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Reducing Burnout in Women Physicians: An Organizational Roadmap from the Harvard Radcliffe Institute Exploratory Seminar

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Abstract

Background: Women physicians comprise more than half of graduating medical students in the United States, yet their rates of burnout and attrition from academic medicine are higher than for men physicians across every career stage.
Objective: In May 2024, the Radcliffe Institute for Advanced Study at Harvard University convened international experts on physician gender inequity and well-being for an exploratory seminar. The goal was to establish consensus on an institutional roadmap to mitigate burnout in women physicians.
Methods: We addressed 3 main questions through presentations, roundtable discussions, and the screening of an award winning physician-directed and -produced film on the subject: (1) What are major organizational drivers of women physician burnout and institutional best practices to address these drivers? (2) What barriers hinder successful implementation of best practices? (3) How can institutions overcome these barriers? Through iterative dialogue during the seminar and post-hoc discussions on the conceptualization of this manuscript, our group reached a consensus on an institutional roadmap to diminish burnout in all physicians identifying as women.
Results: We conceived a budget neutral, easily adopted, and sustainable institutional roadmap to mitigate burnout in women physicians. The roadmap is grounded in a learning health system and leverages data collection to drive iterative, structural changes that achieve meaningful impact on a culture of well-being.
Conclusions: Organizational accountability for a culture of well-being is critical to diminish burnout in women physicians and should be approached through intentional, multi-pronged, structural changes which restore trust and achieve belonging.

Keywords: burnout, gender equity, professional fulfillment, women physicians, academic medicine

Introduction

A woman physician sits in her office on yet another evening to answer patient messages in the electronic health record (EHR)—uncompensated work that consumes her outside-of-clinic hours. As she reflects on her workday, she recalls discovering that unlike her, a male peer received a signing bonus and had more time allocated for teaching, mentoring, and administrative tasks. These inequities have contributed to her experience of burnout in academic medicine. Compounding these issues, her family member is now ill, and she may need to take a leave of absence. She contemplates the decision to leave academia altogether.

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This story of burnout, and subsequent intention-to-leave, reflects an all-too-common scenario for women physicians in academic medicine. Women physicians are twice as likely as men physicians to report burnout, or the psychological sequelae of emotional exhaustion, depersonalization, and reduced sense of accomplishment.[1–3] Burnout among women physicians from underrepresented racial and ethnic populations increased from 37.2% in 2018 to 45.8% in 2022.[4] Moreover, women medical students who identify as sexual minorities had an 8-fold higher predicted probability of burnout as compared with those identifying as heterosexual.[5]

With burnout strongly associated with intention to leave academic medicine, attrition rates of women physicians are generally higher than for men physicians across every career stage in the United States.[6–10] Such turnover has a profound effect on access to high-quality, patient-centered care, with an estimated cost of $2.6–6.3 billion per year due to lost productivity and recruitment expenses.[7,11–13] To address physician attrition, the American Association of Medical Colleges (AAMC), the American Medical Association, the American College of Physicians (ACP), and the National Academy of Medicine have recommended a range of interventions. Their guidance has led to expanded gender inequity research; formalized mentorship and career advancement programs; strengthened parental and family leave policies; and greater transparency on pay equity, gender discrimination, and sexual harassment.[14–25] Despite this, the COVID-19 pandemic exposed potential targets for further improvement: sociocultural and academic structures that disproportionately impacted clinical demands and caregiving responsibilities for women physicians.[7] With an urgent and unmet need for cohesive, institutional approaches to diminish burnout and retain women physicians in academic medicine, we conducted a Harvard Radcliffe Exploratory Seminar.

The Harvard Radcliffe Exploratory Seminar

The Radcliffe Institute for Advanced Study at Harvard University sponsors an exploratory seminar program that awards funding and logistical support for scholars, scientists, artists, policymakers, and others to convene and generate ideas informing future research or practice. In May 2024, a diverse group of international leaders convened for a 2-day seminar. Seminar leaders (A.N. and J.A.F.) selected invitees, identified in the author byline and acknowledgments, based on their broad representation across backgrounds, experiences, and perspectives on women physician burnout. Our group included individuals with varied discipline expertise (physicians and administrators in academic medicine, biotechnology, media, law, government, patient advocacy, and medical professional organizations throughout the country); work experience (trainee, mid-career, and senior career levels in frontline and leadership roles); clinical specialty focus (primary care, physical medicine and rehabilitation, psychiatry, obstetrics and gynecology, oncology, and surgery) and medical leadership focus (clinical care, research, education, and community health).

We addressed three main questions through presentations and roundtable discussions: (1) What are major organizational drivers of women physician burnout and institutional best practices to address these drivers? (2) What barriers hinder successful implementation of best practices? (3) How can institutions overcome these barriers? Through iterative dialogue during the seminar and post-hoc discussions on the conceptualization of this article, our group reached a consensus on an institutional roadmap to diminish burnout in all physicians identifying as women, referred to as women in this article.

Here, we share discussion highlights and our institutional roadmap to achieve meaningful impact on a culture of well-being, or the language, values, and behavioral norms of an institution which improve enhance professional fulfillment.[1] We emphasize culture, which powerfully impacts the lived experience of physicians, but because it encompasses values, language, and behaviors that define institutional norms, it can persist, unnamed and unchanged.[26,27] Moreover, we base our roadmap on a learning health system in which systematic data collection from frontline women physicians blended with empirical evidence guides iterative, institutional-level interventions to drive accountability.[1,28,29] Finally, we, as seminar participants and authors, acknowledge that while we are a diverse, interdisciplinary group, several of us hold faculty appointments at well-resourced institutions. Thus, this article was shaped by perspectives that do not fully represent all communities.

Defining the Problem and Establishing a Model for Change

Our first presentation focused on the gender-based pay gap. Women physicians are estimated to earn $2 million less than their male counterparts over a 40-year career, even after adjustment for hours worked, clinical revenue, practice type, and medical specialty.[30] While approximately 60% of medical schools have conducted a salary equity study in the last 5 years, only 34% equalized total compensation for new faculty.[16] Causality for pay gaps are multifactorial; however, after adjusting for factors such as specialty choice, effort, hours, experience, and other factors, women continue to experience compensation disparities.[31–35] The pay gap profoundly affects women with minoritized identities (e.g., underrepresented in medicine race and ethnicity groups), who experience disparities in academic promotion and disproportionate "minority tax," or uncompensated diversity, equity, and inclusion (DEI) responsibilities.[33,34]

Our roundtable discussion highlighted recommendations from the AAMC, ACP, and American College of Cardiology, which include regular review of physician compensation; clear and objective compensation policies; standardized promotion criteria; leadership development and negotiation programs; enhanced mentorship and sponsorship; and recruitment of women as faculty, leaders, and search committee members.[16,17,19] However, even when institutions employ such best practices, hidden disparities perpetuate the pay gap. For instance, "second-generation gender biases," or gendered cultural expectations, which include stigma that women experience when they negotiate and lead; "occupational segregation" in which women pursue gendered career paths such as faculty affairs roles; and differential, often nonpromotable work, such as mentorship or DEI activities disproportionately assigned to women.[34,35] Another example is gender disparities in academic and leadership promotion rates; administrative support time; academic stipends; and signing and retention bonuses, all of which are insidious

causes of the pay gap that may be overlooked in regular salary reviews and affect compensation beyond the point of hire.[16,35,36] The clinical support women physicians receive can also affect compensation (e.g., teams with advanced practice providers; staff support for scheduling and patient portal messages; operating room availability).[37]

To overcome such barriers, an institutional approach must reinforce open communication between leadership and faculty on job postings, clear compensation terms in contracts, transparent negotiation processes, and recognition for "invisible" or non-promotable work.[16,17,19,30–39] In addition, institutions must use standardized metrics to track compensation by demographics, including factors such as academic and leadership promotion rates; administrative, logistical, and clinical support; and downstream outcomes such as burnout and turnover.[16,17,19,30–39] Regular review of such pay equity dashboards through an institutional oversight committee enhances accountability for equalizing compensation.[16,17,19,30–39]

Our second presentation reviewed gender disparities in administrative burden. Women physicians spend more time in direct patient care and working in the EHR, due in part to receiving more electronically based communication from patients and staff and less administrative support for their workload across medical specialties.[37,40–42] Gender disparities in administrative support further contribute to differences in advancement with women physicians less likely to attain senior leadership roles than men.[43] The early gender disparity in work status—in which almost three-quarters of women physicians transition to part-time work hours within 6 years of working—adds additional promotion penalties.[9]

Our discussion reviewed best practices to diminish EHR workload, which include training on the use of automated workflows, optimized EHR interfaces, elimination of low value tasks, team-based care models, well-resourced staff support, and the use of artificial intelligence (AI) solutions.[37,40–42,44] However, barriers to successful application of best practices are the inequities associated with a part-time clinical schedule.[31,37] For instance, the volume of patient needs outside of clinic hours (e.g., patient calls, message questions, refill requests, clinic coverage schedules) may not decrease with part-time work, reinforcing gender disparities in administrative resource support.[31,37] To address this, health care systems must achieve a cultural shift to align workload with pay and establish full coverage for clinicians out of office.[31] In addition, gender bias from administrative staff may keep women physicians from delegating tasks in collaborative team models, highlighting the importance of training.[45] While AI holds promise to reduce EHR documentation time and in-basket messaging burden, further research must clarify how it can be adapted to existing workflows.[46] EHR audit log data that captures gender differences in workload can improve accountability with workload redistribution.[29,42,47] Moreover, institutional policies that discourage after-hours EHR usage reinforce a culture of boundaries between personal and professional time.[48]

Our third presentation examined widespread gender bias and gender discrimination toward women physicians. Gender bias represents the implicit, unconscious beliefs and judgements directed toward women due to gendered stereotypes, influencing discriminatory perceptions, actions, and decisions.[49–51] Women physicians from racial and ethnic groups underrepresented in medicine face higher rates of discrimination from colleagues and mistreatment from patients and families, increasing the risk of burnout.[51,52] Another driver of burnout is gender harassment: the AAMC's analysis of prevalence rates of sexual harassment of medical school faculty showed that 13% of men and 34% of women faculty experienced sexual harassment in the prior 12-month period.[53]

As a springboard for our roundtable discussion, Sarah Temkin, MD, screened the documentary film, "1001 Cuts," which she produced and directed. The film depicts the operating room through the experiences of women surgeons, using personal narratives to spur dialogue on the impact of sexual harassment, including the intensity of isolation, reduced belonging, and diminished power among women physicians. In this context, we considered best practices to reduce sexual harassment and gender discrimination, which include institutional prioritization of zero tolerance policies; accessible and destigmatized reporting structures; prompt investigation; and clear consequences for violators.[53,54] Organizations must also establish regular training for all staff and leadership on sexual harassment prevention and bystander empowerment.[53,54] Another critical intervention is support for those affected by harassment through counseling and legal services.[53,54]

Our discussion on barriers to best practices reinforced the film's portrayal of retaliation fear, which perpetuates underreporting discrimination and harassment. We also reviewed the challenges of pervasive unconscious bias, entrenched male hierarchies, and normalization of male-default infrastructure. For instance, the film portrays how one-size fits all surgical instruments, gloves, or operating beds compromise ergonomics and create safety issues for both patients and women surgeons. Moreover, intersecting forms of discrimination among women of color, LGBTQIA+ individuals, or those with disabilities necessitate policies and training programs, which address these layered experiences.[43,55] To overcome these barriers, training programs must be ongoing, updated, and inclusive of an intersectional perspective.[55] External review mechanisms such as through ombudspersons improve accountability on sexual harassment claims.[56] Transparency on the process for complaints and outcomes can encourage reporting.[53,54] Finally, regular climate surveys can provide a data-driven approach to improve culture.[57]

Our final presentation reviewed work-life conflict as a fourth organizational driver of burnout. Work-life conflict places a disproportionately larger burden on women physicians independent of other personal and professional factors.[58,59] Gender disparities are most notable for physicians who are mid-career, have adult children, work fewer hours per week, and belong to minoritized race and ethnicity groups.[5,60] The COVID-19 pandemic further amplified work-life conflict with physician mothers in dual physician families 30 times more likely to manage caregiving and school-related responsibilities than physician fathers.[61]

Best practices include paid parental and family leave policies: findings from an assessment at medical schools demonstrated birth and nonbirth parents had no paid leave at 42% of medical schools, and adoptive and foster parents had no paid leave at 40% and 75% of medical schools respectively.[62] Eldercare and caretaking for individuals with disabilities should also be incorporated into paid family leave

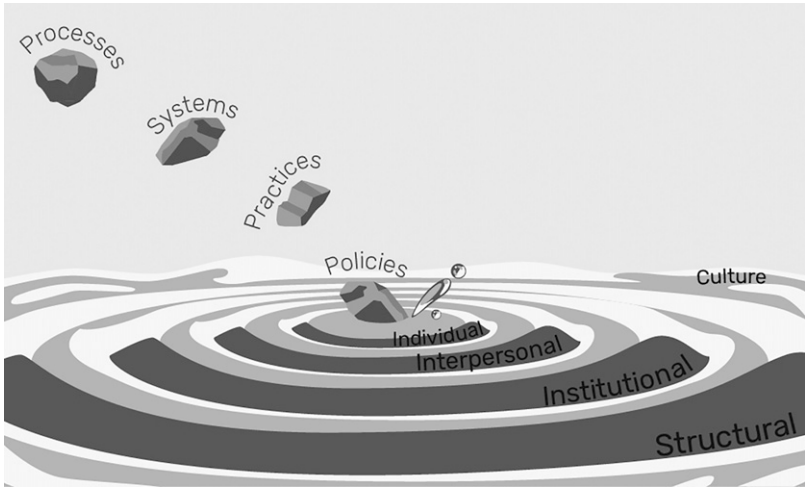

FIG. 1. The rippling effect of structural changes on a culture of well-being.

policies.[63,64] On-site or accessible childcare and caregiving resources, peer support programs, and flexible scheduling can further bolster work-life integration.[16]

To successfully apply these benefits, leaders must model and encourage using paid family leave and normalize boundaries on after-hours work, even in the context of remote/telehealth options that offer increase flexibility.[1] For example, prioritizing email delivery during work hours aligns with changing cultural expectations, moving away from the "always busy" norm. In addition, our discussion identified effective mentorship as a key strategy for improving work-life integration, particularly when it incorporates sponsorship; guides the distinction between promotable and nonpromotable tasks; and fosters flexibility and autonomy.[65,66] Mentorship also strengthens community-building, facilitating the exchange of ideas without relying on hierarchical information flow.

An Institutional Roadmap: The Rippling Effect of a Learning Health System on Culture

From our discussions, unanimity emerged on the importance of accountability for organizational cultural change. For instance, a department may have an equitable compensation plan but sustained adherence to it requires leaders to dismantle their own implicit biases. An institution might provide training on sexual harassment, but leaders may miss the ordinary inconveniences, the day-to-day disrespectful

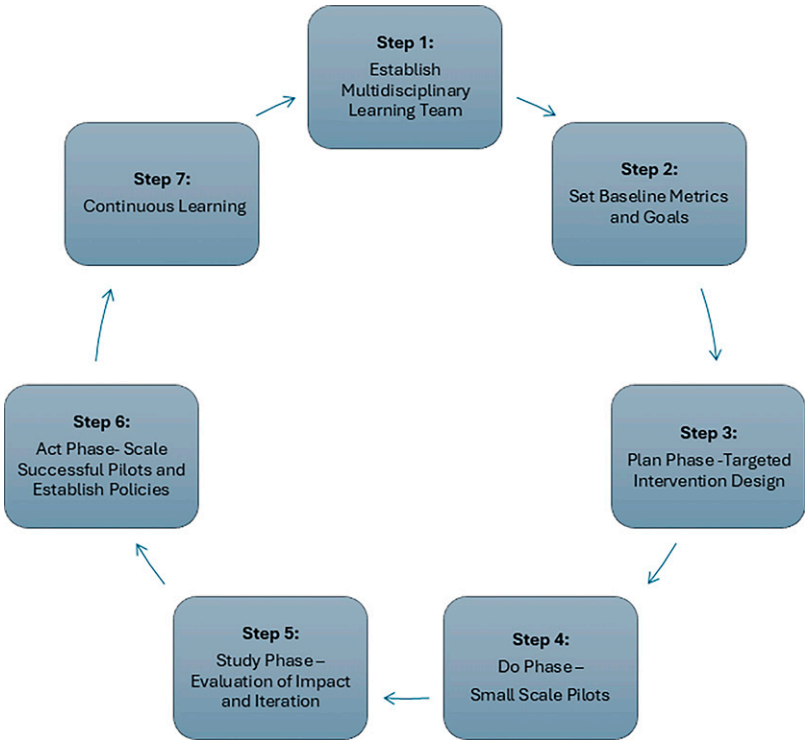

FIG. 2. An institutional roadmap to mitigate women physician burnout.

Table 1. Example Pilots and Plan-Do-Study-Act Cycle[a]

Burnout driver	*Proposed recommendation*	*Plan: intervention*	*Do: pilot*	*Study: outcome*	*Act: policy, process, practice, training*
Pay gap	• Implement pay equity dashboards with anonymized gender comparison data	• Develop pay equity dashboards with salary distribution by specialty, rank, and demographics	• Train department chairs on how to use dashboards to address pay gap • Pilot dashboards in two departments	• Compare pay gap pre- and postdashboard introduction • Collect feedback from frontline faculty and assess barriers to application	• Expand dashboards across the institution • Adjust raises and bonus allocations based on studied outcomes • Train leaders on how to facilitate effective pay equity discussion in the annual career conference
Administrative burden	• Track administrative burden through EHR audit logs • Implement team-based models or AI solution	• Identify high-burden tasks (e.g., in-basket patient portal messaging) through EHR log analysis • Identify department clinics with high EHR burden to pilot a team-based model or AI tool solution	• Pilot team-based model or AI solution in two departments • Employ EHR audit logs in pilot clinic	• Compare EHR audit log data pre- and post-solution • Collect user experience and downstream burden feedback from staff and physicians	• Expand EHR audit logs and solutions across the institution • Establish best practices on staff training and deployment of solutions
Gender discrimination and sexual harassment	• Establish an ombudsperson as an external reporting channel for gender discrimination and sexual harassment	• Train faculty on use of external reporting channel and antiretaliation program • Identify metrics to track reporting channel usage (e.g., deidentified data on number of reports, resolution times, and outcomes)	• Pilot reporting channel, training, and metrics in two departments • Collect feedback on trust in new reporting channel	• Compare metrics on use of reporting channel pre- and postpilot • Collect survey on climate change	• Expand external reporting channel across the institution • Refine training based on climate survey feedback
Work-life integration	• Implement a mentorship program to enhance work-life integration	• Design a mentorship program to achieve work-life integration goals • Identify and train mentors • Identify work-life integration metrics to assess impact	• Pilot the program in two departments • Schedule check-ins with mentors and mentees to identify barriers to applying gains from mentorship	• Compare work-life integration scores pre- and postprogram • Assess mentee and mentor retention rates	• Expand program to additional departments • Implement incentives for mentors (e.g., stipends) • Establish best practices on mentorship to enhance work-life integration

[a]These examples are not intended to be a complete list.

verbal exchanges, and the small slights that accumulate to erode the dignity of women physicians. Systemic culture change must therefore be approached with intentional, multipronged efforts to restore trust and achieve belonging, including efforts such as organizational assessments, training programs, policy changes, reporting systems, and evaluation processes.[67–69] A learning health system provides a framework for how systematic data collection from frontline physicians in combination with empirical evidence guides continuous learning and improvement of policies, practices, and processes.[18,29,70,71] Moreover, evaluating and sharing results from improvements fosters transparency, which translates to accountability for systemic cultural change.[28,29,68–71] As illustrated by Figure 1, cultural change derives its impact from "rippling," in which modifications in policy or practice scale to produce meaningful interpersonal and institutional effects beyond the individual.[1,28,68,69] In this context, we propose a roadmap for academic institutions to enhance a culture of well-being rooted in the principles of a learning health system.[70–72]

Figure 2 provides a step-by-step overview of our roadmap. In step 1, institutions establish a multidisciplinary learning team with representation from senior leadership such as department chairs and well-being and diversity, equity, and inclusion officers. The team should also include women physicians from every academic rank and specialty with time protected for their effort. The learning team oversees the plan-do-study-act (PDSA) cycle.[70–72]

In step 2, the learning team identifies baseline metrics such as measures of practice efficiency (e.g., team structure, stability, and skill level); culture (e.g., wellness-centered leadership behaviors, values alignment, perceived appreciation from leaders, colleagues, and patients); institutional well-being survey scores (e.g., Maslach Burnout Inventory or Professional fulfillment Index); pay equity metrics (median salaries by demographics and rank and academic and leadership promotion rates); administrative burden data (EHR and administrative support hours, and in-basket efficiency metrics per full-time equivalent of work), incidents of harassment and/or discrimination (reports filed), and work-life integration surveys.[1,16,17,19,26,29,31,37,39,47,53–55,58,59,73,74] By publicizing dashboards transparently, institutions foster accountability.

In step 3, the learning team initiates the "plan phase" with the design of targeted interventions, blending feedback from the daily experiences of frontline women physicians with empirical evidence. Next, through step 4, the "do phase," the learning team selects departments or divisions to launch and evaluate pilot programs, securing buy-in from chairs.[70–72]

In step 5, the "study phase," the learning team collects quantitative data and qualitative feedback, comparing pre- and postintervention measures. Here, the learning team also assesses barriers and unintended consequences of pilots to refine interventions. In step 6, the "act phase," the learning team expands successful pilots to additional departments and adapts or revises pilots with gaps or poor uptake, repeating the PDSA cycle until outcomes demonstrate success. Academic institutions then codify best practices from successful results into revised or new policies, procedures, and training curricula.[70–72] Table 1 provides an overview of empirically supported, example interventions originating from our discussions during the seminar. We detail each step of the PDSA cycle as well as intended impact. Our examples encompass interventions varying in scope, reflecting our consensus that burnout demands the deliberate and sustained coordination of many changes, both small and large.

The last step of our learning health system plays a pivotal role in culture change. Step 7, or continuous learning, includes ongoing measurement and reporting; regular updating of metrics; transparent data-sharing with executive leadership and frontline faculty; and scholarly dissemination of findings. When innovative technologies or national guidelines arise, institutions must refine their interventions.[70–72] As academic medical centers demonstrate progress on pay equity, administrative burden, gender discrimination and harassment, and work-life integration, cultural change ripples beyond the individual though the institution.

While the rich discussions from our seminar generated an institutional approach for women physician burnout, we acknowledge limitations. Although participants included a diversity of subject matter experts, our discussions did not reflect the lived experiences of frontline women physicians from all academic intuitions, particularly those from under-resourced or community-based settings. In addition, while the 2-day format enabled us to base our institutional roadmap on scholarly evidence, time limitations precluded formal data-testing or evaluation. Finally, our focus on a systemic approach excluded empirically supported solutions to enhance individual resilience, such as stress management training or mental health evaluation and treatment.

Future initiatives necessitate the expansion of research. For instance, more work is needed on intersectionality to clarify drivers of burnout and solutions in women physicians from underrepresented racial and ethnic populations, non-Christian women, women who identify as LGBTQIA+, and women with disabilities. In addition, while studies focus on the value of mentorship for the advancement of women physicians, evidence-based best practices for mentorship remain understudied.[66] Further research on the use of AI to reduce EHR workload, such as natural language processing for automation of in-basket messages triaging, is another rich source for scalable solutions. Finally, a future convocation could broaden participation to more frontline clinicians to achieve greater community engagement.

Conclusion

We convened interdisciplinary experts through the Harvard Radcliffe Exploratory Seminar to confront and address a pressing challenge in academic medicine: the disproportionate burden of burnout among women physicians. Over 2 days, we engaged in iterative dialogue and established a roadmap for academic medical centers to mitigate burnout, guided by the principles of a learning health system. While we provide actionable insights, we also recognize our roadmap is a starting point for institutional accountability—one that serves as a call to action for sustained commitment to structural changes that transform culture.

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