The Role of Medical Students During the COVID-19 Pandemic

TO THE EDITOR: We read Miller and colleagues’ commentary (1) on the role of medical students during the coronavirus disease 2019 (COVID-19) pandemic with interest. The authors...
disagreed with the Association of American Medical Colleges’ recommendation to suspend student clerkships during the outbreak and instead suggested that medical schools offer clinical opportunities. They reported several benefits of this choice to patients and the health care system.

In our country of Italy in April 2020, more than 16 000 health care workers tested positive for severe acute respiratory syndrome coronavirus 2. In addition, at least 110 physicians have died after contracting it, confirming the high risk faced by health care professionals (2). The Decrees and Regulations adopted by the Italian government in March initially permitted health care student clerkships. Regardless of this position, most Italian medical schools have not allowed students to work in the wards—a decision shared by most hospitals despite a workforce shortage. In April, the Italian government therefore partially modified its position, decreeing that student clerkship could be taken remotely.

We do not believe that medical students are clinicians with duties as Miller and colleagues state. We agree with the Association of American Medical Colleges’ position that “current medical students are students, not employees” (3). We also do not believe that Miller and colleagues reported any important consideration about the role of students in the pandemic. Here, we explain our concerns.

First, some students live with their families and cannot afford to live alone. Alongside concerns for their personal safety, medical students could be anxious about passing the infection to elderly parents or grandparents or to young siblings.

Second, we still do not know the long-term effects of COVID-19 and wonder whether it is ethical to expose young persons to a disease whose effects are not fully known. Working in the medical profession requires a psychophysical integrity that could be damaged by the infection, compromising the future careers of these students. It should be considered that any disability that these students incur could affect their progression to graduation. Moreover, the risk for post-traumatic stress is high (4); therefore, psychological support should be guaranteed to these students.

Finally, we believe that the historical examples reported by the authors (that is, the Spanish flu outbreak of 1918 and the polio epidemic of 1952) are outdated according to a modern conception of medical education, which does not consider students simple members of the workforce in hospitals.

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IN RESPONSE: Dr. Riva and colleagues voice concern about the risks of in-person medical student involvement during the COVID-19 pandemic. Our commentary identified some major risks associated with such involvement, including the risk for viral transmission in the hospital and the consumption of scarce personal protective equipment. Dr. Riva and colleagues highlight additional risks. Some of these build on the risk for viral transmission, including transmission to students’ families and the unknown long-term health consequences of the virus. Others include potential psychological stressors of clinical work during a pandemic. We have several responses to these concerns.

Our commentary focused largely on remote clinical roles for medical students that could be widely adopted. We also suggested that advanced medical students could care only for patients without COVID-19, which would have minimized the psychosocial and health-related risks of clinical participation. We continue to believe that the risk-benefit calculus favored involvement in these roles. It is also worth noting that some institutions asked medical students to volunteer in clinical settings early in the pandemic, despite the additional risks that Dr. Riva and colleagues propose (1).

Moreover, we emphasized the voluntary nature of any clinical involvement by medical students. This stipulation provided an additional safeguard regarding concerns raised by Dr. Riva and colleagues and allowed for medical students themselves to determine the level of risk they were willing to incur.

Since our commentary was published, it has become even safer for medical students to work in the hospital. We have access to more personal protective equipment, know more about transmission of the virus that causes COVID-19, and have implemented safer infection control protocols in hospitals (2). Consequently, medical students have largely returned to their clinical responsibilities (3) despite continued high numbers of cases across the United States. Recent guidance from the Association of American Medical Colleges highlighted the importance of continued medical education, calling medical students “the essential, emerging physician workforce” and stating that “to address ongoing national physician workforce needs, the clinical education of our medical students . . . must continue, with appropriate attention to safety” (2).

We stand by our proposals regarding medical students’ clinical roles early in the pandemic. We are also glad to see evolving guidance from the Association of American Medical Colleges acknowledging that medical education needs to continue, with appropriate safety precautions. We believe that medical students have roles to play in clinical settings that can
benefit patients and be of educational value, all while staying safe during a pandemic.

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IN RESPONSE: Although we agree that terminology is important, these definitions are more ambiguous than Mr. Sorbello acknowledges. Continuous positive airway pressure and high-flow nasal cannula do not provide positive pressure to augment tidal volumes. However, they do provide positive end expiratory pressure, and some still refer to them as “ventilation.” Similarly, many use the acronym IMV to indicate invasive mechanical ventilation, but we understand that it is also used for intermittent mandatory ventilation. Until a consensus is reached on the use of these terms and acronyms, the most prudent approach is probably to be as explicit as possible whenever ventilation and oxygenation approaches are being discussed in order to avoid miscommunication. These issues were discussed extensively with our international contributors, including expert intensivists who contributed to this systematic review. Although there were differences in opinion, the terminology used represented overall consensus among the group.

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Ventilation Techniques and Risk for Transmission of Coronavirus Disease, Including COVID-19

TO THE EDITOR: I believe that Schünemann and colleagues’ living review was well written and provided useful information, but some of the terminology used was not correct. Terminology is important, especially when medical students, residents, and others are reading scientific articles and are in foundational stages of learning. I am certain that you would agree that confusion reigns when correct terminology is not used.

The authors referred to “noninvasive ventilation” and included continuous positive airway pressure and high-flow oxygen therapy as ventilation techniques. This is false. Continuous positive airway pressure and high-flow oxygen therapy provide for enhancement of oxygenation, not ventilation. Ventilation, by definition, is movement of air into and out of the lungs. Continuous positive airway pressure and high-flow oxygen therapy techniques do not perform that function; only positive pressure mechanical ventilators do—thus the term noninvasive ventilation. Bilevel positive airway pressure can technically be considered noninvasive ventilation, but many variations of bilevel positive airway pressure do not provide for a mechanical backup rate in case of apnea.

In addition, Schünemann and colleagues referred to IMV as “invasive mechanical ventilation.” However, IMV is the acronym for intermittent mandatory ventilation, a particular mode of mechanical ventilation. Saying that IMV represents invasive mechanical ventilation is simply not correct. The plethora of acronyms used in respiratory medicine and respiratory therapy are confusing enough on their own without authors using accepted terms to define something else.

Again, Schünemann and colleagues have done a good job but have used terms incorrectly. The Editorial Board should look more closely at terminology to ensure that the reader is reading (and hopefully learning) correct terminology that can then be applied to excellence in patient care.

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