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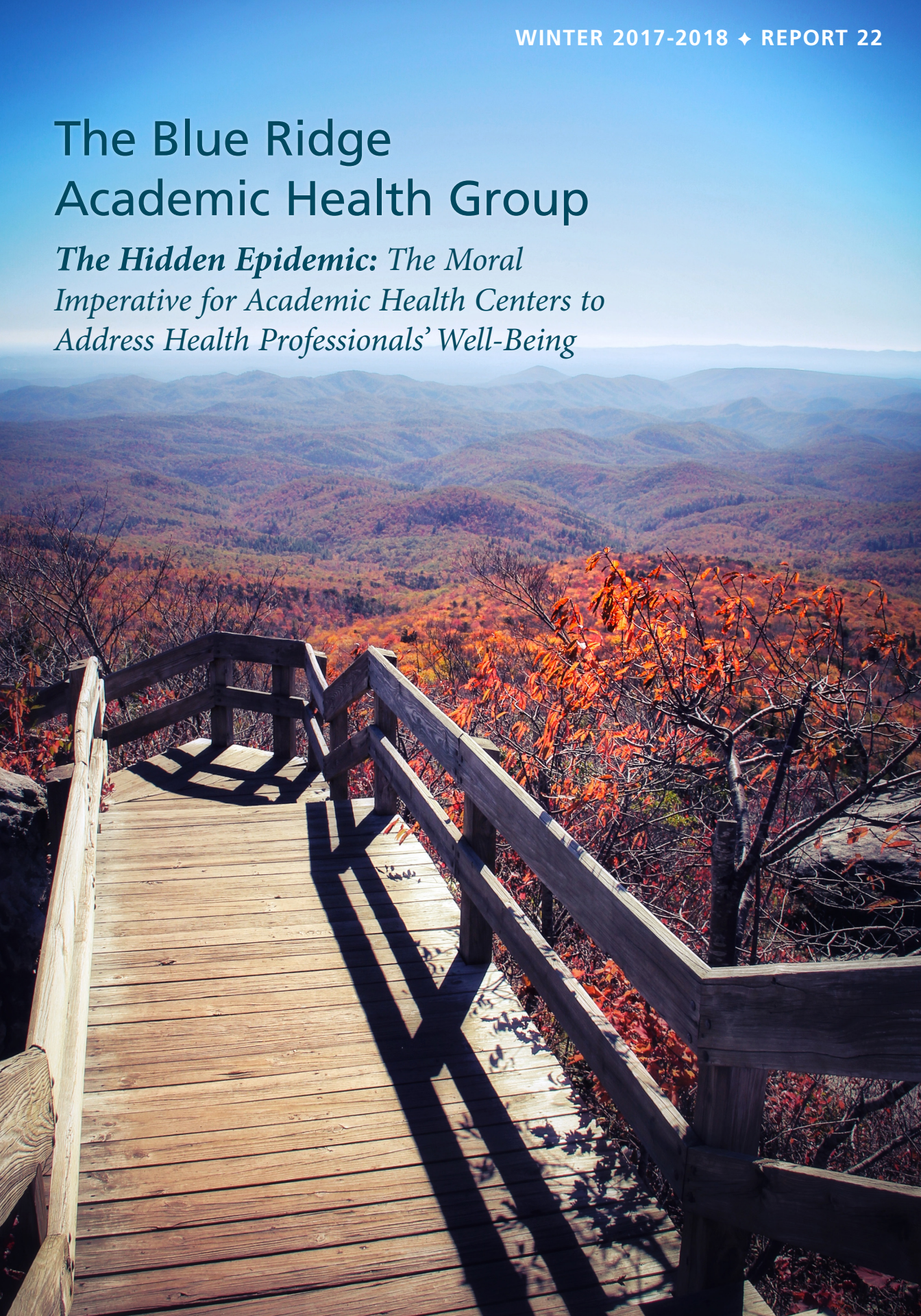
The Blue Ridge Academic Health Group

The Hidden Epidemic: *The Moral Imperative for Academic Health Centers to Address Health Professionals' Well-Being*



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(June 2017 meeting)

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Mission ***The Blue Ridge Academic Health Group*** *seeks to take a societal view of health and health care needs and to identify recommendations for academic health centers (AHCs) to help create greater value for society. The Blue Ridge Group also recommends public policies to enable AHCs to accomplish these ends.*

Contents

That physician will hardly be thought very careful of the health of his patients if he neglects his own.

—Galen (130-200 AD)[1]

Introduction

Over the past 20 years the Blue Ridge Academic Health Group (BRAHG) has made observations and recommendations on a number of topics important to the special roles of academic health centers (AHCs) in American society. The AHC uniquely integrates the missions of education, research, and clinical care and aspires to create and apply new knowledge for the broad benefit of the communities it serves. The AHC in its many iterations is the developer of strategies to take advantage of opportunities and to mitigate mission risks in a changing environment; it is the organizer of operational plans to implement mission strategies; and it is the steward of the human capital without which strategies and plans have no meaning. Underpinning the AHC are human and technical systems that allow the work to get done. The observations and recommendations of the BRAHG have urged AHCs and others that have the same missions to operate as orderly businesses, and to be innovative leaders in each of their mission domains. While each of the mission domains are specific, in the well-functioning AHC their activities intersect. Trouble in one is often reflected in others.

In the clinical care arena, we have strongly supported social equity in the provision of patient care, recommending that adjustors (social determinants) in reimbursement be developed to recognize populations at social risk. We have also supported the move to pay-for-value that explicitly recognizes improvement in measurable patient quality, safety, and service and the expansion in access to care made possible through the Affordable Care Act. The BRAHG has a particular interest in the explosion of knowledge and its management, developments in information technology, and the move from paper to electronic health records (EHRs) that in theory provides more accuracy and broader access to patient clinical information.

Our recommendations often broadly apply to the health, education, and research missions of institutions that are not organized under a single umbrella as is an AHC. The BRAHG recognizes that although progress has often been chaotic and uneven, significant advances have been and are being made in each of the mission domains.

That said, even with progress in the clinical domain, there is increasing uncertainty in the clinical environment evidenced by rapidly consolidating health systems and constantly changing reimbursement. In particular, with the implementation of user-unfriendly and poorly integrated information technology systems including the EHR, daily workflows are being interrupted, and key relationships between patients and caregivers are being disrupted as well.

At the center of this maelstrom are the physicians, nurses, and supporting health workers who on a daily basis have the obligation and calling to provide care to individual patients. Consequently, what should be a joy is often a burden.

In an earlier publication, *Getting the Physician Right: Exceptional Health Professionalism for a New Era,*[2] the BRAHG reviewed the elements of professionalism for individual physicians and interdisciplinary teams. Perhaps the key value is altruism—which stated simply means that serving the best interest of patients, and not one's own interest, is the rule. Our observation is that altruism is difficult even for the most committed professionals when one is working in a maelstrom. As you read this report, we suggest that "Getting the Physician Right," along with all members of an interdisciplinary professional team, will require "Getting the Physician Well," "Getting the Nurse Well," and "Getting All the Team Members Well."

Classical and scriptural proverbs have consistently addressed wellness in physicians and, by association, all professional care givers. The Greek playwright Aeschylus in *Prometheus Bound* has the chorus saying "Like some inferior doctor who's become ill, you're in despair and are unable to discover, by what medicine you yourself can be cured." "Physician, physician heal thine own limp" is found in *Genesis Rabbah* (23:4). The additional scriptural quote, "Physician, heal thyself," is found in the gospel of Luke (4:23), who himself was a physician. These proverbs apply to all professional caregivers. Each suggests that one must be emotionally and mentally healthy if one is to provide compassionate, exceptional clinical care to patients. However, it is clear that the "healing" of caregivers cannot be accomplished solely through "self-help." Just as the best care for patients is achieved through team work and support, addressing the challenges of burnout and advancing the wellness of health care providers will also require AHC leadership and institutional commitment to achieve optimal results. In this report, we explore and make recommendations to address what is becoming a crisis in health care delivery. We recommend that AHC leaders take immediate steps in addressing the real human stresses in the "human capital" upon which their AHCs and all health care organizations depend.

Executive Summary

With this background, the BRAHG views it as an essential duty of health professionals to maintain their own well-being, so that they can be effective healers of others. As a recent *British Medical Journal* editorial phrased it, "doctors have a professional responsibility to be at their best."[3] Hippocrates himself captured a version of this commitment when he asked the new physician to vow, "In purity and holiness I will guard my life and my art."[4]

It is a failing of our health care system that we have made it increasingly difficult for so many clinicians to meet this primary imperative despite the growing focus on quality and outcomes. There are many causes, but one growing result: clinician burnout. We pay a staggering cost in lost productivity, risks to mental and physical health, eroding quality and safety, diminished patient satisfaction, staff turnover, and lost dollars. At the extreme, we have an unacceptably high personal toll of depression and suicide.

The alarming rate of clinician burnout might well be called a hidden epidemic. Although the phenomenon is well known in the health professions and is even increasingly recognized in the lay press (e.g., *The New York Times,*[5,6] *US News & World Report* special report[7-9]), it is still not adequately acknowledged by many health system and academic leaders that their physicians, nurses, and administrators are at substantial risk in day-to-day dealings with each other and with the public.

In this year's report, the BRAHG confronts this widely debilitating and sometimes lethal phenomenon head-on. We declare that the time is ripe for us as AHC leaders to claim a central role in acknowledging, owning, researching, understanding, and defeating the epidemic of burnout.

The role of AHCs in addressing this issue is especially important because we educate, train, and acculturate each new generation of health professionals, including physicians, dentists, nurses, and all other health professionals. Our faculty model—in their lives, practices, and classrooms—the disciplinary values and professional lifestyles that our students will emulate in their own careers. In our organizational life, we help to create the norms and expectations that define our professions' canons, credentialing protocols, and societal commitments.[2] We must address the burnout crisis or risk ongoing problems not only among our current cadre of providers, but also among our next generation of health care professionals.

Additionally, we share in and are subject to the same environmental and organizational pressures that impinge on every health professional and health practice, whether inside or outside of the AHC.

We have a special responsibility—as educators, researchers, stewards of community health, and managers of large-scale health systems—to address and defeat burnout. The leadership of our health centers, in particular, have a special and acute obligation to place this issue front and center, recognizing it as among the most important issues they must address. AHCs are not fulfilling their fundamental obligation to society if they do not epitomize the optimal practice of medicine and that of every other health profession. The danger of burnout is not only impairment of our own health professionals; it is also the erosion of quality in the delivery of health care to our patients and a fraying of morale and institutional effectiveness at every level of our organizations. Optimizing the well-being of individual professionals and the teams they work in is a requirement if we are to meet the

benchmarks of efficient quality patient care.

Part of our need is to understand and define burnout appropriately. It is not a simple function of stress, depression, overwork, or exhaustion. Rather, all of those states and conditions can be and are drivers, but burnout itself is a complex psychological and sociological outcome that results in depersonalization, loss of caring, and withdrawal of engagement in many critical dimensions of attentiveness and energy that may spell the difference between success and failure in therapeutic environments.

At the extreme, burnout can eventuate in suicide, a low-percentage but high-impact "black swan" event that shatters lives, families, and colleagues when it occurs. Suicide of health care professionals, though a rare cause of death, is high enough in comparison with other professions to merit our special attention and preventive energies as educators, administrators, and colleagues.

One phrase that has been often employed to describe the vital quality most essentially threatened by burnout is "joy in work." This is akin to the phenomenon of "flow"—the absorption we experience while working on a completely enjoyable task at the height of our powers. Also related to this is the status of professionalism. Professionals are educated, trained, licensed, and respected as they perform rare and needful functions in a way that meets the duty to the patient. Professionalism in health care is selfless, expert, excellent, judicious, accountable, and effective. Respect for oneself, the team, and especially the patient is a hallmark. Honor and integrity are key attributes.[2] Burnout is both a consequence of the loss of one or more dimensions of professionalism and a contributor to the loss of professionalism. The cycle is a vicious one.

What is at stake is nothing less than the "joy in work" that the most productive and empathetic clinicians bring to the workplace; the sense of professionalism that every doctor, nurse, and other health professional has a right to expect from their career; and the satisfaction, quality, and safety that is expected by patients.

The Societal Impact of Physician Burnout

This report describes the many causes and dimensions of physician burnout. No matter its full scope, there is one consequence that health care executives and policymakers must understand and account for: it costs money. We are not aware of any analysis that has tallied the full bill for the United States.

For this report, the Blue Ridge Academic Health Group asked consultants from The Chartis Group (who also assist BRAHG in planning and facilitating its annual meetings) to help run the numbers. Their calculation is based on several assumptions and extrapolations reflecting the limited cost analysis completed to date. Within this context, the dollar signs become extraordinary: Physician burnout costs as much as $150 billion per year.

That formidable sum amounts to more than 4.7% of the nation's $3.2 trillion expenditure on health care—an enormous sum that could have great consequence for the future of our health care system and the directions of health reform, were there a way to save or redeploy those dollars.

There are both quantitative and qualitative factors driving the cost of physician burnout. Through this analysis, we estimated the additional costs that are reasonably attributable to burnout and its effect on mental health and job performance in the following areas:

- **Turnover.** Various studies have estimated the cost of turnover at $500,000 to $1 million per physician. Current studies estimate the overall rate of burnout at about 54% among the nation's 750,000 active physicians.*[10] The rate of early retirement has increased from 12% to 18%.[11] Based on the approach to calculate the organizational impact of burnout outlined in Shanafelt et al,[12] the increased rate of turnover due to burnout is 2.4%, which equates to an annual cost of $9 billion to $18 billion for the nation.
- **Productivity loss.** This is an extrapolation based on a comprehensive analysis of Canadian physicians by Dewa and colleagues.[13] Comparing burnout rates between the two countries, which are virtually identical,[14] and adjusting for the much larger physician pool in the U.S. (approximately nine times that of Canada), we come up with a productivity loss figure of $1.7 billion.
- **Quality of care, patient safety, and medical errors.** Shanafelt and co-authors[15] found that each one-point increase in a surgeon's self-reported emotional exhaustion led to a five-point increase in reported errors. The same effect was doubled for every one-point increase in the surgeon's depersonalization score. Extrapolating those marginal increases to the entire active population of physicians, more than half of whom are found to be suffering from burnout, we made assumptions about the overall increase in reported medical errors by all physicians in the country. Using the denominator of $735 billion to $980 billion as the total annual cost (both direct and indirect) of medical errors in the U.S.,[16] we estimate the portion of medical errors attributable to burned out physicians as $97 billion to $129 billion.

A full outline and explanation of the methodology used by Chartis has been posted on the Blue Ridge Academic Health Group website: http://whsc.emory.edu/blueridge/publications/reports.html as an appendix to this report.

The preceding analysis of the total cost of burnout to the American health care system, though it results in a formidable dollar figure, is undoubtedly partial for two reasons:

First, many important factors have not been quantified, even to the sometimes-tenuous extent of the aforementioned drivers. They include the following:

- Increased diagnostic testing and specialty referrals
- Rise in malpractice risk and cost
- Degradation in patient experience
- Erosion in organizational morale and harm to organizational culture
- Long-term increase in physician shortages due to fewer entering the field
- Negative impact on physicians' families' lives
- Total cost and impact of physician suicide due to burnout as a risk factor; more research is needed to quantify.

Second, a critical caveat: this computation made no attempt to assess the societal impact of burnout on the part of other health professionals, including nurses, pharmacists, dentists, therapists, physician assistants, and all other members of the care team. Any and all professionals anywhere along the chain of care can experience burnout contributing to increased errors, from misdiagnosis to mistreatment, as well as suboptimal patient support.

**The total U.S. active physician count of 923,308, per the Kaiser Family Foundation and Redi-Data Inc., was adjusted down to account for part-time and academic physicians who do not spend all their time in clinical activities.[10]*

I. Problem Statement: A Growing Threat

Burnout in health care is a threat to all of us. It hurts quality of life, the morale of groups and teams, and the productivity of organizations. It costs money through inefficiency, ineffectiveness, and the unnecessary and premature turnover of highly trained professionals representing substantial societal investment. It threatens the health of patients, in the form of suboptimal outcomes as well as avoidable errors, and it threatens the health of practitioners, through a spectrum of outcomes that range from exhaustion and depersonalization all the way to depression, suicidal ideation, and all too tragically, suicide itself.

The insidious spread of burnout, reflecting a perfect storm of personal, professional, academic, and societal factors, is so relentless that it might well be termed epidemic. Concerted action will be needed to recognize, analyze, and reverse it where present today and to prevent it in the future.

History and scope

The phenomenon of occupational burnout, especially in the human services and helping professions, has been recognized since 1974, with the work of psychologist Herbert Freudenberger. Christina Maslach and colleagues at Berkeley wrote a seminal 1981 study of physician burnout, identifying its cardinal symptoms as emotional exhaustion, depersonalization (or negative feelings toward patients and clients), and loss of personal accomplishment (or feelings of com-

petence).[17] They found that the consequences of burnout include lower quality of care, along with such damaging symptoms as insomnia, drug and alcohol abuse, absenteeism, marital and family difficulties, and job turnover. This work led to the development of a written instrument, called the Maslach Burnout Inventory, which has become a standard means of testing for the problem. It typically takes no more than 10-15 minutes to complete.[18]

In recent years, surveys have shown that the levels of burnout are high and continuing to climb in the health professions, especially medicine, creating a special issue—and problem—at the heart of a system that is designed to improve the health of individuals and communities.

The first large-scale study of U.S. physicians, conducted in 2011, found that burnout was more rampant among physicians than in the workforce at large, with 45.5% reporting at least one symptom.[19] A 2014 survey found an even higher rate, of 54.4%, with authors Shanafelt and colleagues concluding, "More than half of US physicians are now experiencing professional burnout."[20] Burnout also affects other health professionals, including RNs, NPs, PAs, and medical assistants, among others.

Personal dimensions

Joy in work—The notion of "joy in work" speaks to the sense of fulfillment that is most highly prized by individuals as well as teams that are working to their highest capacity. While difficult to define precisely, it is the sensation of hitting on all cylinders that often is most highly prized in retrospect, when one steps back to take a breather. Many positive qualities contribute to this sensation, which might also be defined as the converse of burnout.

As the Institute for Healthcare Improvement put it, "The most joyful, productive, engaged staff feel both physically and psychologically safe, appreciate the meaning and purpose of their work, have some choice and control over their time, experience camaraderie with others at work, and perceive their work life to be fair and equitable."[21]

Risks to mental health, including suicide—When joy is lacking and burnout is present, the stakes are high. It would be difficult to quantify the overall impact of all the negative impacts of burnout on residents, physicians, nurses, and other health professionals. But at the extreme, the impact of suicide is the most catastrophic. A recent study of 381,614 residents in more than 9,000 training programs nationwide, covering the period from 2000 to 2014, found that suicide was the second-leading cause of death in that period, behind only all forms of cancers.[22] Overall, 66 residents were reported to have died of suicide, though the authors noted there were possible ambiguities about some other categories, such as accidental poisonings, that may have led to underreporting of suicide. (While high in absolute terms, the overall rate of death among residents, as well as the rate of death due to suicide, were both significantly lower than age- and gender-adjusted rates in the general population.) Nevertheless, the authors lament the failure of the health care system to detect such extreme distress among doctors in training. It is noteworthy, for instance, that suicides peaked during the first quarter of the first year of residency and were also higher in the first quarters of the third and fourth years.

"Our findings present the education community with an opportunity to reduce unnecessary deaths by increasing preventive strategies, scheduling preemptive education, and fostering access to counseling and confidential mental health services for residents," they write. "In addition, all of those who are engaged in the clinical learning environment—both faculty and residents themselves—need to watch for signs of resident burnout, depression, social isolation, or significant changes in performance."[22]

Equally devastating is the annual toll of suicide among practicing physicians. The American Foundation for Suicide Prevention estimates that 300-400 practicing physicians die of suicide every year,[23] also citing a 2004 meta-analysis showing a heightened suicide risk ratio of about 1.41 times (for male physicians) and 2.27 times (for female physicians) when compared with the population at-large.[24] While this is an area ripe for further research, it is shocking to consider that the estimated loss equates to two to three (or more) graduating classes of medical students. This should be regarded as a grievously high and unacceptable number by everyone concerned with the health of health professionals—not to mention the safe and high-quality functioning of the American health care system.

While suicide is not an immediate outcome of burnout, a Venn diagram would show areas of overlap between the categories of burnout, mental health disorders such as depression, and suicide.[25] Hence the importance of early recognition and mitigation strategies. While well-designed studies show that entering medical students, on average, score higher than their peers in the general population on measures of mental health, follow-up studies show their mental health has fallen below the mean after two years of medical school. Something has gone awry—whether in the "hero culture" they imbibe as part of the hidden curriculum, the extreme zero-sum competitiveness of some traditional models of medical education, or other factors that chip away at their resilience, perhaps by isolating them from peers and support networks. Indeed, focused education and support of health care provider resilience is an important component of the strategies that can counter the forces that often lead to burnout.

Professionalism—"A profession… is an occupation that regulates itself though systematic, required training and collegial discipline; that has a base in technical, specialized knowledge; and that has a service rather than a profit orientation, enshrined in its code of ethics," writes Paul Starr in *The Social Transformation of American Medicine*.[26]

This definition captures essential characteristics identified by most scholars, including that a profession is[2]

- Based on required intellectual training in specialized knowledge
- Oriented toward public service
- Rooted in a code of ethics
- Not strictly profit-oriented
- Infused with common, collegial norms
- Authorized by society to operate as a relatively autonomous, largely self-regulating occupation.

Along with joy in work, it is equally important to note the definitional importance of professionalism. Cara Lesser and colleagues, writing in *JAMA*,[27] note that professionalism entails learning about and respecting a complex web of relationships and obligations—to patients, colleagues, the health care system, and society at large. Further, professionalism is a quality that is enhanced and developed over time, throughout the course of one's career. In this endeavor, "the principles of emotional intelligence, reflective practice, and mindfulness [are] critical to nourishing professionalism in practice." These qualities are antithetical to the corrosive experiences of exhaustion, disengagement, and depersonalization that characterize burnout. The enhancement of professionalism may be expected to counteract burnout, while conversely, burnout will corrode the high-quality performance, ideals, and values of the professional. The two qualities are inversely correlated. While professionalism brings great joy, it requires remarkable individual commitment that can be difficult to sustain when complex systems that support clinical care are not optimized.

Organizational dimensions

A multitude of factors in the design of organizational systems impinge on the satisfaction, engagement, and effectiveness of clinicians and staff. (See **table 1.**) These range from productivity targets to the relative efficiency (or not) of the institution's EHR, billing, ordering, and appointments systems; the prevailing values and collegiality (or not) of clinical care teams; the level of support and collegiality; and communication from senior levels of leadership—in short, a myriad of dimensions of bureaucracy and workplace design and culture.

One of the most persistent organizational issues centers on the EHR, which is a large and inescapable part of modern practice, consuming a large percentage of the workday.

As Bodenheimer and Sinsky observe: "More EHR functionalities—email with patients, physician order entry, alerts and reminders—intended to promote the Triple Aim—are associated with more burnout and intent to leave practice."[28] Constant changes in regulatory standards such as "meaningful use" become "meaningless," as the EHR becomes harder and not easier to use.

Healthcare delivery impact

Burnout has a deleterious impact on the health

care system as a whole and on the delivery of health care as it is experienced by patients. Summarizing a series of studies, Christine Sinsky, an internist and vice president of professional satisfaction for the AMA, observes that physician burnout is associated with an increased risk of medical errors and malpractice, decreased physician empathy for patients, a lower rate of patient adherence to treatment orders, and less patient satisfaction. Furthermore, physicians experiencing burnout are much more likely to turn over, an enormously costly loss for health systems as well as society as a whole. With about 50% of MDs experiencing burnout, a health system of 3,000 MDs might expect 75 physicians leaving prematurely each year due to burnout, with average replacement costs amounting to $500,000 to $1 million, for a total cost of at least $40 million per year.[12, 29-33]

II. Drivers of Burnout

Collectively, many of the factors driving the epidemic reflect the law of unintended consequences. With the best of intentions, a profusion of regulatory requirements related to billing, quality, safety, and compliance have turned the lives of many clinicians into a blur of keystrokes and computer screens. The fundamental human interactions of physician and patient, nurse and doctor, or one colleague with another, in unhurried, casual settings, such as simply having lunch together, have been increasingly interrupted and greatly decreased in frequency.

Drivers of burnout are legion, and importantly, they exist at multiple levels of the organization. They manifest as conflicting incentives, stressors, and dysfunction at the level of the individual and the workplace team; the overall organization; and the larger society or environment (world at large). **Table 1**[34] summarizes this multitude of factors which are at play across seven driver dimensions:

- Workload and job demands
- Efficiency and resources
- Meaning in work
- Culture and values
- Control and flexibility
- Social support and community at work
- Work-life integration

Although individual factors vary from place to place, there is almost universal agreement that changes in health care that require substantial amounts of time to be spent on "clerical" duties as opposed to the face-to-face practice of medicine are resulting in a perceived loss of professionalism and accomplishment. In an observational study of physicians in ambulatory settings, Sinsky and coauthors found that physicians spend nearly two hours on desk and EHR duties for every hour of direct face time with patients.[35]

Particular issues include:

- Record keeping and documentation required for physician orders
- Billing procedures and requirements
- Physicians' productivity demands (as described in the next point) and hours of work are increasing due to the amount of computer time consumed by EHR interfacing, in-box management, and other clerical tasks—leading to the widespread belief that technology is a time sink. These demands are creating stress as physicians try to juggle patient needs, while trying to find sufficient time for personal, academic, and other pursuits.
- Growing productivity demands placed on all members of the care team, including physicians, APPs, RNs, and other health professionals
- The "consumer" movement in health care bringing ever higher demands and expectations from patients to the table
- Pace of advancements in medical practice, requiring ongoing continuing education, as well as the increasing severity and complexity of many illnesses being treated and managed in quaternary care centers such as the typical AHC
- Burdensome and costly recertification requirements, which vary from specialty to specialty but loom large over busy professionals, requiring "cramming" at the expense of personal time
- The persistence of the "hero" and "ego ideal" models in physician culture, often modeled by faculty and unconsciously adopted by students and residents
- Working harder to maintain compensation levels, as flat traditional and risk-based reimbursement rates require increased volumes—at the

TABLE 1 | Drivers of burnout and engagement in physicians[34]

	Individual factors	Work unit factors	Organization factors	National factors
Workload and job demands	■ Specialty ■ Practice location ■ Decision to increase work to increase income	■ Productivity expectations ■ Team structure ■ Efficiency ■ Use of allied health professionals	■ Productivity targets ■ Method of compensation □ Salary □ Productivity based ■ Payer mix	■ Structure reimbursement □ Medicare/Medicaid □ Bundled payments □ Documentation requirements
Efficiency and resources	■ Experience ■ Ability to prioritize ■ Personal efficiency ■ Organizational skills ■ Willingness to delegate ■ Ability to say "no"	■ Availability of support staff and their experience ■ Patient check-in efficiency/process ■ Use of scribes ■ Team huddles ■ Use of allied health professionals	■ Integration of care ■ Use of patient portal ■ Institutional efficiency: □ EHR □ Appointment system □ Ordering systems ■ How regulations interpreted and applied	■ Integration of care ■ Requirements for: □ Electronic prescribing □ Medication reconciliation □ Meaningful use of EHR ■ Certification agency facility regulations (JCAHO) ■ Precertifications for tests/treatments
Meaning in work	■ Self-awareness of most personally meaningful aspect of work ■ Ability to shape career to focus on interests ■ Doctor-patient relationships ■ Personal recognition of positive events at work	■ Match of work to talents and interests of individuals ■ Opportunities for involvement □ Education □ Research □ Leadership	■ Organizational culture ■ Practice environment ■ Opportunities for professional development	■ Evolving supervisory role of physicians (potentially less direct patient contact) ■ Reduced funding □ Research □ Education ■ Regulations that increase clerical work
Culture and values	■ Personal values ■ Professional values ■ Level of altruism ■ Moral compass/ethics ■ Commitment to organization	■ Behavior of work unit leader ■ Work unit norms and expectations ■ Equity/fairness	■ Organization's mission □ Service/quality vs profit ■ Organization's values ■ Behavior of senior leaders ■ Communication/messaging ■ Organizational norms and expectations ■ Just culture	■ System of coverage for uninsured ■ Structure reimbursement □ What is rewarded ■ Regulations
Control and flexibility	■ Personality ■ Assertiveness ■ Intentionality	■ Degree of flexibility: □ Control of physician calendars □ Clinic start/end times □ Vacation scheduling □ Call schedule	■ Scheduling system ■ Policies ■ Affiliations that restrict referrals ■ Rigid application practice guidelines	■ Precertifications for tests/treatments ■ Insurance networks that restrict referrals ■ Practice guidelines
Social support and community at work	■ Personality traits ■ Length of service ■ Relationship-building skills	■ Collegiality in practice environment ■ Physical configuration of work unit space ■ Social gatherings to promote community ■ Team structure	■ Collegiality across the organization ■ Physician lounge ■ Strategies to build community ■ Social gatherings	■ Support and community created by medical/specialty societies
Work-life integration	■ Priorities and values ■ Personal characteristics □ Spouse/partner □ Children/dependents □ Health issues	■ Call schedule ■ Structure night/weekend coverage ■ Cross-coverage for time away ■ Expectations/role models	■ Vacation policies ■ Sick/medical leave ■ Policies □ Part-time work □ Flexible scheduling ■ Expectations/role models	■ Requirements for: □ Maintenance certification □ Licensing ■ Regulations that increase clerical work

Drivers of burnout and engagement with examples of individual, work unit, orgaization, and national factors that influence each driver.
EHR = electronic health unit; JCAHO = Joint Commission on the Accreditation of Healthcare Organizations.
Adapted with permission from Mayo Clinic Proceedings.[34]

same time as there is growing recognition of the therapeutic need for better work-life balance
- For nurses, challenging staffing ratios result in burdensome workloads, and poor management practices and lack of leadership compound their risks for burnout. Nurses may also experience moral distress at dissonance between their beliefs and training about best practice as compared with the actual care delivery they experience. They may also be susceptible to post-traumatic stress (as are some doctors) based on their clinical experiences with vulnerable patients of every age.

III. Impacts

Burnout among clinicians—both doctors and nurses—has substantial consequences for clinicians, the organizations they serve, and patients. The impact is summarized in figures 1[36-40] and 2. Many of these issues were discussed in Part I.

For physicians, they include:
- An erosion of the sense of meaning or fulfillment that comes from their experience of medicine as a "calling" with professional status and values
- Less time with patients and ability to nurture caring relationships
- Loss of work-life balance in which they have adequate time for families and intimate relationships, adequate sleep, balanced diet, hobbies and sports, and exercise regimens
- Increase in "pajama time" (i.e., time at home spent on EHR) as evening hours for R&R or even professional literature review are being overtaken by catch-up work on computer medicine tasks
- Growing sense of dissatisfaction, exhaustion, and depersonalization
- Growing incidence of medical errors
- Growing rate of turnover

For nurses, they include:
- An erosion of the sense of meaning or fulfillment that comes from their experience of nursing as a "calling" with professional status and values
- Increasing workloads, longer working hours
- Insufficient staffing
- Juggling personal obligations for an increasing number of single parents
- Wages stagnant for more than 12 years relative to inflation[36]
- Low morale
- Growing rate of turnover

For patients, they include:
- Increased susceptibility to avoidable errors
- Loss of face-to-face time
- Decreased satisfaction
- Increased delays in access to care

For organizations, they include:
- Turnover expenses—$500,000+ for MDs, $60,000+ for nurses
- Opportunity costs associated with not operating at top of license/scope of practice
- Patient safety, quality, and satisfaction decline—with heightened risk of malpractice leading to quality, financial, and brand costs and damage
- Overuse of testing and referrals
- Contagious impact on morale

Costs to society at large are substantial, given the investment in the education and training of health care professionals. A recent study in Canada estimated that burnout among the current cohort of approximately 70,000 physicians would cost the country $213 million in lost future health services over a 24-year study horizon, based on reduction in clinical hours by burnt-out physicians as well as burnout-induced early retirement.[13] Of course, this does not include many other categories of burnout-related cost that might be imagined, including the impact of lower productivity on teams and organizations, in addition to the direct and indirect costs of sub-optimal care.

A recent study in Canada estimated that burnout among the current cohort of approximately 70,000 physicians would cost the country $213 million in lost future health services over a 24-year study horizon.

FIGURE 1 | Causes and Impact of Nurse Burnout[36-40]

Contributors to nurse burnout are slightly different.

Contributors to Nurse Burnout
- Increased workloads, longer working hours, less flexibility in schedule and shift preferences
- Insufficient staffing, with reduced pipeline (fewer students accepted into nursing programs)
- Lack of support outside of work—high prevalence of single workers/parents
- Stagnant wages on average, relative to inflation, 2000-2012[36]

Impact of Burnout
- Mental health concerns for nurses
- Drop in quality of patient care
- Low morale, workplace satisfaction
- High rate of turnover, with high cost of replacement ($60,000 -$70,000 to recruit a replacement nurse)

Source: The Chartis Group, LLC. 2016

FIGURE 2 | Consequences: Impact of Physician Burnout

Physician burnout can impact patient outcomes, which presents real challenges to the viability and sustainability of a hospital or health system.

Physician Burnout

- Loss of joy, passion, motivation for career and "calling"
- Disengagement in daily patient care activities and practice operations
- Increase in apathy and erosion of professionalism
- Risk to physician's own care and safety (suicide rates)
- Depression and other mental health concerns

Patient

- Reduction in time and attention to patients
- Significant negative impact on quality of care and patient outcomes
- Significant rise in patient dissatisfaction

Hospital/Health System


- Erosion of physician community and clinician collaboration
- Permeating sense of negativity and dissatisfaction within the health system
- Increase in clinician turnover and staffing challenges (recruitment/retention)
- Drop in patient loyalty and loss of patient volumes/visits
- Brand damage

Source: The Chartis Group, LLC. 2016

Analogies to the National Quality Movement

The publication of *To Err Is Human* (1999)[41] and *Crossing the Quality Chasm* (2001)[42] by the Institute of Medicine (now the National Academy of Medicine [NAM]) were milestone events that over time, catalyzed significantly different ways in which AHCs—and our health care system in general—thought about the problem of medical errors and their impact on the health and safety of patients.

Today, we are seeing the beginnings of analogous leadership on the issue of clinician burnout and wellness by the NAM, together with the Association of American Medical Colleges (AAMC) and Accreditation Council for Graduate Medical Education, in league with the American Medical Association, American Hospital Association, America Nurses Association, and more than 30 other flagship organizations.[43]

The BRAHG believes it is an urgent priority to address the issue of clinician burnout with the same forthrightness and prominence that characterized the quality movement. Many of the principal findings and consequences of those IOM publications apply directly to this issue and the position we are in today.

As clinician well-being is a complex multifactor problem, the NAM Action Collaborative on Clinician Well-Being and Resilience has concentrated its efforts around four work streams:

1. Research, Data, and Metrics, gathering validated measurement tools and benchmarks to track progress and understanding the financial costs of burnout
2. Conceptual Model, developing a logic model that will help establish a shared framework to address key factors
3. External Factors and Workflow, identifying optimal approaches to team-based care and solutions to change documentation approaches better aligned to the digital health care environment
4. Messaging and Communications, developing a knowledge hub that will create a repository for sharing toolkits, data, and models. The NAM has also formed a broad network of organizations that are also committed to addressing clinician well-being and burnout.

Transparency—Countering decades of denial and secrecy, the quality movement led to the recognition that it is best—for patients, their families and loved ones, for clinicians, and for health care organizations—to frankly acknowledge error when it occurs. Not only is sunlight the best disinfectant, the best learning can occur in no other way. Even more fundamentally, honesty is always the best policy.

Systems-level emphasis—Although errors are, by definition, committed by individuals, the quality movement understood that fundamental improvements ultimately depend on system changes. With a variety of quality and performance improvement models—including the six sigma movement in several major industries—providing a guiding star, health care began to look at creating checklists, reducing redundancies, and developing algorithms and other types of systems to create safer and more robust processes and controls undergirding fallible individuals. Similarly, much work is needed to understand and mitigate the role of health care systems, as currently designed, in stressing, tiring, and even embittering physicians and nurses, leading to the potential for disengagement, exhaustion, and depersonalization.

De-stigmatization—If systems are to be improved, individual practitioners must be able to candidly acknowledge making mistakes and freely discuss how to remedy them and improve in the future. The analogy for physicians, nurses, and other health professionals being willing to acknowledge and seek help for early warning signs of burnout, stress, depression, and anxiety—without becoming stigmatized—is obvious.

End the shame—Given the "heroic" nature of the medical impulse, and the perfectionist nature of many physicians' personalities,[25] we need to promote fundamental changes in how some physicians—and physicians-in-training—regard themselves and relate to others on the care team, as well as patients and colleagues.

Empower team members—The same logic that recognized the importance of empowering all members of a surgical team, for instance, to stop a procedure immediately if mistakes were about to be committed—without fear of repercussion—find their analogy in addressing the issues of burnout. Team members must be mindful of the problem and watchful for symptoms, in themselves and others.

C-suite leadership—The quality and safety movement required governing boards and CEOs to acknowledge the need and elevate it to the top of their agendas. The same must be said of clinician burnout. All over the country, in organizations of varying sizes, we now have chief quality officers, housed literally or figuratively in the C-suite, empowered to intervene in any situation or any crisis precisely at its most uncomfortable point, and reporting directly to the CEO. In years to come, the same should be true of chief wellness officers. Indeed, they may find themselves working closely with chief quality officers on many points of mutual interest.

Sustained work over time—Many years after publication of the milestone IOM quality reports, the issues of quality and safety have not been definitely solved. Six sigma remains an elusive goal in health care. But the quest is critical. It will continue. The same must be said of the problem of burnout.

IV. Solutions and Interventions

The "triple aim" of quality improvement first articulated by Don Berwick and then institutionalized with the establishment of the Institute for Healthcare Improvement has become foundational in efforts to reform and transform the American health care system.[44] To the three current goals—improving the experience of care (including safety and quality) for individuals, enhancing the health of populations, and reducing the per capita cost of care—the BRAHG joins its voice to others in supporting the addition of a fourth: maintaining and promoting the wellness of health care professionals. This is an indispensable basis for the successful delivery of high-quality, safe, and satisfying patient care.

Solutions and interventions aimed at addressing and mitigating the phenomenon of burnout need to occur at the individual, team, and organizational level, among others.

Individual focus (Provider, heal thyself!) First and foremost, individual practitioners are responsible for following the same healthful wellness routines they would prescribe for their patients—engaging in exercise, eating healthful diets, and attending to their own medical care.[19] "Activities to enhance self-awareness (e.g., mindfulness, narrative medicine, cognitive behavioral techniques, connecting with meaning and purpose in work) and resilience can reduce burnout. These qualities are skills that can be taught, and individual physicians should commit to learning, developing, and complementing these skills," say Shanafelt and colleagues.[19]

On the organizational side, AHC leaders can move culture in significant ways. For instance, performance reviews can be used conscientiously to assist staff in focusing on their true passion and protecting time in which to pursue it. Leaders can also prioritize the creation of safe spaces for peer-to-peer interactions and connections, ranging from intentionally creating (and subsidizing) new types of dining clubs for professionals, to encouraging use of faculty lounges and doctors' dining rooms.

Additionally, AHC leaders can work to reduce the potential stigma often associated with professionals seeking help for stress or other kinds of psychological issues, whether they are intrinsic to the organization (for instance, promotion and tenure) or in the discipline or profession at large (redesigning licensure questions that can be used, or misused, to identify and stigmatize physicians who seek psychiatric care). Illustrating the scope of the problem, a 2008 national survey found that one out of 16 surgeons had experienced recent suicidal ideation (significantly higher than among the general population) but more than half of those individuals (60.1%) reported they were reluctant to seek psychiatric or psychologic assistance because of medical license worries.[45]

Yoga mats and grit

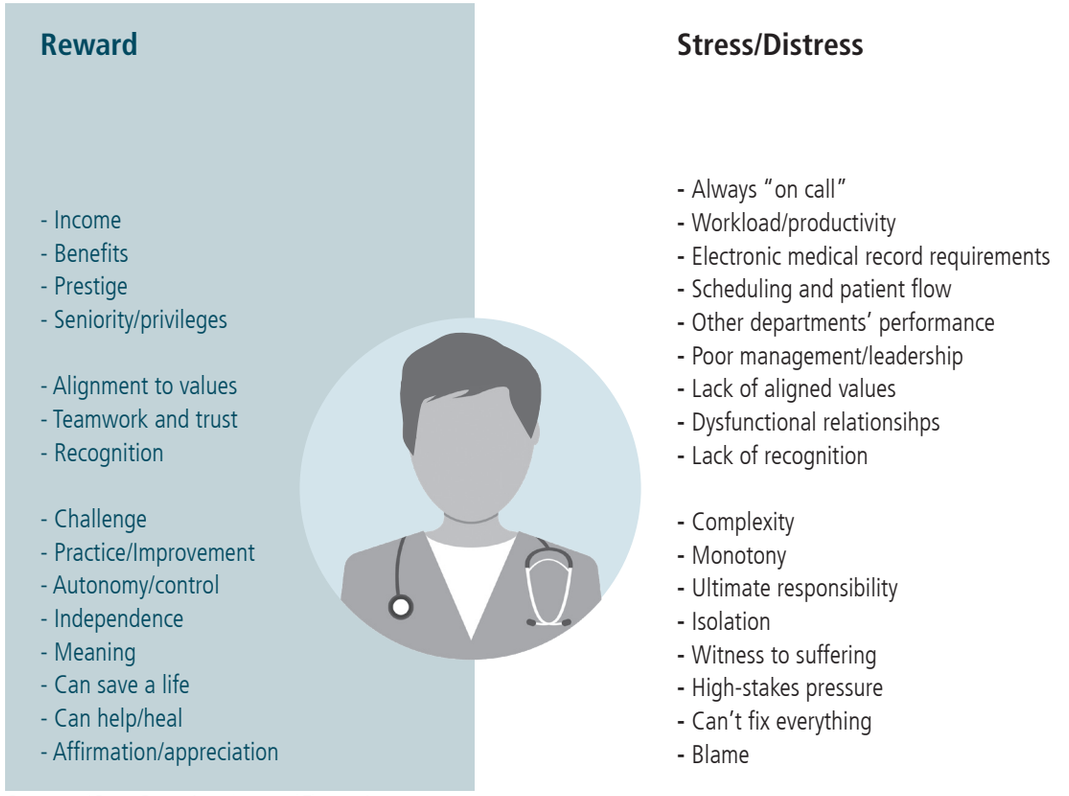
Many leaders of the well-being movement caution institutions who are entering the fray anew not to "lead" with such well-intentioned announcements as free yoga classes for all. Clinical staffs who are already ragged with cynicism and exhaustion (by definition) may resent what they perceive as an attempt to foist institutional failings onto the back of already-overburdened clinicians.

And yet there is no doubt that one significant dimension of addressing the problem of burnout is to give individuals the tools, skills, and motivation they need to practice self-care and wellness. If half of all physicians are experiencing burnout and half are not, it seems likely that there are individual strategies that can be taught and learned[46]—in addition to those structural changes that can only be enacted by AHCs and/or by even larger organizations, such as professional societies, regulatory agencies, and payers.

In fact, coursework in Eastern practices—such as Tibetan Buddhist compassion cultivation and mindfulness training—is becoming more common. Emory, for example, has been offering free cognitively based compassion training courses since 2014 to medical faculty, staff, and students. Stanford Medicine offers compassion cultivation training, incorporating both meditation disciplines and scientific study. The *Washington Post* reported finding similar programs at Massachusetts General Hospital, the University of Virginia School of Nursing, and Georgetown University School of Medicine.[47]

AHC leaders can work to reduce the potential stigma often associated with professionals seeking help for stress or other kinds of psychological issues.

FIGURE 3 | We Offer "Perks" to Try to Offset the Stress[48]



Courtesy of Press Ganey Associates and Thomas Lee.

Thomas H. Lee, chief medical officer of Press Ganey, offers a striking model of the opposing forces—rewards and stresses—that converge every day on the individual clinician (see **figure 3**). While symptoms of burnout (exhaustion, cynicism, depersonalization) are obviously one common response to being in the middle of all these tensions, Lee finds grounds for another and more positive set of responses in the "positive psychology" movement, which includes such leading exponents as Martin E. P. Seligman, director of the Penn Positive Psychology Center at the University of Pennsylvania, and author Angela Duckworth, also a professor of psychology at Penn, who has written the bestselling book *Grit: The Power of Passion and Perseverance.*

Lee sees grounds for cultivating resilience and grit through pursuing four key psychological assets:

- Interest—following your curiosity
- Practice—with the goal of improvement
- Purpose—the intention to contribute to the well-being of others
- Hope—that efforts can improve the future.[48]

As applied across individuals, teams, and organizations, pursuing improvement on these four dimensions leads to the matrix depicted in **Table 2.**

There is no doubt that one significant dimension of addressing the problem of burnout is to give individuals the tools, skills, and motivation they need to practice self-care and wellness.

Team focus

Burnout for everyone on the team, from physicians to nurses to all other allied health professionals staff, can be mitigated through a number of strategies. Perhaps most important are cultivating and respecting collegiality and values in which each member feels respected and has clearly defined job descriptions that call on his or her competencies in meaningful ways. An optimal organization will also maximize the opportunity for each team member to practice at the "top of their license," enhancing their sense of pride and professionalism.

TABLE 2 | How Do We Build Resilience and Grit from the Inside out?[48]

	Individuals	Teams	Organizations
Interest—following your curiosity	Clinicians should be genuinely curious about what they do	Should be comfortable with the routine and searching for the non-routine	Put patients first
Practice—with the goal of improvement	Try to improve something important to patients	Move the needle on outcomes that matter	Improve coordination across teams and across time
Purpose—the intention to contribute to the well-being of others	Reduce the suffering of their patients	Reduce the suffering of a group of patients	Reduce complexity and chaos for patients
Hope—that efforts can improve future	Exult in persevering over adversity	Compete to be the best in your class—and win market share	Make high-value health care the core of strategy

Courtesy of Press Ganey Associates and Thomas Lee.

Emory Critical Care Center Tackles Burnout Syndrome

The publication of a white paper on Burnout Syndrome (BOS) last year by the Critical Care Societies Collaborative precipitated a wide range of actions by leaders of the Critical Care Center at Emory Healthcare in Atlanta. As the paper documented, studies consistently show that physician intensivists and critical care nurses rank near the top for symptoms of burnout in their respective disciplines. Up to 86% of all critical care nurses display one of the symptoms of BOS; 45% of critical care physicians have symptoms of severe BOS[49]; and 49% of pediatric critical care physicians scored at least some symptoms of high burnout in a recent national study.[50] In response, Emory Healthcare's chief of the critical care service, Timothy Buchman, and Emory's chief nursing executive, Sharon Pappas, agreed on a series of steps and measures designed to measure, assess, and mitigate BOS in the Emory Critical Care Center (ECCC).

Significantly, almost all of the steps they took were either free or low cost, requiring leadership backing for new types of organization and new pathways of advancement.

First, a physician assistant and a critical care nurse were charged with surveying staff in the ECCC, using the Maslach Burnout Inventory and the Areas of Work-Life Survey. On the plus side, the survey found high scores among nurses and MDs for feelings of personal accomplishment, community, fairness, and value. However, nurses and MDs alike reported negative symptoms pertaining to emotional exhaustion, workload, and control, consistent with national trends in the field.

For nurses, the leadership took a series of steps to ease staffing pressure, from implementing self-scheduling to reducing floating of critical care RNs in non-critical care units. A new mentorship program is being developed, along with new forms of recognition for outstanding performance by nurses and physicians alike.

Other steps include developing new tracks for professional improvement, including a Clinical Ladder track to develop ethics expertise, with the goal of nurse retention.

One particular issue is a form of brain drain that results in nurses pursuing education in order to move up and out—into research or administration—and leaving direct patient care. Under consideration is the creation of a new position called a Clinical Nurse Leader—"a Masters-prepared RN specifically prepared to stay at the bedside in a new role focusing on quality outcomes, the quality-control process, maximizing safety standards, and participating in research and measurement of nursing-sensitive patient care outcomes."

Additionally, heightened communication is being regarded as critical to job satisfaction and retention. The center is creating monthly unit-based leadership interdisciplinary meetings. This includes the unit nursing director, unit medical director, lead affiliate, clinical nurse specialist, unit-based pharmacist, unit-based social worker, director for physical therapy, nutrition support team, and director for respiratory care. Other team members can be invited as appropriate.

Although it is too soon for year-to-year comparisons, feedback from ECCC staff has been positive.

Organizational focus

AHC leadership has the potential, through a wide range of organizational levers and incentives, to promote and encourage the development of resilience. As an outgrowth of the positive psychology movement, our new understanding of resilience recognizes our ability to nurture and grow the capacity of individuals to resist burnout. Resilience is promoted by rewarding and strengthening the traits of interest, purpose, practice, and hope. Leaders can recognize and encourage such positive development by practicing good stewardship and care of clinicians and staff at all levels.

Examples of burnout-mitigating leadership might include setting reasonable productivity expectations, supporting well-being and wellness initiatives, interpreting regulations and billing procedures wisely, adapting EHR systems to local needs and conditions (to the extent possible), measuring burnout and wellness metrics throughout the organization, and setting (and accepting) compensation plans in which well-being metrics are one important component of incentive targets.

A quote from one of the giants of American medicine reminds us that this is yet another area where doing the right thing for organizations and clinicians—minimizing time-consuming drudgery, maximizing professional concentration—is also the right thing for patients. "Medical care must be provided with utmost efficiency. To do less is a disservice to those we treat, and an injustice to those we might have treated," said Sir William Osler, in 1893.[29]

In search of joy in practice

A seminal study of 23 high-functioning primary care practices by Christine Sinsky and colleagues, sponsored by the American Board of Internal Medicine Foundation, identified several major areas of organizational change and improvement that could help restore what the authors call "joy in practice" and mitigate burnout.[51] The authors suggest that joy in practice results when physicians are able to concentrate on their fundamental calling in health care, which is "to create healing relationships with patients."

Tellingly, many of the changes and fixes instituted by high-performing groups take work off the shoulders of physicians and give it to others—including scribes, medical assistants, nurses, or office staff—who can perform it equally well or better, while physicians have precious hours freed up and can focus their attention on the patient. Transformative solutions to commonly encountered problems include the following:

- Pre-visit planning: organizing lab tests in time to ensure results are available for discussion and decision-making during the patient visit.
- Spreading responsibility for care: taking tasks away from the physician and assigning them to medical assistants, nurses, and health coaches. These members of the team can handle immunizations, screening and testing, and medication reviews.
- Let scribes help: In some practices, scribes, nurses, and/or medical assistants have offloaded two to three hours per day from MDs in patient documentation and computerized order entry. At Cleveland Clinic Strongville, primary care physicians are assigned either two medical assistants, or one medical assistant and one nurse. Daily visits increased from 21 to 28, revenue rose 20% to 30%, and satisfaction scores improved from all parties—patients, staff, and physicians. Said one physician: "I leave work earlier every day and have a very fulfilling relationship with my team … We're having fun."

Minimizing time-consuming drudgery and maximizing professional concentration for physicians is also the right thing for patients.

- Reengineer prescriptions: Give stable or chronically ill patients a year's worth of renewals, at the time of their annual conference visit.
- In-box management: Let nurses or medical assistants filter the flow of email to physicians, handling routine reports, requests, and renewals. Also, replace inbox messages with verbal messaging (i.e., talking to each other) for more thorough and efficient exchange of information between physicians and clinical staff. "Fairview Clinic in Minneapolis has decreased the in-box work from 90 minutes to only a few minutes per day for many physicians."
- Improve team functioning: Locate physicians and medical assistants side by side. Hold frequent team meetings. Minimize the need for e-mail tag. Use systems analysis to map more efficient workflows for complex offices.

Overall, Sinsky says, it is possible to save three to five physician hours per day through practice re-engineering, as these high-functioning practices have documented.[29]

Stanford WellMD Shows the Way[52]

Effective September 1, 2017, Stanford Medicine became the first AHC to appoint a chief wellness officer. Lloyd Minor, dean of the school of medicine, announced that Tait Shanafelt had been recruited from Mayo Clinic to serve as associate dean and director of the WellMD Center at Stanford Medicine.

The appointment followed six years of growing focus on the problem of burnout and well-being at Stanford, making it a leader in organized institutional responses to a problem that Shanafelt himself helped to document through a series of national surveys and published studies.

A hematologist and oncologist, Shanafelt was director of the Department of Medicine Program on Physician Well-being at Mayo, where he led initiatives that succeeded in reducing the rate of burnout.

"My experience has shown that an individual organization that is committed to this at the highest level of leadership and that invests in well-designed interventions can move the needle and run counter to the national trend of physician distress and burnout," Shanafelt said in a Stanford announcement. "I hope that the Stanford WellMD center becomes a paragon that other medical centers want to emulate."[53-56]

Internal surveys at Stanford, taken in 2013 and 2016, have reflected national trends, with one or more symptoms of burnout increasing from about 25% to 34%, while reported assessments of high professional fulfillment have decreased from 23% to 17%.

Stanford Medicine is committing major resources to tackling the issue, with annual funding of $1.8 million and the appointment of four FTEs in addition to Shanafelt. In October, Stanford sponsored the first biennial American Conference on Physician Health: Creating an Organizational Foundation to Achieve Joy in Medicine, in collaboration with Mayo and the AMA. The conference sold out, and the waiting list for any seats that might come open also had to be closed.

Minor explains that Stanford Medicine's approach to the problem began several years ago, with the development of its own survey instrument to assess physician well-being and burnout. Stanford defined the long-term challenge as having three dimensions: creating a culture of wellness; improving the efficiency of practice, which has led to ongoing work to revamp its EHR and to provide documentation assistance to physicians; and promoting personal resilience, which emphasizes the individual's own needs to pursue wellness practices.

Among a host of programs gathered under the "culture of wellness" rubric are a speaker series, a literature and medicine dinner series, music events, a women faculty networking group, classes in mindfulness and compassion cultivation, medical staff and house staff peer-support programs, an office of medical student wellness, and linkages to a variety of other Stanford wellness programs.

Societal focus—advocacy efforts

As noted earlier, some of the most onerous drivers of burnout are related to the growing burdens related to regulation, billing, compliance, certification, and meaningful use of the EHR. AHC leaders—individually and corporately—need to advocate continually for meaningful reductions in the burden of paperwork that serves no clear purpose in improving quality and safety for patients.

At the level of professional societies, we need to keep advocating for licensing and renewal protocols that do not stigmatize and undermine the prospects of good professionals who have done the right thing by seeking psychological or psychiatric care when needed. Recognizing the need for help and seeking it in a timely fashion is precisely one of the things we need most to encourage to fight this epidemic of burnout and even more damaging associated syndromes and consequences.

The BRAHG notes—and applauds—the leadership role being played by NAM in convening study and action groups aimed at addressing the problem of burnout. We also applaud the leadership of the AAMC in taking special interest in correctable features of the learning environment that impinge on all physicians, nurses, residents, students, and others within the AHC. In particular, we salute the leadership role played by our fellow member Darrell Kirch, president and CEO of the AAMC, who is co-chairing the NAM Action Collaborative on Clinician Well-Being and Resilience. We believe that the forthcoming national report from this collaborative, with buy-in from a growing number of leading industry, professional, and academic groups, may have a transformational impact similar to that of the IOM reports *To Err Is Human* and *Crossing the Quality Chasm.*

V. Recommendations

- Create awareness. Every CEO should begin to use his or her leadership platform to raise awareness of the burnout issue. Giving a name to the "burnout" syndrome so much of our workforce is experiencing and talking about it openly and without shame or stigma is a crucial first step. Acknowledge its existence. Insist on its importance.
- Spread happiness. CEOs have the unique ability to change the emotional temperature of virtually everyone they encounter. To the extent possible, they should always be mindful of these opportunities and always aim for positive impact with each encounter.
- Run it up the flagpole. Given our growing recognition of burnout as a personal, organizational, and patient threat, we need to elevate it to the top of every strategic planning session and strategic communication plan we formulate as organizational leaders. Make it a major initiative for the CEO and the organization. While specific metrics may need to be developed, current provider satisfaction and engagement scores are a good start. CEOs and the C-suite team should have incentives and risk built into their compensation for improvement. They should also be insistent and consistent that these same metrics become part of the responsibility and accountability of leaders throughout the organization. AHC leaders need to be prepared to define the impact of these issues on their own institutions and to articulate their importance in convincing and compelling terms.
- Measure better. Several attempts are under way in the health care sector to devise instruments that will quickly assess doctors, nurses, and other clinicians and health professionals for symptoms and warning signs of burnout. The key is to identify key factors associated with successful measurement and make these tools crisp, simple, and quick. It is also critical that such tools become well accepted and routine and that they confer no particular stigma or shame, no matter what the findings may be in any individual case. They must be used clinically, analytically, and routinely to promote the health of individuals, teams, and organizations—all for the sake of our professionals and our patients.
- Take the first step. Acknowledge this will be a multi-year journey requiring organizational focus and commitment to continuous improvement and adaptability. Acknowledge the truism of the Chinese proverb that no matter its length, this must begin with the short steps. Make the steps public and decisive, and insist that they will be followed with many more. Check in regularly. As organizations that are devoted to three principal missions—education, research, and health care—our changes must be multidimensional, including academic and organizational culture, content, and delivery of our curricula for all health professions and for the delivery of health care, with the ability to measure, change, and refine along all three axes.
- Learn the unique role of learning organizations. AHCs have a unique role to play, given their central role in educating and training students, residents, and fellows in medicine and all the health professions. An important feature is introducing the concept of "balance" in a professional life. AHCs shape the present and mold the future. Much of the work that has to be done will be in the form of new approaches to education and training. For instance, progress is being made through such innovations as the following[25]:

- Allowing, even encouraging, medical students to spend a year or two in a service program such as Teach for America before matriculating.
- Encouraging medical students to spend a year or two as medical scribes before matriculating. Not only do they become sophisticated in EHRs, they also develop critical team-based skills from a position other than that of physician.
- Replacing over-reliance on MCAT scores with more holistic approaches to admission—considering such issues as "distance traveled" from family of origin to medical school (a good index of grit), to situational judgment tests and interviews.
- Dividing large entering classes into smaller units of 40, encouraging participation in so-called societies or academies that provide a sense of community and social support.
- Abolishing the zero-sum competitiveness of traditional medical school culture by switching to pass-fail grading.
- Ensuring absolutely confidential access to wellness and mental health services and encouraging their use when needed.

- Elevate the fourth aim. The issue of promoting wellness in health care professions—the so-called fourth aim—is sufficiently important that AHCs should consider forming a national organization focused on this imperative. It would be analogous to the Institute for Healthcare Improvement (IHI), whose formation grew out of the National Demonstration Project on Quality Improvement in Health Care in the 1980s.[44] Today, the IHI has growing importance and influence not only in the U.S. but in many other nations around the world. We should aspire to nothing less in the fight to promote flourishing and joy in work and to mitigate burnout among our health care professionals.
- Focus on research. Work on understanding the causes and factors that lead to burnout and on active measures that can mitigate and prevent burnout, is just beginning. We still do not know nearly as much as we need to know about the human factor in care delivery and how we can promote flourishing instead of burning out at a systems level—including individuals, teams, and organizations. Many of the solutions that have been proposed have heuristic underpinnings instead of evidence-based validation.
- Advance along a broad front. There is a wide range of solutions that have proven successful in at least some settings. They range from relatively easy changes to ones that will require substantial reorganization.
  - One class of strategies, recommended by Bodenheimer and Sinsky[28] in a review of the Group Health Medical Home experience in Seattle,[57] involves a thoroughgoing redefinition of team roles, mitigating the frustration and burnout initially experienced by many physicians in trying to meet the massive new documentation and compliance requirements associated with the Triple Aim. Among them are engineering team-based approaches to patient care and documentation, using nurses and medical assistants as health coaches, redesigning clinical and office workflow to avoid wasted visits, and standardizing prescription refills, saving physicians up to five hours per week.
  - Practice at the top of one's professional license. Create the opportunity for all of the professions in our organizations to do best what they were trained for, working in teams and helping their colleagues and themselves to maximize their contributions to patient care and the advancement of practice through innovation.
  - Redesign professional positions to create a 20% window to focus on the subject of one's greatest passion or challenge; experience shows this percent of effort can be critical in making the difference between burnout and fulfillment.[58]
  - Redesign of reporting relationships: Many health care organizations are using "dyad" (physician and administrator) and "triad" (physician, nurse, and administrator) management models to recognize the breadth of the skill required to make complex clinical operations more effective. These models require specific role definitions for each member of the team and definitions of the rules of the road.
  - Redesign promotion and tenure criteria: positively, to incentivize personal well-being and the enhanced professionalism that reflects the mastery of "soft skills" related to heightened professionalism, collegiality, and community-building; negatively, to eliminate any stigma that might attach to seeking personal help when it is indicated.
  - Physically redesign spaces used by health care teams to allow the co-locating of physicians—i.e., semi-circular desks, printers in every room
  - Redesign of EHR (overlays and wholesale introduction of new, more user-friendly systems)
  - Create a C-suite office focused on well-being. Like the chief quality officer, the chief wellness officer should report directly to the CEO and represent the CEO's stature, credibility, and personal commitment to the cause of enhanced professional well-being as an institutional priority.

VI. Future Directions

Much of what we assume will mitigate burnout and promote professional well-being is intuitive or pragmatic. Evidence-based research is sorely lacking, at every level. We need a form of system engineering that will offer us much better insights into what and how we need to measure and how and when we should intervene. We need to identify and train appropriate experts, and we need to find the resources and funding to make this study a priority.

In 2016, the AMA convened a Joy in Medicine Research Summit, with 32 experts who were asked to establish a national research agenda. The six highest-scoring recommendations emerging from those discussions were the following[59]:

1. "Further establish the links between physician burnout, well-being, and health care outcomes." We need to understand better the relationships between burnout and quality of care. Do steps we might take to reduce physician burnout actually improve the experience and health outcomes of patients?

We need a form of system engineering that will offer us much better insights into what and how we need to measure and how and when we should intervene.

2. "Estimate the economic cost of physician burnout." How staggering is the sum of burnout-related medical error, malpractice litigation, physician turnover, reductions in work hours, and lower patient satisfaction? If we could calculate that toll, would it make a more compelling case for the changes and interventions we need to undertake?

3. "Build alliances to address physician burnout." Collaborations and partnerships that would propel tangible interventions could include academic and industry groups, private foundations, national agencies and funders, and patient groups.

4. "Use common metrics." There are at least eight tools and instruments being commonly used to detect and diagnose burnout, stress, satisfaction, engagement, and other related concepts.[34] A reliable, common tool should be developed to facilitate meaningful comparisons across occupations and groups and enable faster progress. It can be questioned whether there is a clear vocabulary or consistent measuring rod currently in use, making it difficult to generalize about findings, goals, and recommendations.[60]

5. "Develop a comprehensive framework for intervention with individual and organizational components." An integrated framework of interventions for both systems and individuals should be developed, encouraging healthful individual choices and even more important, beneficial organizational changes.

6. "Share the best available evidence." A toolkit of strategies that have proven to have at least some efficacy for individuals and organizations should be developed and shared widely.

VII. Rationale and Conclusion

Evidence is overwhelming that burnout is a clear and present danger to our own professional faculties, workforce, students, and trainees—as well as, potentially, to our patients. The human cost of not acting promptly and energetically is clear. The financial costs, while less clear, are still substantial. Mitigating burnout promises, in the long run, to reduce, not increase, the societal cost of health care. Admittedly, there will be some initial costs to redesign of spaces, reengineering workflow, investing in well-being and wellness programs and leadership—to name a few. In the long run, we will reap intangible as well as tangible benefits.

By acknowledging and reversing this tide of burnout, we will create transformative win/wins for our people and our organizations. Most important, we will become true magnet institutions, where our society's best want to come—to study, to teach, to heal, and to be healed.

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