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Position Paper

An opportunity for change in medical education amidst COVID-19: Perspective of a medical student

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On a global level, we were handed a staggering diagnosis. The difficult news was delivered without the empathy and transparency we have been taught to use when communicating life-altering information as first year medical students. A barrage of contradictory information spattered like shrapnel, leading to fear, confusion, and the collective grief of vanished identities, lives, and the structures that kept us going. The systems in healthcare that provide due process have been upended, leaving us in a state of unknown which has come to characterize the pandemic caused by the novel coronavirus (COVID-19). Thankfully, breakdowns can lead to breakthroughs, and if we are thoughtful, this upheaval may provide the foundation for reform.

Like everything else, medical education has endured pronounced divergence from routine. Students' lives are organized around the next test, clerkship, and graduated responsibilities that accompany each step of training. As goal-oriented individuals, we have been disoriented by the crumbling of the carefully laid-out sequence of expected events. Fourth year students should have been able to pause and reflect on the significant milestone they just achieved as well as prepare for the next hurdle of residency. Instead, their Match Day and graduation ceremonies were cancelled, and some were even called upon to bolster the physician workforce at hard-hit institutions. Merely one year behind in training, third years were suspended from any direct patient care in accordance with the statement released by the Association of American Medical Colleges (AAMC) and the Liaison Committee on Medical Education (LCME) in mid-March 2020 indicating that students were non-essential [1]. The responsibility to "flatten the curve," reduce exposures, and preserve valuable resources outweighed normal educational obligations [2]. Although acting out of concern for our safety as medical students, this decision excluded us from what would have been an invaluable learning opportunity.

The roles of medical trainees in this crisis drastically differed based on level of education, our scope of practice determined by thresholds sometimes just months apart. We heard the troubling stories from residents in New York about what it was like to be in the hospitals, accompanied by the tangible fear of their own mortality and the risk they placed on their families. Meanwhile, many students only a few years or months behind in training were left feeling powerless as the profession we chose continued to struggle. We watched from behind our computer screens as we completed online curricula regarding COVID-19 and the remainder of our abridged clerkships.

Still, many students who were pulled from the hospitals used this newfound time in extraordinary ways. We started task forces to watch health care workers' chil-

dren, deliver groceries to the elderly, and collect donations of personal protective equipment (PPE). Some of us volunteered by administering nasal swabs or staffing hotlines for phone triage. Others helped the unhoused communities and vulnerable populations to ensure they retained access to healthcare. Additionally, many discovered tasks that brought meaning, whether it was finding avenues to still help patients, pursuing non-medical activities, or spending extra time with loved ones. While the rest of the medical community seemed to be overwhelmed, this was an unusual opportunity for most students to slow down.

Unfortunately, during the time away from the hospital, many students also spent months studying for high-stakes exams that were cancelled, in some cases, just days before their scheduled appointments. We continue to face other challenges too, including delays in the residency application cycle, cancellations of nearly all visiting student rotations, and the inherent limitations of virtual interviews. Although the changes will allow us to apply to more programs and we will save substantial travel expenses, we are left scrambling and unsure of what these decisions mean for our competitiveness when applying to residency programs.

Historically, medical education has been heavily dependent on tradition and criticized for being inefficient, especially when our communities are facing critical shortages of healthcare providers. Change in this system is often arduous. Now, we have been forced to adjust quickly, and this has shed light on other areas that could benefit from further consideration.

Medical schools across the United States have struggled with low attendance to preclinical lectures. In 2018, only 31.9% of second year medical students reported attending lectures "most of the time" while 26.3% reported attending "almost never" [3]. Some students watched accelerated recordings remotely, while others did not watch at all. In the preclinical years, we strive for efficiency in learning the breadth of information. If the curricula do not meet that expectation, we turn to other resources. Maybe students would benefit from medical schools embracing the well-made supplements and the more flipped-classroom style of learning that has been adapted for the quarantine. In addition, the AAMC-administered standardized clinical exam (Step 2 Clinical Skills), which typically requires students to spend $1300 and travel to one of five testing centers, was cancelled altogether due to physical distancing measures. Students and faculty have long advocated for this expensive test of minimal utility to be retired, and many hope this resolution will be permanent [4]. Also, the declared state of emergency arising from the pandemic allowed for the truncation of medical school for some graduating students who had met their required learning objectives [5]. Perhaps COVID-19 could open the door for more competency-based rather than time-based targets in medical education to better address the shortage of providers and burdensome cost of training. These are complex issues that will not be resolved easily. However, while we are making sweeping changes rather liberally, this may be an opportunity to make a few more.

After the suspension from clinical duties, the reintegration of medical students into clerkships is necessary yet challenging. Students attending Duke-National University of Singapore (Duke-NUS) Medical School were surveyed one month into the suspension, and approximately one-third preferred not to return to the clinical setting. These students perceived a greater personal risk and indicated that they did not want to cause additional harm to patients or the healthcare system [6]. The two-thirds who preferred to return indicated that it was part of their professional responsibility. One large barrier to reintegration is that students do not have the protections that come with being paid employees of the hospital [7]. As such, those who have returned to the clinical setting are not supposed to have direct contact with COVID-19 patients. However, due to COVID-19's varied clinical presentations, it is nearly impossible to avoid all exposures while working in the hospital. Furthermore, many community sites are not allowing student learners. Thus, some third years have to complete their first clinical rotations on night shifts in order to minimize persons in their home hospitals, which is unprecedented.

Institutions continue to grapple with reintegration of students because it has become clear that COVID-19 is not going away in the near future, yet medical education must continue. The preclinical years have many well-developed online resources already, making this remote-learning transition easier. However, the third and fourth years are largely comprised of in-person training without vetted alternatives. Tools that were once used predominantly in resource-limited settings, such as video conferencing, webinars, and online modules, are now adopted widely along with increased integration of telemedicine, simulation, and social media [8]. Some are even calling for an online curriculum to be developed through the international collaboration of institutions in order to implement a more flexible and comprehensive supplement than can be created by any one program [9].

However, future leaders of our healthcare system, whom we hope can tackle the challenges of widespread inequities and impending crises, cannot be created from online curricula. Students have to see patients in order to learn and grow as providers, which is why medical training was designed to be arduous. Thus, reintegration is necessary, and we need to find better avenues to keep not just students but all of our providers safe. Rather than focusing our efforts on reinventing online curricula, changing hospital protocols and securing appropriate PPE are achievable and necessary first steps. Medical students may not be essential in the short-term, but we are important in the care of patients at academic institutions and will be instrumental in the future of our healthcare systems.

We are told at the White Coat Ceremony, the initiation into medical school, that we are entering into a career of service. The COVID-19 pandemic has tested and given this responsibility a new meaning. Hopefully, the medical community can come together and use this staggering diagnosis to illuminate the weaknesses in our systems so that we can grow stronger and begin the journey towards much-needed rehabilitation.

Conflict of interest

The author has no conflict of interest to report.

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