Burnout: Economic Consequences for Physicians and Health Systems

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Burnout in physicians is an increasingly recognized phenomenon, with multiple studies estimating an incidence of at least 50%.[1-3] Burnout was nearly twice as common among physicians compared with US workers in other fields even after adjusting for age, sex, relationship status, level of education, and hours worked per week.[4] In a study of neurosurgeons, 70% would choose our specialty again and the burnout rate was 56%.[5] The symptoms of burnout – emotional exhaustion, depersonalization/cynicism, and reduced sense of accomplishment and inefficacy[6,7] – can affect trainees and experienced physicians, lead to serious personal and professional consequences, and contribute to poor patient care[8]. There may be an association between burnout and the increased risk of suicide in physicians versus the general population.

The literature surrounding burnout in the health care sector has expanded significantly over the past few years, with much focus on downstream effects on individual providers and patient care. However, until recently, the potential economic consequences to both physicians and health care systems have largely been ignored. Accurate information on the economic cost of physician burnout to health care organizations may help motivate systematic organizational level efforts to improve physician wellbeing.[4,9]

Current strategies to address the problem of burnout across health care systems focus almost entirely on change at the individual level. System-wide initiatives and rewards for behaviors (stress reduction, mindfulness, structured exercise, etc) that improve overall health are dependent upon individual participation. 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 problem.[3] Also, for many neurosurgeons, these interventions simply do not fit within the demands of daily practice and are inconvenient or ineffectual. Responsibility for wellness must be shared. Individual-focused and structural or organizational interventions can reduce physician burnout, and both strategies are probably necessary.[10] Improving our understanding of the economic effects of burnout, for both the neurosurgeon and the hospital, has the potential to alter the approach to wellness and improve buy-in from multiple perspectives.

Physicians suffering from burnout are more likely to leave medicine.[11-14] High burnout scores are also significantly associated with intentions to leave a current position.[15] In a study of academic physicians at Stanford, those suffering burnout had an odds ratio more than 2.5 of leaving the institution over the next 2 years, independent of specialty, work hours or individual history of anxiety or depression.[9] Studies at other academic centers have reported similar findings.[11] For those who have invested years in their education, training and practice, the toll of leaving medicine is difficult to quantify but certainly real. It is also difficult to estimate the cost to the overall care team when, for example, a surgeon with particular expertise leaves. This often lead to decreased patient referrals, reduced production from other members of the team, and lost revenue during the start-up phase of the replacement surgeon. Return to prior levels of productivity may take a considerable amount of time, particularly if the departing physician is replaced with someone more junior. Prospective studies demonstrate that the turnover of any

member of the care team increases the risk of burnout among all other members of the care team over the next 12 months even if someone is hired to replace that individual.[4,16]

Multiple studies have quantified physician replacement cost, with estimates ranging from the hundreds of thousands to millions of dollars per physician. Considering recruitment, onboarding, lost patient care revenue during recruitment, relocation, and ramp up replacement costs are estimated to be 2 to 3 times the physician's annual salary.[3,17-20] In the Stanford study, based on institution-specific replacement cost and rates of turnover secondary to burnout, the minimum estimated two-year economic loss due to physician departure – at one academic institution alone – will range between $15,544,000 and $55,506,000.[9] Modeling similar data on a national scale, based on physician turnover and reduced productivity, Han et al[21] estimated costs of approximately $4.6 billion per year are attributable to physician burnout in the United States. This is likely a conservative estimate as quantifying the cost of other variables with known relationships to physician burnout – poor patient outcomes,[4,22] decreased patient access, reduced patient satisfaction,[23-26] loss of patients to other systems, to name a few – remains challenging.

In addition to the expense of physician replacement, reduced productivity in providers with burnout may be responsible for more lost revenue than turnover. In a Mayo Clinic study, even 1-point changes in burnout or physician satisfaction were associated with significant increases in decreased production over the following 24 months.[27] This has the potential to affect all types of health care systems – academic, hospital employed and private practice. On top of reduced revenue for the individual, lost productivity results in downstream decreases in utilization for multiple hospital services. For neurosurgery, this has the potential to affect operating room revenue and hospital bed utilization, anesthesiology, physical/occupational therapy, radiology, and other professional services (neurology, physical medicine, interventional pain, ICU care, etc). Given the considerable downstream clinical revenue attributable to one neurosurgeon, the potential indirect cost of burnout is high.

This does not take into consideration the economic cost of other lost opportunities as a result of diminished engagement at work, things like reduced mentorship of residents and junior faculty, decreased grant funding and reduced academic output. Furthermore, physicians who are burned out are more likely to make mistakes, be involved in malpractice suits and have patients who are less likely to follow medical recommendations.[3,28-31] In the current environment of ever expanding quality metrics and increasing competition, organizations cannot afford to have a portion of their physician workforce providing suboptimal care.

Reducing burnout has the potential to lead to substantial savings, but where do we start? The first step is acknowledging there is a problem. Many executives are unaware there is a substantial economic cost to physician burnout.[4] A group of 10 CEOs of leading U.S. health care organizations recently "unanimously concluded that physician burnout is a pressing issue of national importance"[32] and called on other leaders to commit to addressing it.[21] This is a step in the right direction but many gaps, and related patient care near misses, in the current health care system are currently addressed only through the heroic efforts of individual providers. Individual problem solving is less expensive, at least in the short term, than system fixes. Also, committed physicians frequently take responsibility to address systems issues affecting their patients, often at personal cost. This situation, particularly when combined with poor organizational

commitment, a known risk factor for burnout,[15] is a set up for non-sustainability and eventual discontent and disengagement.

Next, it must be clear to health care executives that return on investment (ROI) made to address the burnout epidemic justifies costs. There is increasing evidence[3,4,8] that this is true but many institutions have nonetheless been slow to respond. Recognizing organization specific risks and defining wellness at the local level provides data to drive interventions and reduce costs. To do this, some centers have developed wellness centers and directors responsible for the overarching goal of wellness within the organization. Physician surveys can be used to provide objective feedback for the health system and used along with published tools[4] to estimate institution specific costs. Similar to other quality metrics used to evaluate organizational robustness, evaluating physician wellness on a regular basis is justified and necessary.[33] In an era of declining reimbursement and fixed or increasing costs, any opportunity for significant savings should be realized.

In summary, burnout affects much more than individual providers. Patient care, turnover, productivity, and organizational health are all adversely influenced by burnout, and this leads to substantial costs for the health care system. It is important that physician leaders recognize their responsibility for educating executive colleagues about the business case for wellness and modeling behavior that promotes taking care of patients and themselves. In a profession that has traditionally devalued self-care, change will require a sustained effort and focus. We should be mindful that these changes ultimately lead to benefits for our patients.

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