Work-Life Conflicts

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Introduction

> Your father is on the other end of the speaker phone, from a 1000 miles away, raising his voice in poorly disguised panic: "your mom is not doing well". Your teenager's car, which you are driving (as yours is in the shop), smells like weed, or is that sweaty cleats? Your middle schooler had just texted you (and you peeked): "Mom I really really want you to drive me and my friend for the arboretum class trip- you never do". Your cell phone is simultaneously getting other texts, one from the lab "orders were accidentally released, pls reorder, patient is waiting," and the caretaker of an elderly patient (you only give your cell phone out to a select few over 85 …) writes in all caps: "THE ITCHING IS GETTING WORSE AND NOTHING IS HELPING!"

As the number of women physicians grows, so does the imperative to improve work-life integration within the practice of medicine. Since 2017 the number of women entering US medical schools has exceeded the number of men, most recently 52.4%, and 2019 marks the first year that the majority of all US medical students are women, at 50.5%. More than ever, these young

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C. M. Stonnington, J. A. Files (eds.), *Burnout in Women Physicians*,
https://doi.org/10.1007/978-3-030-44459-4_7

women have indicated that having a work-life balance, rather than a "stable, secure future" or the "ability to pay off debt," was an "essential consideration" in their career path considerations after medical school [1]. "Work-life balance" refers to the balance that an individual needs between time allocated for work and other aspects of life, for example, personal interests, family, and social or leisure activities. However, creating hard boundaries between work and the rest of life is nearly impossible and injecting a bit of life into work and vice versa can increase overall fulfillment. For example, although the mobility of the electronic health record (EHR) has its down sides by encroaching on homelife, it also allows parents to get home for dinner and bedtime and resume work thereafter, rather than having to stay or return to clinic or hospital. Similarly, other technologies allow us to address home issues during downtime with a quick text or FaceTime break. Therefore, for the purpose of this chapter, I will instead use the terms "work-life integration" to refer to a synergy and satisfaction with both work and life and "work-life conflict" to refer to the barriers of achieving that synergy and satisfaction, that is, simultaneous expectations from work and home life that cannot both be accommodated in a manner considered to be satisfactory to both. Professional fulfillment throughout one's career requires recognition of work-life conflicts, strategies to navigate the conflicts (both individually and organizationally), and a supportive culture. While a concern for both men and women physicians, work-life conflicts remain a larger source of distress among women physicians than their male counterparts [31, 112]. Thus, with women on the verge of representing half the physician workforce, it is critical we find solutions to these conflicts and make work-life integration easier to attain.

Work-life integration and conflict will vary and evolve over the life span of the physician and will depend on specialty choice, type of practice (academic/private/government/safety net, etc.), setting (urban/rural), responsibilities (clinical/education/research), full-time vs part-time status, personal characteristics, family unit composition and support, country of residence, and many other factors. For example, for US surgeons, number of hours worked weekly, having children, being female, and practice setting (Veterans Administration and academic center) were

independently associated with an increased risk for conflict between work and home life responsibilities [28]. Work-life integration, that is, balancing and harmonizing a meaningful medical career with a joyful and thriving home life, means integrating responsibilities across multiple domains, and many of these are unique to women physicians [31, 75, 109, 112]. It is imperative that work-life conflicts are addressed as they are an especially important driver of burnout as women face the monumental challenge of responding to the often-competing demands of work and home.

Work-home conflicts are strongly associated with higher burnout, lower mental and physical (e.g., fatigue) quality of life, symptoms of depression with positive depression screens, and difficulties in relationships (lower satisfaction with their partner and more likelihood to be contemplating separation or divorce) [31]. In fact, physicians, both women and men, with a recent work-life conflict, if able to revisit their decision, reported they would be less likely to choose to become a physician again (63.0 vs 77.2%) and were less likely to choose the same specialty (65.7 vs 76.0) [30].

Specialty Characteristics/Hours and Income

Specialty Choice/Income

> I loved all my rotations, and what I loved best was how the family medicine docs had such meaningful long-term relationships with their patients. Some of them had 4 generations in their practice! So cool! But they were so busy, and some of them look a bit burned out. The hours were crazy and that was just at work: I know they were spending hours in the evenings and on weekends in front of the computer, because that's when they would send me their feedback. And they don't make a lot of money; a lot of them have partners who bring in the real dough. I don't think I want to live that life, but I am so torn. I love that continuity of care...

The characteristics of work-home conflicts differ among the specialties. Specialty choices influence income and hours worked and all three have an important effect on work-life integration. Women have historically been attracted to *specialties that involve*

longitudinal care. The draw to deliver continuity of care starts early, with female medical students gravitating toward residencies and specialties that involve long-term patient relationships. In the USA, in 2018, 65% of all applicants to Pediatrics were women, in Family Medicine they made up 50.5%, and in OB/Gyn 77% [3]. Women in these fields have reported greater satisfaction with their choice of specialty and relationships with patient and colleagues than their male counterparts [82]. Wages vary substantially across physician specialties, however, and are lowest for primary care specialties [67]. Shanafelt and colleagues found significant variation in burnout among specialties and highest among those at the front line of access, that is, primary care (Family Medicine and General Internal Medicine) and Emergency Medicine [104]. In older studies, specialties such as Pediatrics, Child and Adolescent Psychiatry, Obstetrics and Gynecology, and Internal Medicine tended to have a relatively lower physician job satisfaction [82] and also tended to have *longer hours*. Women in these fields reported they were less likely to be satisfied with salary and resources, workplace control, and relationships with the community.

While women physicians tend to see the same number of complex patients as their male counterparts, they additionally care for proportionally *more female patients with multifaceted psychosocial problems* who on average seek help more often than male patients. They are rarely compensated for the extra time they take to care for this complicated patient population. In fact, women physicians express the need for 36% more time allotted, compared to men at 21% [82]. Not only do they tend to take *more time with patients* during in-person visits, the advent of the EHR patient portal has further increased time spent with work tasks, especially in ambulatory care [102], and thus disproportionally for women. Women tend to respond back to EHR notes with lengthier messages. The EHR, in its current state, has increased time away from home and even enters and directly competes for time within the home, with "pajama time" and "date night" hours [102]. Many women physicians still believe that significantly more time is needed than allotted for these activities and they often use their own time to complete their work [25], adding to work-life conflicts and contributing to burnout [105].

Shanafelt and colleagues found that satisfaction with work-life balance was not always correlated with burnout, however. Physicians in the specialties of Dermatology, Physical and Rehab Medicine, and Emergency Medicine, while expressing higher work-life satisfaction, also had higher burnout. Neurosurgeons, General Surgeons, and Pediatric subspecialists registered lower on both work-life satisfaction and burnout [104]; however, a follow-up, 2017 survey of US physicians found that Emergency Medicine, general surgery subspecialties, neurosurgery, and pediatric subspecialties were independently associated with higher rates of burnout [106]. Emergency Medicine has also been associated with a high burnout rate compared to many other specialties elsewhere. In a study of Emergency Medicine residents in Qatar citing "stressful work," social reasons, and a desire for "better work and life balance in primary health care," graduating female residents reported significantly higher burnout compared to their male counterpart (22.6% vs 2.3%) although the same proportion of women vs men left the specialty [7].

Work Hours/Income

> "Something has to give. I haven't had a break for months. I get home at 6:30, cranky, starving and angry. And after a quick microwave dinner I am back at my charts. Weekends aren't much better lately, and I haven't exercised for weeks. But we really need the money. Amari's private school costs as much as college and I have to be fulltime to get that university tuition break for Arjana. I never thought it would be this hard! You look great; that part-time practice seems to be doing wonders for you–I am so tempted!"

Satisfaction in work-life integration for both men and women physicians decreased significantly between 2011 and 2017 (42.7% vs 48.5%) despite a stable median number of hours worked per week [106]. As noted above, women have tended to gravitate toward specialties involving longitudinal care. Because of the workload involved in maintaining continuity of care, however, many of these specialties also impose long work hours. Longer work hours have been shown to be a driver of burnout and especially in specialties focused on longitudinal care [104].

In a study of US physicians in primary and specialty nonsurgical care, women had 1.6 times the odds of reporting burnout compared to men and this increased by 12–50% for every additional 5 hours worked over the 40-hour work week. Importantly, this could be mitigated, and burnout decreased by 40%, when supportive colleagues and partners helped integrate home and work life [82].

The choice of specialties that involve long hours among female trainees is not unique to the USA. In the United Kingdom, female medical students choose General Practice almost twice as often as men (32% vs 18%). This is despite the fact that three quarters of these women weighed hours and working condition as well as domestic circumstance as being crucial to honor work-life integration and did significantly more so than their male counterparts. Thirty-two percent of women who chose Psychiatry also did so for "domestic circumstances" [45]. Among a small group of English residents ($n = 96$) across six specialties (General Practice, Medicine, Ob/Gyn, Psychiatry, Radiology, and Surgery), focus groups and interviews revealed that existing work-life conflicts significantly challenged learning and training. Many traveled great distances, separating them from their support groups, leading to low morale and harm to well-being, which made coping with personal pressure even more challenging. Many reported feeling dehumanized. Work-life conflict especially affected women with children, those working full-time, and those exposed to gender discriminatory attitudes. While women residents more often felt compelled to choose a specialty such as General Practice in an attempt to mitigate these conflicts [100], they may have been surprised that this did not materialize as they hoped. For example, over three quarters of female physicians who chose General Practice were compelled to do so for "hours/working conditions," and over half rated "domestic circumstances" as paramount to their choice, compared to 34% and 19%, respectively, of those intending to be hospital doctors [65]. Similarly, in Belgium, primary care specialties (Family Medicine and General Internal Medicine) were also more likely to be sought out by women compared to men. And again, there was a

notably higher rate of dissatisfaction with work-life conflicts attributed to a lack of adequate time for family and private life compared to other specialties [23]. In Scandinavia, where proportionally more women practice medicine than in the United States (47% of physicians are women, compared to the US's 35%) [101], trends in specialty choice were similar. Despite enviable work-life policies, such as Norway's sponsored day care centers, paid parental, and sick child leave, there were fewer women in the field such as Surgery and Internal Medicine, and in fact both men and women increasingly engaged in part-time work. For women, persistent challenges combining family responsibility with specialties involving night duties and heavier workloads, inflexible work hours, gender discrimination, and a lack of female role models partially explained these trends [44].

It may be that an increasing awareness of these challenges is behind the more recent shift in women not pursuing specialties offering continuity of care with long hours as often as they traditionally have (AAMC 3- Table C-1 [2]/Excel link; [66]). Whereas previously, among American women residents, work-life integration has been cited as the single most common reason for not choosing specialties such as Emergency Medicine, Hospitalist, Pediatrics, OB/Gyn, and Surgery (e.g., choosing the latter 12% of the time compared to men at 32%) [65], the ability to work fixed shifts and work fewer hours overall specific to specialties such as Emergency Medicine and Hospitalist Medicine [68] is increasingly considered by women, for example [1].

According to a 2005 national survey of physicians, well over double the number of female physicians in academic medicine worked *part-time* compared to their male counterparts (20% vs 7%). These part-time physicians had higher job satisfaction, higher productivity, and equal performance [82]. When part-time tenure track faculty at the University of Illinois College of Medicine were queried, women and men had different underlying reasons for choosing to work part-time: women did so to allow for family responsibilities whereas male physicians did so because of competing demands from another job [41]. In addition to many Emergency Medicine and Hospitalist practices,

Family Practice provides some choice in number of hours worked. It is near the middle of the hours ranking but unfortunately is associated with some of the lowest wages [67]. Many female physicians feel compelled or choose to work fewer hours to maintain a positive home environment and have lower incomes for this reason. In a survey of academic family physicians, Shrager and colleagues found that half of the women worked full-time compared to 87% of their male colleagues [107]. In her essay, a response and rebuttal to a provocative exhortation in *The New York Times* Op Ed that physicians not be allowed to work part-time because of the resources invested in them, Dr. Shrager concludes: "Working part time will enable me to continue working happily for many years to come" [108].

Surgical and procedural specialties, those that involve crisis management and caring for patients under extreme circumstances and more often chosen by men, are paid significantly more than cognitive specialties. Neurosurgery, for example, receives the highest wage although it was not among the highest in total hours worked. Dermatology is the only specialty in the top 10 most highly paid specialties where women outnumber men at 64.4%. It also ranks among specialties with the lowest hours worked [68]. It is important to keep in mind, however, that hours worked and career satisfaction are not always inversely related: neonatologists and perinatologists, for example, despite having high average hours, also had high career satisfaction [104].

Choices and factors that affect work hours have significant downstream implications for women physicians well into their career. Although women physicians in the middle stages of their careers work fewer hours overall, they were more likely to experience a work-life conflict that was resolved in favor of work. Resolving a work-life conflict in favor of work leads to high levels of emotional exhaustion and professional and career choice dissatisfaction and occurred more frequently than for male mid-career physicians. These mid-career women physicians are more likely to be burned out than their early or late career colleagues. Although they are at a phase in their career when physicians are

the most productive clinically, middle career physicians are more likely to plan on leaving their current practice to pursue a career that did not include seeing patients or to leave medicine altogether [30].

Given that higher incomes might mitigate some of a woman physician's work-life conflicts, it is important to understand the additional reasons that women may not choose some of those higher-paid specialties. In Denmark, for example, *lack of self-confidence and competitive work environments* were cited for why women tended to shy away from the more lucrative technical specialties versus person-oriented specialties [92]. In an older study among Swedish medical students, more women than men reported *degrading experiences and harassment* in the surgical fields, fewer opportunities to perform minor surgery and examine patients, and mistreatment by nurses and staff, leading them to shy away from some of these more highly paid specialties [101].

And just as it is important to note that hours worked and career satisfaction are not always inversely related [104], for women physicians, hours worked are not necessarily correlated with income levels, for example, in Dermatology. Several recent reports revealed that women received considerably *lower incomes after accounting for hours worked* ([68, 91]; Doximity Physician Compensation Report). In a study of internists and family physicians, part-time physicians were more satisfied, with less burnout and more work control than full-time physicians [83]. The gender wage discrepancies among female and male physicians that persist even after accounting for age, experience, specialty, faculty rank, and clinical and research productivity are explored further in Chap. 11 (Mind the Gap: Career and Financial Success for Women in Medicine).

Home and Childcare Responsibilities

In our current medical work environments, having children and raising them may limit opportunities and advancement for women physicians and introduce significant work-life conflicts, particularly during training and early and middle career.

Childcare Planning and Paternal Leave Among Trainees

> Jack just had his second kid, and his wife never bothers him about anything. They even come by the hospital and bring Jack warm lunches. She's at home doing crafts with the kids and making cupcakes for the resident room! Chris and I wanted kids by now but there is no way; I would be training forever, and it would take years to get to sit my boards.

Trainees have indicated that having work-life balance was more important to them than a "stable, secure future" or the "ability to pay off debt" [1]. Women in general tend to value "life goals" and find power "less desirable" than family and lifestyle [43, 120].

Women who choose to start a family may very well be pregnant or raising children during the lengthy medical training, placing an additional responsibility on them. Medical school, residency, and fellowship training, especially in some subspecialties, can span some of the most fertile years of a woman's life; delaying childbirth to minimize the disruption of advancement and promotion or to spare colleagues because of lack of support for those left covering, increases the risk of fertility problems for women; their male counterparts often do not have to grapple with this scenario [8, 113].

Attitudes among administrators and *policies surrounding parental leave and accommodations around childbirth and child-rearing vary significantly* among residency training programs. When surveyed, residents have found these policies range from supportive to hostile. Many have shared direct negative career consequences, loss or delay of fellowship positions, and even adverse pregnancy outcomes because of inadequate understanding of maternal health needs. Even after finishing residencies and fellowships, practicing physicians continue to experience work-life conflicts and inadequate support, citing lack of access to paid leave, physical difficulties with pregnancy and breastfeeding (many organizations have no policies reducing workload for lactation and have no specific place to privately and hygienically pump), career opportunity loss, and workplace discrimination [47].

The head of the American Academy of Pediatrics has publicly endorsed a minimum of six months of paid family leave (a recommendation based on the child's medical and developmental needs). The mean length of paid leave offered at the top US medical schools however is only about 8 weeks.

Two research letters published late in 2018 examined childbearing and family leave policies at 15 programs associated with the 12 top US graduate medical education sponsoring institutions. Although all 12 schools provided paid childbearing or family leave for faculty physicians, only 8 of the 15 programs did so for residents. Among those that did provide benefits to trainees, residents received on average 6.6 weeks paid leave compared to the 8.6 weeks provided to faculty [77, 115]. More recently however 12 weeks of paid parental leave has been offered to both residents and faculty in at least one institution known to this author (Christiana Care Health System).

The Family and Medical Leave Act, last updated in 1993, requires that employees be allowed 12 weeks of unpaid leave per year. Despite the benefits of paid childbearing leave for parents and infants, no federal law requires US employers to provide paid childbearing leave and it is up to the discretion of the employer. Medical students are not in control of exactly where they match for residency and may end up in spots with very little family or community support, often in urban areas with high cost of living. This is a significant impediment to many female residents in terms of setting up their families and possibly also affecting which programs they choose to apply to and rank highly. Although it is important that medical students make themselves aware of family leave benefits at the institutions they apply to for their residencies, they would often be doing so at a time when they may likely feel vulnerable bringing these issues up during the competitive interview season.

Of course, residents must comply with their certifying board on the amount of time off allowed per year and thus may not even be able to take advantage of generous policies. Each board has their own rules and training time may additionally need to be extended to sit for board exam and certification.

The marital and family profile of female and male residents differs and the specialty they train in also affects that profile. Among *surgical residents*, in a pattern similar to those in later career

stages, female surgical residents are just as likely as their male counterparts to be married (68% vs 64%); however, they were twice as likely to be married to a professional (82% vs 41%), twice as likely to be married to a physician (43% vs 18%), and more likely to have a spouse employed full-time (93 vs 54%) [8]. There are implications this profile has on division of household and parenting duties, especially if children are part of that union. Women in surgical residencies were thus more likely to have delayed the birth of their first child until after medical school (100% vs 46%), and many delayed having children until they were through their surgical residency (77% vs 19%). In fact, female trainees were more likely to not have children at all compared to male residents (82% vs 33%). Those that did have children were more likely to be responsible for childcare planning. They nonetheless reported similar satisfaction regarding personal life and in overall work-life integration. However, they reported lower satisfaction with their working life, which has implications for burnout and professional fulfillment and for programs that aim to entice, support, and promote women surgeons [8].

Home Care Responsibilities Among Trainees

Among American general surgery residents who had at least one child during their residency, professional dissatisfaction, thoughts about changing career trajectories, and/or recommendation to medical students to avoid a surgical specialty was associated with three work-life conflicts: having to alter fellowship training plans because of difficulty balancing childbearing with the original choice of subspecialty, lack of formal maternity leave policies, and perception of stigma associated with pregnancy [98]. These findings represent an obvious opportunity for organizations and institutions to step up to the plate and put in place policies and resources to promote diversity by helping woman remain in their chosen field.

In a study of 190 Radiation Oncology residents, half were parents and 44.2% reported a pregnancy during residency. Compared to their female counterpart, males had more children, were in a

higher level of training, were older (median age of 32 vs age 30), had more PhDs, were more often married (99% vs 43%), and significantly more often had a partner who did not work outside the home (24.7% vs 1.9%). Although childcare was considered a shared duty, female residents were frequently responsible for more childcare duties than males. Despite this they had similar career aspirations and research productivity. Of those with children, the number of manuscripts published was similar between women and men, as was the number of residents who stated their intention to pursue an academic career [54]. The determination and stamina that women physicians often possess means they are frequently juggling significantly more tasks than their male counterparts.

Among female Dermatology residents in the USA, *the need to extend their training if they had a child* during training was the most concerning impediment to childbearing. This work-life conflict makes them significantly less likely to have a child during residency than their male counterparts. About a third made a deliberate choice of career success over starting a family, although about a third were committed to having children later in life. As they moved on from training, having children also played into job choice. While 10% of women without children felt they sacrificed an ideal job because of their spouse's career choices, twice that many who did have children reported doing so. Of those without children, over a third responded positively to the question "Did you choose success in your career rather than a family?" [80]. Of those women with children, 40% responded yes to the question "Did you feel you missed out on your child(ren)'s milestones?". Again, the determination and stamina of women physicians, coupled with societal norms, can undermine successful work-life integration.

Beyond Training

Early investigations reported that women physicians placed a higher value on the quality of their personal and work lives than their male counterparts and ranked these higher than institutional

stature and or earning potential [16]. Many women who left careers in academic medicine did so because they felt that their *expectations and their personal views of success were at odds with their institution* or that they would not be able to achieve the success they desired without compromising their own values and priorities [69]. Although many organizations and institutions have worked hard to develop policies to promote flexibility in academic medicine, these are often stereotypically stigmatized and are not used to their full advantage [109]. This is important for institutions to recognize and work against when attempting to hire and maintain a diverse faculty.

Given the challenges inherent in trying to juggle a medical career and personal life, women physicians will often choose to *delay entering into committed relationships*, and a lack of a supportive relationship at home may further fuel work-life conflicts. In a study of deferred personal life decisions, which was reported by 64% of the female physician respondents, 22% reported waiting to get married and 86% reported waiting to have children. Interestingly, while 71% of those who deferred either decision indicated that they would choose medicine again as a career, more women who did not defer (85%) would choose medicine again, highlighting that perhaps deferring marriage and children may have in fact decreased professional fulfillment [11]. In her exploration of the meaning of success and creating a life of well-being, Arianna Huffington reflects that having children was the best possible antidote for her workaholic "always on" tendencies, providing her with perspective, an effective detachment from the stressors of work, and helping her prioritize in a healthier manner [55]. This may explain the greater professional fulfillment in those women physicians who did not defer entering committed relationships or starting families.

> I could tell my chief was holding his breath, and he certainly looked at me sideways and turned a deeper shade of purple when I said I wanted to take the 12 weeks maternity leave. I already felt so bad thinking about my colleagues being stuck with all my patients and in-basket; I don't understand why they won't cover me with a locum! And my poor husband, he only gets two weeks and with our last one that was spent in the NICU- he barely knows his son.

As noted previously, the latest Family and Medical Leave Act (1993) provides certain employees up to 12 weeks of unpaid job-protected leave and requires that group health benefits be maintained during the leave. A few states require employers to offer family leave with partial pay, for example, New York, and some teaching hospitals provide paid leave to care for a child. The Family Act (S 337), introduced in Feb 2017 [38], recommends 60 days of paid family leave. Leave allowances are available to compare online, and among 12 of the top medical schools, leave and salary support varies significantly between institutions. Average leave with full salary support during childbearing leave was 8.6 weeks but ranged from 6 through 16 [56]. Of concern was that many had policies that included the constricting verbiage "at the discretion of the department" or "practice leadership." This may allow supervisors to "encourage" women to cut short their leave or lead them to do so their own to appear as better workers, both equally harmful to work-life integration [78]. *Some policies did not include partners*, which further disadvantages the primary caregiver, usually women, by not allowing for shared responsibility at home and parenting in a cooperative manner [56]. This can be most challenging for women given that almost half the time they are in *dual-physician partnerships*, and their partner may often be at the same institution [78].

Family composition notably affects work-life integration. Dyrbye and her colleagues found that even though male and female physicians in the *early stages of their career* worked comparably fewer hours and took less call duty than those in later stages, they were more likely to experience significant work-home conflicts. This could well be because they, and their children, were likely to be younger and hence the added challenge of equitably navigating both home and work. Unfortunately, these early career physicians were the least likely to report being able to resolve the conflict in a manner that allowed both home and work responsibilities to be met to some satisfactory degree [30]. Whether this was due to personal characteristics, a lack of experience, or lack of autonomy or flexibility remained unclear to the authors. In the UK, early career female physicians with children felt less supported and mentored than their male counterparts. Although they were more satisfied

with their income and leisure activities/friendships than their male counterparts, they were plagued with greater work-life conflicts and were significantly more likely to curtail work hours, avoid academia or larger hospitals, less likely fill senior positions, and avoid what might be considered prestigious surgical fields [19]. Given that work-home conflicts and how they are ultimately resolved are known to affect career satisfaction, burnout, and impactful career decisions, this finding is of great importance and may represent a true opportunity.

Among early career physicians in Ontario, Canada, many women having children felt guilty taking the fully legislated pregnancy leave allowed and often curtailed that leave [88]. Similarly, in a large American medical school, although most felt that their family leave policies were fairly implemented, almost half the women faculty were *concerned about the reaction of their colleagues* if they took time to attend their family [10]. In addition to other lifestyle considerations, this worry may impact the decision to have children: in one-physician couples, the average number of children was higher when the male was a physician (1.86) versus when the female was a physician (1.40) [75]. Thus, in addition to their stamina, resilience, poor self-care skills, a tendency to self-sacrifice, and persistent societal norms, underdeveloped and/or underutilized institutional policies can interfere with successful work-life integration.

In her essay "Promoting Sensible Parenting Policies: Leading by Example" [27], Diamond references a report evaluating parental leave policies of 141 countries, which demonstrated that increasing maternity leave by 10 weeks was associated not only with a 10% reduction in neonatal infant mortality but also a decreased mortality of children younger than 5 years (by 9%) [51]. Furthermore, access to paid family leave correlated with decreased parental stress and a longer interval of breastfeeding. A retrospective study of 14,000 families demonstrated that less than 12 weeks of maternity leave or 8 weeks of paid leave was associated with an increase in postpartum depression in mothers; fewer than 8 weeks of paid leave was also associated with a reduction in overall maternal health [26].

Increasing paternity leave, modeled after Swedish policy, significantly reduces the risk of postpartum mothers experiencing adverse physical health complications and improves her mental health. A study from Stanford's Institute for Economic Policy Research [94] suggests career costs of family formation secondary to lack of workplace flexibility are exacerbated by a father's inability to respond to domestic and newborn needs, further exacerbating the maternal health costs of childbearing.

> "I walk in the door and start picking up toys so I don't kill myself. I am always putting everybody's things away. You all leave the dishes in the sink; don't you know what this dishwasher is for? I have cooked dinner 5 days this week and while I appreciate you grilling the burgers, it would really help if you helped out with a few more chores."

Results from the American Time Use Survey between 2003 and 2016 confirmed that among physicians who were married, sex differences exist in *time spent on household activities* (e.g., cleaning and cooking) and childcare (e.g., bathing and homework). Female physicians, even after adjusting for work hours out of the home, spent significantly more time per day on household activities and childcare than their male counterparts, specifically 100.2 minutes more [75]. Across most western countries where the proportion of women physicians is reaching 40%, women remained responsible for most domestic tasks and responsibilities and thus over 90% of US women physicians reported poor work-life integration [112]. Similarly, among physicians in Newfoundland and Labrador, female physicians reported spending significantly more time on childcare activities and domestic activities than their male counterparts. They bore most of the responsibility for day-to-day functioning of the family unit, whereas male physicians were more readily able to rely on their female partner to carry out these responsibilities. Women physicians faced with these work-life conflicts additionally reported feeling more guilt over their performance as mothers [91]. A 2016 survey of French women physicians revealed similar work-life conflicts, with 41% reporting their careers significantly impacting their child-rearing plans [37].

For those choosing an *academic* medical career, long hours are the norm, compounding work-life conflicts. Patient care, call, high expectations for research with increasing competition for funding, teaching assignments, committee work, as well as professional society and organizational commitments to demonstrate local regional and national recognition are all required for academic advancement. Female doctors entering academia, in comparison to their male counterparts, additionally spent *more hours on childcare and domestic chores* and reported higher level of conflict between their work obligations and family life [59]. Academic productivity of early career faculty was adversely and differentially affected by child-rearing responsibilities. In Jolly and colleague's exploration, these faculty members overwhelmingly believed that their career progress productivity was slowed by having children. Some career development grants are limited to physicians who finished training within the last 10 years, limiting women physician's flexibility to take time off to raise their children or to work part-time [78]. It is not surprising then that academic women physician-researchers do not achieve career success at the same rate as their male counterparts. Jolly and colleagues suggest differences in nonprofessional responsibilities may partially explain this gap. In their study of gender differences in time spent on parenting and domestic responsibilities of nearly 1500 high-achieving academic physicians with K grants between 2006 and 2009, women physicians were more likely than their male counterparts to have partners who worked full-time themselves (86% versus 49%) and they spent an average of 8.5 more hours per week working around the home. Among those who had children, women worked more hours in total, but 7 fewer (paid) hours than men, particularly research hours, and spent 12 hours more on parenting or domestic tasks per week. These married or partnered women researchers with children did 43.8% (vs men at 25.2%) of the total parenting or domestic tasks time themselves. Spouses or partners of male physicians dedicated a greater number of hours on these tasks than spouses of women physicians (60.2% vs 32.4%). In the physician faculty with children and with spouses employed full-time, women spent 46.3% of the total time on parenting or domestic tasks them-

selves, whereas men only spent 31.1%. Women were significantly more likely to report using day care (38.8% vs 30.6%), nanny, or babysitter services (44.3% vs 32.3%) and were less likely to rely on their spouses or domestic partners (29.5% vs 54.9%). Men and women who were married/partnered but did not have children spent similar hours at work and home, which suggests that gender issues surrounding childcare were the major differentiator: women with children were spending substantially more time on parenting or domestic activities than their male peers. Time spent on home responsibilities was found to compete primarily with flexible research hours [59].

Similarly, in narratives of *physician-researchers* and their mentors, significantly more women than men physicians identified the burden of work-life conflicts they face as factors in being less likely to pursue the academic milestones needed for promotion. Although both male and female academic physicians prioritize personal and home life, gendered societal expectations of the woman's role were still considered to significantly and negatively impact female physicians' academic achievements. Women's narratives additionally exposed the guilt surrounding having to compromise time spent with family while at the same time feeling they were neglecting their research careers. Deeply rooted challenges to work-life integration exist within the professional culture of academic medicine, including the stigma attached to taking advantage of, in some cases generous, work flexibility policies [109]. Strong and colleagues cite research in management and psychology that confirms that both women and men are perceived as less committed to their career if they become a parent or use the existing leave policies; thus their fear is not unfounded [109]. Actively promoting and *destigmatizing use of these policies is essential* to attracting and retaining a diverse faculty.

There has been a slow but steady rise in the number of women entering the *surgical* fields. This parallels a rise in dual-physician partnerships, which introduces its own set of work-life challenges (and not just among surgeons). In an exploration by Baptiste and colleagues of *early career surgeons*, the home life profile of men and women differed significantly but was not all that different from surgical trainees. Women were more likely than men to be

married and married to a professional (90% vs 37%), and that partner was more often working full-time (74% vs 18% of men's partners). Women were more likely than men to report having delayed childbearing until after medical school (100% vs 60%) or residency (81% vs 50%), and overall, they had fewer children and their children tended to be younger. Similar to the trainees, early career women surgeons were more likely to be primarily responsible for childcare planning, meal planning, grocery shopping, and vacation planning. The policy of clock stopping was implemented to support women faculty; delaying promotion following an already long and arduous training, however, was seen by some as being punitive. Nevertheless, women faculty had significantly lower satisfaction in personal life but, surprisingly, in their study there was no difference in overall work-life balance satisfaction between genders or among the different career stages [8].

Satisfaction with one's career plays into how one shows up at work. Engagement and "citizenship" can affect one's ability to effectively contribute to a supportive and productive work environment for the whole team, significantly impacting workplace culture [57, 76]. Given that a workplace culture of wellness (along with personal resilience and efficiency of practice) is one of the three reciprocal domains fundamental to improving and sustaining professional fulfillment [14], the importance of supporting all physicians with household responsibilities is an additional opportunity to enhance overall wellness and work performance and reduce burnout. Many day care facilities often have year-long wait periods (my own had the option of entering "estimated date of confinement," expecting couples to sign up even before the child was born!), which needs to be addressed.

Maternal Discrimination and Microaggression

> "I am not sure about your order Marcie (AKA Dr. Marcia Rise). Dr. Yung (AKA known as Dr. Mark Yung) mentioned this morning that we should stop the heparin, not continue it. You look so tired, poor thing. That little bun in the oven is sure taking a toll on you; my memory went to pieces too when I was pregnant!"

In addition to work-life conflict, microaggressions and workplace hostility contribute to work stress and have also been shown to play a role in the struggle of women to attain the rank of full professor [13]. Women physicians are more often targeted with microaggressions, such as having their medical orders questioned and challenged more frequently and being addressed more casually and less respectfully than male peers [40].

Interested in exploring perceived discrimination regarding motherhood, an online survey of the Physician Moms Group was launched. Of 5782 respondents, over a third reported gender and maternal discrimination, most commonly disrespectful treatment by nurses or support staff (based on pregnancy or maternity leave (89%) and breastfeeding (48%)), being excluded from administrative decision-making, as well as receiving lower pay and benefits than their male counterparts. Importantly, burnout was reported in 45.9% in those women physicians who experienced maternal discrimination vs 33% of those who did not [6]. Addressing microaggression and maternal discrimination begins with recognizing that it exists. Advocating for education and policies to eradicate microaggressions and implicit bias should considerably improve the experience of women in medicine.

Domestic Responsibilities and Work-Life Conflict Among Middle Career Physicians

It is established that women physicians are at high risk of work-family conflict just from the dual role of being a physician and a mother. In the same 60,000 participants of the online Physician Moms Group referenced previously, in addition to frequently bearing the greater load of domestic duties and child-rearing, physician mothers' roles as caretakers often means they are additionally caring for spouses, parents, friends, and others with a serious health problem, long-term illness, or disability. Not surprisingly this subset of physician mothers (16.4%) with additional work-life conflict had higher self-reported mood and anxiety disorders (aRR 1.21) as well as burnout (aRR, 1.25) [122].

In a study of *middle career women surgeons,* personal life satisfaction was on par with trainees and early-stage surgeons, but less than late-stage surgeons. Additionally, these mid-career women surgeons reported lower satisfaction scores in work-life than surgeons in all stages, that is, residents and early and late career surgeons. Within these practices, women surgeons were more likely to be on the clinical track. They tended to have younger children and were more likely to have experienced a recent work-home conflict, the latter known to factor into burnout and depression [8].

In contrast to other physicians, work hours among male and female surgeons are relatively similar. In a study of almost 8000 American surgeons by Dyrbye and colleagues, men and women both worked about 60 hours a week and had similar numbers of nights per week taking call (2–3) [28]. Women, however, spent less time in the operating room per week and held lower academic rankings. Far fewer women surgeons compared to men felt their work schedules allowed them time enough for personal and family life (29.8% versus 37.4% of men). Most of the male surgeons had a life partner (90%), and half of those did not work outside the home. These surgeons were much more satisfied with their career than those with spouses who did work outside the home. Women were twice as likely to have a working spouse (83.1% vs 47.8%). Sixteen percent of surgeons overall were married to other physicians. Similar to surgical residents and early career surgeons, a much greater percentage of women surgeons were married to physicians (43%); and in 27% of cases they were married to other surgeons. In comparison, male surgeons were married to physicians only 28% of the time and in only 5% of these cases these were surgeons. Career conflicts between spouses of dual-physician household were more commonly reported in women. *The conflict was resolved in favor of the surgeon if he were male 87% of the time but only 59% of the time if the surgeon was a woman*. Surgeons married to physicians tended to *delay having children*. There was a significant difference in the perceived effect having children had on career advancement, with more than half (57.3%) of the women surgeons reporting that raising children slowed the advancement of their career compared to 20.2% of men. Compared to their male counterparts, they were

less likely to rely on their partner to take care of a sick child or a child out of school. They were five times more likely to use a nanny. Thus, it is understandable that women surgeons were significantly more likely than their male counterparts to have had a recent work-life conflict (62 vs 48%). These conflicts were rarely resolved in favor of personal responsibilities; rather, overwhelmingly they resolved either in favor of work or in a manner that met both responsibilities, although perhaps suboptimally. Women surgeons endorsed slightly more depressive symptoms, were more likely to feel burned out (43 vs 39%), and had a lower mental quality of life, but these differences disappeared when controlling for age, having children, and hours worked. Similar to Internal Medicine physicians [29], after controlling for personal and professional characteristics among surgeons, three themes emerged that were all independently associated with burnout: each additional hour worked per week, a work-home conflict within the last 3 weeks, and resolving that conflict in favor of work [28].

The work-life conflicts described above were even more exaggerated in women surgeons married to other surgeons. Households where both partners were surgeons tended to be younger and newer to their practice. Latent gender discrimination was endorsed by 41% of women surgeons in a dual surgeon US cohort, who felt that the most recent career conflict was resolved in favor of their spouse/partner—more than three times that reported when querying males [28]. These findings suggest that traditionally held societal beliefs about women's role in the home and workforce remain true today for a large segment of the US women surgeon population. In an older study, and in stark contrast, among practicing women surgeons in Canada, a much lower percentage, 10%, thought that their spouse/partner expected his career advancement to take priority over their own career [86].

Among gynecology subspecialists, once again more woman than men felt that their careers more significantly impacted decisions made on parenting: they often felt that their academic and clinical work was negatively impacted by having children [52].

In a sample of almost 50,000 American physicians, not differentiated by specialty (31,000 men and 18,000 women) surveyed 2000–2015, significant differences between female and male doc-

tors were noted in levels of home support. Only 8.8% of women physicians had partners who did not work outside the home, compared to 46% of male physicians. Whereas 31% of the women physicians were married to other physicians, only 17% of the male physicians were, meaning significantly less support at home for female physicians [74]. As the number of paid work hours of spouses of female physicians increased, professional adjustments were made, with more hours spent taking care of household responsibilities and fewer paid hours. In an older study, 82% of the male physicians' spouses performed most or all of the duties at home compared with 5% of the female physicians' spouses [118]. In dual-physician families there can be significantly more challenge integrating work and home life for women physicians than for the male physicians, and in general women physicians in dual-physician marriages end up working fewer paid hours than their male counterparts because of greater pressure to allocate more time to household and childcare responsibilities [74].

There are more similarities than differences in the work-life conflicts felt by women physicians in other countries across the globe. An extensive 2014 examination of women physicians' experiences in Japan, Scandinavia, Russia and Eastern Europe highlighted significant gender-based concerns that contributed to work-life conflicts [80, 97]. In Russia, where medicine had become one of the lowest paid professional careers under Soviet rule, women have comprised about 70% of that work force since the 1950s [50, 80, 101]. Wages are poor to begin with, and medical careers likened to blue-collar jobs. Differences in primary household and childcare responsibilities for women resulted in a 10-hour difference in hours worked per week and women physicians' salaries were found to be 65% of male physicians, who were often found in academic and tertiary care careers [101]. In Hungary, 52% of physicians in 2012 were female and were expected to prioritize family life. At the same time, they reported lack of social support and female mentorship, lower job satisfaction, and higher levels of work-family conflict resulting in lower incomes and higher levels of burnout than their male counterparts [4, 5]. Similarly, in Serbia, where women comprise 64% of the physician workforce, and only 1% of the workforce works part-

time, childcare is primarily the responsibility of women, and work-family conflict and burnout are thus significantly higher in women physicians (OECD 2012 Health Data/[95]).

In Japan, where only 20% of physicians are women, they reported discrimination regarding choice of career, discrimination and sexual harassment in the workplace, a paucity of both spousal and institutional support surrounding pregnancy and childcare, and high levels of work-family conflict [121]. Japanese female surgeons noted a lack of family support as their most significant challenge [63]. Only half of Japanese women OB/GYNs were able to secure any maternity leave [110] and only half of hospitals had on-site childcare centers [121]. Thus, Japanese female OB/GYNs frequently gave up surgery and deliveries, worked significantly fewer hours and fewer nights, and made significantly less money [110]. Female physician employment at 9 years after graduation decreased by 75%, [121] with a marked decline in their late 20s and 30s; workforce participation of male physicians, in contrast, remained high until the age of 65 [60]. Cultural expectations and the challenges of meaningful work-life integration result in the workforce participation of Japanese female physicians resembling the M-shaped curve: "starting low but rapidly increasing as women first enter the workforce; declining as women temporarily withdraw from the labor market to have and raise children; increasing again when those children grow a little older and women reenter the workforce; and then declining again as all workers, men and women, reach retirement age" [60]. Finnish women were less likely to need to sacrifice their work-life for childcare responsibilities because of their country's robust social resources [101].

Work-life conflicts are more burdensome for female physicians for many of the reasons elucidated above. Although, in general, physician marriages tend to be longer lasting and the overall divorce rate lower than nonphysician marriages, it may not be surprising then that *female physicians are significantly more likely to be divorced than male physicians*. Lack of shared responsibility and cooperative parenting further impedes harmonious work-life integration. The divorce rate in female physicians is positively correlated with the number of hours worked per week, suggesting

that there is a *differential response to working longer hours*, both paid and unpaid, and which may have a significant impact on the primary relationship [73].

Late Career

> "I miss the kids like crazy, but I have to say, I am loving having the time to do some writing, and you know, I really like it! And "call" used to throw me for a loop, but it doesn't seem to bother me now. I have finally come to a place where I don't feel I need to play to the crowd; I am comfortable with my values and priorities and that feels wonderful!"

Late career physicians of both genders appear to be doing much better. They report greater professional fulfillment and are more satisfied with their career choices. Although they hold fewer leadership positions than men overall, women physician's publication rates increase and actually exceed those of men in the latter stages of careers [99]. They worked fewer hours, took less night call, and had fewer instances of work-life conflict. Their most recent conflict was considerably more likely to have been resolved in favor of both work and personal life (e.g., utilizing the workplace benefit of in-home or center-based replacement care for one's child or elderly parent: https://stanford.app.box.com/s/0a16dfy52pu3s8wtf0sexdiaw2heb4u5). They exhibit less emotional exhaustion and depersonalization than their younger colleagues and are overall less burned out [30]. While demands at home may be less, given children who are more independent or out of the house, perhaps the years of experience additionally allows them to more successfully navigate work and home life conflicts and develop the ability to resolve issues more equitably.

Intermittent focus on career advancement because of childcare and responsibility to the family is a thread oft woven throughout a woman's medical career. As emphasized by Huffington, home life can also be an effective antidote to the stressors of a career, providing healthy perspective and clearer means to prioritize. Austrian women physician leaders recognized and appreciated

the power of positive effects and energy that is derived from a rich family life. Harmony, happiness, well-being, and health had a constructive spillover into work and helped enhance the work-life relationship (which they termed "work-family enrichment") [103]. Along a similar vein, in an opinion piece by pediatrician Dr. Mayte Figueroa, she celebrates the changing work-life integration that occurs through various career stages as contributing to the daily and overall sense of achievement and enjoyment [39]. The Austrian cohort also felt however that early recognition and management of stress, boredom, personal overload, and family-work conflict was important for continued engagement and fulfillment [103].

"To achieve a measure of inner peace with our roles, sacrifices, and decisions, women should realize that our bodies are different from those of men physically, hormonally, and mentally; learn to embrace these differences; cherish our roles; set realistic expectations; and take pride in our individuality. It eventually comes together in unexpected ways, with unforeseen twists and turns. That's the beauty of life. Motherhood is an important role for those who take that road, but it's best savored in stages" [85].

Academic Advancement and Mentorship

> *Challenges to successfully integrate work and home life for women in academic medicine appear to be deeply embedded in today's professional culture and include the stigma attached to taking advantage of work flexibility (timing and work location) that has been made available and the lack of adequate mentorship* [109].
>
> My husband is in the academic tenure track line, with all its research and publication timeline requirements, but I couldn't imagine I was going to be happy there. First of all, there were no women in the tenure track in my division, so it must be impossible. And so here I am, 10 years later, and still an assistant professor in the clinical educator line. I am so busy in clinic and teaching, I don't have any time to even think about writing up my research, and they sure aren't giving me anyone to help. I feel so guilty about having to ration my time between work and the kids. I feel I have been left behind! No one is really looking out for me. I think I am

> going to leave academia and go into private practice; for all the time I am putting in I would certainly make more money…

Many medical schools offer work flexibility and for a variety of reasons, women often end up in tracks that may make academic advancement more challenging. Of 83 medical schools that offer a clinician educator track (CET), which includes primarily inpatient and outpatient care and medical education rather than the expectation of publishing high-quality data in peer-reviewed medical and scientific journals, 77% of them reported that significantly more women than men pursued this option. Of the 102 medical schools offering the traditional tenure track, 80% have a higher proportion of males engaged. Although many institutions claim to value their CET faculty, tenure track professors are twice as likely to be promoted. Not surprisingly, faculty in the CET, mostly women, were more likely to leave academia and seek employment elsewhere [119].

A survey to explore *barriers to advancement*, sent to 1456 clinical and research faculty at or above the rank of assistant professor faculty at a large Midwestern academic Institution, identified work overload and lack of self-advocacy skills as significant challenges. Forty-two percent responded to the survey and women faculty, especially clinicians, reported that the demands of their current positions prevented them from adopting additional roles, despite how desirable they might be or important they were to advancement. These women also reported that acknowledgment of their work and support from leadership required considerable efforts in self-promotion [35], a skill that may remain societally underdeveloped in woman in general and female faculty specifically. A lack of leaning into promotions and leadership roles because of work-life concerns, work roles, work overload, and organizational factors appears to be more of a factor for female clinical faculty rather than female research faculty [34].

The additional time spent by academic women physicians on household duties and childcare was found to compete primarily with flexible research hours [59]. Given that research, grant acqui-

sition, and publications are so critical to advancement in the academic arena, this may significantly curtail the academic success of talented, competent, and motivated women. Furthermore, due to the poor appreciation of work-home conflicts by their male colleagues and superiors, policy changes that would allow women to integrate and thrive in both realms are often not even considered at some institutions [59]. A decrease in faculty applying for academic promotion overall, and the underrepresentation of women compared to men in senior leadership, independent of policy awareness, may challenge that assumption and underscore that these supposed family-friendly policies are simply not meeting the needs of women physicians. There is, however, evidence of a shift toward recognizing the importance of work-life flexibility and increasing awareness of the need to address gender differences in life-work conflict. For example, attempts to identify and remedy *gender-biased descriptors* in letter of recommendation have resulted in a noted equalization of hiring at the assistant professor level at some institutions [116].

While many academic medical schools have valuable stop-the-clock programs and other supports in place to help support woman in their academic goals and improve work-home integration, women are often reluctant to utilize them for fear of perpetuating stereotypes that unfairly stigmatize women. There is a perception, for example, that men who leave work to attend a soccer game are viewed differently from women who do the same [109]. In a study of faculty at a large American medical school by Becket and colleagues, balancing career and family obligations posed significant challenges for both women and men. Interestingly, in their study, they found no differences in satisfaction across gender or faculty rank in clinical and non-clinical faculty [10]. Nevertheless, women physicians were more likely to report that conflicts between work and family might contribute to a decision to leave academic medicine than men (32% versus 18%). It is important to note that for women, reaching the associate professor rank was associated with greater career satisfaction than it was for men. But despite women

entering careers in academic medicine in greater numbers than men, they are more likely to leave academic medicine before achieving the rank of associate or full professor [90]. Likewise, a study of biomedical PhDs highlighted that women who had a child within 5 years of taking a tenure track faculty position were significantly less likely to make tenure than their male counterparts [79]. More than 10 years later, a recent study showed that women in medicine are still more likely to leave academic medicine before achieving the rank of associate full professor than men [56]. Over the years, many medical schools developed *flexible policies attempting to reducework-life conflicts*. As of 10 years ago almost half of schools offered probationary periods beyond 8 years for clinical or basic science faculty as well as the ability to stop the tenure clock for childcare, medical disability, or care of an ill or elderly family member. However, part-time employment options are offered less frequently to tenure tract faculty, with only a third offering this opportunity [20]. Recently even more flexible career policies have been offered by several top medical schools; however, *low utilization of these policies* has been noted, indicating they do not meet the true needs of faculty. Reasons for not taking advantage of these options include *financial barriers, perceptions regarding commitment, and concerns about colleagues left with a greater burden*. At UC Davis, for example, despite the school's efforts to broadly communicate the many family-friendly policies that exist, there is still considerable underuse. Although the number of women in the biomedical sciences taking the maximum 12-week maternity leave tripled, the percentage of women who took less than 4 weeks remained the same, again raising concern that awareness may not be widespread or women are concerned they may be stigmatized and face repercussions [116]. Increased support, encouragement, and normalization of using flexible policies may be essential to support the academic advancement of women physicians.

In an older study, less than 20% of highly productive academic pediatricians were women. Among over 4000 pediatric faculty at 126 academic pediatric departments, women reported

having *less protected time* and working fewer hours (60 vs 64 hours) weekly than males. Among instructors and assistant professors, women spent significantly more time teaching and in direct patient care (40 hours vs 35 hours weekly) and less time in research (15 hours vs 20 hours per week). This was perceived to be a consequence of receiving less protected time and decreased access to research space provided by their leaders [61]. A more recently published study of over 1200 faculty at 24 US medical schools over 17 years attempted to identify factors predicting academic promotion, retention, and attainment of senior leadership positions. Gender differences still remain with women less likely to reach senior levels compared to men, even adjusting for numbers of publications [24]. Examining overall career productivity in academic physicians, women publish about a third fewer articles than men and their h-index remains lower throughout their work-life. In their later years however, their productivity increased and was equal or greater than their male counterparts. It appears that whereas women may have been deterred from academic advancement because of *greater family responsibilities* and additional factors explored previously, they were often able to make up for that later in their careers if they remained in academia [36, 99].

In their study of Viennese women physicians, the dearth of *women in senior leadership positions* led to significant underrepresentation of their individual and collective voices and opinions in policy and decision-making. The lack of networking or encouraging role models and same-sex mentoring for younger women may decrease their motivation to aim for top careers in medicine. Conversely, implementation of these opportunities was considered crucial to academic advancement. Effective faculty mentoring and fellowship activities promoting networks of similarly academically productive colleagues having frequent discussions about projects and grants were considered essential for academic achievement. For women, more so than men, this was challenging to develop and engage in and took time from their highly valued family life; thus, their networking was less efficient. An early anticipation and planning for academic

advancement and consideration of flexible timelines was also deemed important for the advancement of women [103]. Given that gender preferences and practices regarding work-life integration affect time dedicated to clinical, educational, and research efforts, and very likely contribute to the variances in retention and academic advancement, it is important to be aware of family leave policies where one works. This was previously explored in the section on family responsibilities.

> "Tricia, (AKA Dr. Patricia Rose) would you like to be a mentor for Dr. Kirby?" "Who me? I never had a mentor; can't I have one??"

In the latest data currently tabulated by the AAMC, 2015, only 15.9% of department chairs in academic medicine were women [2]. As such there are few *effective role models* for women physicians who may enter medicine aspiring to advanced leadership roles but who also place value on creating and participating in a fulfilling family life. It is not surprising then that although women may enter medicine with goals of academic advancement, they are not as successful as their male colleagues and there is significant attrition along the way. In addition to fewer female role models and mentors, the generational values and the quality of mentorship from male role models and mentors are important. Several years ago, women at one academic institution cited a lack of role modeling on how to combine career and home life and deal with the research frustrations and an institutional culture that appeared to favor men [69]. Although currently there is an appreciation of the emotional and psychological support women often receive from male mentors, in Strong's 2013 examination of narratives of physician-researchers and mentors, the lack of real life strategies and advice about how "to do it," that is, specifically and successfully manage to integrate work and home life, was notable lacking "as they never had to deal with it" [109].

Valentine and Sandborg from Stanford highlighted early on that the lack of women physician role models in leadership positions relays a clear message that women must choose between

academic advancement and their personal life. “Even more pernicious is that this message creates a vicious cycle of inequity and transforms our robust pipeline into a funnel” [114].

Seventy-five percent of medical schools offer mentoring for their female students, but even at this level of training the quality of mentoring has been highlighted as a concern, with women medical students reporting less satisfaction (42% vs 53%) than their male counterparts. This dichotomy represents a significant challenge as both job satisfaction and career advancement rely heavily on effective mentorship; in fact, the presence of a good mentor has been shown to double a physician’s chance of promotion [9]. In general, mentors who are cognizant and skilled in adapting to the gender-related needs of mentees will contribute to the retention and development of women in academic medicine, expanding leadership diversity and capacity [12].

Given these findings, a *mentoring program*, which began with a robust Mentee Needs Assessment Form, was created specifically for junior women faculty at Wake Forest School of Medicine. Mentorship included discussion on career development, research, promotion seeking, available administrative resources/services, and well-being. Not surprisingly, significant benefits included promotions, grant applications/awards, articles, presentations, and professional memberships [117].

At the Mayo Clinic, where there were not enough senior women physicians to mentor junior women, a facilitated peer mentorship pilot was developed. Senior women physicians with significant experience acted as facilitators for a group of junior women, who then served as their own peer mentors. Participants in the pilot program benefited from more published papers, skills acquisition, and promotion in academic rank [81].

Role modeling and exposure are critical to academic advancement. Departmental and divisional leaders, mentors, and sponsors are increasingly trying to combat a much tweeted about occurrence, conference “manels,” or *male-dominated panels*. Not unique to medicine, this refers to the persistent and pervasive gender bias in those invited to present or sit on expert panels at

conferences and other events. For example, between 2010 and 2015 every annual critical care conference was male dominated, and other specialties report a similar pattern [84]. Women, especially those in early training, need to see other women in these positions in order to envision themselves in similar situations. Many conference organizers are making efforts to invite and include women to take part and increasingly male academicians are refusing to participate unless women are present. Although some may consider it patronizing being the token women given these efforts, the effect on members of the female audience is nonetheless important and essential in normalizing the diversity and eliminating bias.

> "Hey Maria, you going to cocktail hour?" "No, Mario, my daughter has afterschool ballet and my son has soccer, so I am going to pick them up, and get dinner going, but say hi to the chief for me."

Social capital is an important factor in professional advancement in many realms. Women physicians in particular, because of the already long hours, tend to engage less in the informal networking that frequently takes place in after-hours meetings and gatherings as it often interferes with homelife and childcare [103]. This is where garnering important relationships and sponsorships takes place, however. Strong and supportive mentorship relationships with well-placed individuals, as well as connections with powerful networks, help propel women by allowing her efforts to build social capital to proceed far more efficiently [33]. Informal networks often connect physicians with legitimate sponsors in positions of power who are able to advocate for one's career advancement and promotion in various ways, including provision of protected time and workload [53]. In the corporate world, having sponsors significantly increased advancement of women into upper levels of leadership [111]. In medicine, it appears that men are more likely to have these resources than women. Social capital is important for professional advancement and promotion, and men are more likely than women to invest in and use these informal but powerful networks.

Self-Advocacy, Setting Limits, and Self-Care

> "I don't understand why I didn't get asked to apply for that position. I didn't even know they were looking for someone. Here I am killing myself at work. I am on two committees, I'm precepting (now I have PA students in addition to the med student), I am teaching a class (with no support I might add), I just finished up a chapter, and a journal article, and presented at a national conference. I just don't get it." "Ya, but did they know all that??"

Women are socialized to introduce their suggestions as questions, in an effort to promote consensus and avoid appearing forward or abrasive [58]. Whereas exercising power and volubility in meetings can be very effective for men, studies show that women can be penalized for such behaviors [15]. As such, *self-perpetuating cycles* ultimately develop as these socialized behaviors are adopted: as women physicians soften their edges, they may appear less competent and promotable. This can lead to women doubting their own capabilities and contributing or deepening their sense of *imposter syndrome*. Imposter syndrome is characterized by self-doubt and fear of being found out as an intellectual fraud. Women in medicine are plagued by imposter syndrome more often than their male counterparts [89]. It can lead to hypervigilance and overwork and decreased time for self-care, and understandably it is highly associated with psychological stress and burnout. Ariana Huffington, in her book, *Thrive*, describes how imposter syndrome can drive women to overcompensate by working harder and longer. Woman too often feel they do not "belong" in what traditionally has been a boys' club atmosphere and their overwork may help them feel that they fit in and allow them to gain a measure of security. This may be tantamount to a Pyrrhic victory, however, as overextending themselves at work negatively impacts their health (e.g., through lack of sleep), which then negatively affects their performance [55].

Although women who become physicians are often highly driven, ambitious, and resilient, characteristics that align with success in their profession, they may also be less skilled at and *less likely to self-advocate*. The "unnaturalness" and effort required to self-promote often leads to lack of notice or acknowledgment of their work [35]. Putting oneself up for opportunities, having estab-

lished name recognition, and knowing people can lead to collaboration and career advancement opportunities are often lacking in women. In mixed gender environments, in order to maintain or promote relationship prospects, women tend to minimize ambitions and salary expectations [21]. Viennese academic women leaders, in an attempt to understand the general lack of women in leadership, additionally described a tendency to poor self-assessment and understatement, with inadequate presentation of skills, personality, and successes, as potential barriers to medical career advancement. Women physicians tended to underplay the softer "female" skills of empathy, grit, and resilience, as well as their ability to function well within teams, and encouraged a greater appreciation and valuing of these skills, which are increasingly recognized as valuable leadership qualities [103].

> Lucky for us...(unspoken)… "you don't have kids, is it ok if I put you on call over the holidays? Jack and Tom were planning on taking their families skiing."

Women physicians often *struggle with setting limits*. For example, despite committing more time to domestic and child-rearing duties, a Swedish study of female physicians reported that women were more likely to show up to work despite being unwell (sickness presenteeism) than their male colleagues. The inability to effectively set limits becomes apparent when examining their reasons for doing so, that is, "concern for others and workload," cited significantly more often by women than men [48].

> "Sandy, you need to get help!" "There is no way I am going to do that. As soon as I admit I am depressed my licensing fiasco starts. And I think it might give my chief more ammunition to further ostracize me. I can do this but I admit, I'm scared, I can barely get up in the morning these days."

Mood disorders and **mental health concerns** can both contribute to and be exacerbated by work-life conflicts. Although matriculating medical students have fewer depressive symptoms than comparable undergraduates, by their second year this pattern is reversed [32]. There is a significant increase in depressive symptoms for both women and men during the internship year, though

statistically significantly greater for women versus men (PHQ–9 increase of 3.2 vs 2.5). *Accounting for work-family conflict decreased this difference by a third*. Support at home has been shown to significantly reduce work-life conflicts [82], and when fathers are provided with, and take, paternity leave, maternal postpartum physical health complications and mental health status are significantly improved [94].

Female physicians are 2.2 times more likely to die by suicide than female nonphysicians. Promoting self-care, addressing work-life integration, and providing mental health support are essential, not only to support women in medicine but to allow them to thrive. Overt efforts to address and decrease both work-life conflict and depression may also promote retention and advancement of women in academic medicine [49] and contribute to the diversity of successful role models for subsequent generations.

> "So how is your NEST? (Nutrition, Exercise, Sleep, Time to be/Time management). You know how important it is to get your rainbow-colored fruits and vegetables daily; how about your aerobic exercise and stretching? Yoga is good for that. And don't forget strengthening, so important. And Sleep- you need 8 hours a night, time to clear out all that metabolic waste among other things (cancer risk, memory issues, infections). And no iPhone or computer for an hour before, right? Do you have the CBTi app? And you know, there is so much known now about the need to just "be". Meditation is so good for you; do you have that Headspace or Calm app?" "Hmm, I don't know doc, do you do all that yourself?"

The pressures and expectations of the medical profession may lead women to unwittingly sacrifice their own well-being and that of their family in order to meet the needs of their patients and the often-unarticulated expectations of the profession. Self-care, including getting adequate sleep, exercise, good nutrition, and time for reflection, can often be seen as selfish but is in fact essential to providing the kind of patient care that women physicians aspire to provide. For example, in a New Zealand study of trainees, women residents were more likely than their male counterparts to report never/rarely waking refreshed and suffering from excessive sleepiness [42]. Acute sleep deprivation creates challenges in committing to regular activities outside of work, being too fatigued to maintain these activities; disruptive night and weekend shift

work and having to study while working were additional work patterns that negatively affected life away from work and contributed to a lack of time for partners, children, and families [42].

Whereas residents and early career faculty may be sleep deprived from overnight shifts and youngsters at home, women in the later stages of their career who may be traversing perimenopause may be sleep deprived due to a number of other factors. The emotional dysregulation resulting from *poor sleep* can make the challenge of work-life integration even harder, as is dealing with potentially hormonal and dysregulated teenagers. Add a threatened marital relationship and work-life integration is further jeopardized. Women physicians in *late career stages* are often at a crossroads. They have accumulated a vast experience and wisdom in their clinical/research/educational endeavors, potentially reached positions of leadership, and may be in supportive primary relationships or past the turmoil of ending them. However, they may also be both caring for their parents and caring for or launching their older children, in the midst of experiencing unexpected perimenopausal hormonal changes and symptoms. Ageism is a known entity in America, and not much is written or shared about these particular struggles, which often remain a personal journey due to lack of time for social connection, embarrassment, or shame. At the same time, women physician at this stage are also looking ahead and deciding how to reconcile the challenges of their medical careers with the desires for a healthy, fulfilling, and meaningful future (see Chap. 17 on late career solutions).

Solutions and Resources

Organizational and Practice-Based Solutions: Flexible Hours, Workflow, Extended Tracks, etc.

- Offer residency couple match for medical students in relationships.
- Offer shift work and job sharing for residents and faculty with small children. For example, the American Board of Family Medicine has clear guidelines for shared or part-time residency training.

- Focus early on gender bias and confidence building within the medical school curriculum such that certain specialties are not considered by women to be out of reach [92].
- In recruitment of dual-physician couples offer tandem recruiting for faculty such that both hiring units or departments synchronously engage in the recruiting process so that both partners feel equally valued. Fund spouses using a combination of funds from both departments with additional support from the deans and/or provost office [96].
- Offer high-quality mentorship; for example, the Doris Duke charitable fund has provided support to medical schools to make mentorship more available and increase career development opportunities for physicians in the early stage of their career.
- Prioritize educating senior faculty on the unique challenges facing women physicians in integrating career and home life while navigating their institution's advancement and promotions pathway [9]. Facilitate discussion groups and have women from this cohort on the A&P committee, with protected time.
- Use a Mentee Needs Assessment Form to individualize the mentoring relationship [117].
- Offer generous parental leave for residents. Some progress: The Board of Plastic Surgery has proposed modifying their requirement of 48 weeks of training per year to 94 weeks in the final 2 years, thus providing for two additional weeks off.
- Destigmatize parental leave policies for both parents—make utilization the expected norm. Offer guaranteed temporary replacement for physicians on leave [88].
- Provide adequate (sufficient, nearby, hygienic) lactation facilities at all clinical sites [63]. No more pumping in dirty bathrooms! Or provide the time to walk to another building. Provide the amenities required for efficient, clean, private pumping including on-site pumps.
- Make efforts to reduce maternal discrimination, through raising awareness, education, and bias training as well as deliberate appreciation and support of women physicians who are also mothers, with explicit workplace changes including longer paid maternity leave, backup childcare, and support for breastfeeding [6].

- Offer high-quality affordable on-site childcare as well as on-site backup sick childcare facilities, with extended hours for night shifts and conferences.
- Eliminate compensation practices that dis-incentivize practitioners from using vacation time [105].
- Offer financial advising resources regarding school debt, mortgages, etc. [87].
- Offer (but don't insist) *flexible and extended clinic hours*, which also maximizes use of space.
- Create programs to retrain women and men who wish to return to medicine after taking time off to care for children [62].
- Address gendered stereotypes, for example, by recognizing when it happens and raising awareness [121] and advocating for education that address socially constructed gender-based assumptions that negatively influence the medical careers of female physicians [22].
- Offer transparent and equitable compensation and bonus plans.
- Offer concierge health services for faculty.
- Fund (FTE and Budget) departmental or divisional wellness directors, who work to improve the work-life experience of their faculty and can also work to make changes that appeal to diverse faculty.
- Offer videoconferencing and telemedicine for improved work-life integration.
- Offer EMR Concierge training to all physicians, often!
- Provide high-quality transcription services (e.g., Dragon DMO) which allows you to dictate into/through your own phone, at work, at home, on the road.
- Provide reliable, well-trained, and experienced scribes.
- Expand AI to perform mundane tasks and free up time for physicians to work at the top of their licensure [70].
- Cover the costs of clinical licensing, board (re)certification, DEA, conferences required to maintain licensure, and conferences at which physicians are presenting.
- "Clock stopping" for their tenure track faculty, for example, the NIH has recognized this priority and automatically extends "early investigator status" allowing women researchers to

apply for additional support without penalties if they give birth during their grant period.
- Include a diversity and inclusion review of institutional educational programs, panels, and hiring practices to ensure women and minorities are adequately recruited and represented.
- Proactively identify qualified women, for example, looking at lists like those of fellows and editors, so that all those in positions to provide sponsorship can easily identify women who might otherwise not immediately come to mind; apply a "Rooney Rule" equivalent, already adopted by the National Football League, requiring that minority candidates at least be included among those considered for a senior position [64].
- Offer leadership programs to faculty; we are all leaders and benefit from the multitude of skills offered starting with self-awareness, values clarification, etc.
- Discourage "sickness presenteeism" by providing adequate coverage that would mitigate concerns of overtaxing colleagues, as well as schedule templates that allow for timely rescheduling of patients.
- Given that women tend to devote a good portion of their "extra time" to family care, rather than reserving it for grant writing, provide a grant office and admin staff that can better cater to their needs/time schedules [9].
- Promote men and women faculty equitably, timely, efficiently, and transparently.
- Sponsor/pay for high-quality childcare at faculty and professional meetings/conferences [59, 71].
- Schedule meetings and committee work during work hours, not before or after the day, or during lunch.
- In addition to mentors, offer sponsors who are in positions of power to advocate publicly for the advancement of women in academia [111].
- Leaders should take advantage of practice improvement processes that have been successfully implemented in other organizations. The AMA STEPS Forward website highlights many resources and modules for physicians in general with a host of

topics/real-life examples, such as addressing the EHR and in-basket restructuring and how to efficiently manage the in-basket, engaging and empowering the entire team, improving work culture and workflow, the use of huddles, strengthening working relationships to improve practice efficiency, appreciative inquiry around fostering positive culture, protecting against burnout, and fostering self-care: https://edhub.ama-assn.org/steps-forward/pages/professional-well-being.

- Organizations should recognize the subtle ways in which women are socialized to behave in public spaces that can prevent them from being recognized for their contributions and be proactive about setting rules and norms that seeks to recognize women physicians for excellent work. Offer education to bring awareness and counter such behavior and allocate resources toward leadership training on these issues to both genders.
- Work closely with local, state, and federal agencies and legislatures to develop policies that support institutional, cultural, and individual efforts, for example, shifting from volume-based to value-based care reimbursement models, eliminating questions about mental health diagnoses from medical license renewal, financial credits to organizations that provide paid parental care and on-site day care, eliminating barriers to telehealth models, etc.

Examples of Practice-Based Programs Offered at Various Institutions

- The New York-Presbyterian Hospital, in addition to medically necessary time off for a woman giving birth, employees, including residents, can take 6 weeks of paid parental leave for the primary care-giving parent and 2 weeks for the secondary parent. This is available to all parents, women and men, whether for birth, adoption, or surrogacy.
- Stanford University offers Child Care Subsidies and Assistance, based on income. It offers Junior Faculty up to $1000 as a Dependent Care Grant for expenses incurred when travelling

to professional meetings/conferences. They offer an emergency and backup dependent care for kids and for elderly both in home and in center with copay: https://stanford.app.box.com/s/0a16dfy52pu3s8wtf0sexdiaw2heb4u5. They maintain a comprehensive database for self-pay services such as nannies, babysitters for evenings and weekends, discounts and preferential enrollment in certain day cares, Test prep, tutoring, pet sitters, house keepers, Elder Care resources/referrals, and free social worker consultation.

- Christiana Health offers 12 weeks of paid paternity leave for all faculty and residents.
- Stanford's "time bank" program (initially a department-wide pilot, currently only continued by the Stanford Emergency Medicine program) provides options to participate in service work (filling in last minute, taking an extra shift, mentoring, serving on committees, or deploying in emergencies) to collect time bank credits. Credits can be used to free up time to spend with family and get help with grant writing, free meals, house cleaning, and eldercare. (Credits cost "far less" than 1% of the budget.) The department also pays for medical scribes.
- Stanford's Emergency Medicine residency program has a transparent return to work policy for new parents—no overnight shifts, no sick call, and no more than three shifts in a row while fully staffing clinical sites [46].
- University of California,Davis, created a Women in Medicine and Health Science Advisory Board, which develops programs to retain women in the early career stages as well as attract more mid-career and senior women faculty members. They have an annual leadership with the intent of investing in and cultivating women's careers in academia and growing them into leaders [116].
- The AAMC's Group of Women in Medicine and Science (GWIMS) offers a 2-volume toolkit with a variety of excellent presentations that speak to "Leveraging your Career" (Vol 1) and "Institutional Strategies for Advancing Women in Medicine" (Vol 2) https://www.aamc.org/members/gwims/toolkit/343518/toolkithometsr.html.

- Stanford Family Medicine extended its hours, now open 7 am to 7 pm, providing flexibility for both patients (more afterhours availability for the employed and students), physicians (increased flexibility to get kids to school in the morning by shifting clinics later or be there to pick them up after school by shifting clinics earlier), and staff (who often commute very long distances and now had the option of working fewer longer shifts, cutting down on commute hours, and helping with retention).
- In June 2018, the American Society for Radiation Oncology (ASTRO) adopted a new policy to provide on-site childcare at its annual meeting.
- The Stanford Division of Primary Care and Population Health provides funding for a Director of Faculty Wellness as well as a budget for activities that increase wellness and professional fulfillment. Clinic-based wellness champions help decide what works for them, for example, funds for wellness-based conferences, physician health coaching, leadership coaching, babysitting dollars for date night, healthy snacks, exercise equipment, "commensality" dinners, and Physicians and Literature groups/Narrative Medicine/Balint meeting. A divisional website lists resources and events and highlights wellness activities of its faculty.

Cultural (Supportive Networks, Mother's Groups, Reducing Stigma Regarding Help Seeking, Sharing Stories)

- Provide divisional or clinic-based funding for activities that increase wellness, decided upon by faculty or wellness directors/champions, for example, additional funds for wellness-based conferences, physician health coaching, leadership coaching, babysitting for date night, healthy snacks, exercise equipment, Physicians and Literature groups/Narrative Medicine/Balint group).
- Support each other in taking a stance against microaggression.
- Support each other with interventions to foster resilience among women physicians, for example, SPACE.

- Training to recognize early sign of depression, normalization of mental health counselling, supportive debriefs and check-ins after near miss events of patient deaths, disaster efforts, etc.
- Offer social gatherings for faculty that include activities for young families/children.
- Provide funding and time for faculty-invested and faculty-led practice improvement projects.
- Consider joining a Physician Mothers social media group.

Examples of Programs that Promote a Culture of Wellness Offered by Some Institutions

- Departmental, divisional, or clinic-based funding for wellness directors and funds for activities that promote a culture of wellness (not specific to women) (e.g., in the Stanford Division of Primary Care, bringing together young families, "Spring Fling"; in Primary Care and the associated University Health Alliance "Commensality"/"Comraderie" gatherings, monthly small group paid dinner gatherings of 6–8 faculty, loosely facilitated, with the first 20 minutes dedicated to a topic of physician-hood with each member given time to share; Physicians and Literature groups/Narrative Medicine gatherings/Balint groups).
- Authentic connections: https://authenticconnectionsgroups.org, facilitated colleague support groups for women fostering collegiality, which significantly lowered depression and global symptoms, with notable improvement in self-compassion, feeling loved, physical affection received, and parenting stress [72]. It was first tested at the Mayo Clinic in Arizona as a means of reducing burnout among physicians, physician assistants, and nurse practitioners, all of whom are mothers.
- Mayo Clinic in Arizona offers facilitated support groups for women (six women per group) that occur during working hours (e.g., 8–9 am), offer CME credit, and are supported by use of a single trip day for the 8 weekly sessions.
- Christiana Care Health System in Delaware offers small group coaching cohorts for women physician leaders. Additionally, although not aimed specifically to women they host COMPASS

(Clinician-Organized Meetings to Promote and Sustain Satisfaction), the goal of which is to encourage physician collegiality, shared experience, mutual support, and meaning in work to decrease burnout and promote well-being. Each COMPASS group consists of 6–8 physicians who meet over a 6-month period to share a meal while a facilitator leads discussion on topics such as medical mistakes and the wounded healer, personal and professional balance, and finding sources of meaning.

- Although not aimed only at women, but heavily women subscribed, Stanford University School of Medicine's Department of Medicine offers facilitated faculty groups that promote a culture of wellness and collegiality called SPACE ("Tending your Nest" and "Making SPACE for What Matters Most) with a goal of enabling physician participants to develop *skills, behaviors, and attitudes* that promote *physical, emotional, and professional well-being* and contribute to their *resilience and leadership potential*: http://medicine.stanford.edu/faculty/professionalDevelopment.html.
- UCSF is starting facilitated learning/support groups for women physicians aimed at creating community/support and well-being at work and developing skills in self-advocacy. The book *How Women Rise* (Sally Helgesen and Marshal Goldsmith), about women in the workplace, is a focal point.

Individual-Personal Wellness: Self-Care, Self-Advocacy, and Limit Setting

- Know (and celebrate) that you are worth it!
- Acknowledge that times have changed, and your life and job depend on taking care of and standing up for your most valuable asset—*You*!
- Build and prioritize your NEST (nutrition, exercise, sleep, and time management) to make SPACE for What Matters Most to you (∗Stanford SPACE © program). Keep a calendar and schedule in sleep, movement, and exercise, in addition to your meetings, conferences, call schedule, vacations, and the birthdays of those you love!

- Seek out effective mentors (and more than one!).
- Premeds—If you have decided early to pursue medicine, do your research—don't be surprised when you get to the application phase, or medical school, by those who have been planning for years. If it is important to you or you have a specific specialty in mind, optimize your resume/CV with competitive standardized test scores (i.e., take the time out to dedicate to preparation time if you can, others do!), pursue leadership experiences that you enjoy (beyond just showing up: lead but develop new ideas/directions; can you leave a legacy?), pursue shadowing experiences, and find or create opportunities to be involved with publications.
- Medical students—if your well-being includes entry into a certain specialty, ensure the appropriate rotations early enough and aggressively seek out effective role models and sponsors. If you anticipate your career path may include an academic focus, identify and speak to mentors you hope to emulate early on and make a plan for academic advancement that includes planning for relationships and family building. Seek out opportunities/information/seminars on career planning, exploring flex time, and flexible career structures [18].
- Medical students—Consider the couple match if you are in a strong relationship.
- Residents—The American Medical Association (AMA) divides resident well-being into six, evidenced-based categories: nutrition, fitness, emotional health, financial health, preventative care, and mindset and behavioral adaptability. Devote time to seek out classes, conferences, and programs that teach and promote these. Practice them! Partner with others for support and hold one another accountable.

- Take advantage of programs to help manage the stress of medicine including:
  - Learning and practicing interpersonal skills that increase the availability of social support
  - Appropriate prioritization of personal, work, and educational demands

  - Techniques to increase stamina and attend to self-care needs
  - Recognition and avoidance of maladaptive responses
    - Positive outlook skills/focus on values, meaning.

- The AMA has amalgamated resources in their STEPS Forward program: https://edhub.ama-assn.org/steps-forward.
- Read the chapter Self-Care, Resilience, and Work-Life Balance by Worley and Stonnington in Physician Mental Health and Well-Being- Research and Practice. Kirk J. Brower, Michelle B. Riba Editors Page 238–258- many excellent resources!
- Take pride in the softer "female" skills including the ability to function well within team, grit, resilience, and empathy (Schueller- Weidekamm el al. 2012). The Mayo Clinic has a yearly GRIT Conference. Get a group together and go!
- If you marry, choose a supportive spouse! One who is knowledgeable and understanding of your commitments and shares your values. Engage early and frequently with your partner regarding your career goals, family plans, daily grrs, and victories. One who will help with household duties and childcare. Have discussions early regarding shared decision-making, role clarity, reasonable expectations, and acknowledging the benefits that living with a doctor, or both being doctors, brings to the marriage [93].
- If you have a partner, schedule date night/time alone—just do it! Take advantage of institutional support for personal time; for example, the Stanford Primary Care Director of Wellness has a budget that among other things financially supports date night.
- Take advantage of parental leave (for both partners). Educate yourself about your organization's policies and negotiate (and advocate) for paid and even unpaid time off—10 years from now you will rarely regret taking time off, but you may regret leaving time on the table.
- Encourage your partner to take advantage of parental leave.
- Engage with your peers for support and resources regarding childbirth, childcare, domestic help, and fun things to do outside of work.
- Seek help from extended family but educate yourself and take advantage of employer-based benefits.

- Consider extending the roles of your home help—shopping, meal prep, cooking, cleaning, personal assistance.
- Meal prep services—there are many, with a variety of options (daily, 3 times a week, weekly, some prep, full prep, vegan, vegetarian, etc.).
- Consider shared jobs with other residents or physicians in a similar situation.
- Engage with mentors and leaders to consider and strategically plan temporary career breaks to prioritize child-rearing in a manner that will minimize academic disruption to academic promotion and career development. Make efforts to normalize this.
- Consider and negotiate flexible hours. Extending the use of office space to earlier or later hours, if that suits you, may also be a smart use of already existing space. Flexible hours for an MA or an extra MA costs little compared to losing or significantly curtailing the hours of a physician.
- Advocate for increased physician control in the workplace; participate in process improvement projects that support work-life integration and wellness (we just did one called Wanted: Healthy and Delicious Lunches for Faculty and Staff Meetings—wow what a success—problem now is that we are overeating because the food is so delicious!!).
- Say yes to breaking up manels (male-dominated panels).
- Engage with your institution and colleagues to recognize, call out, and take a stance against implicit bias and microaggression toward yourself and others. Offer implicit bias training.
- Live close to work to minimize commute and stress from traffic.
- Ask for and take part in a physician leadership program, early.

Examples of Wellness Programs Offered by Some US Institutions

- Johns Hopkins Medical School has instituted physical and emotional wellness programs for medical students, residents, and fellows to prevent burnout. Their website is replete with resources: http://wellness.som.jhu.edu/.
- Stanford has a general trainee website with wellness information and resources: http://med.stanford.edu/gme/housestaff/all-topics/wellness.html.

- Stanford's Surgery and Anesthesia department has also aimed efforts at preventing and addressing resident burnout. The Surgery department created Balance in Life (BIL), a holistic, multifaceted program with the primary aim of educating about and facilitating physical and mental health among resident trainees. They link residents to mentorship and social events, provide access to healthy food, and have mandatory time-protected meetings with a psychologist exploring difficult conversations and situations, as well as access to individual sessions.
- The Stanford Medicine Residency Program has faculty encouraging and modeling exercise and socializing with residents in their REACH program (Resiliency, Education, Advocacy, Community, Health) (medicine: http://medicine.stanford.edu/2019-report/residency-training-with-a-side-of-wellness.html).
- Stanford's Emergency Medicine residency program offers their trainees customizable 12 hours of well-being credit that can take the place of their usual Wednesday conference. Some go for a hike; some try their hand at teaching. All residents are offered 12 free counselling sessions.
- The Stanford O'Conner Family Medicine residency has "Wellness Wednesdays" with a featured wellness topic during noon conference series. Additionally, they have a monthly evening Wellness Group meeting, protected time for first and second years and optional for final year residents, which includes dinner/debrief (45 mins) and a wellness topic/activity (45 mins). Residents also complete the MDI twice per year and receive 1:1 feedback session with their advisor, along with quarterly check-ins.
- Stanford/Lucille Packard Children's Hospital residents have a Wellness Curriculum which includes a humanism program http://med.stanford.edu/peds/prospective-applicants/resident-life/wellness.html. Additionally, weekly email announcements promote various events/activities. Social chairs and well-being chairs on their residency council take the lead on planning/advertising these events as well.
- Mayo Clinic Rochester, Arizona, and Florida campuses all support the "fellow and residents health and wellness initiative" FERSHAWI, with the aim of engaging trainees and

improving self-care, and to combat fatigue, stress, and low motivation among graduate medical trainees. The program includes art projects (watercolor painting, screen printing, and origami) as well as discussions of artwork and guided visual imagery. They have a monthly noontime conference reserved for "Humanities" Thursdays. The Florida Campus supports a quarterly wellness fair at the Florida campus where residents and fellows may participate in arts, chair massage, yoga, and Pilates, visit vendors to gather information such as healthy eating, etc., for a 3-hour period. The program won awards from the accreditation council for graduate medical education ACGME and shared their story in an online module within AMA's STEPS Forward™ collection of practice improvement strategies: https://edhub.ama-assn.org/steps-forward/module/2702541.

- Other residency wellness program successes are also highlighted on the AMA website: https://edhub.ama-assn.org/steps-forward/module/2702511.
- AMA STEPS Forward website has many resources and modules for physicians in general with a host of topics/real-life examples, such as how to efficiently manage your in-basket, engaging and empowering the entire team and improving work culture and workflow, huddles, strengthening working relationships and improving practice efficiency, appreciative inquiry around fostering positive culture, protecting against burnout and fostering self-care, addressing the EHR and in-basket restructuring, etc.: https://edhub.ama-assn.org/steps-forward/pages/professional-well-being.
- Although not gender specific, a one-time 8-hour training session "Relationship: Establishment, Development and Engagement" is offered by the Cleveland Clinic and shown to reduce physician burnout [17].
- The Cleveland Clinic offers peer coaching which aims to increase job satisfaction, engagement, resilience, and professional goal attainment.
- The Stanford University Department of Medicine "SPACE" program focuses on self-care professional fulfillment and leadership while promoting physician collegiality across divisions

(building your NEST: nutrition, exercise, sleep optimization, and time management so that you can make SPACE—through serenity, presence, appreciation, compassion, equanimity—for What Matters Most): http://medicine.stanford.edu/faculty/professionalDevelopment.html.

- Stanford has a website exploring microaggression and micro−/cross-cultural communication: https://respect.stanford.edu/.
- There are many organizations and conferences that support women. For example, TOOER (Through Our Own Eyes Retreat) is a network of women physicians "dedicated to empowering ourselves to enact positive change in our personal lives, workplaces and communities; through continuing education activities with focus on incorporating self-care and well-being practices into all aspects of our careers in medicine." Their mission is to provide regular educational meetings with the following purposes: to develop, promote, and sustain a community of women physicians, dedicated to development of self-care and healing practices that support our work as healers, to provide a safe, nurturing space for women physicians to define their values and goals and to formulate a plan to live those values and attain those goals in their personal and professional lives, and to incorporate teachings that enhance our leadership and mentoring skills and enhance patient care: https://www.tooer.org/.
- Mayo Annual Conference: GRIT for Women in Medicine: Growth, Resilience, Inspiration, and Tenacity. Goal is to empower women in medicine (men invited too) with the skills and resources to remove barriers and bias of women in leadership positions specific to the challenges in healthcare. Leaders in business and healthcare present evidence-based strategies to promote professional development and enhance personal well-being. Addresses the growing need for improved clinician wellness and development for a gender-balanced leadership healthcare team. Participants learn to enhance communication with colleagues and team members to improve team-based care and to better manage conflict, identify symptoms of burnout in themselves and will be able to describe strategies to manage these symptoms, and formulate action plans to create and support a diverse healthcare team: https://gimeducation.

mayo.edu/store/GRIT-for-women-in-medicine-promote-professional%20development-remove-bias-of-women-in-leadership-in-healthcare.

Work-life conflict in medicine abounds, for both men and women. Acknowledging and addressing these challenges from various angles, personally, culturally, and institutionally (including government, licensing, and healthcare policies that are in synergy with organizational efforts) is essential. Taking personal responsibility to care for oneself, although often monumentally challenging, is paramount and of course more likely if there is institutional support. Remaining open to opportunities to weave together work and life, that is, using technology to accomplish some work tasks while at home, and some home/life duties and responsibilities while at work, that is, work-life integration, will "allow us to come to work whole" (Logghe 2018) and help mitigate some of the challenges faced. While many institutions have made significant commitment and inroads to lessoning work-life conflict, some, for various reasons, have not. Heightening awareness and sharing of best practices is a first step to addressing some of the inequities. Aligning institutional values with the personal values that initially calls most individuals into medicine is imperative. Given the increased burden on women physicians over their training and careers it is in fact a huge testament to their courage and resilience that they have accomplished so much in medicine. The goal now is to make this challenging and meaningful journey one filled with significantly more resources and support such that joy and celebration prevail every step of the way.

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