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Perspective
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Beyond Burnout — Redesigning Care to Restore Meaning and Sanity for Physicians

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In late 2016, a primary care physician with a thriving practice decided it was time to shut her doors. She felt her retirement was forced on her after she'd spent a year in the grips of her

health care system's new electronic health record (EHR). It was her fourth EHR over her years of doctoring, but this transition felt different. Instead of improving her efficiency, the new system took time away from her patients, added hours of clerical work to each day, and supplanted her clinical judgment with the government's metrics for "meaningful use" of information technology in health care.

"We're spending our days doing the wrong work," argues Christine Sinsky, a practicing internist and vice president for professional satisfaction at the American Medical Association, who has conducted several studies tracking

how doctors spend their time. "At the highest level, we are disconnected from our purpose and have lost touch with the things that give joy and meaning to our work."

Increasing clerical burden is one of the biggest drivers of burnout in medicine. Time-motion studies show that for every hour physicians spend with patients, they spend one to two more hours finishing notes, documenting phone calls, ordering tests, reviewing results, responding to patient requests, prescribing medications, and communicating with staff.¹ Little of this work is currently reimbursed. Instead, it is done in the interstices of life, during time often referred to as

"work after work" — at night, on weekends, even on vacation.

"EHRs can be a double-edged sword, because they give you more flexibility about where you work, enabling physicians to get home for dinner," argues Tait Shanafelt, professor of medicine at Stanford University and a leading researcher on physician burnout. "But physicians are working a staggering number of hours at night, and this has enabled organizations to continuously increase productivity targets without changing the infrastructure or support system, effectively adding a whole extra work-week hidden within a month."

Burnout rates are now twice as high in medicine as in other fields, even after adjustment for factors such as age, sex, level of education, and hours worked in the past week. In 2014, a national survey found that 54% of U.S. physicians reported at least one

symptom of burnout: emotional exhaustion, depersonalization, or a diminished sense of personal accomplishment due to work-related stressors. Those in “front-line” specialties, including general internal medicine, family medicine, emergency medicine, and neurology, are at the highest risk.²

“There was this assumption that doctors could take on extra work seamlessly, but now it is crowding out our true work as healers,” notes Sinsky. “Physicians are at the sharp end of the stick for accountability, regulatory issues, and now even data acquisition and entry — it’s too much.”

Shanafelt and others argue

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that the situation needs to change and that there’s a business case for addressing physician burnout. At the most basic level, physicians with symptoms of burnout are twice as likely to leave an organization as those without such symptoms, and the cost of replacing a physician is estimated to be \$500,000 to \$1 million, according to a recent report from Atrius Health. This estimate reflects the expenses for physician recruitment, “onboarding” and training, and lost revenue.

Beyond the financial toll physician burnout takes on institutions, there are human costs to both doctors and patients. Studies over the past decade have shown

that burnout can undermine a physician’s sense of purpose and altruism and lead to higher rates of substance use, depression, and suicidality. Physicians with symptoms of burnout are more likely to report having made a major medical error in the past 3 months and to receive lower patient-satisfaction scores.³

Female physicians may be at highest risk, particularly those with heavy clinical loads. A survey of Stanford School of Medicine faculty found that few female faculty members reported “feeling supported” in their career development. The survey prompted the administration to

ported” had nearly doubled by the end of the pilot program.

Increasingly, other medical organizations are starting to tackle the challenge of burnout. In 2016, chief executives from 10 major health care organizations gathered at a summit to share strategies for combating physician burnout. The group committed to 11 actions, including measuring physician well-being, supporting team-based models of care that allow physicians to operate at the top of their license, and proactively monitoring and addressing the increasing regulatory burden imposed on physicians.⁴


Measuring rates of physician burnout is the first step toward addressing this national epidemic. “Fundamentally, you manage what you measure,” argues Mayo Clinic President and Chief Executive Officer John Noseworthy. “CEO performance scorecards always include financial and quality measures, but mine also has staff engagement, satisfaction, and burnout measures that are reported up to the board of trustees.”

At Mayo, physician well-being is measured annually, benchmarked against national data, and used to identify divisions and departments that need help. Physicians are also asked to evaluate the leadership skills of their immediate supervisors, since a 2013 study demonstrated that every 1-point increase in a 60-point measure of leadership was associated with a 3.3% decrease in physician burnout.⁵ “There was a linear relationship between how empathic, engaged, and involved leaders were with their staff and burnout rates,” Noseworthy said. “So now I have leadership-effectiveness scores for every division

consider novel ways to improve work-life integration and prevent burnout. Stanford piloted a “time bank” to ensure that faculty were rewarded for activities that are rarely recognized by medical centers, such as serving on committees. This program allowed faculty to trade time spent on these activities for in-home support, such as meal delivery and cleaning services, or support at work, including assistance with grant writing and submission. Though this initiative was meant for all physicians and basic scientists, women used these services more frequently than men, and the number of female faculty members who reported “feeling sup-

head and department chair, and we review them and coach faculty on leadership skills when they need it.”

Whereas past efforts to address burnout have focused on bolstering individuals’ resilience skills, there’s a growing recognition that organizations also need to redesign the way that clinical care is delivered. In 2015, the Department of Family Medicine at the University of Colorado health system instituted a team-based model called ambulatory process excellence, or APEX. Under this system, medical assistants gather data, reconcile medications, set the agenda for patient visits, and identify opportunities to increase preventive care. After they complete this structured process, they share this information with a physician or nurse practitioner and remain in the room to document the visit. When the clinician leaves, the medical assistant provides patient education and health coaching. This arrangement allows physicians and mid-

 An audio interview with Dr. Tait Shanafelt is available at NEJM.org

level clinicians to focus on synthesizing data, performing the physical exam, and making medical decisions without distractions.

“The chaos in exam rooms before APEX was akin to texting while driving,” explains Corey Lyon, associate professor at the University of Colorado School of Medicine and medical director of the A.F. Williams Family Medicine Center. “The greatest advantage now is that the computer no

longer stands between me and my patients. This allows for deeper thinking and connection.”

Lyon warns that launching APEX required work. Although the program increased the ratio of medical assistants to clinicians from 1:1 to 2.5:1, it required more than simply adding people. APEX required rigorous training for medical assistants, the development of structured protocols to allow them to function semi-independently, and new communication systems. Most of all, Lyons believes, the implementation succeeded because of flexibility and teamwork: “Providers have to be willing to give up a little control to get the support they need so that they can build better connections with patients without technology interfering.”

Within 6 months after the APEX launch, burnout rates among clinicians dropped from 53% to 13%. There was also an improvement in the practice’s pneumococcal vaccination rates and patient referrals for mammography and colonoscopy screening tests. With increased efficiency, the practice was able to add nearly three extra patients per doctor per day and reduce waiting times for new patients who wanted to join the practice. With increased provider productivity, APEX remained cost-neutral, and the University of Colorado health system plans to expand the program to six additional family medicine, internal medicine, and primary care clinics. Similar team-based models have been successfully in-

tegrated into smaller, independent practices throughout the country.

Yet even if they’re effective, clinical care redesign efforts may not address the fundamental question of how physicians can reclaim joy in the practice of medicine. Such a transformation will first require investments from senior administration in academic medical centers and individual practices to recognize and measure the extent of the problem. Then, the resulting data will have to inform shifts in policy and culture to address a system that remains broken for many, and to allow for creative and flexible solutions that promote physician well-being.

Disclosure forms provided by the authors are available at NEJM.org.

Drs. Wright and Katz are national correspondents for the *Journal*.

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