The US health care delivery system and the field of medicine have experienced tremendous change over the last decade. At the system level, narrowing of insurance networks, employed physicians, and financial pressures have resulted in greater expectations regarding productivity, increased workload, and reduced physician autonomy. Physicians also have to navigate a rapidly expanding medical knowledge base, more onerous maintenance of certification requirements, increased clerical burden associated with the introduction of electronic health records (EHRs) and patient portals, new regulatory requirements (meaningful use, e-prescribing, medication reconciliation), and an unprecedented level of scrutiny (quality metrics, patient satisfaction scores, measures of cost).

These challenges have taken a toll on US physicians. Burnout is a syndrome of exhaustion, cynicism, and decreased effectiveness at work. The burnout syndrome, first described in 1974, can affect workers in all fields, particularly those whose work involves an intense interaction with people (eg, teachers, social workers, police officers, health care workers). The first large, national study of burnout among US physicians across all specialties did not occur until 2011. That study of 7288 participating physicians documented that approximately 45% reported at least 1 symptom of burnout and that burnout was more common among physicians than US workers in other fields. The lack of national data on burnout prior to 2011 makes it difficult to put these results into historical context. Current estimates suggest that the prevalence of burnout among practicing physicians in the United States exceeds 50%. A variety of factors contribute to physician burnout. Excessive workload, clerical burden and inefficiency in the practice environment, a loss of control over work, problems with work-life integration, and erosion of meaning in work are all factors. Unlike many industries in which advances in technology have improved efficiency, EHRs appear to have increased clerical burden for physicians and can distract some physicians from meaningful interactions with patients. A recent time-motion study involving direct observation of 57 physicians for 430 hours indicated that physicians spend approximately 33% of their work hours performing direct clinical work and 49% completing clerical tasks and interfacing with the EHR. For every hour of clinical work, physicians spent 2 hours on clerical work or EHR-related tasks. How these estimates compare with the amount of time physicians used to spend handwriting notes, ordering tests, and locating paper records, radiographs, or laboratory reports is unclear.

Observational studies suggest physician burnout may have important repercussions for the US health care delivery system. Physician burnout has been linked to self-reported errors, turnover, and higher mortality ratios in hospitalized patients. Indeed, studies suggest a link between burnout and a reduction in the amount of time physicians devote to providing clinical care to patients. Given the particularly high rates of burnout in some primary care disciplines (eg, family medicine and general internal medicine), burnout could amplify workforce shortages and affect access to care. Therefore, the high rates of burnout reported in US physicians can be considered both a marker of dysfunction in the health care delivery system and a factor contributing to dysfunction. To improve population health as well as the patient experience and to reduce the cost of care in the United States, it will be necessary to improve the work-life of physicians and other health care professionals.

Although the problem of physician burnout has now been widely recognized, there is less information on how to address this problem. A recent systematic review and meta-analysis found that both individual and organizational interventions can make a difference. The evidence indicates that actions at the organization and individual level can counter a national problem. Substantive progress, however, is unlikely to occur until there is a coordinated effort to address this issue at the national and state, organization, leader, and individual levels.

At the national and state level, a number of reforms are needed. The current burden of documentation related to the clinical encounter required to meet billing requirements, quality reporting, and separate justification for each test ordered individually is unsustainable. Required documentation needs to be reduced and streamlined. Clarification and guidance regarding which tasks (eg, computerized order entry), forms, and documentation elements may be completed by appropriately trained nonphysicians is needed. More input from physicians practicing in diverse settings and specialties should be sought regarding how to improve current and future regulations. Future regulations related to documentation, meaningful use of EHRs, and workflow should be thoroughly vetted with all stakeholders (including physicians) and evaluated for workforce implications prior to their enactment. Requirements by insurers that physicians perform and document unnecessary elements of care to justify billing codes but that do not contribute to good medical care should be eliminated. Payers must also develop a more efficient preapproval process for tests, medications, and procedures. Similarly, maintenance of certification requirements need to be better integrated with standard continuing medical education requirements. State licensing boards should eliminate questions on licensing applications regarding diagnosis or treatment for mental health conditions (which may dissuade some physicians from seeking help for burnout,
depression, or other conditions) and replace them with questions regarding current impairment. The National Institutes of Health should allocate funds to support further research evaluating the implications of clinician well-being for the care delivery system and determining how to improve the work-life of health care professionals.

Health care institutions should recognize the potential effect of physician well-being on the long-term viability of their organization. Dimensions of engagement and well-being should be routinely assessed as institutional performance metrics along with more standard institutional measures (eg, cost, operating income, payer mix, patient volumes, quality, patient satisfaction) so they can be monitored, their interactions with other measures assessed, and resources allocated to work-units in greatest need. Deliberate and systematic efforts should be made to improve the efficiency of the practice environment and to identify, reduce, and delegate clerical work. Cost cutting measures that have reduced documentation support (eg, elimination of dictation and transcription support) and that increase the burden on physicians should be reexamined. New practice models that increase efficiency and productivity (eg, scribes, team-based care) should be identified, adapted to fit the organization, and piloted. Proven approaches to process improvement (Lean manufacturing, Six Sigma) must be employed not under the guise of increasing productivity but to improve work flow for physicians. Organizational policies that require physician maintenance of their certification must be accompanied by appropriate allocation of professional time for physicians to complete these tasks. The high work hours for physicians relative to other professions (44% of physicians work >60 hours per week compared with 8% of US workers) should be acknowledged with efforts made to improve flexibility and enhance work-life integration.

Supervisors (who may or may not be physicians) who lead physicians need to recognize the key effect they have on the well-being and professional fulfillment of those they lead. Leading physicians is challenging. Physicians are selected based on their intellect and ability to evaluate and develop solutions to complex problems. They are trained to be attentive to detail, think critically, and derive decisions based on evidence. Given this combination of factors, a participatory management style is typically most effective when leading physicians. Physician leaders must keep their team informed, ask for ideas and suggestions on how to improve the work unit, facilitate the professional development of others, and acknowledge the individual contributions and achievements of those they lead. To effectively facilitate professional development, they must recognize the aspect of work most personally rewarding for each of their reports (best identified by asking the individual) and then provide coaching, mentorship, and opportunities for individuals to gain experience and successfully engage in such activities.

Individual physicians must also do their part. Given the potential effects of physician well-being on quality of care, honest and regular self-calibration should be considered a core component of professionalism. Individual physicians have a professional responsibility to take care of themselves. Adequate sleep, exercise, and attending to personal medical needs should be considered a minimal standard for self-care. Physicians must also proactively identify personal and professional priorities and take deliberate steps to integrate their personal and professional lives. Building community at work and connections with colleagues has also been shown to reduce burnout and should be pursued. Activities to enhance self-awareness (eg, mindfulness, narrative medicine, cognitive behavioral techniques, connecting with meaning and purpose in work) and resilience can reduce burnout. These qualities are skills that can be taught and individual physicians should commit to learning, developing, and implementing these skills.

Burnout is prevalent among physicians. The potential negative personal and professional repercussions are well documented. It is time to address this serious problem. Meaningful progress will require collaborative efforts by national bodies, health care organizations, leaders, and individual physicians, as each is responsible for factors that contribute to the problem and must own their part of the solution. The recently announced National Academy of Medicine Action Collaborative on Clinician Well-Being and Resilience is an example of the unified approach necessary to address this issue. Solving this problem will require cooperation at every level of the health care system.

**REFERENCES**
