We sent

them home

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Medical student education has been a direct victim of the COVID-19 pandemic. Facing a highly virulent airborne pathogen and armed only with a preliminary understanding of transmission and clinical manifestations; a brand new diagnostic test; no proven effective treatment; and shortages of personal protective equipment (PPE), the duty to educate students became a lesser priority than an obligation to ensure student safety.

As clinician-teacher faculty at the University of Washington in Seattle, our principal educational focus for more than 25 years has been students in the required Internal Medicine Clerkship. On March 15, based on rapidly evolving events, students were removed from clinical sites. The decision was in alignment with the University of Washington School of Medicine (UWSOM) Dean's decision to suspend all clinical rotations on March 16 and the American Association of Medical Colleges' recommendation on March 17.

Every year, more than 300 UW students rotate through the internal medicine clerkship at sites in Washington, Wyoming, Alaska, Montana and Idaho. Never before has student exposure to patients been limited or suspended. Prior to entering clerkships, UWSOM students are trained in infection control, blood borne pathogen and respiratory protection measures including N95 fit testing. Prior to COVID-19, the risk of working with infected patients was no different from that posed by exposure to team members who come to work when sick.

Informed by student reports of mistreatment based on gender, race, and age and the perception of ever-heightening grade anxiety, our paramount concern and focus prior to the pandemic had been the emotional well-being of students as they experience the personal demands of learning while acculturating to a hierarchical professional work environment during a demanding 12-week clerkship.

COVID-19 arrives in Washington

The school, faculty, and students were aware of the rapidly evolving COVID-19 pandemic when our winter quarter clerkship began January 6. On January 21, a patient hospitalized at one of the UW teaching hospitals was the first reported Covid-19 patient in the United States, and on February 29, a press conference conducted by the Seattle-King County Public Health Department and representatives of Evergreen Health Medical Center of Kirkland, WA, announced a major outbreak of COVID-19 causing critical illness among residents of a nearby skilled nursing facility (SNF). It became obvious that the novel coronavirus had been spreading in the community for weeks.

At Harborview Medical Center there were 12 students on rotation. A patient from the SNF died in the Harborview MICU with unexplained ARDS the week prior to the press conference. This patient was later confirmed to have COVID-19, and at the time became the earliest fatal case in the U.S.

On March 1, UW Department of Medicine leaders asked if students should be sent home. The answer was "no," based on a practical desire to complete the final four weeks of the clerkship and a general sense that their relative youth combined with care protocols implemented to reduce possible exposure among trainees on the acute care services would keep them safe.

Across the region, students were excluded from seeing patients with Covid-19 and patients with unexplained respiratory symptoms or in droplet isolation. These decisions were made both to preserve PPE and also to limit student exposure.

A unique opportunity

Tragic as the initial outbreak was, it put Seattle on highest alert. Students were given the unique opportunity to witness and participate in a process whereby

public health, state and local government, medical center infection control, and service leadership coordinated a comprehensive restructuring of all systems to address the crisis. To minimize risk of exposure for residents and students on the acute care service, patients under investigation were admitted to attending hospitalists on the non-teaching service.

Prior to implementation of social distancing, daily updates from the incident command center were standing-room-only events. Infection control experts explained the science behind the protocols and demonstrated how priority had been placed on safety: understanding proper hand hygiene and PPE donning and doffing steps became a potential matter of life and death. Students were vital participants and contributed to a palpable sense of innovation, creativity, and mutual appreciation.

When national media interviewed some residents and specialists in critical care and infectious diseases, their character and statements of shared mission resonated powerfully. But, as the medical center barred visitors and social distancing was implemented, there was also heightened anxiety for an impending disaster.

Providing effective patient care to non-COVID-19 patients was proving more difficult, and a collective fear was strongly reinforced by the staggering emotional burden borne by resident physicians in the intensive care units who were finding it nearly impossible to comfort critically ill patients in maximal isolation and their families.

Limiting student engagement

New protocols for self-care, patient triage, and the decision to prevent students from seeing patients with respiratory symptoms had a highly detrimental impact on the educational experience. A new zero tolerance policy made it unacceptable to work with any respiratory symptom no matter how minor.

Many students with mild upper respiratory infection symptoms and allergies were sidelined until all symptoms had resolved, or they had tested negative for COVID-19. When students could come to work, they had fewer opportunities for active engagement in care. The surgery clerkship had removed students from the operating rooms, and our students were waiting in hallways while their team saw patients in droplet isolation. Fewer patients were coming to the emergency room and clinics, and a policy stipulating patients with symptoms had to test negative for COVID-19 before transferring to the teaching service meant some students stayed overnight on-call and had no patient to work up. For many it was increasingly a shadowing experience.

On March 12, the Seattle Public Schools closed. Reports of critically ill patients in their 20s and 30s removed any belief students may be protected from bad outcomes. Residents raised concern that students on a required clerkship would not feel empowered to voice discomfort being at work when feeling ill, unsafe, or concerned for their families.

On March 14, it was realized that any attempt to prevent student exposure would prove futile. One student was exposed to patients with respiratory symptoms on successive call nights. Exposure to COVID-19 was inevitable.

Should students fall ill, even mildly so, they might spend weeks in quarantine far from home. Continuing the clerkship would be to compel exposure to a potentially life-threatening virus upon students yet to take the professional oath. Knowing the proper action would probably seem clearer in retrospect, it felt important to have erred

on the side of caution. But how practical would it be to remove students from teaching sites across five states?

March 15 brought the most active email thread of the pandemic. Under discussion was an exposure in Idaho where an attending had been diagnosed with COVID-19 shortly after working face-to-face with a medical student. All were in full agreement, it was time to send the students home.

Relationships in clerkships and patient care teams always end awkwardly,[1] and these abrupt terminations were maximally so. Student reactions to the decision ranged from open disappointment to leave when they saw so many opportunities to be of use, while others expressed relief. Students who had missed time and spent nights at the hospital without patients to work up said they saw it coming. When breaking the news many cried. There was a release of tension that had been building. Confident that the school would do the right thing, it was time to go.

A tension between mission, education, and safety

The COVID-19 pandemic highlights tension between the mission to educate and the duty to ensure student safety. There have been two positive outcomes from sending students home. With fewer people in team rooms, it has been possible to maintain safer distancing. And, everything that has unfolded since March 15 confirms it was 100 percent unequivocally the proper decision. There have been check-in calls with the students. They're all back to their primary homes, as it should be at this time.

As defensible and appropriate the decision was, removing students has had many negative effects. In practical terms, grading will be based on fewer evaluations. They may find it harder to secure letters of recommendation, and their schedules remain to be determined.

Patients have felt the absence of students. A man struggling with a new diagnosis of metastatic cancer wondered what happened to the student who had been most attentive to his questions. A homeless patient living with severe acute-on-chronic kidney injury refused dialysis and left against medical advice two days after his student left.

Without programs in place to utilize students in alternative non-clinical efforts, there is no active role for them to play in the pandemic response, which left many feeling sidelined in professional limbo.[2,3] Has there been a new precedent set that student participation in patient care is not essential?

What comes next?

SARS, MERS, COVID-19. What comes next? Students have always been considered professional colleagues, but the pandemic forced the question: When do medical students actually enter the profession? When do students have agency to accept the "special obligations to all my fellow human beings" that can be interpreted to include the possibility of working in harm's way?[4] The most appropriate answer may be: After they have earned their medical degree and are no longer students.

If safe next time, students should be welcomed to share an active clinical role. If not, there must be numerous ways developed for student colleagues to join the fight. There must be strong support to develop local and national programs to mobilize all available resources including medical students who can utilize their unique talents.[5] There should also be more effective educational activities than studying for Step 2 while sheltered in place.

The students have been missed. It is not surprising that many have stepped up in their communities to deliver medications, scrub clinic schedules, and reach out to patients living in isolation. They continue to provide exceptional care to patients, just in new and different ways. Their return is greatly anticipated.

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