On January 20, 2020, the first U.S. case of Covid-19 was reported in Washington State. Substantial challenges lay ahead. Covid-19 is highly contagious, it can cause severe illness, and no proven, effective treatments or vaccines are available. As leaders at the University of Washington (UW) and UW Medicine prepared for a tsunami of patients, there was extensive discussion about the role of students and trainees (residents and fellows) in our response. How should clinical and educational imperatives be balanced with their safety and well-being?

Risk is inherent in medicine — for patients and for health care workers. Usually risks to clinicians are small, manageable, and accepted by these workers as part of their responsibility to act in a patient’s best interest. But providing care to patients with communicable diseases can be frightening. Today’s medical leaders remember the anxiety involved in caring for patients who were dying of an infectious disease with an unknown cause during the early years of the AIDS epidemic. More recent outbreaks (including H1N1 influenza, SARS, and Ebola) have further reminded clinicians of the personal risks they face when caring for patients.

The Covid-19 outbreak has required us to address questions about students’ and trainees’ involvement in the care of infectious patients. The high probability that medical students in the hospital would be exposed to Covid-19 and the need to conserve personal protective equipment (PPE) seemed to outweigh the educational benefits of students’ participation. This assessment prompted UW senior leaders to remove medical students from clinical rotations on March 16. The following day, the Association of American Medical Colleges recommended that member schools suspend clinical rotations for medical students for at least 2 weeks; this recommendation was recently extended through at least April 14, 2020. Involvement of residents and fellows in Covid-19 care has varied by specialty and is rapidly evolving. Some of these trainees may be caring for patients with Covid-19 during assigned rotations. When there is a surge in Covid-19 cases, others may be voluntarily redeployed to services with these patients.

To learn more about how Covid-19 is affecting our students and trainees, we conducted a brief, anonymous survey and received responses from 316 third- and fourth-year medical students, interns and residents in internal medicine and emergency medicine, and fellows in pulmonary and critical care at our institu-
Students and trainees were asked to describe what — if any — unique or challenging ethical or practical challenges they have experienced as a result of the Covid-19 pandemic and how they have responded. They were also asked whether there was anything they would like to tell us about their experience during the Covid-19 pandemic.

“I’m excited to be able to make a difference, but I’m just as scared as everyone else.” (IM resident)

“How do I respond when my housemates... are uncomfortable with me being in the house because I might bring Covid home?” (IM resident)

“Going in patient rooms less due to exposure. Not wanting to touch patients as much. New teams. New coverage. New workflow. New PPE training and usage. New triage system. This is endless and ongoing.” (IM resident)

“Masks were taken from precaution carts, hidden away in huddle spaces or workrooms. Patients were stealing them from the hospital. And we were running short. The team started to prioritize who would go into a room, based on how much gear was being used.” (student)

“Is it ethical to keep the N95s my mother sent to me, with the strict warning to not share them, to myself?” (IM resident)

“Considering the cost of intubating a sick elderly patient with multiple comorbidities who may use a ventilator for weeks while they are in dwindling supply.” (EM resident)

“When the Covid epidemic hit, I was on my anesthesia rotation. I dealt with the ethical dilemma of going in to get my intubation numbers higher while knowing I was still nonessential personnel.” (EM resident)

“I feel underutilized. It’s so hard to be a student and not help when you feel morally and ethically inclined to do so.” (student)

“As 4th year comes to a close and internship looms, being away from patient care for so long is deeply concerning... Not an ideal time to be rusty.” (student)

“Lack of visitors, especially the limited number for patients who are dying... This has put us in the place of looking toward public health goals more so than our own individual patients.” (PCC fellow)

“As strange as it sounds, I feel lucky to be working during this time.” (IM intern)

“Considering the cost of intubating a sick elderly patient with multiple comorbidities who may use a ventilator for weeks while they are in dwindling supply.” (EM resident)

“Students’ desire to help has driven them to volunteer to support the school’s clinical mission and community, by preparing home care kits for patients with Covid-19, for example, or by providing child care for health care workers.”

“Especially for fourth-year students, apprehension about “being rusty” and maintaining skills that will be required when they begin their internships shortly loomed large. Students also expressed other practical concerns, such as whether they would graduate on time or maintain financial aid. Students’ desire to help has driven them to volunteer to support the school’s clinical mission and community, by preparing home care kits for patients with Covid-19, for example, or by providing child care for health care workers.”

“Feelings of anxiety and vulnerability among students and trainees compete internally with a desire and commitment to serve the sick. Many have done more than has been required of them for patient care and within the community, despite risks and challenges. When one program called on residents to fill extra shifts through the end of April, all slots were filled by volunteers within 10 minutes.”

“Moving forward, leaders in medical education can communicate frequently with students and trainees to maximize the information and emotional support they receive. Students and trainees are
experiencing intense anxiety, uncertainty, and anticipatory loss. Leaders should create safe spaces for them to share their concerns, acknowledge and validate their emotions, and collaborate on innovative ways to contribute. Leaders can provide trainees who are unable to participate in Covid-19 care because of personal health issues with other options for helping, such as caring for outpatients through telemedicine. Throughout the pandemic, leaders should maximize students’ and trainees’ control over their involvement in Covid-19 care where possible.

The Covid-19 crisis is a teachable moment. Chaos and uncertainty demand an unyielding focus on core medical principles and consistent modeling of professionalism, altruism, quality, and safety. Bioethical issues that previously seemed theoretical, such as rationing and futility of care, are being brought to life during this crisis. Educators can proactively teach students and trainees about strategies for improving end-of-life care, allocating scarce resources, and caring for patients who are noncompliant with self-quarantine recommendations. Leaders should also anticipate pointed questions from students and trainees about Covid-19 policies and procedures and respond with respect and openness.

As the health care system becomes more adept at providing Covid-19 care, there will be innovative ways to assimilate students into care processes. Several schools are allowing fourth-year medical students to graduate early or return to the clinical environment to help address impending staff shortages. The efficacy of this approach will hinge on the ability to safely deploy these young clinicians in ways that don’t require time-consuming supervision, as well as on the response of accrediting bodies. Medical schools should ensure that their fourth-year students arrive at their internships ready to be effective members of Covid-19 teams.

Down the road, disruptions such as Covid-19 will prompt us to revisit routines and traditions. Which of the new practices that are being developed during the Covid-19 pandemic can be adopted more broadly to enhance educational and clinical experiences? How do we simultaneously provide the safest care and the safest education? What is the role of new technology and other innovations in the future of medical care and clinical learning?3

Medicine and medical education are based on a strong tradition of partnership and of one generation passing down knowledge to the next. Students and trainees have experienced considerable loss — loss of routines and traditions, expertise, educational opportunities, and social connections — and many are witnessing frequent loss of life. Most are worried about more losses yet to come in all these areas.

But amid loss, there is hope. In their seminal paper on AIDS and occupational risk for physicians, Zuger and Miles wrote, “Medicine is an inherently moral enterprise, the success and future of which depend to a great extent on the integrity of individual professionals as they face the duties the calling of healer entails.”4 Watching our students and trainees step up during the Covid-19 pandemic despite their fears gives us hope that the profession’s future is in good hands.

Disclosure forms provided by the authors are available at NEJM.org.

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