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SPECIAL ARTICLE

Executive Leadership and Physician Well-being: Nine Organizational Strategies to Promote Engagement and Reduce Burnout

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Abstract

These are challenging times for health care executives. The health care field is experiencing unprecedented changes that threaten the survival of many health care organizations. To successfully navigate these challenges, health care executives need committed and productive physicians working in collaboration with organization leaders. Unfortunately, national studies suggest that at least 50% of US physicians are experiencing professional burnout, indicating that most executives face this challenge with a disillusioned physician workforce. Burnout is a syndrome characterized by exhaustion, cynicism, and reduced effectiveness. Physician burnout has been shown to influence quality of care, patient safety, physician turnover, and patient satisfaction. Although burnout is a system issue, most institutions operate under the erroneous framework that burnout and professional satisfaction are solely the responsibility of the individual physician. Engagement is the positive antithesis of burnout and is characterized by vigor, dedication, and absorption in work. There is a strong business case for organizations to invest in efforts to reduce physician burnout and promote engagement. Herein, we summarize 9 organizational strategies to promote physician engagement and describe how we have operationalized some of these approaches at Mayo Clinic. Our experience demonstrates that deliberate, sustained, and comprehensive efforts by the organization to reduce burnout and promote engagement can make a difference. Many effective interventions are relatively inexpensive, and small investments can have a large impact. Leadership and sustained attention from the highest level of the organization are the keys to making progress.

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THE CHALLENGE FACING HEALTH CARE EXECUTIVES

This is a challenging time for health care executives. Increasing price competition, narrowing of insurance networks, and a greater proportion of patients with noncommercial insurance (eg, Medicare, Medicaid) due to the Affordable Care Act have all resulted in declining reimbursements. In parallel, requirements for "meaningful use" of electronic health records have resulted in large capital expenditures and dramatically increased clerical burden for staff.[1,2] These financial challenges have, by and large, been addressed by increasing productivity expectations for physicians (ie, caring for more patients with the same amount of time/resources), efforts to improve efficiency, and expense reductions to decrease the cost of care delivered (doing more with less).

Health care organizations are also facing a variety of other threats. Increased mergers and consolidation of competitors place contracting at risk and are a perpetual, existential threat to organizational survival.[3] The implementation of new quality metrics and requirements for public reporting necessitates greater attention to measures of system safety and increased resources to count, track, and report these dimensions. The national shortage of nurses and physicians in many specialties makes it challenging to maintain adequate staffing.[4,5] Assessment of patient satisfaction and ubiquitous ratings of hospital "quality" creates incessant pressure to keep up with competitors in the technological "arms race" and to invest resources to maintain a state-of-the-art physical plant. Attacks from cyber criminals and nation states are a constant threat to information security as well as the trust of patients and the public.

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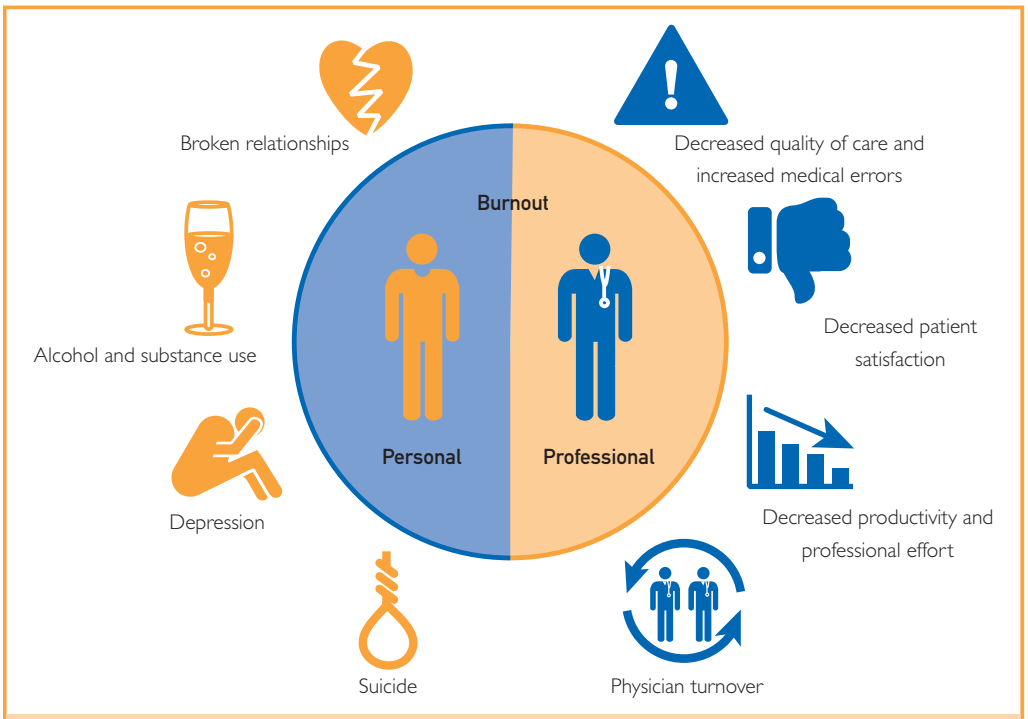

FIGURE 1. Personal and professional repercussions of physician burnout.

These myriad challenges often lead health care executives to focus on external threats. This can create a blind spot to equally important internal threats to organizational health. Successfully navigating the external challenges requires not only tremendous leadership but also committed and productive physicians working in partnership with leaders (who may or may not be physicians themselves). Executives need their physicians to be engaged, nimble, resilient, and invested in helping the organization improve quality, develop more efficient care delivery models, and enhance productivity.[6]

Unfortunately, today's health care leaders face these challenges with an increasingly exhausted and disillusioned physician workforce. National studies indicate that at least 50% of US physicians are experiencing professional burnout.[7,8] Burnout is a syndrome characterized by exhaustion, cynicism, and reduced effectiveness.[9] Burnout in US physicians has increased during the past decade and is dramatically higher than that of US workers in other fields.[7,8] The rate of burnout among physicians varies by clinical discipline, with many of the specialties at the front line of access to care (eg, family medicine, general internal medicine, and emergency medicine) at highest risk.[7] Although burnout can also affect nurses and other health care workers, the focus of this manuscript is the epidemic of burnout among US physicians.

IMPLICATIONS OF PHYSICIAN BURNOUT

There is a moral and ethical imperative to address burnout in physicians. Physician burnout contributes to broken relationships, alcoholism, and physician suicide.[10-16] In addition to the moral-ethical argument, there is a strong professional and business case to reduce physician burnout and promote physician engagement. Studies indicate that physician burnout influences quality of care, patient safety, and patient satisfaction.[17-24] Physician distress has also been linked to physician prescribing habits, test ordering, the risk of malpractice suits, and whether or not patients adhere with physicians' medical recommendations (Figure 1).[11,25-28] Based on these relationships, it has been argued that physician distress is an important quality indicator for medical centers to monitor.[29]

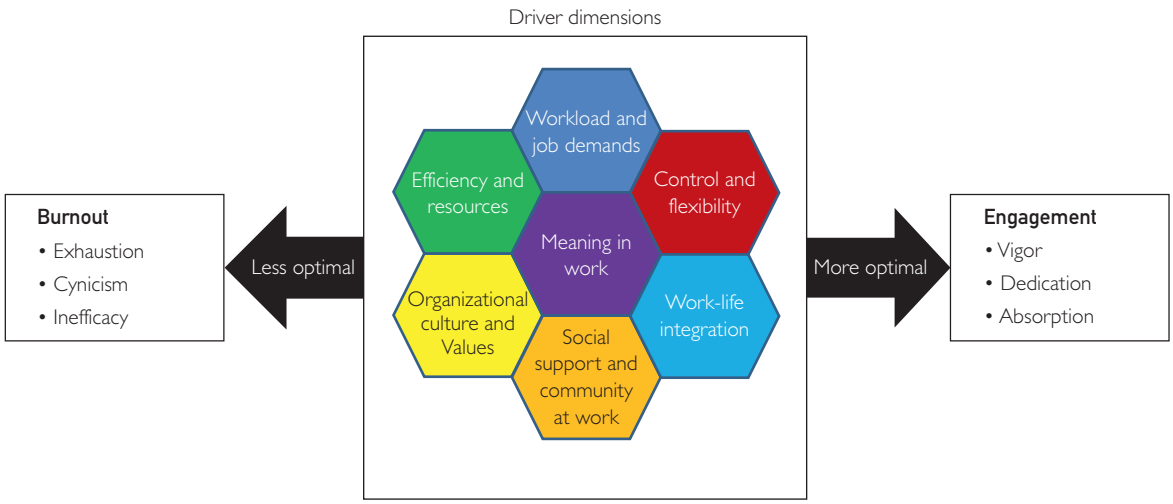

FIGURE 2. Key drivers of burnout and engagement in physicians.

Burnout also has strong links to physician turnover and professional work effort.[30-34] The costs of replacing a physician (recruitment, onboarding, and lost patient care revenue during recruitment, relocation, and ramp up) are estimated to be 2 to 3 times the physician's annual salary.[35-38] Even if physicians do not leave, burnout can have a potentially large effect on productivity. In a prospective longitudinal study of approximately 2000 physicians at Mayo Clinic, each 1-point increase in burnout (on a 7-point scale) or 1-point decrease in satisfaction (on a 5-point scale) was associated with a 30% to 40% increase in the likelihood that physicians would reduce their professional work effort during the next 24 months based on independent correlation with payroll records.[39]

A SHARED RESPONSIBILITY

Given the professional repercussions of physician satisfaction and burnout, health care organizations have a vested interest in cultivating physician engagement. Engagement is the positive antithesis of burnout and is characterized by vigor, dedication, and absorption in work.[40,41] Any health care organization that recognized it had a system issue that threatened quality of care, eroded patient satisfaction, and limited access to care would rapidly mobilize organizational resources to address the problem. Burnout is precisely such a system issue.[30,41] Extensive evidence suggests that the organization and practice environment play critical roles in whether physicians remain engaged or burn out (Figure 2). Although a host of factors can contribute to burnout and engagement, these can largely be grouped into 7 dimensions: workload, efficiency, flexibility/control over work, work-life integration, alignment of individual and organizational values, social support/community at work, and the degree of meaning derived from work.[39,42,43] Each of these dimensions is influenced by individual, work unit, organizational, and national factors (Figure 3).[39] Given this fact, reducing burnout and promoting engagement are the shared responsibility of individual physicians and health care organizations.[30,44,45]

Mistakenly,[46,47] most hospitals, medical centers, and practice groups operate under the framework that burnout and professional satisfaction are solely the responsibility of the individual physician. This frequently results in organizations pursuing a narrow list of "solutions" that are unlikely to result in meaningful progress (eg, stress management workshops and individual training in mindfulness/resilience). Such strategies neglect the organizational factors that are the primary drivers of physician burnout and are correctly viewed with skepticism by physicians as an insincere effort by the organization to address the

Drivers of burnout and engagement in physicians	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

FIGURE 3. Drivers of burnout and engagement with examples of individual, work unit, organization, and national factors that influence each driver. EHR = electronic health record; JCAHO = Joint Commission on the Accreditation of Healthcare Organizations. Adapted from *Mayo Clin Proc.*[39]

problem. Casting the issue as a personal problem can also lead individual physicians to pursue solutions that are personally beneficial but detrimental to the organization and society, such as reducing professional work effort or pursuing a concierge practice model. The fact that more than 50% of US physicians are now burned out underscores the need for a system-level strategy.[8,44,48,49] Herein we focus on organization-level strategies to reduce burnout and promote engagement.

NINE ORGANIZATIONAL STRATEGIES TO PROMOTE PHYSICIAN WELL-BEING

Although the framework of shared responsibility and the need for system-level solutions have begun to be recognized, 2 pervasive myths have been barriers to organizations taking effective action. The first is the belief that the steps necessary to cultivate physician well-being will conflict with other organizational objectives. The second is the assumption that all effective interventions to reduce burnout will be cost prohibitive. The reality is that an engaged physician workforce is requisite to achieving institutional objectives, that small investments can have a large impact, and that many effective interventions are cost neutral. Herein, we summarize 9 organizational strategies to promote physician well-being and highlight how we have operationalized some of these approaches at Mayo Clinic. We do not consider these principles to be exhaustive or definitive. Rather, they represent tangible organizational actions that are supported by evidence and experience.

Strategy 1: Acknowledge and Assess the Problem

Acknowledging the problem of burnout and demonstrating that the organization cares about the well-being of its physicians is a necessary first step toward making progress. We have been impressed by how much our staff appreciate open and candid dialogue directly with the chief executive officer (CEO) about the challenge of being a physician in today's world. It is important that these discussions are not rushed and are repeated more often than one initially imagines would be necessary. Depending on the size of the organization, a variety of formats is typically necessary to reach the staff. At Mayo Clinic, we have incorporated town halls, radio broadcasts, letters, and video interviews along with face-to-face meetings involving clinical divisions, work units, and small groups as formats for the CEO to reach the staff. Naming the issue and being willing to listen demonstrates that the problem is recognized at the highest level of the organization and creates the necessary trust for physicians and leaders to work in partnership to make progress.

Once the problem is acknowledged, it is necessary to measure physician well-being as a routine institutional performance metric.[29,49,50] Organizations measure the things that they believe are critical to achieving their mission. All medical organizations routinely assess patient volume, payer mix, quality/safety, patient satisfaction, and financial performance (cost, net operating income, etc). Overwhelming evidence indicates that physician well-being is equally important to the health and long-term viability of the organization, and, thus, it should be measured.

There are a variety of dimensions of physician well-being worthy of assessment, including: burnout, engagement, professional fulfillment/satisfaction, fatigue, emotional health/stress, and various dimensions of well-being/quality of life (Table). Organizations should select and assess several of these dimensions at regular intervals. Ideally, standardized instruments shown to correlate with outcomes of interest (eg, safety, quality, productivity, and turnover) should be used.[9,31,39,54,55,65,66] Using instruments with national benchmark data can also help provide context for interpreting results.[7-9,51,65,66] Tools that are applicable to other health professionals (eg, nurses) and other job types also allows comprehensive assessment of the organization rather than assessment of physician alone. At Mayo Clinic, we first began measuring the professional satisfaction of physicians (as well as our 60,000 other employees) in 1998, and we began systematically measuring burnout using standardized instruments in 2010. We also regularly measure engagement and satisfaction with work-life integration. Historically, we assessed these dimensions every 24 months, but we switched to annual assessment in 2016. We benchmark these measures against national data[8] and use the information as a barometer of

TABLE. Candidate Dimensions of Well-being for Organizations to Assess

Dimension	Potential standardized instruments to assess	No. of questions	National benchmarks for US physicians	Comparisons with the general population	Relevant to other health care workers[a]	Shown to correlate with relevant outcomes[b]	Select references
Achievement/professional fulfillment							
• Meaning	Physician Job Satisfaction Scale	5 or 36	Yes[c]	–	No	Yes	20,31,43,51
• Professional satisfaction	Empowerment at Work Scale	12	–	–	Yes	–	52,53
Burnout							
• Exhaustion	Maslach Burnout Inventory	2 or 22	Yes	Yes	Yes	Yes	7-10,22,39,54,55
• Cynicism	Oldenburg Burnout Inventory	16	–	–	Yes	–	47,56
• Inefficacy							
Engagement							
• Vigor	Utrecht Work Engagement Scale	9	–	–	Yes	–	57
• Dedication							
• Absorption							
Fatigue							
• Energy	Brief Fatigue Index	9	–	–	Yes	–	58
• Sleep	Epworth Sleepiness Scale	8	–	–	Yes	–	59
Stress							
• Work stress	Perceived Stress Scale	10	–	Yes	Yes	–	60,61
• Anxiety							
Quality of Life							
• Physical	Short Form Health Survey (SF)-8/SF-12/SF-36	8 or 12 or 36	–	Yes	Yes	–	62,63
• Mental	Linear Analogue Self-Assessment Scales	1-10	–	–	Yes	–	64
• Emotional							
• Social							
• Financial							
• Overall							
Composite well-being measures							
• Achievement/professional fulfillment	Well-being Index/Physician Well-being Index[d]	9	Yes[e]	Yes	Yes	Yes	65-67
	Mini-Z[f]	16	–	–	No	–	68
• Burnout							
• Work-life integration							
• Stress							
• Fatigue							

[a]Can be used in nurses and other health care professionals (eg, applied at the medical center, hospital, or system level).
[b]Relevant outcomes include quality of care, patient satisfaction, turnover, professional work effort, and suicide.
[c]Most recently 1999.
[d]Evaluates dimensions of meaning in work, burnout, stress, work-life integration, fatigue, mental/emotional quality of life, and physical quality of life.
[e]Most recently 2014.
[f]Evaluates dimensions of professional satisfaction, burnout, and stress.

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organizational health. The results are reported directly to the Mayo Clinic Board of Governors and Board of Trustees along with other key organizational performance metrics.

Although anonymous at the level of the individual, results are aggregated at the work unit level (eg, division/department) to allow executive leadership to focus attention and resources where they are most needed. Assessing these dimensions also allows us to evaluate their relationship with other key measures of organizational performance (financial metrics, safety/quality, physician turnover, and patient satisfaction).[39]

Strategy 2: Harness the Power of Leadership

Although the importance of leadership for organizational success is obvious, its direct effect on the professional satisfaction of individual physicians is underappreciated. Recent evidence suggests that the leadership behaviors of the physician supervisor play a critical role in the well-being of the physicians they lead.[20,69] A 2013 study of more than 2800 physicians at Mayo Clinic found that each 1-point increase in the leadership score (60-point scale) of a physician's immediate supervisor (division/department chair) was associated with a 3.5% decrease in the likelihood of burnout ($P < .001$) and a 9.1% increase in satisfaction ($P < .001$) for individual physicians after adjusting for age, sex, and specialty.[69] After adjusting for other factors, 11% of the variation in burnout and 47% of the variation in satisfaction between work units was explained by the aggregate leadership rating of the work unit supervisor as assessed by their physician reports.

Harnessing the power of effective leadership to promote individual and organizational health requires several steps. First, the right leaders must be selected. This selection should focus on identifying individuals with the ability to listen to, engage, develop, and lead physicians.[70] Second, these individuals must themselves be developed, prepared, and equipped for their leadership role.[71,72] Several experts have characterized the core competencies for physician leaders,[70,73-77] and progressive institutions have developed formal strategies to identify, develop, and equip physician leaders.[70,73,74,78-81] Third, the performance of leaders should be regularly assessed by the individuals they lead. Although this seems intuitive, the leaders of many health care organizations are assessed solely based on whether they deliver on organizational performance targets. We believe that leaders must be assessed based on whether they achieve such targets as well as the way in which they do so (as evaluated by the people they are leading). Our physicians now evaluate the leadership behaviors of their immediate supervisors annually using the scale in the Supplemental Table which has been shown to correlate with burnout and satisfaction within the work-unit (available online at http://www.mayoclinicproceedings.org). This information is used for leaders' yearly performance review with executive management.

To be effective, leaders must also recognize the unique talents of the individual physicians on their team and know what motivates them.[82] Evidence suggests that physicians who spend at least 20% of their professional effort focused on the dimension of work they find most meaningful are at dramatically lower risk for burnout.[83] Although each 1% reduction below this threshold increases the risk of burnout, there is a ceiling effect to this benefit at 20% (eg, spending 50% of your time in the most meaningful area is associated with similar rates of burnout as 20%).[83] This suggests that physicians will spend 80% of their time doing what leadership needs them to do provided that they are spending at least 20% of their time in the professional activity that motivates them. This activity could involve caring for specific types of patients (eg, the underserved) or patients with a given health condition (eg, becoming a disease expert) or activities such as patient education, quality improvement work, community outreach, mentorship, teaching students/residents, or leadership/administration. To harness this principle, leaders must know what that 20% activity is for each of their physicians so that they can facilitate professional development in that dimension and identify opportunities that may allow the individual to increase the time they devote to this activity. In our experience, few leaders seek such information. Furthermore, we find that few physicians can articulate in a granular way

which professional activity is most meaningful to them when first asked. This represents a missed opportunity for individual physicians and leaders to work together to foster engagement, professional development, and professional fulfillment.

Organizations must also have the courage to make leadership changes when necessary. In most organizations, a leader who consistently underperforms on financial metrics will be removed from leadership. In the same way, leaders who continue to receive low leadership behavior scores from those they lead despite appropriate support, coaching, and mentorship may be ill-suited to lead physicians, and a leadership change may be required.

Strategy 3: Develop and Implement Targeted Interventions

Although the drivers of burnout have been defined (Figure 2), the specific way in which they manifest and which dimension is dominant varies by specialty and work unit. For example, inefficiency in the practice environment (including clerical burden) is a universal driver of dissatisfaction and burnout, but how it manifests and the specific factors that create inefficiency vary widely among surgical, primary care, radiology, and pathology work units (and among organizations).[84-90] Although general principles can be established (eg, we aim to minimize clerical burden and maximize physician efficiency), this variability makes it challenging for executive leaders to effectively address burnout at the enterprise level. Many of the challenges and solutions are local.[91]

Using the framework of the existing organizational structure in combination with strategy 1 (assessment) and strategy 2 (leadership) can overcome this dilemma.[6] Information on the prevalence of burnout, engagement, and satisfaction at the division/department level (strategy 1) allows senior leaders to identify "high-opportunity work units." At Mayo Clinic, rather than identifying high-opportunity work units using relative criteria (eg, the lowest-scoring 10% of work units on well-being—related metrics at our institution), we categorize units as high-opportunity based on external benchmarks.[8] For example, in 2013 we designated divisions/departments with burnout rates higher than the national average[7] and satisfaction below the 50th percentile relative to other US organizations as high-opportunity work units.[6] Once identified, we systematically engaged these units to identify local factors that could be rapidly altered to improve physician burnout and satisfaction.[6] This interaction was based on the principle of participatory management, collaborative action planning, and understanding how the drivers of burnout were manifest locally. The framework of the intervention is described in Figure 4. This process can also be used to drive improvement in work units that do not meet the criteria of being a high-opportunity unit. The process is structured to transition away from generalities regarding burnout, focus on the specific issue(s) in the local work unit, and identify, develop, and implement an initial intervention. This approach helps transform physicians' mindset from that of a victim in a broken system to an engaged and empowered partner working constructively with leaders to shape their own future.

Among the 7 Mayo Clinic work units with analyzable data that went through this process after the 2013 survey, all 7 had an improvement in burnout (median change 11% absolute reduction in burnout; range 4%-46% reduction), and 5 also had an improvement in satisfaction (median change 8% absolute improvement).[6] Notably, at the conclusion of the intervention, 6 of these 7 work units no longer met the criteria initially used to identify high-opportunity work units.

Because our criteria to identify high-opportunity units are based on external benchmarks, it is theoretically possible to have no work units qualify as high opportunity. This characteristic avoids the possibility that a unit moves out of the high-opportunity category simply because other units got worse. We have used these qualities to set measurable institutional objectives. Given its vital importance to organizational health, one of us (J.H.N.) has incorporated goals related to these parameters into the annual CEO performance scorecard evaluated by the Mayo Clinic Board of Trustees. Specifically, this goal is to have at least 50% of high-opportunity work units improve to the extent that they no longer qualify as high-opportunity units within 12 months. Achieving this goal means that a

	Assemble Team • *Identify* a leadership consulting team of 2-3 physicians and administrators with expertise in leadership and physician engagement.[a]
	Team Meets with Work Unit Leaders • Get insights regarding the specific local challenges from the perspective of local leadership team.
	Focus Groups • Team subsequently conducts 2-3 focus groups (60 min each) with physicians (n=7-8) in the work unit. • Introduction: *"We are here because..."* • Provide framework for discussion by briefly (2 min) articulating the drivers of burnout/engagement (Figure 2). • Ask individuals to succinctly articulate the macro factors that are larger than the work unit contributing to this challenge (EHR, reimbursement issues, etc). State that these comments will be recorded and collated with comments from other units for senior leaders to consider. Most of these challenges (eg, improving the EHR) are not easily solved, and limited time (<5 min) should be spent on this aspect of the discussion. The goal is to acknowledge these challenges/issues that are beyond the control of the work unit and for the consulting team to share them with the higher-level leaders in the organization responsible for these aspects. • The remaining 50 min should focus on identifying specific, local challenges and solutions. Ask which of the 7 driver dimensions (Figure 2) is viewed as the most pressing challenge in the work unit (eg, inefficiency due to excessive clerical burden). Have participants articulate specific ways this manifests (eg, *there is no triage or filtering of messages received through the patient portal; the operating room turnaround times are too slow*). Let this be granular. • Once the driver dimension of greatest current concern is identified, ask "What changes could be made to address this problem rapidly if your work unit and its leaders made it a priority?" Obvious solutions that involve changes to process and more effective use of support staff are often identified with good facilitation. Simplistic solutions (eg, *"we need to hire 10 more nurses"*) should be both acknowledged and challenged (eg, *"That may be worth pursing but that takes time and requires development of the business case. Are there ways we could harness the existing support staff to provide this support more quickly? Are there other ways to make progress in the near term while permission to increase support staff is pursued? What could we do to make our lives better in the next 2-3 mo?*)."
	Passing the Baton Back to the Work Unit Leader • Consulting team debriefs the local work unit leader regarding the 1-2 dimensions of greatest concern identified during the focus groups. Highlight the dimension of greatest concern (eg, inefficiency due to excess clerical burden) and give examples of how it manifests. Provide examples of the types of local changes the groups felt would be most helpful. • Charge to the local work unit leader: empower your team to develop and implement one change designed to make progress in this dimension. The consulting team should emphasize to the local work unit leader that it is critical that the specific change to be implemented is selected and developed by the physicians in the unit (not the local work unit leader and their leadership team).
	Work Unit Leader Facilitates the Change • Local work unit leader leads remaining aspects of the process. This establishes that the local work unit leader is spearheading the changes necessary to improve the unit. The leadership consulting team's job transitions to coaching and supporting the local work unit leader (behind the scenes). • Local work unit leader meets with work unit members. Thanks them for their participation and feedback in focus groups; articulates that, although there are multiple challenges, the consensus from the focus groups was to start by trying to improve dimension *x*. Name the person they have asked to lead the task force that will go deeper to help develop and implement a change intended to make an improvement in this dimension over the next 8-10 wk. • Local work unit leader empowers task force (with appropriate guardrails) to develop and help operationalize the idea developed by the group.
	Typical Outcomes • Once the change is implemented, assess the impact. Did the change help? Are revisions/refinements needed? • Even if the intervention did not lead to the hoped for improvement, the process itself may nonetheless reduce burnout and promote engagement. The change made was derived from the input and idea(s) of the work unit members; they were empowered to develop and try it. They can now move forward and try something else. • Move on to the next dimension for improvement and repeat the process.

FIGURE 4. A stepwise process for targeted work unit interventions. [a]This process can also be applied to other units that do not meet the high-opportunity criteria, and, in such cases, it may be possible for some steps performed by the consulting team to be performed by work unit leaders. EHR = electronic health record.

division/department that is down will not be down for long. Using an objective external benchmark also makes it possible for the organization to try to drive down the total number of high-opportunity work units in an iterative manner over time (eg, reduce the number of high-opportunity work units by 10% every 12 months). These are strategic metrics that can be measured as a target to evaluate the performance of senior management.

Strategy 4: Cultivate Community at Work

Physicians deal with unique challenges (eg, medical errors, malpractice suits) and have a professional identity and role that is distinct from other disciplines.[11,92-94] Peer support has always been critical to helping physicians navigate these professional challenges. This support can be formal[95,96] or informal[97] and encompasses a wide range of activities, including celebrating achievements (eg, personal and professional milestones), supporting one another through challenging experiences (eg, loss of a patient, medical errors, a malpractice suit), and sharing ideas on how to navigate the ups and downs of a career in medicine.[11,22,92-94,98-100]

Historically, such interactions happened somewhat organically during the course of discussing interesting/challenging cases or spending time together in the physicians' lounge. In our experience, these interactions have been an unintended casualty of increasing productivity expectations, documentation requirements, and clerical burden. Well-intentioned efforts to create a more egalitarian environment have also led many organizations to eliminate formal spaces for physicians to interact (eg, physicians' lounge or dining room) without recognizing the important role that this dedicated space played in fostering interpersonal connections among physicians. Collectively, these changes have led to an erosion of peer support and a greater sense of isolation for many physicians.

Deliberate organizational strategies are needed to counter the forces eroding connection with colleagues.[101] Around the same time that many institutions were eliminating their physicians' lounge (eg, 2001), we introduced a dedicated meeting area with free fruit and beverages, computer stations, lunch tables, and limited food for purchase for the 2000 physicians, scientists, and senior administrators at our Rochester campus as part of an ongoing building project. The space so rapidly became an incubator for peer interaction and comradery that within 3 years we remodeled existing space to create similar rooms at a second location in Rochester as well as on our Florida and Arizona campuses.

We have also experimented with other ways to promote community at work. In 2012, a randomized trial at Mayo Clinic found that providing physicians with 1 hour of protected time every other week to meet with a small group of colleagues and discuss topics related to the experience of physicianhood improved meaning in work and reduced burnout.[102] A follow-up trial evaluated a revised format to make these COMPASS (COlleagues Meeting to Promote And Sustain Satisfaction) groups more cost-effective and scalable. Participating physicians signed up with a group of 6 to 7 colleagues, shared a meal together at a restaurant in town once every 2 weeks, and spent the first 20 minutes of that gathering discussing a question that explored the virtues and challenges of being a physician.[103] Funds to cover the cost of the meal were provided by Mayo Clinic. The randomized trial again found that these meetings with colleagues led to an improvement in both meaning in work and burnout for participants.[103] Based on this evidence, Mayo Clinic made COMPASS groups available to all 3755 Mayo Clinic physicians and scientists across our organization in October 2015. More than 1100 of our physicians and scientists joined a group in the first 10 months.

Strategy 5: Use Rewards and Incentives Wisely

People can be motivated by rewards. To harness this principle, many health care organizations have linked physicians' financial compensation to productivity.[104] In some settings, physicians' income is entirely based on productivity, and in others it is structured as a base salary with a productivity bonus.[105-107] Physicians are not salespeople. Although some variation in productivity (eg, patient volumes and relative value unit generation) can be attributed to physicians' experience, efficiency, and skill, such variation is relatively narrow. Physicians in an equally

efficient practice environment primarily increase productivity or revenue generation in 3 ways: (1) shortening the time spent per patient, (2) ordering more tests/procedures, or (3) working longer. The first 2 approaches may erode quality of care, and the third approach increases the risk of physician burnout and may, therefore, be self-defeating in the long run. Consistent with this notion, evidence suggests that productivity-based compensation increases the risk of physician burnout.[22,108]

To mitigate the potential negative effects of productivity-based pay, some medical centers have incorporated other dimensions (eg, patient satisfaction and quality measures) as part of the productivity-based pay formula.[107,109-112] Although incentivizing quality rather than only productivity/volume may better align with the mission of health care, the effectiveness of financial incentives in improving quality is far less clear,[113-117] can have unintended consequences,[113,117-119] and does not address the third potential problem of productivity-based physician pay: the incentive to overwork. Physicians may be particularly vulnerable to overwork due to high levels of education debt, their desire to "do everything for their patients," unhealthy role modeling by colleagues, and normalization of extreme work hours during the training process. Salaried compensation models are a way to overcome this issue.[107] Other innovative centers have begun to incorporate dimensions of self-care and well-being as part of the formula to calculate productivity-based pay, which may provide a safeguard to counter the incentive to overwork.

A final dimension of productivity-based compensation to consider is what "carrot" is used as a reward.[113,114] Rewards such as greater flexibility (which can facilitate work-life integration) or protected time to pursue personally meaningful aspects of work (eg, quality improvement work, community outreach, research, education, or mentorship) may allow more productive physicians to shape their work to create personal and professional fulfillment. In contrast, using a simple financial incentive may be less effective[112-114] and encourage overwork that erodes meaning and fuels burnout. Ultimately, there is no right or wrong model of compensation. It is important, however, to recognize the potential risks of each model, deliberately consider how they will be mitigated, and structure compensation in a way that facilitates individual and organizational health over the long-term.

Strategy 6: Align Values and Strengthen Culture

Most health care organizations have an altruistic mission statement that centers on serving patients and providing them the best possible medical care. An organization's culture, values, and principles in large part determine whether it will achieve its mission. It is critical for organizations to (1) be mindful of factors that influence culture, (2) assess ways to keep values fresh, and (3) periodically take stock of whether actions and values are aligned.

Mayo Clinic has a long-standing value proposition that "the needs of the patient come first" as well as a mature organizational culture that supports this value.[120] This culture is, in part, built on principles such as physician leadership, salaried physicians, physician-administrator partnership, a multidisciplinary approach to team-based care, "term limits" for all leaders (including the CEO), and organizational policies that cultivate long tenure and low turnover.

To facilitate honest self-appraisal, we ask our people to evaluate how well we live out our values through our all-staff survey. Although the commitment of our staff to the organization on this survey has been unwavering during the past 20 years, other aspects of this feedback are not always flattering. At the time of our 2011 staff survey, we received feedback from our physicians that they perceived erosion in the commitment of Mayo Clinic to its staff. In response, the Mayo Clinic Board of Governors commissioned a task force of physicians and scientists to identify where we had gotten off course.

During an 18-month interval, this task force engaged our physicians, scientists, and senior leaders in a dialogue designed to articulate our shared values and affirm that we were working toward a common goal. The task force initially used this input to create a working document that identified the 11 key components of our shared commitment, indicated why each component was important to both physicians

and the organization, and gave examples of how these characteristics shaped our culture. This document was then refined based on surveys and focus groups with physicians from across the entire organization. All Mayo Clinic physicians and scientists were then given the opportunity to review the final document and provide feedback on whether it captured what mattered most to them about the organization and to indicate the dimensions where we were not living up to our ideals. The approximately 2000 physicians and scientists who responded overwhelmingly endorsed (>95%) that the document captured the key components of the relationship between Mayo Clinic and our physicians and scientists. They also provided feedback indicating the 3 dimensions most needing improvement to better live up to our aspirations. The final document was subsequently endorsed by the Mayo Clinic Board of Governors, who also received the feedback on which dimensions were most in need of improvement. This process of value alignment helped affirm that 1) the organization and physicians are partners working toward a common goal, 2) provided candid feedback on where we needed to improve, and 3) created an enduring document that articulates the principles that form the foundation of the partnership between Mayo Clinic and its physicians (Supplemental Figure, available online at http://www.mayoclinicproceedings.org). This document is now used for recruitment and onboarding, as a recurring touchstone for communications, to identify areas needing improvement, and as a source of principles to guide organizational decision making.

Strategy 7: Promote Flexibility and Work-Life Integration

A host of organizational policies are linked to the drivers of burnout and can have a profound effect on physician well-being. Given their broad impact, the intended and unintended consequences of these policies must be thoughtfully considered and periodically reevaluated. Two aspects particularly important to physician well-being are policies related to flexibility and work-life integration.[121]

Physicians are nearly twice as likely to be dissatisfied with work-life integration as US workers in other fields. This problem is likely, in part, explained by differences in work hours. Approximately 45% of physicians work more than 60 hours per week compared with less than 10% of US workers in other fields.[7,8] The high work hours expected of a full-time position in medicine make it difficult for physicians to integrate their personal and professional lives. These challenges may be even more problematic for women physicians due to different cultural and societal expectations.[7,122-124]

Providing physicians with the option to adjust professional work effort (with a commensurate reduction in compensation) allows them to tailor their work hours to meet both personal and professional obligations.[39,125-130] Evidence suggests that reducing professional work hours can help individual physicians recover from burnout.[131] Depending on the specialty and the size of the organization, it may not always be possible for a physician to work less than full time. Nonetheless, organizations should seek to make this option available to the greatest extent possible. Given the large anticipated physician workforce shortage over the next 10 years,[4,5] providing the option to work less than full time may become an increasingly important strategy for recruitment and retention.

Perhaps even more important, organizations should seek to provide physicians greater flexibility in when and how they work.[39,121] Allowing physicians to start the work day earlier/later or to work longer hours on certain days of the week and shorter hours on others may allow individual physicians to meet personal responsibilities without having to reduce total work effort. This is typically preferable to the organization than having a part-time physician and can represent a win-win for both the individual and the organization. Declarative statements (eg "we have to staff the clinic on Friday" and "it is too complicated to match the work schedule of support staff") are frequently used as pretexts to close down discussion rather than being legitimate barriers. These needs can typically be easily accommodated in an equitable manner if explored and discussed as a team.

Institutions should also comprehensively examine the structure of their vacation benefits, coverage for life events (eg, birth of a child, illness/death in family), approach to

scheduling, and strategy for coverage of nights and weekends. Compensation practices that disincentivize using vacation time are short-sighted and should be eliminated.

Strategy 8: Provide Resources to Promote Resilience and Self-care

Although the primary focus for organizations should be to optimize the practice environment and create a healthy organizational culture, they should also provide resources that make it easier for physicians to implement individual strategies to prevent burnout, deal with distress, and promote well-being.[44,49,132-134] Unfortunately, most medical centers have made such individual offerings the centerpiece of their strategy. When individually focused offerings are not coupled with sincere efforts to address the system-based issues contributing to burnout, this approach is typically met with skepticism and resistance by physicians ("they are implying I am the problem"). In this context, the response to well-intentioned "resilience training" is frequently a cynical one ("you only want to make me more resilient so you can further increase my workload"). For this reason, it is important that such individual offerings are part of a broader strategy that demonstrates that the organization is also doing its part to address issues in the system and environment.

Providing individual physicians with tools for self-calibration, resources to promote self-care, and training in skills that promote resilience are 3 tangible ways that organizations can help individuals care for themselves. The available data indicate that individual physicians do not accurately calibrate their personal level of well-being/distress and suggest that providing them objective information on how their well-being compares with that of physicians nationally helps promote behavior change.[67] Linking such tools for self-calibration to resources may help physicians take action. Such resources should be comprehensive and address work-life integration, exercise/fitness, sleep habits, diet, personal financial health, relationships, hobbies, and preventive medical care.[44,50,133,135-137] Physicians who take better care of their own health have been found to provide more optimal counseling and screening practices to their patients; this suggests that encouraging these behaviors in physicians may have a double benefit.[138-140] Skills training in tasks related to resilience, positive psychology exercises, mindfulness, narrative medicine, and approaches to work-life integration should be offered.[101,134,141-143]

Strategy 9: Facilitate and Fund Organizational Science

Instituting operational efforts to reduce burnout and promote physician engagement will be the primary objective for most medical centers. Vanguard institutions, however, have the additional responsibility of developing the evidence-based strategies that these other centers will implement. The Mayo Clinic Program on Physician Well-being, founded in 2007, was launched precisely to provide such evidence. Many of the approaches outlined in strategies 1 through 8 are derived from the scientific efforts of this program during the past decade. These efforts have included developing new metrics, establishing national benchmarks, implementing practice analytics, and conducting intervention studies and randomized trials, which have resulted in

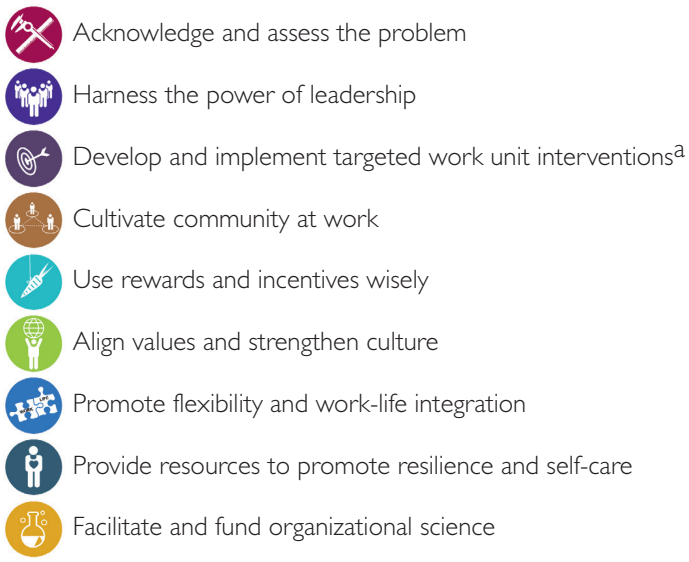

FIGURE 5. Organizational strategies to reduce burnout and promote physician engagement. [a]Often will focus on improving efficiency and reducing clerical burden but should focus on whichever driver dimension (Figure 1) deemed most important by members of the work unit (Figure 3).

approximately 100 peer-reviewed publications. Other leading institutions, such as the Stanford University School of Medicine/Medical Center, have recently made a major institutional investment in launching a similar program, and it is time for other premier institutions to follow suit. As opposed to employee assistance programs or offices/committees on physician wellness that provide support to physicians already experiencing distress, the focus of such programs is the creation of new knowledge and evidence on how to reduce burnout and promote engagement in physicians through organizational science. Given the profound effect of physician well-being on quality of care, patient satisfaction, and access to care, such knowledge will be critical to the long-term health and viability of the nation's health care delivery system.

THE MAYO CLINIC EXPERIENCE

Our experience at Mayo Clinic demonstrates that deliberate, sustained, and comprehensive efforts by the organization to reduce burnout and promote engagement can make a difference. Between 2011 and 2013, the rates of burnout among our physicians went from lower than average to similar to that of physicians nationally.[7] In response to this increase, a host of changes were pursued, including several of the strategies articulated herein (Figure 5). In the following 2 years, the absolute burnout rate of our physicians decreased by 7%, despite an 11% rise in the absolute rate of burnout in physicians nationally using identical metrics.[8] This reduction in physician burnout at Mayo Clinic was achieved while simultaneously reducing the rates of burnout in our nonphysician employees and despite having to implement a variety of other changes to improve efficiency, decrease costs, and increase productivity during the same interval. Although we are gratified that the rate of physician burnout at Mayo Clinic is currently approximately two-thirds the rate nationally (32.9% vs 48.8%),[8] burnout still affects approximately one-third of our physicians. We have more work to do.

Conclusion

Addressing the problem of physician burnout is the shared responsibility of individual physicians and the organizations in which they work. Having an engaged physician workforce is critical for health care organizations to meet institutional objectives and achieve their mission. Given the strong links to quality of care, patient safety, and patient satisfaction, there is a strong business case for organizations to reduce physician burnout and promote physician engagement. Although some factors driving burnout are larger than the organization, organizational-level efforts can have a profound effect on physician well-being. Herein, we have outlined 9 organizational strategies to reduce burnout and promote engagement along with examples of how these strategies have been operationalized at Mayo Clinic. Many effective interventions are relatively inexpensive, and small investments can have a large impact. Although the specific way each of these 9 strategies is operationalized must be adapted to fit the organization, we believe that the dimensions themselves have broad applicability. Leadership and attention from the highest level of the organization are the keys to making progress.

Supplemental Online Material

Supplemental material can be found online at http://www.mayoclinicproceedings.org. Supplemental material attached to journal articles has not been edited, and the authors take responsibility for the accuracy of all data.

Abbreviations and Acronyms: **CEO** = chief executive officer; **COMPASS** = COlleagues Meeting to Promote And Sustain Satisfaction; **EHR** = electronic health record; **JCAHO** = Joint Commission on the Accreditation of Healthcare Organizations; **SF-8/SF-12/SF-36** = 8-/12-/36-Item Short Form Health Survey

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