/jama.2015.10680 [PubMed: 26372584]

20. Carr PL, Raj A, Kaplan SE, Terrin N, Breeze JL, Freund KM. Gender Differences in Academic Medicine: Retention, Rank, and Leadership Comparisons From the National Faculty Survey. Acad Med. 11 2018;93(11):1694–1699. doi:10.1097/ACM.0000000000002146 [PubMed: 29384751]

21. Roberts LW. Women and Academic Medicine, 2020. Acad Med. 10 2020;95(10):1459–1464. doi:10.1097/ACM.0000000000003617 [PubMed: 33002898]

22. Lautenberger DM, Dandar VM. 2018–2019 The State of Women in Academic Medicine: Exploring Pathways to Equity. Association of American Medical Colleges; 2020.

23. Cross M, Lee S, Bridgman H, Thapa DK, Cleary M, Kornhaber R. Benefits, barriers and enablers of mentoring female health academics: An integrative review. PLoS One. 2019;14(4):e0215319. doi:10.1371/journal.pone.0215319 [PubMed: 30998791]

24. Lewiss RE, Silver JK, Bernstein CA, Mills AM, Overholser B, Spector ND. Is Academic Medicine Making Mid-Career Women Physicians Invisible? J Womens Health (Larchmt). 02 2020;29(2):187–192. doi:10.1089/jwh.2019.7732 [PubMed: 31593525]

25. Templeton K, Bernstein CA, Sukhera J, et al. Gender-Based Differences in Burnout: Issues Faced by Women Physicians. Washington, DC: NAM Perspectives, National Academy of Medicine; 2019.

26. 2020 U.S. Medical School Faculty. AAMC. https://www.aamc.org/data-reports/faculty-institutions/interactive-data/2020-us-medical-school-faculty

27. Buch K, Huet Y, Rorrer A, Roberson L. Removing the Barriers to Full Professor: A Mentoring Program for Associate Professors. Change: The Magazine of Higher Learning 2011. p. 38–45.

28. Armijo PR, Silver JK, Larson AR, Asante P, Shillcutt S. Citizenship Tasks and Women Physicians: Additional Woman Tax in Academic Medicine? J Womens Health (Larchmt). Nov 2020;doi:10.1089/jwh.2020.8482

29. Templeton K, Nilsen KM, Walling A. Issues Faced by Senior Women Physicians: A National Survey. J Womens Health (Larchmt). 07 2020;29(7):980–988. doi:10.1089/jwh.2019.7910 [PubMed: 31905309]

30. Pololi LH, Jones SJ. Women faculty: an analysis of their experiences in academic medicine and their coping strategies. Gend Med. Oct 2010;7(5):438–50. doi:10.1016/j.genm.2010.09.006 [PubMed: 21056870]

31. O'Sullivan A Pulled from all sides: The sandwich generation at work. Work. 2015;50(3):491–4. doi:10.3233/WOR-141959 [PubMed: 25248534]

32. Evans KL, Millsteed J, Richmond JE, Falkmer M, Falkmer T, Girdler SJ. Working Sandwich Generation Women Utilize Strategies within and between Roles to Achieve Role Balance. PLoS One. 2016;11(6):e0157469. doi:10.1371/journal.pone.0157469 [PubMed: 27305074]

33. Wilson R Why Are Associate Professors So Unhappy? The Chronicle of Higher Education. https://www.chronicle.com/article/Why-Are-Associate-Professors/132071/

34. Chang S, Guindani M, Morahan P, Magrane D, Newbill S, Helitzer D. Increasing Promotion of Women Faculty in Academic Medicine: Impact of National Career Development Programs. J Womens Health (Larchmt). 06 2020;29(6):837–846. doi:10.1089/jwh.2019.8044 [PubMed: 32466701]

35. Campion MW, Bhasin RM, Beaudette DJ, Shann MH, Benjamin EJ. Mid-career faculty development in academic medicine: How does it impact faculty and institutional vitality? J Fac Dev. Sep 2016;30(3):49–64. [PubMed: 27942418]

36. Chopra V, Edelson DP, Saint S. A PIECE OF MY MIND. Mentorship Malpractice. JAMA. Apr 12 2016;315(14):1453–4. doi:10.1001/jama.2015.18884 [PubMed: 27115263]

37. Burgess A, van Diggele C, Mellis C. Mentorship in the health professions: a review. Clin Teach. 06 2018;15(3):197–202. doi:10.1111/tct.12756 [PubMed: 29318730]

38. Straus SE, Chatur F, Taylor M. Issues in the mentor-mentee relationship in academic medicine: a qualitative study. Acad Med. Jan 2009;84(1):135–9. doi:10.1097/ACM.0b013e31819301ab [PubMed: 19116493]

39. Dunham-Taylor J, Lynn CW, Moore P, McDaniel S, Walker JK. What goes around comes around: improving faculty retention through more effective mentoring. J Prof Nurs. 2008 Nov–Dec 2008;24(6):337–46. doi:10.1016/j.profnurs.2007.10.013 [PubMed: 19022206]

40. Jackson VA, Palepu A, Szalacha L, Caswell C, Carr PL, Inui T. "Having the right chemistry": a qualitative study of mentoring in academic medicine. Acad Med. Mar 2003;78(3):328–34. doi:10.1097/00001888-200303000-00020 [PubMed: 12634219]

41. Zerzan JT, Hess R, Schur E, Phillips RS, Rigotti N. Making the most of mentors: a guide for mentees. Acad Med. Jan 2009;84(1):140–4. doi:10.1097/ACM.0b013e3181906e8f [PubMed: 19116494]

42. Helitzer DL, Newbill SL, Cardinali G, Morahan PS, Chang S, Magrane D. Changing the Culture of Academic Medicine: Critical Mass or Critical Actors? J Womens Health (Larchmt). 05 2017;26(5):540–548. doi:10.1089/jwh.2016.6019 [PubMed: 28092473]

43. Kashiwagi DT, Varkey P, Cook DA. Mentoring programs for physicians in academic medicine: a systematic review. Acad Med. Jul 2013;88(7):1029–37. doi:10.1097/ACM.0b013e318294f368 [PubMed: 23702518]

44. Nick JM, Delahoyde TM, Del Prato D, et al. Best practices in academic mentoring: a model for excellence. Nurs Res Pract. 2012;2012:937906. doi:10.1155/2012/937906 [PubMed: 22685645]

45. Geraci SA, Thigpen SC. A Review of Mentoring in Academic Medicine. Am J Med Sci. Feb 2017;353(2):151–157. doi:10.1016/j.amjms.2016.12.002 [PubMed: 28183416]

46. Gandhi M, Johnson M. Creating More Effective Mentors: Mentoring the Mentor. AIDS Behav. 09 2016;20 Suppl 2:294–303. doi:10.1007/s10461-016-1364-3 [PubMed: 27039092]

47. Thorndyke LE, Gusic ME, George JH, Quillen DA, Milner RJ. Empowering junior faculty: Penn State's faculty development and mentoring program. Acad Med. Jul 2006;81(7):668–73. doi:10.1097/01.ACM.0000232424.88922.df [PubMed: 16799296]

48. Cranmer JM, Scurlock AM, Hale RB, et al. An Adaptable Pediatrics Faculty Mentoring Model. Pediatrics. 05 2018;141(5)doi:10.1542/peds.2017-3202

49. Emans SJ, Goldberg CT, Milstein ME, Dobriner J. Creating a faculty development office in an academic pediatric hospital: challenges and successes. Pediatrics. Feb 2008;121(2):390–401. doi:10.1542/peds.2007-1176 [PubMed: 18245430]

50. Golper TA, Feldman HI. New challenges and paradigms for mid-career faculty in academic medical centers: key strategies for success for mid-career medical school faculty. Clin J Am Soc Nephrol. Nov 2008;3(6):1870–4. doi:10.2215/CJN.03900907 [PubMed: 18322049]

51. Pololi LH, Evans AT. Group Peer Mentoring: An Answer to the Faculty Mentoring Problem? A Successful Program at a Large Academic Department of Medicine. J Contin Educ Health Prof. 2015;35(3):192–200. doi:10.1002/chp.21296 [PubMed: 26378425]

52. Pololi L, Knight S. Mentoring faculty in academic medicine. A new paradigm? J Gen Intern Med. Sep 2005;20(9):866–70. doi:10.1111/j.1525-1497.2005.05007.x [PubMed: 16117759]

53. Tsen LC, Borus JF, Nadelson CC, Seely EW, Haas A, Fuhlbrigge AL. The development, implementation, and assessment of an innovative faculty mentoring leadership program. Acad Med. Dec 2012;87(12):1757–61. doi:10.1097/ACM.0b013e3182712cff [PubMed: 23095917]

54. Byington CL, Keenan H, Phillips JD, et al. A Matrix Mentoring Model That Effectively Supports Clinical and Translational Scientists and Increases Inclusion in Biomedical Research: Lessons From the University of Utah. Acad Med. Apr 2016;91(4):497–502. doi:10.1097/ACM.0000000000001021 [PubMed: 26650676]

55. Christou H, Dookeran N, Haas A, et al. Establishing Effective Mentoring Networks: Rationale and Strategies. MedEdPORTAL. Apr 18 2017;13:10571. doi:10.15766/mep_2374-8265.10571 [PubMed: 30800773]

56. DeCastro R, Sambuco D, Ubel PA, Stewart A, Jagsi R. Mentor networks in academic medicine: moving beyond a dyadic conception of mentoring for junior faculty researchers. Acad Med. Apr 2013;88(4):488–96. doi:10.1097/ACM.0b013e318285d302 [PubMed: 23425990]

57. Sorkness CA, Pfund C, Ofili EO, et al. A new approach to mentoring for research careers: the National Research Mentoring Network. BMC Proc. 2017;11(Suppl 12):22. doi:10.1186/s12919-017-0083-8 [PubMed: 29375663]

58. Fitzgibbon ML, Rutten LJ, Yaroch A, Peterson C. Lessons learned from the initial 4 years of the SBM Mid-Career Leadership Institute. Transl Behav Med. 10 08 2020;10(4):915–917. doi:10.1093/tbm/ibaa081 [PubMed: 33030536]

59. Johnson W On Being a Mentor: A Guide for Higher Education Faculty. Routledge; 2015.

60. Social Sciences Feminist Network Research Interest Group UoO. The Burden of Invisible Work in Academia: Social Inequalities and Time Use in Five University Departments. Humboldt Journal of Special Relations; 2017. p. 228–245.

61. Bauman MD, Howell LP, Villablanca AC. The Women in Medicine and Health Science program: an innovative initiative to support female faculty at the University of California Davis School of Medicine. Acad Med. Nov 2014;89(11):1462–6. doi:10.1097/ACM.0000000000000403 [PubMed: 25006704]

62. Hewlett S, Peraino K, Sherbin L, Sumberg K. The Sponsor Effect: Breaking Through the Last Glass Ceiling. Harvard Business Review; 2011.

63. Huston WM, Cranfield CG, Forbes SL, Leigh A. A sponsorship action plan for increasing diversity in STEMM. Ecol Evol. Mar 2019;9(5):2340–2345. doi:10.1002/ece3.4962 [PubMed: 30891184]

64. Patton EW, Griffith KA, Jones RD, Stewart A, Ubel PA, Jagsi R. Differences in Mentor-Mentee Sponsorship in Male vs Female Recipients of National Institutes of Health Grants. JAMA Intern Med. 04 01 2017;177(4):580–582. doi:10.1001/jamainternmed.2016.9391 [PubMed: 28241219]

65. Gottlieb AS, Travis EL. Rationale and Models for Career Advancement Sponsorship in Academic Medicine: The Time Is Here; the Time Is Now. Acad Med. 11 2018;93(11):1620–1623. doi:10.1097/ACM.0000000000002342 [PubMed: 29979207]

66. Roy B, Gottlieb AS. The Career Advising Program: A Strategy to Achieve Gender Equity in Academic Medicine. J Gen Intern Med. 06 2017;32(6):601–602. doi:10.1007/s11606-016-3969-7 [PubMed: 28050753]

67. Abbuhl S, Bristol MN, Ashfaq H, et al. Examining faculty awards for gender equity and evolving values. J Gen Intern Med. Jan 2010;25(1):57–60. doi:10.1007/s11606-009-1092-8 [PubMed: 19727968]

68. Blake-Beard S, Bayne ML, Crosby FJ, Muller CB. Matching by Race and Gender in Mentoring Relationships: Keeping our Eyes on the Prize. Journal of Social Issues. 2011;67(3):622–643.

69. Hernandez PR, Estrada M, Woodcock A, Schultz PW. Mentor qualities that matter: The importance of perceived (not demographic) similarity. J Exp Educ. 2017;85(3):450–468. doi:10.1080/00220973.2016.1246405 [PubMed: 30381776]

70. Coleman VH, Power ML, Williams S, Carpentieri A, Schulkin J. Continuing professional development: racial and gender differences in obstetrics and gynecology residents' perceptions of mentoring. J Contin Educ Health Prof. 2005;25(4):268–77. doi:10.1002/chp.40 [PubMed: 16365902]

71. Carapinha R, Ortiz-Walters R, McCracken CM, Hill EV, Reede JY. Variability in Women Faculty's Preferences Regarding Mentor Similarity: A Multi-Institution Study in Academic Medicine. Acad Med. 08 2016;91(8):1108–18. doi:10.1097/ACM.0000000000001284 [PubMed: 27332871]

72. Reisman AB, Gross CP. Gender differences in the ability to identify a mentor at morning report: a multi-institutional survey. Teach Learn Med. 2002;14(4):236–9. doi:10.1207/S15328015TLM1404_6 [PubMed: 12395485]

73. Edmunds LD, Ovseiko PV, Shepperd S, et al. Why do women choose or reject careers in academic medicine? A narrative review of empirical evidence. Lancet. 12 2016;388(10062):2948–2958. doi:10.1016/S0140-6736(15)01091-0 [PubMed: 27105721]

74. Girod S, Fassiotto M, Grewal D, et al. Reducing Implicit Gender Leadership Bias in Academic Medicine With an Educational Intervention. Acad Med. 08 2016;91(8):1143–50. doi:10.1097/ACM.0000000000001099 [PubMed: 26826068]

75. Johnson MO, Subak LL, Brown JS, Lee KA, Feldman MD. An innovative program to train health sciences researchers to be effective clinical and translational research mentors. Acad Med. Mar 2010;85(3):484–9. doi:10.1097/ACM.0b013e3181cccd12 [PubMed: 20182122]

76. Soklaridis S, Zahn C, Kuper A, Gillis D, Taylor VH, Whitehead C. Men's Fear of Mentoring in the #MeToo Era - What's at Stake for Academic Medicine? N Engl J Med. 12 2018;379(23):2270–2274. doi:10.1056/NEJMms1805743 [PubMed: 30281387]

77. Hershberger PE, Minton M, Voss JG, et al. Midcareer Faculty Needs Identified by the Midwest Nursing Research Society Midcareer Scholars Task Force. West J Nurs Res. 05 2019;41(5):762–783. doi:10.1177/0193945918798634 [PubMed: 30160200]

78. Carr PL, Friedman RH, Moskowitz MA, Kazis LE. Comparing the status of women and men in academic medicine. Ann Intern Med. Nov 1993;119(9):908–13. doi:10.7326/0003-4819-119-9-199311010-00008 [PubMed: 8215004]

79. Pololi LH, Dennis K, Winn GM, Mitchell J. A needs assessment of medical school faculty: caring for the caretakers. J Contin Educ Health Prof. 2003;23(1):21–9. doi:10.1002/chp.1340230105 [PubMed: 12739256]

80. Blood EA, Ullrich NJ, Hirshfeld-Becker DR, et al. Academic women faculty: are they finding the mentoring they need? J Womens Health (Larchmt). Nov 2012;21(11):1201–8. doi:10.1089/jwh.2012.3529 [PubMed: 22906003]

81. Teshima J, McKean AJS, Myint MT, et al. Developmental Approaches to Faculty Development. Psychiatr Clin North Am. 09 2019;42(3):375–387. doi:10.1016/j.psc.2019.05.008 [PubMed: 31358118]

82. McDade SA, Richman RC, Jackson GB, Morahan PS. Effects of participation in the Executive Leadership in Academic Medicine (ELAM) program on women faculty's perceived leadership capabilities. Acad Med. Apr 2004;79(4):302–9. doi:10.1097/00001888-200404000-00005 [PubMed: 15044161]

83. Lucas RH, Dandar V. Importance of Mentoring on Workplace Engagement of Emergency Medicine Faculty: A Multi-institutional Study. West J Emerg Med. Mar 31 2021;22(3):653–659. doi:10.5811/westjem.2020.11.48510 [PubMed: 34125042]

84. Pololi L, Cooper LA, Carr P. Race, disadvantage and faculty experiences in academic medicine. J Gen Intern Med. Dec 2010;25(12):1363–9. doi:10.1007/s11606-010-1478-7 [PubMed: 20697960]

LESSONS FOR PRACTICE

- Mid-career women faculty face a wide range of systemic challenges that can inhibit career advancement; overcoming barriers and achieving career goals require individualized support and planning that may benefit from targeted mentoring programs.

- Sponsorship in addition to mentorship is useful for major career advancements, especially in "filling the gap" during the mid-career, between hiring junior-level women and placing them into high level leadership positions.

- Bidirectional relationships between mentors, mentees, departments, and institutions should be leveraged to provide individual-level support and institutional-level change for improved mid-career faculty advancement, satisfaction, and retention.

TABLE 1.

Sample division of responsibilities for a mentorship program providing individual- and institutional-level support to mid-career women faculty.

	Organizational Development	Functional Development	Personal Development
Institution Faculty/ Career Development Office	• Provide "home office" for mentorship program infrastructure and resources • Compile department-level needs assessment data to address mid-career faculty needs at an institution level (e.g., resources for promotion planning) • Influence institutional culture around mentorship, sponsorship, and support for mid-career faculty	• Clarify transparent advancement criteria • Seek input from faculty, and develop and/or provide access to trainings to address mid-career faculty knowledge gaps • Seek and broadly disseminate opportunities to faculty – e.g., formal external mentorship or sponsorship programs	• Provide faculty with trainings to reduce biases and ensure equity • Connect faculty with resources to support work/life balance (e.g. employee assistance programs) • Seek input from faculty to identify issues impacting career and life satisfaction • Collaborate with departments, leadership, and faculty stakeholders to develop meaningful solutions
Mentoring Program	• Conduct needs assessments to identify specific faculty needs • Develop mentoring program to meet institutional priorities and faculty-identified needs • Advocate to department/ institution leadership for mentor and mentee needs (e.g., protected time, funds)	• Codify mentor/mentee expectations • Identify possible mentors and provide trainings in effective mentorship practices • Identify possible sponsors and support departments in emphasizing sponsorship activities • Assist mid-career faculty in connecting with potential mentors/ sponsors • Mediate conflicts between mentors, mentees, and/or sponsors	
Department Dean's Office	• Align faculty initiatives with institutional strategic plans • Advocate for policies to support mid-career faculty • Support faculty in accessing growth opportunities (e.g., faculty nominations, funding for professional society membership) • Influence culture around mentorship, sponsorship, and support for mid-career faculty (e.g., inclusion of sponsorship	• Assist mid-career faculty in identifying and connecting with potential mentors/sponsors • Invest in mid-career faculty mentoring by providing dedicated time/ resources for mentorship • Solicit nominations for faculty awards/ opportunities and review for diversity	• Advocate for departmental/ institutional policies to support work/life balance (e.g., flexible scheduling, assistance with child and elder care responsibilities) • Connect faculty with resources to support work/life balance (e.g. employee assistance programs)

	Organizational Development	**Functional Development**	**Personal Development**
	activities as a priority for senior faculty)		
Mentor	• Advocate for mid-career faculty needs with department/ institutional leadership • Promote mentorship and sponsorship of mid-career faculty among peers	• Help mentee develop, enact, and evaluate individual career plan • Connect mentee with resources and opportunities • Make introductions to sponsors • Develop mentee skills in negotiating	• Connect mentee with additional support networks and resources
Sponsor	• Promote mentorship and sponsorship of mid-career faculty among peers	• Identify and recommend mentee for high-impact and high-visibility career advancement opportunities	
Mid-Career Colleagues/ Peer Mentors	• Identify and advocate for mid-career faculty needs with department/ institutional leadership • Participate in needs assessments	• Share opportunities for training, networking, collaborating • Identify training gaps within the cohort and bring to faculty development office for further development	• Troubleshoot work-life challenges between peers (e.g., share tools and solutions) • Identify needs and possible solutions, advocate for change to department and institutional leadership
Mentee	• Identify career goals and intersections with institutional priorities • Participate in needs assessments, provide candid feedback to support continued development of faculty support initiatives	• Think critically about training gaps and areas for growth to reach career goals • Seek out training and advancement opportunities • Seek mentor, sponsor, and institutional support (e.g., nominations) in obtaining opportunities	• Evaluate career plans and satisfaction • Evaluate home life priorities and balance with career goals • Build an influential network