# **Chapter 14 Supporting the Health and Wellbeing of Women in Pediatrics**



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Communities and countries and ultimately the world are only as strong as the health of their women. – Michelle Obama [1]

### Background

Wellbeing is an ever-changing aspect of life that varies by individual and requires active awareness, acceptance, and commitment. Women have traditionally taken roles of caregivers, often prioritizing professional and personal responsibilities toward others over their own wellbeing. In order to live fully, women must nurture each of the established dimensions of wellness: physical, social, emotional, intellectual, vocational, environmental, spiritual, and financial [2, 3]. Ignoring or neglecting individual wellbeing can trigger a variety of stressors that often lead to *burnout*, a psychological syndrome characterized by emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment [4].

Healthcare and medical innovations have made significant advances that benefit patients but can also create work environments where physicians are forced to rush

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patient encounters, are tasked with inefficient clerical work, and which lack ample opportunities for collegiality. The resulting *work compression* undermines the very traits that motivate physicians such as compassion and altruism; serving others devolves into self-sacrificing for others [5]. A recent Medscape report shows that 42% of physicians reported burnout in 2020, with over 70% reporting burnout has a moderate to severe impact on their lives [6]. Women physicians rank significantly higher in all components of empathy which may result in more emotional exhaustion compared to counterparts who are men [7]. The gender differences in burnout – 51% of women physicians reported burnout compared to 36% men physicians – are driven by systemic and societal factors [6].

Physician burnout is a serious problem that can begin as early as medical school. Resident physician burnout is associated with poor work quality, a threefold increase in medical error, and increased guilt about poor patient care [5, 8]. Burnout is also strongly associated with high turnover rates and the cost of recruitment, relocation, onboarding, and ramp-up is approximately two to three times the physician's annual salary [9–17]. Mitigating burnout requires recognition and taking steps to prioritize wellbeing. However, for women physicians especially, physician vulnerability is viewed as a weakness which may negatively impact career opportunities. As a result, burnout is often left unaddressed and unresolved and can result in tragic outcomes.

Each year, more than 1,000,000 patients lose their doctor to suicide, highlighting how physician burnout has ripple effects that devastate broader communities [18]. Physicians commit suicide at rates twice that of the general population and suicide is the cause of the majority of medical student deaths [19]. Women physicians are significantly more likely to commit suicide than men counterparts and twice as more likely as nonphysician women; thus, it is imperative to examine gender-specific differences in the drivers of burnout to tailor systemic interventions for healthier work approaches and environments for women in pediatrics [20].

### **Drivers of Burnout**

Drivers contributing to physician burnout can be grouped into seven dimensions: workload and job demands, efficiency and resources, meaning in work, culture and values, control and flexibility, social support and community at work, and work-life integration [21]. A focused understanding of how women physicians function within these dimensions will promote the ongoing movement toward gender equity.

Ann, a pediatric neuro-intensivist, has dedicated her life to providing expert compassionate care to patients with devastating neurologic injury and has single-handedly built the neuro-intensive care unit over the past five years. She learns that the institution will not be hiring a promised additional neuro-intensivist to provide backup call coverage because of other institutional priorities. Ann uncharacteristically raises her voice to argue with her division chief and is referred to human resources and the employee assistance program to "develop skills to cope with job stress." – Anonymous, 2021

Women like Ann are more likely to endure unsustainable job demands, perhaps because of a need to prove value to the organization, a fear of not being invited to participate in the future, or a concern for patient care. High workload can be a driver of burnout and is compounded by inadequate compensation and/or limited promotion of women pediatricians; nationwide, early- to midcareer women pediatricians earn less than counterparts who are men [22]. Perhaps more disturbing is that as a profession becomes more women-dominated, the overall earnings decrease, with pediatricians being among the lowest paid among all specialties [23, 24]. Insufficient compensation during the COVID-19 pandemic disproportionately burdened primary care physicians and frontline workers, a majority of whom were women [25, 26]. Many women in pediatrics bore the elevated risk and mental stress of contracting COVID-19, the threat of passing the virus to family members, and the uncertainty of needing to take unpaid leave to recover or care for sick relatives, all without proper hazard pay or compensation [27]. Lack of representation of women was evident in addressing pandemic-related issues: despite making up 64% of pediatricians, women hold proportionately few leadership positions [25, 28]. With fewer women at the forefront of institutional, regional, and national policy creation, leadership may inadvertently implement procedures that disadvantage women pediatricians [27]. For example, organizations may implement mandatory "backup" coverage during pandemic surge periods, disregarding conflicts like childcare [27]. Such policies can disproportionately upset career stability or delay advancement opportunities for women [27].

Men in my health system do fewer administrative tasks than women, who often volunteer to organize events, take meeting minutes, prepare slide decks, organize holiday gifts for hospital units, etc. These extra tasks, of small and big value, are time consuming and detract from time spent on work that is consistently recognized and valued for promotions or compensation, leaving women doing necessary work that remains unvalued. – Anonymous, 2021

Burdened with extra clerical work, time-constrained patient visits, and limited scheduling flexibility, 58% of physicians claim bureaucratic tasks are the leading cause of burnout [6]. When established workplace culture and ineffective leadership behaviors hinder employee input in workflow practices and policies, physicians are more likely to feel a deterioration of control, independence, and meaningfulness in work, all significant contributors to burnout [29]. Women in pediatrics report having even less control over workplace decisions than men, which contributes to the gender disparity in high risk for burnout [28]. High work compression environments and electronic communication may also contribute to burnout by displacing spontaneous collegiality and meaningful peer support, especially in the face of challenges like poor patient outcomes, medical errors, and malpractice suits [30-33]. Without meaningful peer support, young women physicians are particularly susceptible to burnout since they also often face professional bias and harassment [34-36]. Importantly, while junior women faculty are more likely to receive advice from multiple mentors, men are more likely to be mentored and sponsored by upper level leadership [35, 37, 38]. Fewer women in upper leadership positions means that women mentors often do not have the power to sponsor women mentees [39, 40]. A

gender-biased workplace culture may permit discrimination and harassment toward women [36]. It is important to note the "double bind" effect: women physicians with intersectional identities, those who identify with any one or more marginalized community (race, LGBTQ, etc.), face harsher bias and discrimination [41]. A lack of diversity and inclusion among leaders trickles down to impact entering women physicians since they then have less representation and less access to meaningful mentorship and sponsorship; combined with lack of support, this leaves intersectional women more susceptible to burnout [29].

When Riya, a pediatric ER physician, was asked by a male boss how it felt to return to work after maternity leave, he was surprised to hear that she was struggling to meet the demands at home with her work schedule, "...but babies are so immobile at 3 months, what do you stay busy with at home?" he had asked. – Anonymous, 2021

Drivers of burnout are exacerbated for women needing maternity leave or if the return-to-work lifestyle is extremely difficult to reconcile with childcare. Pediatrics is one of the specialties with the highest proportion of women (38%) becoming pregnant during residency [42]. While the American Academy of Pediatrics recommends 6 months to a year of exclusive breastfeeding and extended leave is associated with a longer duration of breastfeeding, residents are only given an average of 6.6 weeks paid maternity leave [43, 44]. Often facing bias regarding taking time to pump and a lack of flexible scheduling or on-site childcare, many women physicians feel forced to ignore the very childcare advice they give to patients [34, 45]. Unintentional gender-biased policies can incorporate maternal discrimination: pregnant women have been expected to perform high-risk tasks involving exposure to communicable diseases that can cause fetal defects or continue to work during preterm labor or while having a miscarriage [45]. These policies often lack support surrounding miscarriage; one-third of 844 physician mothers experienced a miscarriage and only 97 reported being able to take time off to recover [34]. Leadership dominated by men can also be unaware of difficulties women face when leaving their baby and managing with a sleep-deprived schedule. Remarks that minimize the volume and toll of juggling childcare, child-rearing, and return-to-work are commonplace and exemplify one of the many microaggressions faced by women physicians at work that can exacerbate burnout. While 76% of women physicians report experiencing gender-based discrimination in early career, 35.8% of late career women reported facing gender-based discrimination, indicating the chronicity of the problem. Very little research has assessed the effects of aging on women physicians in the workplace. A survey conducted on women in the National Association of Women Executives found that despite 95% of menopausal women reporting physical symptoms and 79% reporting emotional symptoms, few workplace policies address or support women experiencing menopause [46]. Women fearing discrimination and embarrassment may not disclose their symptoms, especially if the topic is viewed as inappropriate [47]. Menopausal symptoms have been associated with emotional exhaustion, an indicator of burnout, and having to discreetly handle these symptoms with low social support at work from superiors and colleagues can be frustrating and isolating for women [48, 49].

Although my husband and I shared childcare responsibilities, when there was a 'snow day' we would argue over who had the more critical job responsibilities and I ended up feeling like a neglectful mother. My kids attended rounds a lot... – Anonymous, 2021

Challenges to work-life integration, a key dimension of physician wellbeing, disproportionately affects women. Inadequate paternity leave policies can result in women bearing more childcare responsibilities. Most residency programs provide little to no paternity leave [43]. The "parenting-load" gender disparity continues throughout child-rearing years. Women are more likely to work fewer hours and take on more household responsibilities and/or hire help in order to mitigate professional burnout, while men are more likely to make time for recreational activities [50]. Reports show that 17% of women physicians claim combining parenthood and work as the most concerning issue, compared to 6% of men [6]. The state of worklife integration worsened for women physicians during the COVID-19 lockdown [50, 51]. With parents working from home and closed childcare facilities, the majority of the parenting, childcare, and home schooling responsibilities fell on women [51]. During the early stages of lockdown, women physicians sacrificed self-care and professional responsibilities in order to allot more time for child and household care compared to counterparts who were men, resulting in a drastic gender difference in research and publications [52, 53]. Women pediatricians often have primary responsibility in the majority of household chores, spend more time on housework, and are less satisfied with their share of household responsibility compared to men [50]. Additionally, women are more likely to be solely responsible for the *cognitive dimension* of household and child-rearing labor: the mental and physical work of anticipating needs, identifying options for filling them, making decisions, and monitoring progress on actions [54]. This "invisible" task is a chronic stressor that makes healthy work-life integration and wellbeing even more untenable for women physicians [21, 55].

Considering the prevalence of stressors across all dimensions of wellbeing and the ramifications associated with decreased physician wellbeing, burnout must be addressed systemically. Although individuals should take certain steps to cultivate protective practices/behaviors, only systemic change will have a strong, long-lasting impact on physician wellbeing [21, 56]. Recent survey data shows that only 35% of physicians have a stress reduction/burnout prevention program at their organization [6]. Of those, 70% claimed they would not be very likely to participate in offered programs as they focus on individual approaches, ignoring necessary policy changes [6]. Re-evaluating policies and leadership can help address the gender disparity in burnout [57]. Many institutions seek to change workplace culture but may lack specific guidance or support on how to create and implement plans. Below are several strategies organizations and individuals can implement to combat burnout and promote wellbeing among women pediatricians.

#### Solutions

### Systemic Solutions

Interventions at the individual, organizational, and structural levels mitigate burnout for physicians [58–62]. Thoughtfully created interventions that target gender-biased policies are needed because organizational drivers of burnout disproportionately affect women [63]. Systemic change within the medical community beginning as early as medical school ensures that future generations of women physicians are less likely to experience burnout.

Medical schools can actively support the wellbeing of trainees by restructuring clinical rotations to incorporate flexibility and by teaching, modeling, and normalizing behaviors that prioritize emotional wellbeing [29]. Schwartz Rounds, for example, show peer support and collegiality can help pediatricians debrief after difficult cases, build comradery among staff, and alleviate work-related distress [57, 64]. Providing instruction, time for reflection, and practice of self-care strategies during medical school and residency training fosters resiliency [29]. Twenty percent of physicians who report burnout have not sought help out of fear of disclosure; eradicating the stigma surrounding therapy and other psychological supports creates an environment where vulnerability is not associated with weakness and doctors feel safe seeking help without damaging career opportunities or advancement [6]. Medical schools can also shift culture by intentionally pursuing inclusivity among leadership to provide mentors and sponsors representative of a diverse body of future physicians.

Postgraduate environments must work harder to change long established systems that perpetuate the gender pay gap and countless disparities at all levels [65]. Re-evaluating organizational leadership effectiveness and inclusivity for employees with intersectional identities can be achieved by using existing research-backed performance, assessment, and training tools that identify and measure a leader's ability to behave inclusively [66]. In order to mitigate implicit bias, organizations must invest in recruiting and developing quality leaders and increase employee diversity in every part of the hiring process [65, 67]. For example, many search committees initially rely on personal networks when considering candidates, which limits variety, especially if leadership is dominated by men [65]. By working to hire more women leaders, organizations can build a reputation of being fair employers and will be more likely to attract women candidates [65]. Making résumés gender-blind by removing personal information can help diminish hiring bias against women [65]. Organizations can make changes to how employees are integrated and developed within the practice, how performance is assessed, and how compensation and promotions are managed to ensure gender bias and discrimination are not factors that hold women employees back, contribute to professional burnout, or prevent retention of quality physicians [65].

Practices that provide more autonomy, regularly ask for and implement physician input, provide clear structure for large care teams, and create opportunities to reshape working conditions by embedding long-term flexibility can help diminish burnout and increase retention of strong employees [67]. Previously, professional success often required employees to work long hours, overextend themselves, and compete heavily in order to be promoted and climb the corporate ladder, which came at the cost of personal wellbeing and healthy work-life integration [68]. Now, with mothers being the primary earners or co-earners in almost two-thirds of American families, organizations need to meet this fundamental shift with a new outlook on career performance and advancement for both women and men [68, 69]. Long-term flexibility involves an organizational shift from the traditional corporate ladder model to a nuanced *corporate lattice* model [68]. While the traditional hierarchy was forged by a singular path upward, assumed the needs of employees remained constant over time, and was more conducive to a traditional family structure where men had to prioritize work over life, the corporate lattice model allows for multiple paths upward where employees have the option to move fast, to move slow, or change directions [68]. In this continuously evolving matrix, the organization adjusts as the needs of employees change over the course of their career, which allows employees to maintain healthier work-life integration and can help diminish burnout [21, 68]. The corporate lattice model also fosters loyalty both for employers and employees, which can help reduce turnover rates and lower the costs of continuous recruitment, onboarding, and starter packages [68]. An example of a corporate lattice model is the mass career customization (MCC) framework, which encompasses four dimensions: pace of career progression, workload, location/schedule for work, and job role [68]. Figures 14.1 and 14.2 depict an adapted MCC framework, which follows the career of a physician over several stages of life, showing how the four dimensions can ebb and flow to allow for employee and organizational success [68]. Leaders who understand the sine wave of mass career customization can support, retain, and promote women into leadership by understanding and implementing flexible policies.

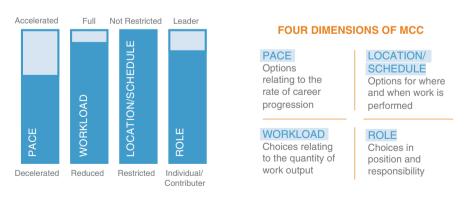
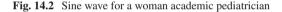


Fig. 14.1 The four dimensions of mass career customization

PACE	PACE	PACE	PACE
WORKLOAD	WORKLOAD	WORKLOAD	WORKLOAD
LOCATONISCHEDUY	LOCATION CHEDULE	LOCATTONUS ROULE	LOCATIONSCHEDU
ROLE	ROLE	ROLE	ROLE
STAGE 1	STAGE 2	STAGE 3	STAGE 4
Career years: 1-5	Career years: 6-9	Career years: 10-Present	Career years: Future (15+)
Phase: Pre-kids	Phase: Young kids	Phase: Dueling careers	Phase: Next
<ul> <li>First job out of residency or fellowship.</li> <li>Involved in multiple academic, teaching, professional devel opment opportunities.</li> <li>Writes a K award.</li> <li>Desires professional mentor ship.</li> <li>Establishing clinical expertise – clinical work is primary focus at work.</li> <li>Mostly physically present at work.</li> <li>Understanding how to man age no longer having work hour restrictions.</li> <li>Personal/social realms may occupy more emotional space.</li> </ul>	<ul> <li>Has young children.</li> <li>Considers scaling clinical work back. Partner may scale back to support family life.</li> <li>May work non-day shifts or weekends to accommodate family and childcare respon sibilities.</li> <li>Pays for childcare respon sibilities.</li> <li>Pays for childcare to continue non-clinical work (academic, teaching, deyt/division/med- ical school meetings) and telecommute when possible.</li> <li>Scholarly work takes lower priority.</li> <li>Continues to seek external funding as co-Pl.</li> <li>Mentors residents and stu dents.</li> </ul>	<ul> <li>School-aged children require more assistance with sched uled activities.</li> <li>Although more predict able, there maybe less work flexibility due to schedules of children and partner.</li> <li>Clinical work may stay at a lower pace but non-clinical work fills the calendar.</li> <li>Scholarly work may emerge as a priority again; creating academic reputation locally and nationally.</li> <li>Intention for academic pro motion to next level.</li> <li>Seeks funding as a PI on exter nal grants.</li> <li>Mentors junior faculty and trainees.</li> <li>Serves as a journal, abstract, grant reviewer.</li> </ul>	<ul> <li>Needs of children less sched - uled into day-to-day duties (i.e., children more indepen - dent).</li> <li>Partner likely with more de - mands in their workplace.</li> <li>Opportunities for leadership in division, hospital, unversity, national organizations/collab oratives.</li> <li>Pi on external grants.</li> <li>Recognized for academic and clinical expertise national nutronal division expertise national mentor.</li> <li>Serves as a local and national mentor.</li> <li>Scholarly work is a priority for "non-compensated" time.</li> <li>Preparing for academic promotion to next level.</li> </ul>

Note. While the descriptive anchors above represent women pediatricians with children or in dual career partnerships as two specific career inflections, they are in no way meant to place value on child-rearing or dual career partnerships. We fully recognize the many forms that career inflections may take for pediatricians. Adapted from "Mass career customization," by C. Benko, A. Weisberg, 2008, Deloittle Insights



A prime example of effectively restructuring workplace policies to incorporate and promote flexibility and autonomy was the Academic Biomedical Career Customization (ABCC) pilot study conducted at Stanford University School of Medicine. Faculty in academic medicine first met with professional coaches to reflect on work-life and work-work challenges and design a plan promoting personal and professional goals that accommodated for any institutional or personal constraints. Team leaders (e.g., division chief) were trained on how to determine a balance between the goals of the team and the goals of the individual faculty member. Leaders were provided guides that listed flexibility and career development policies and examples of how these policies could assist in achievement of personal and professional goals [70]. This first phase of the intervention demonstrated that employee wellbeing is a priority. Leadership training and guidance that incorporates sensitivity toward women, women with intersectional identities, antibias and anti-discrimination training, and inclusive hiring and on-boarding practices prioritizes wellbeing to prevent burnout.

A key segment of the ABCC intervention is a time-banking system which provides choice and flexibility of work schedules, another policy that can alleviate burnout [67, 70]. This time-banking system codified various tasks into "credit" values determined by the team, allowing for customization [70]. Previously, faculty would often "trade favors" and complete work tasks for each other, but with the

time-banking system, employees received credits for all extra tasks completed that benefitted the organization or other team members [70]. These credits could be used for support services at home (e.g., free meal for the family or house cleaning) or at work (e.g., hiring grant writing specialists or interview coaches) [70]. Faculty felt encouraged to take on more responsibilities, making it possible for colleagues to decrease workload when needed (e.g., manuscript deadlines or family crisis), thus embedding flexibility in workplace culture and reframing the concept to support both individual and team success [70]. Individual faculty work production could ebb and flow while overall team success remained constant, providing more autonomy and enabling staff to have a healthy sense of control at work, which helps strengthen wellbeing [67, 70].

The time-banking system also fostered collegiality and positive relationships among coworkers because work favors never went unnoticed, ignored, or unreturned; faculty did not feel resentment for extra work completed due to credit compensation [70]. Additionally, recognition and value of their extra work on a shared tracker was associated with positive feelings [70]. In the ABCC pilot, team leaders were able to support faculty wellbeing as participants found stronger purpose at work [21, 67, 70].

A time-banking system could significantly reduce the tension of childcare and work-life integration by applying credits toward support services at home; other colleagues could help share the workload should a family emergency arise. Valuing extra work with a visible, tracked credit system could also help diminish the baseless self-doubt women feel because of the stigma attached to asking for help, thereby reducing drivers of burnout [70, 71]. Some may argue that credits should be translated into salary increments or bonuses, considering 45% of physicians experiencing burnout claim increased compensation would help most to avoid financial stress [6, 70]. However, the ABCC time-banking method works to target solutions supported by the majority of physicians experiencing burnout: 42% voted for a more manageable work and schedule; 39% voted for greater respect from administrators/ employers, colleagues, or staff; 35% voted for increased autonomy; and 32% voted for more support staff [6].

Leadership can engage staff through effective professional development, schedule adjustment, and opportunities for peer support. Providing at least 1 hour of protected time for physicians to meet and discuss career-related topics has been shown to increase meaning in work and decrease burnout [61]. These avenues are also opportunities for leadership to promote diversity, equity, and inclusion since women with intersectional identities experience compounded bias and are more likely to experience burnout [41, 72]. Leaders can help women physicians find meaningful mentorship and sponsorship prospects by forming identity-specific peer support groups [28].

Implementing physician input and including physicians in leading efforts to improve workflows contributes to wellbeing [21, 67]. Physicians should identify the roles that best align with their professional interests and purpose. Physicians can engage a coach to assist them in identifying and maximizing the amount of their

professional effort that is spent in meaningful roles through inquiry, encouragement, and accountability [67]. This manner of addressing burnout requires both a systemic and an individual culture shift so that physicians feel comfortable being honest about vulnerable areas, working hard through a steep learning curve, and then continuing toward improvement.

A major part of shifting culture and respecting physician feedback will involve addressing childbearing and child-rearing. For pregnant physicians, policies must protect them from completing tasks that can be harmful to their health or the health of the fetus [45]. Long-needed updates on maternity/paternity leave policies must occur. The USA lags behind most developed countries in terms of maternity leave even though research shows that longer paid family leave is positively associated with maternal mental health and breastfeeding [73, 74]. Adequate maternity and paternity leave can help alleviate burnout among women physicians by providing time to heal, emotionally bond with the baby, and share childcare responsibilities with the non-birth parent so that mothers may return to work as balanced and energized as possible. Return-to-work support for physician mothers should entail services and policies providing nearby childcare, adequate breast pumping time without penalty, and flexible scheduling [34]. By making these support systems part of the workplace culture and norms, organizations can eradicate the bias and discrimination many mothers face [34].

Workplace culture can diminish gender bias and support women physicians by normalizing conversation and policy around menopause. Leaders can begin by creating guidance tailored for the organization which incorporates evidence-based research [75]. In environments with men-dominated leadership, it is especially important to increase general awareness about menopause, associated symptoms, and guidance on how to best support women employees during conversations regarding menopause [75, 76]. Flexible scheduling, work from home options and time-banking policies can help provide additional support for women physicians without risking career stability or advancement opportunities [70, 75]. By creating more awareness and normalizing menopause, organizations can aim to further empower and engage women physicians, support employee wellbeing, and avoid the high costs and risks associated with frequent clinician burnout [48, 77].

Bias and discrimination can be eradicated if entire communities work to support women in pediatrics. Physician leaders can teach by example through inclusive hiring practices, meaningful mentorship, and sponsorship. Shifting workplace culture so that physicians feel comfortable being vulnerable and examining their own conscious and subconscious biases will inevitably trickle down to men colleagues, who can practice stronger forms of allyship – a benefit for all [78]. Simultaneously, women in pediatrics need to feel supported by the external community. Often in society, the professional accomplishments of men are celebrated more, while women are more likely to be praised for personal accomplishments like marriage or having children. Both men and women collectively can ask about and celebrate advancements in the careers of women physicians.

## Individual Solutions

#### A woman's health is her capital. - Harriet Beecher Stowe [79]

Seminars and workshops that target individual approaches to diminish burnout and reduce stress and fatigue often frustrate physicians if systemic changes are not being implemented [6]. While institution-level preventative measures like re-evaluating leadership, incorporating flexibility into policies, and creating more diverse and inclusive environments are crucial, implementing these changes can be a slow process marked with red tape and bureaucracy [21, 67]. Therefore, it is important for women physicians to understand how occupational burnout can affect their professional and personal lives. As the traditional caregivers, women are constantly multitasking, both professionally and personally, and overextending themselves for the community at the steep cost of personal wellbeing. By understanding the harsh consequences of ignoring self-care and learning various methods to fight against burnout, women must work to create a personal harmony between the dimensions of wellbeing [2].

Recognizing the neurobiological impacts of burnout can help women identify symptoms and take necessary steps for intervention [67]. In response to chronic occupational stress, women show pronounced partially-reversible structural abnormalities in the prefrontal cortex (PFC), an area of the frontal lobe of the brain that controls high-order reasoning, social cognition, and complex decision-making [67, 80]. Fatigue-induced PFC dysfunction can lead to forgetfulness, reduced motivation, impaired decision-making, unprofessional behavior, decreased empathy and engagement, and impaired communication with patients/coworkers - all characteristics associated with occupational burnout and potential for medical errors [67]. This toxic response in the brain is specifically a result of prolonged uncontrollable stress, and as such, a perceived sense of control can protect women from PFC dysfunction [81]. When women physicians are highly stressed, just the awareness of the biochemical changes occurring in the brain can increase perceived control and mitigate PFC impairment [67]. Additionally, this awareness can reduce self-blame, promote a more compassionate view of oneself and others, and provide the opportunity to take necessary steps to care for personal wellbeing [67]. Table 14.1 outlines skills and strategies associated with burnout prevention or mitigation (Table 14.1).

For women to prioritize self-care, recreational activities, and overall wellbeing, women must establish and maintain healthy work-life integration. Women often feel guilty if they do not offer to volunteer for "office housework" or take time for self-care over housework/childcare. It is important to remember the *airplane rule:* "Always put your own oxygen mask on before assisting someone else." Women physicians, and their families, need to accept that self-care is not indulgent or selfish, but necessary. If women do not take the time to refresh and simply have fun, they are more likely to experience the hazardous symptoms of burnout which can have even more damaging repercussions. Women physicians should lean on their social support system and normalize asking for help rather than feeling inadequate that they cannot manage it all alone. In order to find

Skills/strategies to develop/			
implement		Benefits associated with burnout prevention/reduction	
Emotional intelligence [82]		Increased sense of control, job satisfaction, patient	
Self-regulation [82]		satisfaction [82], social relationship satisfaction [83]	
Self-	Naming emotions [67]		
awareness Identifying when workload is overwhelming [67]			
	Attending physical needs (hunger/sleep) [67]		
	Assertive self- promotion [84]	Increased sense of value/recognition, compensation growth [84]	
Recreational activities		Decompressing/refreshing	
Mindfulness [67, 85]		Increased activity of PFC in areas that sustain/monitor focus, mitigation of forgetfulness/impaired decision-making associated with PFC dysfunction and burnout, cardiovascular disease prevention [67, 85]	
Healthy diet habits		Meet high energy demands of PFC [67, 86]	
Exercise		Meet high energy demands of PFC, uplift mood, help with stress coping, enhance sleep quality, CVD prevention [67, 87–89]	

Table 14.1 Skills and strategies associated with burnout prevention and mitigation

support in establishing these boundaries, women can meet with a professional coach to determine individual professional and personal goals and discuss foreseeable constraints in achieving them [67, 70]. Both goal-setting with a coach and maintaining healthy work-life integration can help women physicians have a stronger sense of control, decrease stress, and diminish burnout [21, 61, 67]. Additionally, finding meaningful peer support or actively seeking opportunities to create moments of collegiality can help reduce the isolation and depersonalization associated with burnout [28, 29].

The following anecdote exemplifies several ways that women pediatricians need to be gentle with themselves when work-life integration meets a speed bump.

Mary, a pediatric hospitalist, is resuscitating a baby in respiratory failure when she receives a phone call from her 12-year-old daughter. In the midst of caring for the baby, Mary forgot her daughter's school was on a half day schedule. Her daughter explains that she is in a "stranger's" house using their phone to call to find out when she will be picked up since it is pouring rain. Mary responded, "do the strangers seem nice because I can't get there for a while..."

This story is not meant to condone a mother leaving her child in the rain so she can care for another child, but to exemplify that we must be willing to accept the help of others in times of crisis. Our children will understand that although 99% of the time they come first – sometimes we need to put our patients first as long as we know they are safe. When our children see us accepting help, they also learn to accept help. As women physicians we are blessed to have several wonderful roles in life that we manage to integrate well most of the time. When we juggle a lot of balls, we occasionally drop a few (and they bounce back)! – Anonymous, 2021

#### Wellbeing of Women in Pediatrics in the Future

We envision a pediatrician mother recommending a career in medicine for her daughter. Times have changed and women physicians experience equity in the workplace and healthy work-life integration. Most importantly, women enjoy lasting meaning and purpose in their work and an authentic, personal harmony with all the dimensions of their wellbeing.

### Works Cited

- 1. Obama M. A passionate, personal case for education [Video]. TED Conferences, Elizabeth G. Anderson School. 2009, April. https://www.ted.com/talks/ michelle\_obama\_a\_passionate\_personal\_case\_for\_education?language=en.
- 2. 8 Dimensions of Wellness, (UMD) University of Maryland's Your Guide to Living Well. n.d.. https://umwellness.wordpress.com/8-dimensions-of-wellness/.
- 3. Stoewen DL. Dimensions of wellness: change your habits, change your life. Can Veterinary J. 2017;58(8):861–2. PubMed.
- 4. Maslach C, Jackson SE, Leiter MP. Maslach burnout inventory: third edition. In: Evaluating stress: a book of resources. Scarecrow Education; Lanham, MD. 1997. p. 191–218.
- 5. Mahan JD. Burnout in pediatric residents and physicians: a call to action. Pediatrics. 2017;139(3) https://doi.org/10.1542/peds.2016-4233.
- Kane L. "Death by 1000 cuts": Medscape National Physician Burnout & suicide report 2021. Medscape. 2021; https://www.medscape.com/slideshow/2021-lifestyle-burnout-6013456
- Gleichgerrcht E, Decety J. Empathy in clinical practice: how individual dispositions, gender, and experience moderate empathic concern, burnout, and emotional distress in physicians. PLoS One. 2013;8(4):e61526. https://doi.org/10.1371/journal.pone.0061526.
- Brunsberg KA, Landrigan CP, Garcia BM, Petty CR, Sectish TC, Simpkin AL, Spector ND, Starmer AJ, West DC, Calaman S. Association of Pediatric Resident Physician Depression and Burnout with Harmful Medical Errors on inpatient services. Acad Med. 2019;94(8):1150–6. https://doi.org/10.1097/ACM.00000000002778.
- Atkinson W, Misra-Hebert A, Stoller JK. The impact on revenue of physician turnover: an assessment model and experience in a large healthcare center. J Med Pract Manag. 2006;21(6):351–5.
- Berger JE, Boyle RL Jr. How to avoid the high costs of physician turnover. Med Group Manage J. 1992;39(6):80. 82–84, 86 passim
- Buchbinder SB, Wilson M, Melick CF, Powe NR. Estimates of costs of primary care physician turnover. Am J Manag Care. 1999;5(11):1431–8.
- Dewa CS, Loong D, Bonato S, Thanh NX, Jacobs P. How does burnout affect physician productivity? A systematic literature review. BMC Health Serv Res. 2014;14(1):1–10.
- Misra-Hebert AD, Kay R, Stoller JK. A review of physician turnover: rates, causes, and consequences. Am J Med Qual. 2004;19(2):56–66.
- Shanafelt T, Sloan J, Satele D, Balch C. Why do surgeons consider leaving practice? J Am Coll Surg. 2011;212(3):421–2.
- Shanafelt TD, Raymond M, Kosty M, Satele D, Horn L, Pippen J, Chu Q, Chew H, Clark WB, Hanley AE. Satisfaction with work-life balance and the career and retirement plans of US oncologists. J Clin Oncol. 2014;32(11):1127.
- Williams ES, Konrad TR, Linzer M, McMurray J, Pathman DE, Gerrity M, Schwartz MD, Scheckler WE, Douglas J. Physician, practice, and patient characteristics related to primary

care physician physical and mental health: results from the physician Worklife study. Health Serv Res. 2002;37(1):119.

- 17. Williams ES, Konrad TR, Scheckler WE, Pathman DE, Linzer M, McMurray JE, Gerrity M, Schwartz M. Understanding physicians: intentions to withdraw from practice: the role of job satisfaction, job stress, mental and physical health. In: Advances in health care management. Emerald Group Publishing Limited; Bingley, UK. 2001.
- Wible P. 1 million patients lose their doctors to suicide every year. J Med. 2016; https://www. ncnp.org/journal-of-medicine/1782-why-1-million-doctors-kill-themselves-every-year.html
- 19. Schernhammer E. Taking their own lives—the high rate of physician suicide. N Engl J Med. 2005;352(24):2473–6.
- Schernhammer ES, Colditz GA. Suicide rates among physicians: a quantitative and gender assessment (meta-analysis). Am J Psychiatr. 2004;161(12):2295–302. https://doi.org/10.1176/ appi.ajp.161.12.2295.
- Shanafelt TD, Noseworthy JH. Executive leadership and physician Well-being: nine organizational strategies to promote engagement and reduce burnout. Mayo Clin Proc. 2017;92(1):129–46. https://doi.org/10.1016/j.mayocp.2016.10.004.
- Frintner MP, Sisk B, Byrne BJ, Freed GL, Starmer AJ, Olson LM. Gender differences in earnings of early- and midcareer pediatricians. Pediatrics. 2019;144(4):e20183955. https://doi. org/10.1542/peds.2018-3955.
- Hegewisch A, Williams-Baron E. The Gender wage gap by occupation 2017 and by race and ethnicity. IWPR 2020. 2018, April 29. https://iwpr.org/iwpr-issues/employment-and-earnings/ the-gender-wage-gap-by-occupation-2017-and-by-race-and-ethnicity/.
- Jena AB, Olenski AR, Blumenthal DM. Sex differences in physician salary in US public medical schools. JAMA Intern Med. 2016;176(9):1294–304. https://doi.org/10.1001/ jamainternmed.2016.3284.
- Active Physicians by Sex and Specialty, 2019. n.d. AAMC. Retrieved May 16, 2021, from https://www.aamc.org/data-reports/workforce/interactive-data/ active-physicians-sex-and-specialty-2019.
- Crimi C, Carlucci A. Challenges for the female health-care workers during the COVID-19 pandemic: the need for protection beyond the mask. Pulmonology. 2021;27(1):1–3. PubMed. https://doi.org/10.1016/j.pulmoe.2020.09.004.
- Jones Y, Durand V, Morton K, Ottolini M, Shaughnessy E, Spector N, O'Toole J. Collateral damage: how COVID-19 is adversely impacting women physicians. J Hosp Med. 2020;15(8):507–9. https://doi.org/10.12788/jhm.3470
- Spector ND, Asante PA, Marcelin JR, Poorman JA, Larson AR, Salles A, Oxentenko AS, Silver JK. Women in pediatrics: Progress, barriers, and opportunities for equity, diversity, and inclusion. Pediatrics. 2019;144(5):e20192149. https://doi.org/10.1542/peds.2019-2149.
- 29. Hein C. MMC wellbeing & peer support program. J Maine Med Center. 2021;3(2):17.
- Hu Y-Y, Fix ML, Hevelone ND, Lipsitz SR, Greenberg CC, Weissman JS, Shapiro J. Physicians' needs in coping with emotional stressors: the case for peer support. Arch Surg. 2012;147(3):212–7.
- 31. Pratt SD, Jachna BR. Care of the clinician after an adverse event. Int J Obstet Anesth. 2015;24(1):54–63.
- 32. Shapiro J, Galowitz P. Peer support for clinicians: a programmatic approach. Acad Med. 2016;91(9):1200–4.
- 33. Wallace JE, Lemaire J. On physician well being—you'll get by with a little help from your friends. Soc Sci Med. 2007;64(12):2565–77.
- Juengst SB, Royston A, Huang I, Wright B. Family leave and return-to-work experiences of physician mothers. JAMA Netw Open. 2019;2(10):-e1913054. https://doi.org/10.1001/ jamanetworkopen.2019.13054.
- Shakil S, Redberg RF. Gender disparities in sponsorship—how they perpetuate the Glass ceiling. JAMA Intern Med. 2017;177(4):582. https://doi.org/10.1001/jamainternmed.2016.9411.

- Templeton K, Nilsen KM, Walling A. Issues faced by senior women physicians: a National Survey. J Women's Health. 2020;29(7):980–8. https://doi.org/10.1089/jwh.2019.7910.
- Ibarra H, Carter NM, Silva C. Why men still get more promotions than women. Harv Bus Rev. 2010;88(9):80–5.
- Travis EL, Doty L, Helitzer DL. Sponsorship: a path to the academic medicine C-suite for women faculty? Acad Med. 2013;88(10) https://journals.lww.com/academicmedicine/ Fulltext/2013/10000/Sponsorship\_A\_Path\_to\_the\_Academic\_Medicine.12.aspx.
- Ochberg R, Barton G, West A. Women physicians and their mentors. J Am Med Womens Assoc (1972). 1989;44(4):123–6. PubMed
- 40. Schor NF. The decanal divide: women in decanal roles at U.S. medical schools. Acad Med. 2018;93(2) https://journals.lww.com/academicmedicine/Fulltext/2018/02000/The\_Decanal\_Divide\_Women\_in\_Decanal\_Roles\_at\_U\_S\_.30.aspx.
- 41. Ginther DK, Kahn S, Schaffer WT. Gender, race/ethnicity, and National Institutes of Health R01 research awards: is there evidence of a double bind for women of color? Acad Med. 2016;91(8):1098–107. PubMed. https://doi.org/10.1097/ACM.000000000001278.
- 42. Butkus R, Serchen J, Moyer DV, Bornstein SS, Hingle ST. Achieving gender equity in physician compensation and career advancement: a position paper of the American College of Physicians. Ann Intern Med. 2018;168(10):721–3. https://doi.org/10.7326/M17-3438.
- 43. Magudia K, Bick A, Cohen J, Ng TSC, Weinstein D, Mangurian C, Jagsi R. Childbearing and family leave policies for resident physicians at top training institutions. JAMA. 2018;320(22):2372–4. https://doi.org/10.1001/jama.2018.14414.
- Pac JE, Bartel AP, Ruhm CJ, Waldfogel J. Paid family leave and breastfeeding: evidence from California. National Bureau of Economic Research Working Paper Series, No. 25784. 2019. https://doi.org/10.3386/w25784.
- Halley MC, Rustagi AS, Torres JS, Linos E, Plaut V, Mangurian C, Choo E, Linos E. Physician mothers' experience of workplace discrimination: a qualitative analysis. BMJ. 2018;363:k4926. https://doi.org/10.1136/bmj.k4926.
- 46. Simon JA, Reape KZ. Understanding the menopausal experiences of professional women. Menopause. 2009;16(1) https://journals.lww.com/menopausejournal/Fulltext/2009/16010/ Understanding\_the\_menopausal\_experiences\_of.14.aspx
- Hardy C, Griffiths A, Thorne E, Hunter M. Tackling the taboo: talking menopause-related problems at work. Int J Workplace Health Manag. 2019;12(1):28–38. https://doi.org/10.1108/ IJWHM-03-2018-0035.
- 48. Converso D, Viotti S, Sottimano I, Loera B, Molinengo G, Guidetti G. The relationship between menopausal symptoms and burnout. A cross-sectional study among nurses. BMC Womens Health. 2019;19(1):148. https://doi.org/10.1186/s12905-019-0847-6.
- Reynolds F. Distress and coping with hot flushes at work: implications for counsellors in occupational settings. Couns Psychol Q. 1999;12(4):353–61. https://doi.org/10.1080/09515079908254105.
- Starmer AJ, Frintner MP, Matos K, Somberg C, Freed G, Byrne BJ. Gender discrepancies related to pediatrician work-life balance and household responsibilities. Pediatrics. 2019;144(4):e20182926. https://doi.org/10.1542/peds.2018-2926.
- Randell KA, Patel AK, Talib HJ. Parenting pressures among academic pediatricians during the COVID-19 pandemic. Pediatrics. 2021;147(4):e2020033159. https://doi.org/10.1542/ peds.2020-033159.
- Miller KA, Mannix R, Schmitz G, Monuteaux MC, Lee LK. Impact of COVID-19 on professional and personal responsibilities of Massachusetts physicians. Am J Emerg Med. 2020;38(11):2365–7. https://doi.org/10.1016/j.ajem.2020.08.051.
- 53. Vincent-Lamarre P, Sugimoto CR, Lariviere V. The decline of women's research production during the coronavirus pandemic. Nature Index. 2020;
- 54. Daminger A. The cognitive dimension of household labor. Am Sociol Rev. 2019;84(4):609–33. https://doi.org/10.1177/0003122419859007.

- 55. Ciciolla L, Luthar SS. Invisible household labor and ramifications for adjustment: mothers as captains of households. Sex Roles. 2019;81(7):467–86. https://doi.org/10.1007/s11199-018-1001-x.
- Scheurer D, McKean S, Miller J, Wetterneck T. U.S. physician satisfaction: a systematic review. J Hosp Med. 2009;4(9):560–8. https://doi.org/10.1002/jhm.496.
- Kase SM, Gribben JL, Waldman ED, Weintraub AS. A pilot study exploring interventions for physician distress in pediatric subspecialists. Pediatr Res. 2020;88(3):398–403. https://doi. org/10.1038/s41390-020-0805-x.
- Linzer M, Poplau S, Grossman E, Varkey A, Yale S, Williams E, Hicks L, Brown RL, Wallock J, Kohnhorst D. A cluster randomized trial of interventions to improve work conditions and clinician burnout in primary care: results from the healthy work place (HWP) study. J Gen Intern Med. 2015;30(8):1105–11.
- Panagioti M, Panagopoulou E, Bower P, Lewith G, Kontopantelis E, Chew-Graham C, Dawson S, Van Marwijk H, Geraghty K, Esmail A. Controlled interventions to reduce burnout in physicians: a systematic review and meta-analysis. JAMA Intern Med. 2017;177(2):195–205.
- West CP, Dyrbye LN, Erwin PJ, Shanafelt TD. Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis. Lancet. 2016;388(10057):2272–81.
- West CP, Dyrbye LN, Rabatin JT, Call TG, Davidson JH, Multari A, Romanski SA, Hellyer JMH, Sloan JA, Shanafelt TD. Intervention to promote physician Well-being, job satisfaction, and professionalism: a randomized clinical trial. JAMA Intern Med. 2014;174(4):527–33. https://doi.org/10.1001/jamainternmed.2013.14387.
- West CP, Dyrbye LN, Shanafelt TD. Physician burnout: contributors, consequences and solutions. J Intern Med. 2018;283(6):516–29.
- Eden AR, Jabbarpour Y, Morgan ZJ, Dai M, Coffman M, Bazemore A. Gender differences in personal and organizational mechanisms to address burnout among family physicians. J Am Board Family Med. 2020;33(3):446. https://doi.org/10.3122/jabfm.2020.03.190344.
- 64. Adamson K, Sengsavang S, Myers-Halbig S, Searl N. Developing a compassionate culture within pediatric rehabilitation: does the Schwartz rounds<sup>™</sup> support both clinical and nonclinical hospital workers in managing their work experiences? Qual Health Res. 2018;28(9):1406–20. https://doi.org/10.1177/1049732318768239.
- 65. Ammerman C, Groysberg B. How to close the gender pay gap. Harvard Business Review. 2021, June. https://hbr.org/2021/05/how-to-close-the-gender-gap.
- 66. Rahim-Dillard S. How inclusive is your leadership? Harvard Business Review. 2021, April 19.
- Arnsten AFT, Shanafelt T. Physician distress and burnout: the neurobiological perspective. Mayo Clin Proc. 2021;96(3):763–9. https://doi.org/10.1016/j.mayocp.2020.12.027.
- Benko C, Weisberg A., Mass Career Customization. Deloitte Insights. 2008, August 2. https:// www2.deloitte.com/us/en/insights/deloitte-review/issue-3/mass-career-customization-building-the-corporate-lattice-organization.html.
- 69. Shriver M, Boushey H, O'Leary A. The Shriver report: a woman's nation changes everything. Center for American Progress. 2009, October 16.
- Fassiotto M, Simard C, Sandborg C, Valantine H, Raymond J. An integrated career coaching and time-banking system promoting flexibility, wellness, and success: a pilot program at Stanford University School of Medicine. Acad Med. 2018;93(6):881–7. PubMed. https://doi. org/10.1097/ACM.00000000002121
- Tulshyan R, Burey J-A. Stop telling women they have imposter syndrome. Harvard Business Review. 2021, February 11.
- Nunez-Smith M, Pilgrim N, Wynia M, Desai MM, Jones BA, Bright C, Krumholz HM, Bradley EH. Race/ethnicity and workplace discrimination: results of a National Survey of physicians. J Gen Intern Med. 2009;24(11):1198. https://doi.org/10.1007/s11606-009-1103-9.
- Hamad R, Modrek S, White JS. Paid family leave effects on breastfeeding: a quasi-experimental study of US policies. Am J Public Health. 2019;109(1):164–6. https://doi.org/10.2105/ AJPH.2018.304693.

- 74. Staehelin K, Bertea PC, Stutz EZ. Length of maternity leave and health of mother and child a review. Int J Public Health. 2007;52(4):202–9. https://doi.org/10.1007/s00038-007-5122-1.
- Hardy C. Menopause and the workplace guidance: what to consider. Post Reproduct Health. 2020;26(1):43–5. https://doi.org/10.1177/2053369119873257.
- 76. Hardy C, Griffiths A, Hunter MS. What do working menopausal women want? A qualitative investigation into women's perspectives on employer and line manager support. Maturitas. 2017;101:37–41. https://doi.org/10.1016/j.maturitas.2017.04.011.
- 77. Smeur E. The effect of menopausal complaints on burnout. n.d.
- Johnson WB, Smith DG. Male Allyship is About Paying Attention. Harvard Business Review. 2021, February 10. https://hbr.org/2021/02/male-allyship-is-about-paying-attention.
- 79. Stowe HB. Household Papers and Stories. The Riverside Press, Cambridge. n.d. Retrieved November 9, 2021, from https://www.gutenberg.org/files/31217/31217-h/31217-h.htm.
- Savic I, Perski A, Osika W. MRI shows that exhaustion syndrome due to chronic occupational stress is associated with partially reversible cerebral changes. Cereb Cortex. 2018;28(3):894–906. https://doi.org/10.1093/cercor/bhw413.
- Glass DC, Reim B, Singer JE. Behavioral consequences of adaptation to controllable and uncontrollable noise. J Exp Soc Psychol. 1971;7(2):244–57. https://doi. org/10.1016/0022-1031(71)90070-9.
- Weng H-C, Hung C-M, Liu Y-T, Cheng Y-J, Yen C-Y, Chang C-C, Huang C-K. Associations between emotional intelligence and doctor burnout, job satisfaction and patient satisfaction. Med Educ. 2011;45(8):835–42.
- Lopes PN, Salovey P, Straus R. Emotional intelligence, personality, and the perceived quality of social relationships. Personal Individ Differ. 2003;35(3):641–58.
- 84. Carter NM, Silva C. The myth of the ideal worker: does doing all the right things really get women ahead? New York: Catalyst; 2011.
- Tomasino B, Fabbro F. Increases in the right dorsolateral prefrontal cortex and decreases the rostral prefrontal cortex activation after-8 weeks of focused attention based mindfulness meditation. Brain Cogn. 2016;102:46–54. https://doi.org/10.1016/j.bandc.2015.12.004.
- 86. Engelfriet P, Hoekstra J, Hoogenveen R, Büchner F, van Rossum C, Verschuren M. Food and vessels: the importance of a healthy diet to prevent cardiovascular disease. Eur J Cardiovasc Prev Rehabil. 2010;17(1):50–5. https://doi.org/10.1097/HJR.0b013e32832f3a76.
- Edenfield TM, Blumenthal JA. Exercise and stress reduction. In: The handbook of stress science: biology, psychology, and health. Springer Publishing Company; New York. 2011. p. 301–19.
- Karr S. Avoiding physician burnout through physical, emotional, and spiritual energy. Curr Opin Cardiol. 2019;34(1) https://journals.lww.com/co-cardiology/Fulltext/2019/01000/ Avoiding\_physician\_burnout\_through\_physical.15.aspx
- Tian D, Meng J. Exercise for prevention and relief of cardiovascular disease: prognoses, mechanisms, and approaches. Oxidative Med Cell Longev. 2019;2019:3756750. https://doi. org/10.1155/2019/3756750.