

Burnout in Academic Physicians

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Abstract

The prevalence of burnout is much higher in physicians than in other occupations. Academic physicians serve important functions, training future physicians and advancing medical research in addition to doing clinical work. However, they are particularly vulnerable to burnout for reasons including low compensation for teaching, pressure to publish despite a lack of time and declining research funds, and a redistribution of clinical workload due to restrictions on trainee work hours. Junior faculty, women, and marginalized groups are the most affected. Beyond poor physician health and worse patient outcomes, burnout is strongly associated with reduced work effort and an intent to leave the profession. Moreover, physicians are leaving the workforce in record numbers, further increasing the stress on remaining physicians. Combined with a worsening of quality of patient care, this increased rate of physician burnout threatens the viability of health care organizations. This review discusses the causes and consequences of faculty burnout, as well as interventions undertaken for its mitigation.

Introduction

Although the experience of exhaustion from job stress has been described since biblical times, the modern definition of burnout was first proposed in the 1970s by Herbert Freudenberger and Christina Maslach.¹⁻³ Freudenberger, a psychologist, coined the term while working at a free clinic in New York. He used the word burnout to describe the volunteers' gradual emotional depletion, loss of motivation, and eventual reduced commitment. At that time, the term was commonly used to describe the effects of chronic drug use.⁴

During the same period, Maslach, a social psychology researcher at the University of California at Berkeley, observed a syndrome when she was interviewing health care workers. Using the same word burnout, she described their emotional exhaustion, negative feelings about patients, and crises about their own professional competence.⁵

The rise of burnout since the 1970s can be attributed to sociocultural events and to its elucidation through ongoing investigation. In the 1950s, institutional bureaucratization increased as an effort to increase efficiency, leading to an inadvertent decline

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in autonomy. In the 1960s, with the war on poverty, the crusade for civil rights, and the upheaval caused by the draft for the Vietnam War, idealistic young people flocked to human service professions. However, many soon became disillusioned when their efforts failed to advance change. With the cultural revolution of the 1960s and the steadily increasing bureaucratization, health service workers experienced an increase in patient care responsibilities in the face of a weakening of their authority and a reduction in patient and organizational gratitude.² After these sociocultural events, in 1981, Christina Maslach and coauthor Susan E. Jackson created the Maslach Burnout Inventory (MBI), a validated tool that is still in use to assess burnout. The description and assessment of burnout has led to an outpouring of research. At the same time, the challenges faced by health care practitioners have further expanded with the growth of medical research, data, and knowledge.

The burnout rates for physicians stand out against those for both other human service workers and individuals with doctoral and equivalent degrees, with a prevalence reported to be between 25% and 60%.⁵ Academic physicians may be especially prone to burnout because of the need to balance education, research, and administrative responsibilities alongside clinical work.⁶ Their chronic job stress has repercussions. It affects individual physicians, patients, and health care organizations.

This review focuses on issues of burnout relevant to academic clinicians. It explores the contributors to burnout, the impacts of burnout, and ways in which burnout might be mitigated for this vulnerable population.

Why Academic Physicians Are a Vulnerable Population

MULTIPLE ROLES

Academic physicians serve a critical role in health care. They train and mentor future clinicians while also advancing the frontiers of medicine. Although academic physicians are expected to excel in each domain, including clinical, educational, research, and administrative, they typically find certain areas of work more meaningful than others.⁷ In a large single-center study, Shanafelt and colleagues examined the concept of “career fit,” by looking at how much time physicians were able to spend in the domain that they regarded as the most meaningful. They found that 68% of academic physicians felt

patient care to be the most meaningful aspect of their work, followed by research (19%), education (9%), and finally administration (3%). The authors concluded that spending less than 20% of work time, or approximately 1 day per week, doing the most meaningful activity was associated with higher rates of burnout (29.9% vs 53.8%, $p = 0.001$). In fact, spending less than 20% of work hours in a physician's perceived most meaningful activity was the strongest predictor of burnout (odds ratio [OR] 2.75, 95% confidence interval [CI] 1.49-5.10), with a higher association than the total number of hours worked per week (OR 1.02, 95% CI 1.004-1.031).⁷ Although administrative responsibilities were found to be the least preferred, academic physicians reported that up to 26.9% of working hours may be spent in administrative tasks.⁷ Academic physicians are prone to both role conflict (due to different roles requiring incongruent and contrasting behaviors) and role ambiguity (resulting from uncertainty regarding responsibility, authority, allocation of time, and relationship with others).⁸ Both are associated with burnout.

PATIENT CARE

Academic centers are increasingly demanding greater clinical productivity from faculty members.⁹⁻¹² Funding models for faculty medical departments are often production-based, using fee-for-service or relative value unit models. Thus, more clinical work is needed for faculty members to earn income. Compensation for teaching per se is extremely low.¹³ Therefore, academic physicians need to allocate increasingly more time to clinical work to maintain their income at a stable level. Junior physicians, known to be more likely to experience burnout, are spending more time doing clinical work than both mid-career and senior physicians.⁷ It has been reported that, in academic institutions, 70% to 75% of physicians' time is spent on clinical activities, with only the remainder being available for nonclinical work.¹⁴ Academic centers have even created faculty positions whose primary purpose is “clinical,” that is, to see a high volume of patients rather than perform the traditional scholarly activities associated with academic medicine.¹⁴⁻¹⁹ This results in demoralization when these high clinical expectations are not clearly communicated during the interview process or when these physicians enter academic medicine out of an interest in education and research. Production-based payment models devalue these other fundamental facets of the academic mission, simply because they do not generate revenue.¹⁴

A consequence of the restrictions on trainee work hours imposed by the Accreditation Council for Graduate Medical Education (ACGME) has been a proportional increase in faculty work hours, stretching faculty even further.^{16,17} In addition, clinical workload is ballooning as physicians are leaving the workforce and as sicker patients are presenting for care. Popowitz and colleagues estimated that 117,000 physicians left the US workforce in 2021.²⁰ This problem is expected to increase because of an aging physician workforce, especially in the primary care specialties, which have seen the greatest loss of physicians.²¹

TRAINEES

Time for teaching is probably the domain that has been affected most by the expansion of clinical responsibilities. Production pressure negatively affects both the teacher and the learner. Teachers find themselves with inadequate time to prepare content and refine their teaching skills through specialized training. Teaching incentives have become lower than those for patient care, forcing faculty to choose between income and education.¹³ Although the ACGME regulations resulted directly from attempts to improve the conditions of the trainees, they have caused a worsening of working conditions for the educators, damaging the bedrock of apprenticeship. Students may find themselves without adequate mentorship and guidance for scholarly projects. They also mirror the values and behavior modeled by faculty and thus may learn to devalue teaching as part of their own career path.

RESEARCH

To gain promotions, academic faculty are expected to be productive researchers. Meanwhile, government research funding through the National Institutes of Health has been reduced, leading to greater competition for a smaller pot of funds.¹⁹ The expectation to publish without the funds or time needed to do so undermines the quality of work and results in burnout of those who aim to do high-quality, time-intensive research.^{19,22} Discretionary organizational funds, which were historically used by department chairs to support faculty career development, have also been dwindling.⁷

FACULTY SUBGROUPS

Junior faculty are more likely to experience burnout for a variety of reasons. These include student debt, higher clinical burden, and the complexity of the lives of young physicians, juggling new relationships and young children.^{23,24} Thus, young faculty are especially vulnerable to burnout. Being aged

between 30 years and 50 years has consistently been correlated with burnout and its consequences across a variety of cohorts.^{7,23,25}

In a multiyear survey of academic faculty in family medicine, women were significantly less likely than men to report “good” or “very good” mental and physical health and reported more than twice the rate of burnout in 2 of the 3 years surveyed.²⁶ An analysis of the data on physicians and other advanced professionals from 2017 demonstrated in a multivariable model that the odds ratio of burnout of participants (women versus men) was 1.310 (95% CI 1.145-1.498).⁵ This difference is about the same as that between physicians and nonphysicians. In a study of women in anesthesiology, their increased burnout was attributed to childcare responsibilities, uncompensated work, and lack of appreciation, among other reasons.²⁷ The authors of that study raised important points about how burnout manifests differently between men and women, with women reporting more emotional exhaustion and men showing more depersonalization. The study also pointed to lower rates of workplace acknowledgment and higher rates of physical abuse and posttraumatic stress disorder as potential contributing factors. This link is compelling and deserves further prospective investigation.

In addition to junior faculty and women, individuals from the lesbian, gay, bisexual, transgender, queer community and minority racial groups experience a higher chance of burnout. A potential reason for the higher prevalence of burnout is that women physicians or physicians from groups that are underrepresented in medicine are known to be involved in a higher percentage of uncompensated roles related to teaching and department initiatives such as wellness or diversity and inclusion. Such a “gender tax” or “minority tax” has been well-described as one of the causes of persistent underrepresentation of minority racial and ethnic groups in academic medicine. These unofficial burdens result in a higher baseline level of stress compared to historically privileged groups.²⁸ It is impossible to pursue a robust diversity, equity, and inclusion strategic plan without a strong focus on mitigating the increased chance of burnout that racial and gender minorities face.

The Toll of Burnout

ON PHYSICIANS AND FUTURE PHYSICIANS

Physicians suffering from burnout are more likely to report professional behavior issues, depression,

and suicidal ideation. Physician substance abuse, inclusive of drugs and alcohol, is estimated to be 10% to 15%, whereas the rate in the general population is 9%.²⁹ For physicians with burnout, the risk of suicidal ideation is doubled.^{30,31} This added risk is substantial, as physicians inherently have a much higher risk of suicide: 40% higher in males and 130% higher in females as compared to males and females, respectively, in the general population.³² Beyond substance abuse and suicidal ideation, burnout causes a generalized impairment of physician health and behavior. Even the rates of motor vehicle accidents were found to be higher in burned-out physicians after adjusting for age, sex, and fatigue.³³

Burned-out faculty not only have poor confidence in their teaching skills but also have fewer life-long-learning habits.^{8,34} The cross-sectional nature of most studies limits conclusions on causality. However, it is conceptually likely that burnout in this subgroup of physicians has a cascading negative effect on the training provided to future generations of physicians, including their quality of care, professional conduct, and attitudes toward their own health.³⁵

Physicians in leadership roles in academic centers have an equally high rate of burnout (50%) as those whom they lead. This is important, because the behavior of the leader has an inordinate impact on the burnout of the individuals being led.^{36,37} Both anesthesiology department chairs and residency program directors were found to derive lower job satisfaction in successive years following appointment to these positions, with 20% to 30% in both categories strongly considering stepping down within 2 years from the time surveyed.^{38,39} This is discouraging, as residents and faculty look up to their leaders for support and moral stewardship.

ON HEALTH CARE ORGANIZATIONS

Patient care is affected because burned-out physicians report increased medical errors. As a result, patient satisfaction is lower, and patient outcomes are worse.⁴⁰⁻⁴² There is a deterioration of work unit safety, with a corresponding reduction in safety levels from excellent to barely acceptable or even poor.⁴³ In terms of health care organizations, physicians experiencing burnout are more likely to report reducing their clinical hours or planning to leave their positions.⁷ Burnout is associated with both intent to switch from full-time to part-time and intent to leave.^{7,22} A retrospective longitudinal study of faculty physicians at Stanford University

found that the 2-year turnover rate among physicians who were burned out was twice as high as that among physicians who were not burned out. Shanafelt and colleagues conducted a longitudinal study using the MBI and reported that each 1-point increase in emotional exhaustion or 1-point decrease in job satisfaction was associated with a 28% or 67% greater likelihood, respectively, of a reduction in professional effort and work hours.⁴⁴

Despite these findings, the costs and repercussions of turnover remain a blind spot for most academic centers.⁴⁵ The failure by institutional leadership to address this turnover issue may be due to the readily available pool of residents and fellows from which they recruit. There may also be a perception that the junior faculty member recruited to fill such a position will have a lower salary than the mid- or senior-level faculty being replaced, making it appear to be an economically favorable result. However, this is not a cost-efficient approach, given that the cost of replacing a single physician who leaves the workforce ranges from \$500,000 to \$1,000,000.^{21,45,46} Other studies have shown that turnover costs are 2 to 3 times the annual salary of the physician.²¹ Academic institutions often fail to recognize that the largest cost of replacing a physician faculty member is the opportunity cost of lost patient-care revenue.⁴⁵ Overall, the cost of burnout attributed to increased staff turnover or reduction in work hours has been reported to be \$4.6 billion per year.^{47,48} However, the effect in academia is even greater because burned-out physicians report less confidence in teaching. Therefore, burnout may be decreasing the quality of training for the next generation of physicians. Furthermore, turnovers rarely coincide with the completion of academic years, leading to unfilled positions mid-term and a negative “domino effect” on other faculty members. Turnover of any member of a care team has been found to increase the possibility of burnout among all other members. It worsens teamwork even if someone is hired to replace the departing individual.⁴⁹ Finally, an even larger unappreciated detriment is the loss of experience and mentorship from mid- or senior-level faculty with respect to grants, publications, and the ability to design and lead clinical trials and train junior faculty members.^{45,50}

Interventions to Mitigate Burnout

Few concepts for mitigating burnout have been described within the specific context of

academic medicine. The authors focus here on methods used to first burnout, first on a personal level and then on the organizational and policy levels.

PERSONAL

It has been established that personal interventions are substantially less effective than system-based changes.⁵¹ Studies on academic faculty alone are limited, but meditation and mindfulness have demonstrated some early positive results.^{51,52}

A recent survey of emergency medicine faculty identified 5 resilience factors that correlated with burnout scores on the MBI. These are spirituality, mindfulness, restful sleep, home life, and institutional debriefing. This study suggested heterogeneous relationships between burnout and workload that varied based on responses to resilience factor statements. One example cited was the relationship between self-assessed spirituality and burnout. For individuals reporting a lack of spirituality, a significant positive correlation was found between emotional exhaustion and perception of workload.⁵³ The study also found that subspecialty faculty face burnout issues similar to those faced by generalists but may not respond as well to resilience interventions.⁵³ A recent review that focused on cardiologists found a benefit in organizational solutions supplemented with self-care and self-reflection.⁵⁴ Among anesthesiology faculty, leadership and self-care skills along with close matching between time and obligations (flexibility of schedule) were found to be helpful.²⁷ These variations may represent differences in study design, but they also reinforce the need to customize well-being interventions based on local processes, specialty, individual outlook, and values.

The novel idea of time-banking is being tried as part of a wellness initiative for emergency medicine physicians at Stanford. According to this approach, time spent on academic or nonacademic activities such as helping colleagues with last-minute substitution of shifts can be converted into credits that individual physicians can use to ease their workload.⁵⁵ Other personal interventions such as help with setting expectations, collegiality, and mentoring have been suggested for academic physicians.⁵⁶

ORGANIZATIONAL

Up to 60% of US physicians are burned out. Yet little has been done at the organizational level to address this problem. Two areas of uncertainty among organizational decision makers are thought to be dominant factors: 1) lack of awareness regarding the economic costs of burnout and 2) uncertainty as to whether anything meaningful can be done on a limited budget, given the amorphous nature of the problem. Studies indicate that burnout threatens the very viability of health care organizations. It has been shown that even modest investments in efforts to address burnout lead to a measurable return on investment; it is therefore each organization's fiscal and fiduciary responsibility to make such efforts. To identify appropriate initial funding, a formula has been proposed. The premise is that, by allocating funds to reduce burnout, organizational turnover costs can be drastically reduced.⁴⁵ This may be particularly important for academic centers, where the damage caused by faculty turnover is more severe but is also underestimated because of the constant availability of trainees.⁴⁵

The role of organizational leadership in preventing physician burnout has been found to be substantial. A study at the Mayo Clinic in Minnesota found that each 1-point increase in composite leadership score was associated with a 3.3% decrease in the likelihood of burnout and a 9% increase in the likelihood of satisfaction among the physicians supervised, measured on a 5-point Likert scale in 12 dimensions.^{4,57} Some leadership styles such as "authentic leadership," which has 5 components including a non-authoritarian style and a moral perspective, have been associated with lower rates of burnout. According to McPherson and colleagues, leadership styles that promote relationship transparency, openness, and support may help address the demands in academic medicine, including the symptoms of burnout.³⁷

Academic centers should have clearly defined job descriptions for their faculty members and should hire individuals whose career ambitions align with institutional expectations.⁷ Finally, some leading academic institutions such as Stanford University, Baylor Scott & White Health, and Carolinas Health-care System have instituted formal programs to curb the rising rates of burnout.⁵⁵ Stanford was the first to appoint a chief wellness officer to benchmark, assess local processes, and design interventions; more institutions are now following suit.

POLICY LEVEL

Recruitment and retention of academic faculty is a growing national concern.⁵⁸ In 2019, the National Academy of Medicine issued a report titled “Taking Action Against Clinician Burnout.”⁵⁹ One of the 7 goals listed in the report is to create and sustain positive work and learning environments and culture by investing in efforts to optimize these environments. The plan also includes the goal of reducing unnecessary burdens that stem from laws, regulations, policies, and standards placed on health workers.⁶⁰ Effective operationalization of these policies may add value to scholarly work and reduce some of the administrative and regulatory burden faced by faculty physicians.

The shortage of physicians, particularly in primary care and in rural settings, is expected to worsen. An expansion of graduate medical education programs is needed. Data show that the number of medical school graduates has increased, but residency training programs have failed to scale up proportionally. Furthermore, student debts are associated with new graduates choosing higher-paying specialties. The average medical school debt for students graduating in 2019 was \$201,490, according to the Association of American Medical Colleges.⁶¹ It can be argued that high student loan burdens not only worsen burnout in young physicians but may also steer them away from choosing the relatively low-income careers characteristic of academic medicine. Modification of student loans in favor of students and improvements in faculty income may aid in recruitment and retention of physicians in academia.

Conclusion

Although far from a new phenomenon, burnout in the working population since the advent of COVID is reaching alarming proportions. The prevalence of burnout in physicians is higher than that in other occupations.⁶² Educators, such as teachers and university professors, also experience very high levels of burnout, largely due to publication and administrative pressures.⁶³ Academic faculty in medicine form the intersection of these 2 vulnerable groups. The importance of burnout lies in its well-documented negative impact on individuals, on health care organizations, and ultimately on patient care. Patient care suffers in many ways: medical errors increase, and there is a worsening of work unit safety. Among physicians, depression, suicide, substance abuse, and impairment all increase, and quality of teaching and mentorship decline. Three groups within academic medicine, namely, junior

faculty, women, and marginalized racial groups, have been found to report the highest rates of burnout. Those in leadership roles are also affected. Turnover is increasing at the leadership level, further destabilizing health care organizations. The costs of replacing physicians for clinical care are high and include not only financial costs (about 2–3 times the yearly salary), but also the loss of experience and mentorship to fulfill the comprehensive academic medical mission.

Although many different risk factors for burnout have been described, it is interesting that the amount of work per se has been found to be less relevant for the development of burnout than the loss of purpose, meaning, respect, and autonomy. As such, poor career fit, or spending less time on the type of work an individual finds most meaningful, is a strong predictor of burnout. Administrative burdens and ever-increasing patient care responsibilities are serious problems. The increasing incidence of burnout may represent one of the reasons physicians are leaving the workforce in record numbers. Exacerbating the situation, it is projected that the future clinical workload will increase substantially.

Several different interventions to mitigate burnout at the personal level have been examined, with meditation and mindfulness consistently showing positive results. Interventions should be customized to individuals and organizations, as well as to specialty, as cultures and belief systems affect the response to interventions. Organizational leadership plays an imperative role in mitigating burnout, and more work is needed in this area. The National Academy of Medicine is raising awareness at the national and global levels. Operationalization of goals is needed.

The companion “Point-Counterpoint” article in this issue provides a more spirited discussion on the topic of burnout,⁶⁴ especially addressing the complex and sometimes uncomfortable issues underlying the mitigation of burnout.

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