



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Reflections

The impact of COVID-19 on medical education

Victor S. Sierpina, MD

Director, Medical Student Education Program W.D. and Laura Nell Nicholson Family Professor of Integrative Medicine University of Texas Medical Branch, UTMB-Health Galveston, TX, USA



Out of adversity comes opportunity

–Benjamin Franklin

At the onset of the pandemic, medical students in the midst of 3rd year clerkships were abruptly pulled out of clinical care. The same was true of 4th year students and those on acting internships, electives, or engaged in research.

Faculty scrambled to adjust learning experiences by switching to online cases and other remote activities to prepare students for required exams and to build clinical reasoning skills without the face to face patient encounter. This is admittedly a heavy lift for a human services, high touch profession like medicine.

The carefully orchestrated schedule of medical student life was thrown into sudden unpredictability. National organizations revised schedules and processes for interviews for residency as well as entry into medical school. All interviews this year are likely to be online, ZOOM, Skype, or some other platform rather than in person to reduce travel, disease exposure, and to expedite a shortened interview season.

As our clinical activities slowly resume, our thoughts turn not only to our patients and their care but also to our medical students. Both have been significantly impacted by the recent societal lockdown.

Practices of both academic and other community teaching faculty have been adversely affected, limiting their capacity to take students in clinical training. Many family practices have scaled back clinical services to telehealth and other more limited patient encounters. Many or most have had to reduce or furlough staff as well as facing reductions in personal and professional income.

At this point, we are unsure of how soon and how many of our volunteer community faculty will even be able to manage having students in their practices.

Medical students have generally adapted well to the whipsaw of events and uncertainty of their future. Like students at all levels, they have been pushed into isolation and quarantine, losing daily contact with teachers, mentors, and critically their friends and colleagues.

For some, this additional burden has been the straw that broke the camel's back of the usual already intense stress of medical school. As a result, we have seen an uptick in students asking for, and being granted medical leaves, usually for mental health issues. The long-awaited celebration of graduating from a long four-year course of study with attendance of their family and friends has also been canceled.

Clerkships will be shortened to accommodate to the shorter academic year as the summer months will be used for make-up time for rising 4th years plus providing pre-clinical skills building time for rising 3rd years.

All of this is subject to change, of course, based on COVID cases detected in our community and statewide.

The longer-term unknown is just how these students will perform clinically in residency. Will their patients be safe? This year's class who were ending their year without much disturbance until March should perform about as well as prior cohorts. But how about the rising 3rd and 4th years who will be missing substantial clinical experiences? Will they have the skills and confidence to treat patients adequately as interns? How will residencies adapt to different interviewing and application processes, perhaps limited letters of recommendation and uncertain grading metrics? We have moved to a Pass/Fail system in the midst of all this? How will that work in terms of high stakes, competitive matching programs?

At the end of the day, our system of medical school education, like the medical profession itself, will have undergone profound and unanticipated changes.

Some were perhaps overdue such a revision of grading systems, enhancing the rigor and value of the 4th year, sharpening our ability to do remote and virtual teaching. We have learned through the experiences of telehealth, which we now realize will be a new essential skill, that everything in medical care and medical education cannot be done remotely. I am not just talking about surgical and office procedures but the laying on of hands, the body language, the vocal inflections, the physical exam, the face to face of two humans in the same room exploring the mysteries of the body, mind, and spirit—these things can only be done, and taught, in person.

My fellow faculty and our students are hoping to find the new normal. In fact, we are having to discover and invent it as we go. Fortunately, we follow the steps of giants of education and medicine. Learning to adapt requires vision, leadership, perseverance, and creativity. We and our students will make it through.

“There is no education like adversity”

–Benjamin Disraeli

Victor S. Sierpina, MD, is the WD and Laura Nell Nicholson Family Professor of Integrative Medicine and University of Texas Distinguished Teaching Professor at UTMB-Health, Galveston, Texas.

E-mail address: vssierpi@utmb.edu