EXECUTIVE SUMMARY

The epidemic of burnout among healthcare professionals is receiving growing international attention. The high prevalence of burnout in the healthcare workforce is cause for immediate concern because evidence shows impacts on quality, safety, and healthcare system performance. In addition, our analysis suggests that costs for burnout-related turnover may be as high as $1.7 billion annually among hospital-employed physicians, and $17 billion across all US physicians. For nurses, we estimate the hospital cost at $9 billion annually, and total national costs at $14 billion. This epidemic must be remedied, given the serious and negative ramifications of poor well-being and low job satisfaction among health care professionals on patient experience, health of populations, and the cost of healthcare.

The National Taskforce for Humanity in Healthcare (NTH) proposes a new model that goes beyond burnout prevention and promotes resiliency and the restoration of humanity in healthcare. We believe that burnout is the manifestation of a system problem, and therefore it requires system-level solutions. Those solutions must move beyond the prevention of burnout, and instead systemically cultivate human thriving and connection in ways that promote resilience, well-being, and joy for all healthcare team members. To accomplish this, we see three critical imperatives:

1. **Change the dialog around burnout** from one that sees burnout as a personal psychological failing to acknowledgement of a system in distress. Through this reframing, shift the aim from burnout prevention to creation of a system that supports resilience, well-being, and joy.

2. **Adopt a metric for humanity** that focuses less on deficit measurement (burnout), and more on understanding the causes and consequences of emotional thriving and emotional resilience.

3. **Create a blueprint for change** that supports a systematic shift in culture towards a human-centered care system. Change must occur at all levels within organizations and cascade across all decisions related to people, processes, and technology.

BURNOUT EXAMINED

1. **Introduction**

   The United States healthcare system has never faced the degree of transformation that exists today. Relentless cost pressure from government (Medicare, Medicaid) and commercial payers have forced a mixed and often uncoordinated transition from fee-for-service to value-based payment models.
Government incentives have spurred mass adoption of electronic health records (EHRs) over the shortest time period ever witnessed for digitizing a large, complex industry. And regulatory requirements change frequently, commonly piling new regulations on top of old without rationalizing or sunsetting outdated requirements.

While much work has therefore focused on care quality, outcomes, and cost containment, it’s the caregivers on the front lines of this industry-wide transformation who face the most Herculean task: maintaining their own well-being and capacity for compassion and excellence in the face of increasing and often contradictory professional demands. As committed, highly skilled healthcare professionals face untenable demands, burnout and compassion fatigue are a crisis affecting every stakeholder, from patients and families to doctors, nurses, and other care team members.

Physicians, nurses, and all healthcare team members need a new kind of professionally-led empowerment that prioritizes care team well-being and gives them a stronger hand in determining the “how?” and “why?” of healthcare delivery excellence. Similar to the way patients were encouraged to take a proactive role in their own care over the last 20 years, this well-being movement will elevate a critical voice to ensure that healthcare system transformation serves all – patients, families, and the dedicated professionals who devote their lives to healing. And, this needs to happen soon – too much is at stake.

II. Prevalence of Burnout

Burnout is nearly twice as prevalent among physicians as US workers in other fields after controlling for work hours and other factors. Between 2011 and 2014, the prevalence of burnout increased by nine percent among physicians while remaining stable among other US workers.¹ And the problem is not isolated to physician members of the healthcare workforce. The statistics are staggering:

- More than 50 percent of U.S. physicians report significant symptoms of burnout, a syndrome characterized by a high degree of emotional exhaustion and depersonalization (i.e., cynicism), and a low sense of personal accomplishment at work.²
- As many as 400 physicians die by suicide each year in the US, a rate of more than twice that of the general population.³
- Twenty-four percent of ICU nurses tested positive for symptoms of post-traumatic stress disorder.⁴
- Twenty-six percent of emergency nurses are burned out.⁵

• Thirty-to-thirty-five percent of oncology nurses experience burnout.⁶
• Thirty-three percent of new registered nurses seek another job within a year, according to another 2013 report.

Nurses, who are the healthcare team members on the front-lines and interact most frequently with patients and who often advise patients, friends, and families about how to obtain and maintain a healthy lifestyle, consistently score lower on an assortment of health metrics as compared to the general population.⁷ Compassion fatigue has also been associated with impacts on work quality and nursing retention and turnover. Studies have associated higher levels of compassion fatigue and burnout with lower patient satisfaction, increased incidence of sharps injuries, higher rates of hospital-acquired infections, decreased nurse productivity, and increased nurse turnover.⁸

III. Drivers of Burnout

Increasing price competition, narrowing of insurance networks, and a greater proportion of patients with governmental insurance have resulted in declining reimbursement for care providers.⁹ In parallel, requirements for “meaningful use” of electronic health records have demanded large capital expenditures and produced a dramatic increase in the clerical burden for physicians, nurses, and other clinical staff.¹⁰ These financial challenges have, by and large, been addressed by increasing productivity expectations for physicians and nurses (i.e., caring for more patients with the same amount of time/resources), broader efforts to improve efficiency, and significant expense reductions to decrease the cost of care delivery (doing more with less).¹¹

The spike in reported burnout among both physicians and nurses is correlated with a loss of control over work, increased performance measurement (quality, cost, and patient experience), the increasing complexity of medical care, the implementation of electronic health records (EHRs), and profound, systemic inefficiencies in the practice environment, all of which have altered workflows and patient and healthcare team interactions. As meaningful connections with patients, families, and colleagues have become constrained, there has been a simultaneous loss of the deep sense of purpose historically interwoven in healthcare careers. The result is that many previously well-adjusted and engaged physicians

have been stressed to the point of burnout, prompting them to retire early, reduce the time they devote to clinical work, or leave the profession altogether.\textsuperscript{12}

IV. The Human Costs

Clinician burnout can have serious, wide-ranging consequences, from reduced job performance and high turnover rates to—in the most extreme cases—fatal medical errors or clinician suicide.\textsuperscript{13} Research over the last decade shows that symptoms of burnout among healthcare professionals are widespread, greater than among other workers and industries—and rising.\textsuperscript{14} Burnout manifests itself in every life realm, from the physical (exhaustion, impaired concentration, an increased risk for substance abuse) to the emotional (irritability, feeling overwhelmed) to the spiritual (no room for stillness, lack of life balance).\textsuperscript{15}

Providers whose patients have experienced adverse and/or traumatic events may also experience negative effects on their own physical and psychological well-being. Chronic emotional stress, often termed secondary traumatic stress or compassion fatigue (CF), is defined as emotional, physical, and spiritual depletion related to secondary exposure to trauma and the overwhelming daily needs of victims of direct trauma. Common among all health care providers, especially nurses, CF results from the indirect countertransference of the trauma/stress experienced by patients onto their care providers.

V. Financial Impact

The burnout-associated issues described above produce a direct financial impact in terms of lost productivity, direct costs associated with error and infection, and indirect costs stemming from substandard care. While very real, it is difficult to pinpoint the exact percentage of these costs that can be attributed to burnout.

Turnover costs

What can be reasonably estimated is turnover and reduced productivity costs for both physicians and nurses that result from burnout and dissatisfaction. Prospective longitudinal studies from the Mayo Clinic demonstrate that for every 1-point increase in burnout score, there is a corresponding 43 percent increase in the likelihood a physician will reduce clinical effort in the following 24 months.\textsuperscript{16}


The costs of replacing a physician (recruitment, onboarding, and lost patient care revenue) are estimated to be 2 to 3 times that physician’s annual salary.\(^{17}\) One study showed that lost revenue for replacing one full-time equivalent (FTE) physician totals $990,000 for a year-long vacancy, plus recruitment costs of $93,000 and annual start-up costs of $211,063. That means replacing one departing physician and on-boarding one new physician will cost the organization more than $1 million.\(^{18}\)

An analysis performed at Stanford Medicine citing the statistic that burned out physicians are more than twice as likely to leave their current employer than their non-burned out counterparts, estimated that 58 physicians were likely to leave Stanford over the coming two years if nothing is done to stem the tide of burnout.\(^{19}\) Calculations of replacement costs based on specialty and tenure pegged the replacement cost for those physicians at a $15.5 million to $55.5 million.\(^{20}\)

Using these turnover rates and industry data on the replacement costs and lost revenues for the 70,573 hospital-employed physicians in the US, we arrive at a system cost of $1.3 billion, and an additional lost revenue of $2.1 billion for a 6-month vacancy (see Figure 1). Extended across all 954,000 US physicians, those numbers jump to $17 billion in costs and $28 billion in lost revenue.

Nursing turnover costs are comparable, collectively, to physician costs, with a study reporting a national hospital turnover rate of 16.4% for hospital-employed nurses. Indeed, the average US hospital has turned over 82% of its nursing workforce since 2012.\(^{21}\) Average turnover costs are estimated to range from 1.2 to 1.3 times nurses’ salaries.\(^{22}\) If we assume similar turnover rates among nurses as a result of burnout as among physicians (an 11 percentage point differential), and take into account that the number of nurses employed in US hospitals is more than 1,748,000 (not counting nurse anesthetists, nurse midwives, and nurse practitioners)\(^{23}\), turnover costs for US hospital-based nurses approaches $9 billion (see Figure 2). Extrapolating to all 2.9 million US nurses, that number jumps to more than $14 billion.

Figure 1: Estimate of turnover-related cost of burnout among hospital-employed physicians in the US.

Inputs:
- Number of licensed physicians in the US: 953,695 (i)
- Percent of physicians employed by hospitals: 7.4% (ii)
- Recruitment costs per physician: $47,598 (iii)
- Signing bonus and moving costs per physician: $45,000 (iii)
- First-year start up cost per physician: $211,063 (iii)
- Lost revenue per physician (6 months): $495,000 (iii)

Turnover rate for burned out physicians: 21% (v)

- Total recruitment, start up, moving, + signing bonus costs: $2,448,000,000
- Lost revenue (6 months): $3,991,000,000
- TOTAL: $6,439,000,000

Total hospital-employed physicians in the US: 70,573

Percent with signs of burnout: 54.4% (iv)

Total recruitment, start up, moving, + signing bonus costs:
- Lost revenue (6 months):
- TOTAL:

Turnover rate for non-burned out physicians: 10% (v)

- Total recruitment, start up, moving, + signing bonus costs: $1,166,000,000
- Lost revenue (6 months): $1,900,000,000
- TOTAL: $3,066,000,000

Cost of Burnout: $1,282,000,000

(i) Young, A. et al. “A Census of Actively Licensed Physicians in the United States, 2016”

Figure 2: Estimate of turnover-related cost of burnout among hospital-employed nurses in the US.

Inputs:
- Turnover cost per nurse: 1.25 x salary (i)
- Average salary for US hospital-employed nurses: $74,245 (i)
- Total turnover rate for US hospital-employed nurses: 16.1% (ii)

Turnover rate for burned out nurses: 20% (iv)

- Turnover cost: $16,581,000,000

Total hospital-employed nurses in the US: 1,748,810 (i)

Percent with signs of burnout: 63% (iii)

Total turnover rate for US hospital-employed nurses: 16.1% (ii)

Turnover rate for non-burned out nurses: 9% (iv)

- Turnover cost: $7,583,000,000

Cost of Burnout: $8,998,000,000

(ii) NSI Nursing Solutions. 2017 National Healthcare Retention and RN Staffing Report
(iii) May 2017 survey by Kronos Incorporated of 257 RNs working in U.S. hospitals.
Lost reimbursement
With a potential 2% loss in reimbursements for hospitals that cannot meet specific patient satisfaction and quality outcomes, the link from employee actions to patient experience to financial results could not be more direct. Losses amounting to millions of dollars for many hospitals and systems that receive half or more of their funding from government reimbursement are possible. Put another way, well-being of the clinical workforce is, quite literally, a make-or-break issue for financial sustainability.\(^\text{24}\)

When employees believe their organization truly values quality care - and also get the support they need on the job - their patients are more satisfied, employees take less sick time and have fewer on-the-job accidents, and health outcomes are better.\(^\text{25}\) This impacts both reimbursement and costs.

VI. Effects on Outcomes

Studies show that burned out physicians make more referrals and order more tests than necessary, and have patients who are less likely to be compliant with prescribed care plans. Burned out surgeons make more medical errors,\(^\text{26}\) and a study of medical residents showed that those with depression made 6.2 times the rate of medication errors as their non-depressed counterparts.\(^\text{27}\) Burnout has been linked to malpractice lawsuits, longer post-discharge recovery time,\(^\text{28}\) and even patient mortality.\(^\text{29}\) The consequences of physician burnout are significant, and threaten our U.S. health care system, including patient safety, quality of care, and healthcare costs.

Nurses, considered the principal frontline caregivers in the U.S. healthcare system, have tremendous influence over a patient’s healthcare experience. Studies have demonstrated that specific characteristics of the nursing workforce directly impact healthcare quality, healthcare outcomes, patient safety, and the safety of the work environment.\(^\text{30}\) In a multivariate model controlling for patient severity and nurse and hospital characteristics, only nurse burnout remained significantly associated with urinary tract and surgical site infections.\(^\text{31}\)

Compassion fatigue has also been associated with impacts on work quality and nursing retention and turnover. Studies have associated higher levels of compassion fatigue and burnout with lower patient


satisfaction scores, increased incidence of sharps injuries, higher rates of hospital-acquired infections, decreased nurse productivity, and increased nurse turnover.32

A NEW PARADIGM: RESTORING RESILIENCE, WELL-BEING, AND JOY TO HEALTHCARE

Discussions of burnout prevention and resolution typically focus on interventions at the individual level. Prevailing wisdom seems to hold that because burnout manifests in the individual, it is the individual’s responsibility to solve, with perhaps some growing acknowledgement that institutional support is necessary. At the Taskforce for Humanity in Healthcare, we believe that burnout is the individual manifestation of a system and culture issue, which requires intervention at the system, team, and individual levels.

Our approach to supporting systems that reduce burnout and promote resilience, well-being, and joy in work stems from a research-based understanding of both the system and individual processes that support resilience, well-being, and joy.

I. Individual Model of Resilience, Well-being, and Joy

Our conception of individual burnout, and, conversely, of resilience, well-being, and joy in work is informed by three connecting principles:

1. Burnout, at its core, is the impaired ability to experience positive emotion.33

2. Positive emotions (joy, gratitude, serenity, interest, hope, pride, amusement, awe, love, and inspiration) are tiny engines that recharge us.

3. Positive emotions have an ‘undoing effect,’ creating a well-being impact that far outlasts the immediate experience of the emotion.34,35

Individual and team-level interventions that help care team members reinforce and maximize access to positive emotions can be both restorative in cases where burnout already exists, and can augment experiences of resilience, well-being, and joy in work.36

II. System-Level Model of Resilience, Well-being, and Joy

Individual and even team-level interventions that maximize access to positive emotions are a necessary,

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33 Definition courtesy of J. Bryan Sexton, PhD, MA associate professor and director of the Patient Safety Center for the Duke University Health System.
but not sufficient condition to prevent burnout and restore humanity to healthcare. Health systems and system leaders shape the environment, processes, technologies, and cultures with and within which care team members practice. They create a crucial context that shapes how care team members work, what resources they have access to, and what attitudes predominate. System leaders, therefore, play a critical role in supporting the three core elements of a system strategy for resilience, well-being, and joy.\textsuperscript{37}

- **Help team members overcome the inherent trauma of providing care.** Care team members interact with patients and families at their most vulnerable moments in life. While this can be extremely rewarding, it can also create an emotional strain. And while the science of medicine advances every day, care team members still make life and death decisions based on imperfect information—and must live with the consequences. Because the culture of medicine has historically prized stoicism, leaders need to build cultures that give permission to maximize care team members’ access to positive emotions to help them recover from emotional setbacks and renew emotional resources.

- **Minimize the unnecessary trauma of poor systems.** Care team members live at the sharp end of decisions regarding technology, process design, and even leadership skills development. System leaders have to balance competing priorities and comply with regulations, but they also have an obligation to make sure investments and change processes foster solutions that support team members’ resilience, well-being, and joy in work—not just traditional measures of healthcare business performance. To achieve this, organizations must use “metrics of well-being (or humanity)” pre and post deployment of technologies and process improvements to assess whether they added to or eased the burden of being a clinician. Organizations also must proactively observe what system-level processes produce hassles or joys.\textsuperscript{38} Measurement is particularly important when introducing a new technology or process into an environment. Before and after measurements, as for clinical interventions, are essential to understand the true impact of these changes.

- **Connect to purpose and joy.** Providing care is inherently meaningful work, and most healthcare professionals are drawn to their work as a calling. Still, it’s important to explicitly identify and express meaning and value in work to keep the wellspring of purpose and meaning replenished through access to positive emotions. Regardless of the real impact of their work, care team members benefit from reminders and celebrations of purpose and joy to stop necessary but tedious tasks from overshadowing the value of their contribution, and to prevent “routine” work from losing its connection to meaning.

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Given these models of individual and system-level resilience, well-being, and joy, the NTH proposes a three-pronged approach to resolving the burnout crisis in healthcare:

1. **Change the dialog around burnout** from one that sees burnout as a psychological failing to acknowledgement of a system in distress. Through this dialog, shift the aim from burnout prevention to creation of a system that supports resilience, well-being, and joy.

2. **Adopt a metric for humanity** that focuses less on deficit measurement (burnout), and more on understanding the causes and consequences of emotional thriving and emotional resilience. Apply this metric broadly to all systems as a gauge of quality, leadership competence, and effectiveness of all change initiatives.

3. **Create a blueprint for change** that supports a systematic shift in culture towards a human-centered care system. Change must occur at the executive, team, and individual levels of organizations, and cascade across all decisions related to people, processes, and technology.

**CONCLUSION**

Burnout is not a new phenomenon in healthcare, but its rising prevalence indicates a system in crisis. The consequences of this crisis are not only important to the individual doctors, nurses, and other care team members on the front lines of delivery systems, but also to the quality of care delivered to patients and their loved ones. All of these impacts inform the economic stability of our care systems and the broader economy.

The healthcare system is at a critical crossroads. Just as patient care is shifting from a model of disease treatment and “sick care” to one of prevention and population management, so too must the system shift its approach to the emotional, physical, and spiritual well-being of healthcare team members. The new model must aim not merely at burnout prevention, but also at supporting the emotional thriving and emotional resilience of team members through human-centered leadership, creating a positive culture, and implementing processes and technology that enable care team members to achieve their highest healing potential.
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