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Healing Medicine's Future: Prioritizing Physician Trainee Mental Health

Kathryn Baker, MD and

Clinical instructor in the Department of Psychiatry at the University of Michigan. She is also the director of the University of Michigan Medical Student Mental Health and House Officer Mental Health Programs

Srijan Sen, MD, PhD

Associate professor in the Department of Psychiatry and Molecular and Behavioral Neuroscience Institute at the University of Michigan. He is the Principal Investigator of the Intern Health Study

Abstract

In this article, we discuss current perceptions of the model physician and how these perceptions conflict with stressful realities of training environments and contribute to staggering rates of burnout and depression faced by medical students and residents. We suggest a multi-tiered interventional approach to address these problems, with innovations for individual trainees, programs, institutions, and the health care system. Finally, we discuss ethical obligations the medical community has to ensure that it is appropriately and thoughtfully investing in the wellness of medicine's next generations of practitioners.

As they develop educationally and clinically, medical students and residents are also cultivating their professional identities. This can be a nebulous process, as our model of an ideal physician is not easily defined. In fact, what it means to be a "good doctor" has been discussed for decades, with physicians debating how that should be defined, assessed, and taught [1]. Reviews of literature on professionalism in medicine have identified as many as 90 different attributes [2] and shown that there is no comprehensive, universally accepted definition of medical professionalism to date [3]. Despite these complexities, professional identity formation is considered an important aspect of medical training [4], with trainees forming influential ideals about how they should think, feel, and behave as physicians.

As relatively recent residency graduates, we (the authors) run a mental health clinic for medical students and residents at The University of Michigan, and frequently hear the trainees speaking in the same language with which we were indoctrinated as trainees. Common across their stories seems to be a predominant core belief that one's own pain and suffering, occurring in service to the art or science of medicine, should be quietly tolerated. One of us was recently speaking with a resident who shared that the mantra among his cohort was to "tough it out" and "power through" any physical or emotional suffering. We routinely hear phrases like this, coupled with the fear that to do anything else would be to risk being seen by peers and supervisors as weak, vulnerable, or flawed in some way [5–7].

A predominant assumption in medicine is that we should be supernaturally resilient [5–7]. Given the rigors of medical education, residency, and a career in medicine, our ability to

navigate this journey successfully while remaining psychologically and physically resilient is an understandable source of pride. But in harboring this ideal and reinforcing it throughout training, do we create a culture in which physicians easily lose sight of the fact that we are also human beings subject to illness vulnerabilities, just like the patients we treat? Do the stressors of training and their psychological consequences negatively impact our ability to be "good" doctors?

Stress, Burnout, and Depression

Physician trainee mental health has been spotlighted recently in prominent newspapers and magazines [8–12] as well as the academic literature [13–18], suggesting a growing interest in challenges that developing physicians face and their consequences. In their influential systematic review on the topic, Dyrbye and colleagues found that medical students consistently demonstrate higher overall psychological distress relative to samples of both the general population and age-matched peers [19], even though they start their training with lower rates of burnout and depression than age-similar controls [20]. Factors contributing to psychological distress include academic pressures [19, 21–22], financial burdens [19, 21–22], student mistreatment [19, 23], and developing professional cynicism [19, 24], to name a few. The negative impacts of this psychological distress are exacerbated during residency by long hours [25], overnight shifts [26], debt [27], dissatisfaction with lifestyle [28] and with job [29], and lack of autonomy [29]. Furthermore, there is little time to develop aspects of identity unrelated to medicine that could contribute to a solidly grounded sense of self [30], and the quality of relationships that might provide a secure base of social support often suffer [31].

Given these psychological challenges, it is not surprising that rates of burnout and depression are high among trainees; the largest multicenter study on resident burnout showed rates of 51.5 percent in a sample of 16,192 internal medicine residents in the 2008–2009 academic year [27]. Medical students and residents also have significantly higher rates of burnout and depressive symptoms than population control samples [13]. A recent meta-analysis on resident depression published in *JAMA* in December 2015 by Mata and colleagues revealed an overall prevalence of depression or depressive symptoms of 28.8 percent in 17,560 resident physicians—with similar rates across specialties, post-graduate year, and country of practice—and a 15.8 percent median increase in depressive symptoms within one year of beginning training in 4,482 resident physicians [14]. These findings suggest that residency training is fundamentally stressful and that residents pay a substantial price in terms of their mental health for enduring this stress. Furthermore, the literature has consistently shown a correlation between degree of burnout, distress, and fatigue, and the frequency of perceived or self-reported medical errors [32–35], suggesting that it might not only be the physicians who pay the price, but their patients as well.

First in 2003 and then again in 2011, the Accreditation Council of Graduate Medical Education (ACGME) made efforts to implement duty-hour restrictions in order to foster a "humanistic environment" promoting "excellent and safe patient care" [36]. Subsequent literature has shown that though these changes have led to a small but statistically significant reduction in work hours (from 67.0 to 64.3 hours on average), that reduction did not cause

statistically significant changes in sleep, depression, or well-being; moreover, there was an unexpected increase in self-reported medical errors [37]. In their recent narrative review on resident burnout, authors Dyrbye and Shanafelt argue that “work compression” (a concept previously described as the same workload and educational requirements being compressed into a shorter time frame [38]) is adding additional stress during the shorter hours such that the net effect of work hour restriction on resident mental health is zero [18]. Regardless of its cause, it would seem that resident burnout and depression cannot be solved solely by addressing work hours.

The Need for a Multifaceted Interventional Approach

In order to provide medical training that both prepares trainees to become skilled physicians and preserves their mental health in the process, we must implement innovative, evidence-based interventions aimed at individual trainees, medical schools and residency programs, health care institutions, and educational systems. Despite the alarmingly high rates of burnout and depression among medical trainees, they do not readily seek appropriate mental health treatment from qualified professionals, due, in part, to concerns about confidentiality and stigma [39]. Understanding more fully the barriers to accessing care and finding solutions to overcome those barriers is essential. In our House Officer Mental Health Program at the University of Michigan, faculty psychiatrists see residents for a confidential initial evaluation that is not documented in their medical charts, offer onsite appointments at the hospital, and hope to soon add “after hours” appointments.

Since the stigma of seeking treatment persists, we also need academically rigorous research on reasonable alternatives to traditional, in-office psychiatric treatment. Finding creative and effective ways for trainees to readily and privately utilize multimodal technologies (such as tele-mental health), and grounding these approaches in good science, seems like a worthy investment. For example, a recent randomized clinical trial showed that a web-based cognitive behavioral therapy intervention for the prevention of suicide in medical interns was successful in reducing suicidal ideation [15]. However, the interventional literature is lacking in such gold-standard studies and more are clearly needed. A 2014 review and meta-analysis of interventions to reduce anxiety, stress, and burnout in physicians initially identified 87 studies, but only 12 were methodologically sound enough to be included in the analysis [40]. The interventions studied did, however, show promise for cognitive, behavioral, and mindfulness-based interventions [40, 49].

Nonclinical interventions could also be useful. Mentorship and coaching programs addressing personal and professional development, and peer-to-peer support systems, such as big/little sibling programs and “process” groups in which residents are encouraged to speak candidly about their shared experience, may also provide opportunities for therapeutic outreach and open communication. A recent randomized controlled trial of facilitated small-group intervention for physicians—with protected time to focus on mindfulness, reflection, and shared experience—demonstrated significant differences between the intervention and control arms in improvements in participants’ ratings of meaning and engagement at work, although it did not show reductions in depression [41], suggesting that small group interventions alone may not be sufficient. We could be missing a larger foundational issue

associated with the nature of medical training by focusing our efforts on treatment of depression, anxiety, and burnout once they have developed rather than working to innovate our educational and training environments so that they would be less likely to cause these problems in the first place.

In fact, within the past decade attention has been paid to prevention through proactively improving wellness as opposed to reactively treating the mental health issues that arise during medical training [41–44] and to evaluating the impact of wellness programs. The American Medical Association (AMA) recently released a learning module intended to provide a framework for developing successful wellness programs; the organization also outlined several wellness models that have already been implemented at various institutions across the country [42]. These wellness programs could prove to be a valuable resource at medical school and graduate medical education levels. The Vanderbilt Medical School Wellness Program is the first published model of a comprehensive medical student wellness initiative [43], and though subsequent analysis of the impact of its programming has not, to our knowledge, yet been published, it did show high levels of participation and satisfaction [40]. Other physician wellness programs have shown reductions in physical and emotional exhaustion [41], as well as stress and anxiety [42]. Although preliminary data is promising, a systematic review of 13 studies on medical school stress management programs revealed that only one study was randomized and considered of very high quality [50]. Evaluating our interventions in an academically rigorous way to expand the evidence base will be a critical addition to the expanding body of literature on this topic.

Finally, research has also shown that institutions have greater influence than specialty on residents' satisfaction with their learning environment and workload, suggesting that attention to institutional culture will be critical in improving education and reducing burnout and psychiatric illness [45]. The ACGME is paying formal attention to the quality of training environments through its Clinical Learning Environment Review (CLER) program, which sets an expectation that programs provide education about and measurements of burnout annually [46]. It is important not only to track burnout, but also to address its underlying causes while offering effective interventions to combat it.

Revisiting the "Good Doctor": An Ethical Obligation

Given what we now know about the negative mental health consequences of medical training, is it ethical for us to maintain the cultural status quo? Can we provide optimal care for our patients when one-third of our trainees are depressed and half are burned out? And given that it is fundamentally a healing art that we practice, is it ethical to ignore the suffering of our own? Our trainees are intelligent, enthusiastic people who begin their journey with lower rates of burnout and depression than age-matched college graduates [20] but are subjected to environmental stressors in training that foster a dramatic prevalence of depression, anxiety, and burnout [13, 14, 19]. If the nature of our training contributes to this decline in mental health, is it ethical to ignore it? The empirical evidence indicates that residency is fundamentally stressful and has negative health consequences for trainees; this demands efforts to fundamentally change the system, to promote wellness, reduce illness

burden, and improve access to effective mental health treatments for our own. We must heal a broken system, each other, and ourselves in the process.

In medical schools and residency programs, we need to create a culture in which trainees are encouraged to take care of themselves, to recognize when they are struggling, and to reach out for support when needed. Our faculty leaders must do their part to destigmatize mental illness, promote wellness, and encourage trainees to seek help when needed. They should not shy away from talking about resident distress, depression, anxiety, and burnout, as these are realities that exist as a part of our current training environment [13, 14]. We would go a step further and argue that focusing solely on burnout without also discussing depression and suicide, the latter of which are real risks for trainees [14, 47, 48], might reinforce stigma-driven beliefs that it might be acceptable for a trainee to be burned out, but not to have depression. We suggest here that an open dialogue about mental illness, appropriately named and discussed, should be an expectation for training programs. And, finally, we cannot simply react to these difficulties once they have arisen. We also need to proactively address the foundational stresses of medical training and promote wellness in trainees.

When we see trainees for treatment in our offices, we see bright, empathic, and dedicated men and women who are willing to acknowledge their own suffering and take action to ameliorate it. We applaud their introspection and courage, and their willingness to swim against the predominant cultural stream of “power through” and “tough it out.” The medical community has now shed light on the realities of the physician training experience, and we hope it will continue developing innovative ways to promote wellness, positive learning environments, mental health awareness, and to reduce the burden of mental illness in physicians. We must change the way we define what it means to be a “good doctor” by acknowledging our humanity and our human vulnerabilities, and we must encourage medical students and residents to ally with us to become champions in these efforts, advocating for themselves and their futures in medicine.

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