Strategies for Provider Well-Being in the Emergency Department

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KEYWORDS

• Wellness • Emergency medicine • Stress • Burnout

KEY POINTS

- Circadian disruption is a significant cause of decreased performance and long-term burnout among emergency physicians. Administrators should help to schedule shifts in a way that minimizes short turn-around times after night shifts and should consider breaking up overnight shifts into smaller portions that allow for some sleep.
- Emergency physicians tend to see fewer patients late in their shifts, which parallels decreasing performance and productivity with fatigue seen in other professions with a heavy cognitive load. Work strategies that promote decreasing responsibility over the course of a shift, such as seeing less-acute patients later on, may help to mitigate this effect.
- Workplace violence remains a serious, underappreciated issue faced by emergency physicians and nurses. Administrators need to advocate for proactive measures to ensure the safety of clinical staff.
- Unexpected family crises and the ever-present risk of malpractice are serious stressors that can contribute to burnout and other long-lasting consequences for emergency physicians. Administrators should make plans to help support colleagues who face these stressors rather than expecting them to push through on their own.

INTRODUCTION: PROMOTING WELLNESS

Over the past decade, the concept of "burnout," a syndrome characterized by stress, fatigue, depersonalization, and cynicism, has gone from a niche term discussed primarily in psychological research to an open topic of discussion among emergency physicians (EPs) and has found its way into residency curricula and yearly talks at major emergency medicine conferences. The term continues to gain traction in the broader medical and surgical community, as an issue in professional practice, and

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increasingly, as a longitudinal challenge of medical education. The American College of Emergency Physicians (ACEP) published an extensive guide on well-being in emergency medicine a few years ago, and the National Academy of Medicine has written extensively on the subject as well.[1,2]

Much of the current discourse on wellness and burnout within emergency medicine has been on developing frameworks to understand what it means to be "well" and have a career in medicine, quantifying the severity of the problems, and developing a research agenda to better understand the threats that burnout poses to patients and to EPs' longevity.[3] Although what it means to be "well" is distinctly personal, the root causes of burnout are systemic problems, imposed by the mismatch between EPs' substantial professional responsibilities and the relatively insubstantial support they receive from hospitals and the larger health care system.[4]

Among the most corrosive forces contributing to burnout are those of "moral injury," feelings of distress resulting from physicians being compelled to provide care that they think is substandard. The reality of working in a crowded emergency department (ED) provides many such opportunities, an EP may think that she cannot provide her patients with her full attention while managing a boarding intensive care unit patient, whereas hospital management tells her that the appropriate response to crowding is simply to work faster. Not surprisingly, several prominent writers have highlighted that many organizations within modern health care thrive by exploiting the inherent good nature of physicians.[5,6]

Unfortunately, despite the depth of the problem of burnout, solutions to address root causes and mitigate its negative effects are scant.[7] In a recent review of wellness interventions, most interventions attempting to address burnout involved duty-hour restrictions for trainees (with little relevance to attending physicians in practice), and programs to promote mindfulness, stress management, improving peer-to-peer support, and professional coaching for individuals.[7,8]

What should a practicing EP (or a local leader of a department of EPs) do? Some sources of stress and insult are larger than any particular department or hospital, such as payer reimbursement or the local malpractice environment. However, the literature shows that the issues that are most important to us are surprisingly local and may fall within the control of administrators. A disproportionate amount of burnout (and enjoyment from work) comes down to the day-to-day working environment. With this principle in mind, the authors highlight the following areas where local physician-leaders can really make a difference in physician well-being.

CIRCADIAN RHYTHM AND SHIFT WORK

Shift work is both a draw to the specialty of emergency medicine and a source of distress. The mission to take care of patients regardless of circumstance includes the provision that they can receive quality care at any time, including evenings, overnights, weekends, and holidays. Working from 9 in the morning to 5 o'clock at night from Monday to Friday may represent the quintessential workday for other professionals, but most of the hours of a week fall outside that window, and so EPs work predominantly outside those hours. In particular, working overnight is major source of stress for physicians. Individuals report that night shifts negatively affect their health, contribute to fatigue and poor-quality sleep, and are a contributing factor as to when individual EPs retire from the job.[9] Because this is an important issue for wellness, and because the shift schedule is mostly under local control, administrators involved in ED operations need to understand scheduling shifts cannot simply be a matter of maximizing efficiency: wellness must be a primary endpoint of scheduling.

For many people shift work causes a pathologic form of sleep. The American Academy of Sleep Medicine recognizes "shift-work disorder" as a disease, and the World Health Organization recognizes nighttime work as a probable carcinogen.[10,11] In the Nurses' Health Study (a very large prospective cohort of registered nurses commonly used in epidemiology), researchers found that rotating night shift work increased the risk of all-cause mortality.[12]

Specifically with an eye toward well-being, the ACEP recommends forward circadian rhythm scheduling (scheduling progressively later shifts), limiting shift length, limiting long stretches of shifts, prioritizing the health and adequately compensating overnight workers, and providing a safe space to sleep after night shifts.[13] Although many departments have tailored the hours of the shifts in their department to fit their local needs, there have been no significant trials examining the design of shift structures to promote wellness or career longevity. In a study of emergency medicine residents, there was substantial variability in terms of their scheduling preferences.[14] Shorter shifts come at the cost of an increased number of shifts, whereas longer shifts may come at the cost of fatigue. Each department needs to consider multiple factors when designing shift schedules and balancing clinical work and time off. However, in a large longitudinal study of Diplomates of the American Board of Emergency Medicine, physical fatigue, the number of night shifts, and the length of shifts were the strongest predictors of burnout.[15]

To reduce the fatigue of working an overnight shift, some departments have adopted "casino shifts" in lieu of traditional shifts.[16] Traditional overnight shifts start in the evening hours and last until the early morning (eg, 2200 hours or 2300 hours until 0700 hours, or 1900 hours until 0700 hours). This traditional overnight shift is very disruptive to circadian rhythm cycles because the person working overnight is completely misaligned from normal sleep cycles. The casino shift essentially splits the overnight into 2 shorter shifts. Instead of a single 2200 hour to 0700 hour shift, 1 doctor would work from 2200 hours to 0400 hours, and then a second doctor would work from 0400 hours until 1000 hours. This arrangement would allow both doctors to sleep at least some part of the time while it was dark outside. When implemented at 1 hospital, the results were impressive (although only published in abstract form): 87% of the EPs preferred casino shift scheduling, as did 63% of their families, and the doctors slept more after their shift (6 vs 4.5 hours), and the perceived recovery time was less (1.2 vs 2.1 days).[17]

Aside from the issues of fatigue and inconvenience when optimizing shift scheduling, data suggest that the marginal productivity of physicians changes significantly while working. With each passing hour on shift, physician productivity declines significantly.[18,19] Emergency medicine is mentally demanding, and during the midpoint of a shift, an EP's new patient-per-hour productivity is roughly half that compared with the beginning of the shift and continues to drop in each subsequent hour.[19]

This decrease in productivity may represent a cognitive defense mechanism to limit the exposure of work and limit mental burden, but may also reflect the fact that although EPs are expected to see new patients at a consistent rate, patient workups may stretch over the course of many hours, necessitating an increasing degree of physician multitasking as the shift continues. The ability to make decisions decreases as a shift wears on.[20] An example of this can be found in the prescribing pattern for antibiotics by primary care physicians for acute respiratory tract infections throughout the day. Because it is cognitively easier to prescribe an antibiotic for what is likely a viral infection (instead of taking the risk of upsetting the patient, or taking take time to explain the medical decision making), physicians are more likely to prescribe antibiotics for acute respiratory infection later in the day than in

the beginning of the day.[21] This same phenomena has recently been demonstrated in EPs' willingness to admit patients during a shift. Compared with earlier in the shift, EPs are more likely to admit a patient later on in their shift than earlier, perhaps because it is cognitively easier to do so than to discharge the patient and risk an adverse event.[22]

This phenomenon parallels a famous study in psychology that examined the determinants of receiving a favorable decision for parole. For a judge, the decision to grant a prisoner parole is associated with more risk and mental work than maintaining the prisoner's current position in jail. Independent of other factors, the decision to grant a prisoner parole (vs keep them in custody or defer the decision to a later date) was associated with the time of day and the judge's proximity to a break. Prisoners who had their case reviewed early in the day and immediately after a break had the best chance of getting parole.[23] The title of this article was "Extraneous factors in judicial decisions." It is time to consider that extraneous factors contribute to medical decision making, and what can be done to limit these negative influences should be considered.

VIOLENCE IN THE EMERGENCY DEPARTMENT

Gun violence is a persistent and disquieting issue that continues to grow, despite increased awareness and efforts to limit firearm access. Schools and communities have shared the grief following tragedies such as Columbine and Sandy Hook. Hospital personnel not only care for the victims from these events but also have been the targets of violence as well. On January 20, 2015, a man of unremarkable height, weight, and appearance walked into Brigham and Women's Hospital in Boston, Massachusetts and asked to see Dr Michael J. Davidson.[24] The man opened fire when the cardiovascular surgeon stepped into an examination room to speak with him, and both men died.

The ED and psychiatric wards are places where health care providers are often verbally or physically injured while at work.[25] The ACEP as well as the Emergency Nurses Association has studied the issue, and in a recent poll of more than 35,000 EPs nationwide, nearly half of the respondents had been physically assaulted.[26] Ninety-six percent of all women and 80% of all men EPs reported that they had been the victim of inappropriate comments or unwanted advances toward them. Verbal threats and physical assault are also common in residents.[27]

The negative effects of these interactions contribute to burnout, depression, and posttraumatic stress in physicians.[28,29] Most hospitals do not have metal detectors at their entrances. Long wait times, high-stress situations, and short fuses compound the anxiety and frustration felt by both patients and visitors, making EDs particularly susceptible to workplace violence. Nurses suffer significantly more verbal and physical assault compared with physicians, sometimes more than twice as frequently in some studies, although the rates for physicians are also high.[30,31] Gates and colleagues[31] found that 51% of physicians reported at least 1 episode of physical violence against them within that past 12 months. Given the known tendency for underreporting of events, individuals rationalizing that this is just "part of the job" of working in an ED, the actual incidence of workplace violence is likely even higher. Another study of 6 different EDs found that 20% of verbal threats to any staff member resulted in physical injury.[30]

According to the study by Gates and colleagues,[31] not surprisingly, alcohol intoxication, drug use, and psychiatric illness have been cited as the most frequent risk factors for perpetrators of abuse against health care workers. Most assaults occur

overnight and increase with increasing wait times. As an additional concern, 25% of violent episodes were related to the ease of ability to bring weapons into the ED.

Not only does workplace violence cause obvious physical distress to those involved but also it can create an environment in which health care workers feel unsafe. Of the different types of staff in the ED, patient representatives have the highest percentage of workers (60%) who report feeling unsafe.[31] In general terms, there is an inverse relationship between feelings of safety, all types of violence, and job satisfaction. Acute stress symptoms are most prevalent in staff that reports the greatest frequency of verbal and physical threats and assaults.[30]

Prevention strategies to address workplace violence include specific training of medical staff to recognize signs of violence, modification of the actual physical structure of the ED, and policy development.[30] Surveyed health care workers reported that they would like to see an increased police presence and more physical barriers, such as metal detectors.[31]

FAMILY AND MEDICAL LEAVE

Over half of the US population is female; women comprise more than half of medical student matriculants, and 38% of all emergency medicine residents are women.[32,33] Young physicians have drastically different attitudes about having children and a career in medicine compared with prior generations. In 1980, only 13% of female graduate medical education trainees became pregnant during their training, but that number has nearly tripled to 35% nationally, and in some institutions and in some specific residencies that number is even higher.[34] Even among men, 93% of millennial-generation new fathers think that paternity leave is important, compared with 77% of baby boomers.[35]

Despite the secular change in opinion, the workplace is a source of stress and discrimination for many new parents, and particularly for new mothers. In a recent survey, 36% of all female physicians experienced discrimination based on pregnancy, maternity leave, or breast feeding.[36] The ACEP recommends that every ED, physician group, and residency should have a policy about family leave, and furthermore, that it guarantees at least 12 weeks' paid time off for new mothers, and 4 weeks of paid time off for other parents.[37]

The United States is the rare exception to the global consensus that parental leave is not guaranteed for everyone.[38] The US federal Family and Medical Leave Act does not apply to employees of a company less than 50 individuals (which would excludes those employed by a small physician group), only if they have worked in their place of employment for a year and for 1250 hours (which would exclude new graduates and part-time employees), and does not apply to individuals paid through an independent contractor mechanism (as many EPs are).[39]

There are no randomized controlled trials regarding the effects of parental leave on the productivity or well-being of EPs. However, there does not necessarily have to be any for us to act. This topic is important for many EPs and is an easy way for EPs to take care of each other and improve their collective well-being.

The most common concerns that prevent the expansion of parental leave involve finances and work productivity. Specifically, this includes issues related to how the physician going to be compensated while on leave, where that money is going to come from, and who is going to cover the shifts for the time that they are gone. This problem is complex and is particularly difficult because each group or organization pays physicians through different accounting strategies, and some EPs work under an independent contractor model. Some known practices include using

short-term disability insurance to finance part of the leave, using saved department coffers, and rebalancing an individual's shift allotments to average out a full-time complement but over a longer period of time.

Besides birth mothers, other partners in relationships may also benefit directly from parental leave.[38] Moreover, mandating them to take leave may be important. In the example of a heterosexual relationship, labor practices that provide women parental leave but do not provide for parental leave might exacerbate long-standing gender inequities and workplace sexism.[40] If the workplace permits women to take maternity leave but it does not provide adequate time for men to take care of newborns, then an unequal amount of childcare burden is shifted to women, which is the opposite effect than intended. To combat the problem of structured gender inequity, several Scandinavian countries have experimented with the concept of mandatory paternity leave with so-called father's quota, although the concept has not gained traction in the United States yet.

Even upon returning to the workplace, many women face discrimination and barriers to pumping breast milk.[36] The American Academy of Pediatrics recommends that newborns exclusively receive breast milk for 6 months, and they should continue to receive breast milk until at least they are 1 year old.[41] EDs need to be supportive of new mothers during this time and should be accommodating. The ACEP supports nursing mothers and recommends a private area for women to express milk that is not the bathroom and that is in proximity to the department.[42]

In closing, a robust parental leave policy, and associated cultural change that supports parents on returning to work, is paramount to combating burnout and making physicians feel valued as individuals. With the recent national emphasis on wellness and job satisfaction, it would be prudent for departments to come up with a coherent strategy and invest time and resources into this issue.

LITIGATION STRESS

A 2016 study conducted by the American Medical Association found that more than 52% of US EPs reported having been sued at least once and more than 26% report being sued 2 or more times.[43] These rates were much higher than the mean across all specialties, which were 34% and 17%, respectively. Residents can be sued too. A study in the *Journal of the American Medical Association* estimated that residents have been named in approximately 22% of lawsuits.[44] In most cases, they are named as codefendants with the attending physician on the case and may be held to the same standards of care. Although the attending is usually determined to be ultimately responsible for the care of the patient, malpractice lawsuits may become part of the resident's permanent professional record should the claim result in payment.[45]

Cognitive, Behavioral, and Affective Consequences of Litigation Stress

The looming specter of malpractice casts a long shadow, including affecting physicians who have not been served. Many physicians admit to practicing defensive medicine, referring to the practice of performing a diagnostic test or treatment that primarily serves the function of protecting the physician against possible future litigation, rather than the best interests of the patient's health. EPs in particular practice in an information-poor, high-risk, technology-rich environment that lends itself to defensive decision making. This environment inevitably leads to increased costs and a greater rate of false-positive findings that may adversely affect patients. Unfortunately, this culture has become so engrained, that even with tort reform, physicians continue to practice defensively.[46]

Merely the threat of being sued may contribute to decreased career longevity. One study found that EPs cited malpractice and litigation stress as one of the top 3 reasons for burnout and a desire to leave the field.[47] Furthermore, as this study and many others have found, physicians who report high levels of burnout are also more likely to retire early.

There are real physical, mental, and emotional costs to being sued as a physician. Medical malpractice stress syndrome (MMSS) shares many features of posttraumatic stress disorder.[48,49] Victims suffer psychological distress, often manifesting as anxiety and depression, and may also experience physical symptoms, such as the development of a new physical illness or exacerbation of a preexisting one, such as diabetes or hypertension. Physicians with MMSS report feelings of isolation, negative self-image, irritability, and difficulty concentrating. They may experience insomnia, fatigue, or hyperexcitability. They may be prone to compulsively overordering tests on patients and consider changing careers. Physicians with MMSS may resort to self-medication with alcohol or recreational drugs and in extreme cases may contemplate, or complete, suicide. Finally, although MMSS is not ubiquitous among physicians who have been sued, almost all will experience at least some form of depression, anger, shame, or feelings of isolation, which is independent of whether or not any negligence, real or imagined by the physician involved, actually occurred.

Strategies for Mitigating Litigation Stress

Demystification of the legal process can be effective in reducing anxiety. Representatives from the hospital risk-management department should be readily available to answer questions from defendants. Resources such as published books and journal articles can also be good sources of information about the litigation process.

Many risk-management groups offer confidential peer-counseling networks. Often conducted over the telephone, within the confidential peer-counseling networks, physicians can anonymously contact another physician who has also been sued in the past. This confidential peer-counseling network not only provides a means of sharing emotions with a truly empathic individual but it also serves as another means of learning more about the litigation process and what to expect.

It can be useful to seek treatment from a licensed mental health professional and most certainly for thoughts of persistent depression, guilt, hopelessness, thoughts of self-harm, and any of the symptoms consistent with MMSS. The confidential peer-counseling network can provide a source of emotional support, safe space for brainstorming effective coping strategies, and prescribe medications if necessary.

SUMMARY

There are many aspects that contribute to provider well-being in the ED, and it is paramount for ED leaders to remain cognizant of the fact that their decisions can have significant effects on physician wellness. Although the concept of “wellness” may seem vague, theoretical, or intangible at times, many of the most important contributing factors are well within the control of ED leadership, and developing robust and supportive structures and culture can make a big difference in the lives of individual physicians.

DISCLOSURE

The authors have nothing to disclose.

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