

Covid-19 and Medical Education

The pandemic has intensified several emerging trends in the education of medical students By Delia O'Hara

OVID-19 massively disrupted medical education in 2020, and while medical schools, like the rest of the world, have adjusted to "the new normal" in the pandemic, leaders in the field say the system will likely emerge trending toward some long-discussed changes.

"I think we're at a pivotal moment in medical education," says Catherine Lucey, MD, vice dean for education at the University of California at San Francisco School of Medicine, who works nationally on medical education and has written about the pandemic's influence on it. "I hope that we recognize the power we have if only we align and work together."

The major trends intensified by Covid-19 include a more pronounced emphasis on the well-being of both students and faculty; a more individualized approach to doctors' education that will stress 21st century skills like teamwork and cultural competence; and the increased use of technology like online instruction platforms.

Another widespread trend, only partly attributable to Covid-19, is a renewed commitment to antiracism and social justice. Educators agree it will be part of the mix going forward (see sidebar).

Learning Proceeds Alongside Covid

At first, safety concerns were paramount. Mid-March 2020, students decamped from medical schools, but their classes soon went online; they were back in clinical settings for the most part by the summer. By that time, institutions had formalized plans for how to keep them safe, and how to keep treatment teams' work with patients on track with students.

Behind the scenes, medical educators and the organizations that support their efforts raced to create a system that could function alongside Covid-19. Cooperation was key. Leaders came together across Chicago, and the country, to share information, ideas and curriculum that various institutions had created prior to the pandemic on topics that were now in demand, such as antiracism, and how to teach medical knowledge online.

"In the ensuing year and a half, some things that have been under discussion for a long time began to happen," says Raymond Curry, MD, senior associate dean for educational affairs

at the University of Illinois Chicago College of Medicine, with campuses in Chicago, Rockford, Peoria and Urbana.

The professional organizations that support medical education, accreditors and licensing bodies cooperated with one another to an unprecedented degree, Dr. Curry says, providing guidance to educators and adjusting rules and requirements to keep students moving through their training and gaining the skills they need to be good doctors.

Not only that, but faculty members who had resisted virtual teaching found themselves earnestly discussing with their colleagues the best techniques for connecting with learners online.

"The pandemic forced us to be nimble and think carefully about how to deliver content in a way that is engaging in a more consistent way," says Marianne Green, MD, vice dean for education and chair of the Department of Medical Education at Northwestern University's Feinberg School of Medicine in Chicago. "That's going to continue."

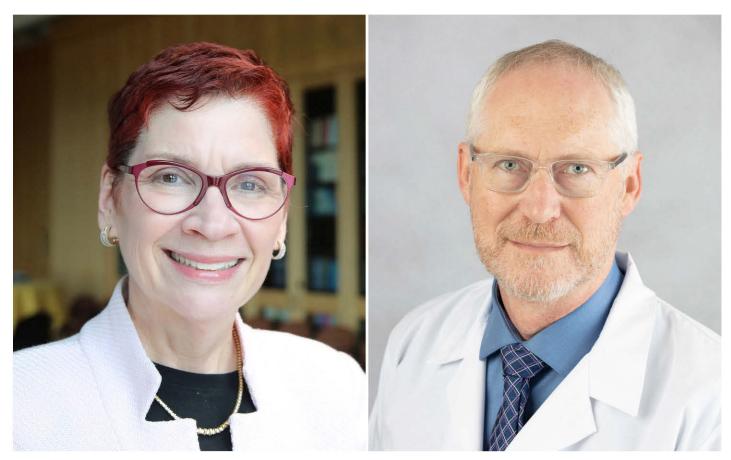
Early Push into the Trenches

Competency-based medical education (CBME), a fairly new approach advocates say would modernize and individualize the system, received a proof of principle when Covid-19 pushed students in New York, for example, out of medical school early and into the trenches as part of the medical workforce.

"The pandemic forced us to be nimble and think carefully about how to deliver content in a way that is engaging in a more consistent way."

We may think of 2020 graduates as the class most affected by the pandemic—those students who finished classes and even graduated virtually-but they had a normal experience for all but their last few months. Many also had the opportunity to fill clinical support roles, manning Covid hotlines and following up with Covid patients after discharge, and perhaps even creating their own roles in the early chaotic months, like babysitting and grocery

Chicago Medicine's COVID-19 **Series**



Catherine Lucey, MD, vice dean for education at the University of California at San Francisco School of Medicine; Raymond Curry, MD, senior associate dean for educational affairs at the University of Illinois at Chicago College of Medicine.

shopping for clinicians slammed with work.

"It really became an 'all hands on deck' approach" at academic hospitals, says Jeanne Farnan, MD, MHPE, associate dean for medical school education at the University of Chicago Pritzker School of Medicine. "Once it was deemed safe for the students to return, I think they felt very empowered to be part of the clinical team."

"It's going to take some time for us to know what the impact really has been."

As the new normal took shape, ongoing students found themselves in a shifting landscape as the virus surged, receded and surged again. These students have had to evolve into deft online learners, and they have had fewer face-to-face opportunities to socialize with their classmates or seek mentors in person than previous cohorts. Some of their clinical experiences have been virtualized, with standardized patients subbing in for real ones in some cases. Face-to-face meetings with patients and teachers have been conducted in masks.

For residents, burnout has been a problem, as they became part of the clinical workforce facing down Covid-19, and as public attitudes slipped

from gratitude into hostility and distrust of science. "That can be very challenging from a morale perspective," says Dr. Green.

"It's going to take some time for us to know what the impact really has been," says Katherine McOwen, MS, senior director of educational affairs at the Association of American Medical Colleges (AAMC) in Washington, which oversees admissions and accreditations.

Medical education leaders interviewed here agreed that so far, these cohorts don't look that different from students who have gone through medical school in more normal times.

After all, medical students are elite, highly motivated learners, Dr. Lucey says. "There's enough redundancy in the system" so students can catch up, and sufficient opportunities for assessment to identify learners who need help and get them what they need, she says.

Programs Ease Up on Exams

And there have been bright spots for these students. Step 1 of the medical licensing exam went to pass/fail and Step 2 Clinical Skills has been stopped, McOwen says. (Step 2 Clinical Knowledge remains a scored exam.) Residency programs had been using those scores as a screening tool, so students in recent years have been "intently focused" on studying for the





Marianne Green, MD, vice dean for education and chair of medical education at Northwestern's Feinberg School of Medicine; Jeanne Farnan, MD, MHPE, associate dean for medical school education at the University of Chicago Pritzker School of Medicine.

exams. Dr. Curry says he thinks the changes came because "stress levels of medical students within the Covid environment were just exploding."

Program leaders say the changes in the screening exam are a relief for students, but they make the lives of directors of residency programs harder. "Each year, it seems we get more applications and less information," one of them told a writer for the AAMC earlier this year.

"Everybody is afraid that the stresses will just migrate somewhere else" as residency programs look for a new way to rank applicants to programs, Dr. Curry says. But it's good news, he says, that the groups that oversee medical schools, including accrediting bodies and licensing boards, have been able to agree on policies that have helped students.

Will these changes stick, even after the pandemic? That is "a major topic of conversation in the field of medical education right now," McOwen says.

Interviews for residency programs are all virtual, at least for now, and away rotations have been halted. These changes reduce stress on students at a different point in their education. In the past, many third- and fourth-year students have been preoccupied with personal visits to numerous residency programs. Some educators want to go back to that system after the pandemic, as it offers valuable insights on both sides; others believe that

all-virtual interviews will "level the playing field" for less affluent students and reduce stress overall. "There is a big economic burden" and educational disruptions with in-person visits, says Dr. Lucey.

"There's enough redundancy in the system" so students can catch up, and sufficient opportunities for assessment to identify learners who need help and get them what they need.

"If I had to guess, I'd say that most likely we'll see some combination of both" virtual and inperson interviewing employed as students choose residencies in the future, McOwen says.

Extra Duties for Faculty

Increased attention to the well-being of faculty members may be another effect of the pandemic. Many clinicians who teach in medical schools have taken on extra duties, covering shifts for their colleagues who were treating Covid-19 patients if they weren't treating those patients themselves. "Teaching is that much more difficult when you have massive clinical expectations," McOwen says,



Katherine McOwen, MS, senior director of educational affairs at the Association of American Medical Colleges (AAMC).

noting that overwork and burnout were already a problem among medical school faculty before the pandemic.

"It's been hard to ask people who are already working at the absolute level of their abilities" in the clinic to then pivot to the teaching duties they would ordinarily handle, Dr. Farnan says.

Interviews for residency programs are all virtual, at least for now, and away rotations have been halted.

"The impact that Covid-19 has had on faculty has not necessarily been explored."

McOwen notes that, if the educational model indeed shifts toward a more individualized assessment structure, faculty members will require more training to be able to assess learners' progress, and the practice could take even more of their time.

More Engagement with Students

The way the system interacts with students may change, too. Regular communication with students, keeping them in the loop, has increased during the pandemic and is likely to continue, Dr. Green says. She would like to see students included more in decision-making, "really partnering with them" on their learning experiences.

Becoming a physician is about more than listening to lectures and seeing patients, leaders agree. Students need to explore their professional options with mentors, make friends among their peers and figure out what being a doctor means to them. Those activities all need to happen to a great degree in person.

Before the pandemic, students were routinely skipping lectures, instead watching recordings, the pacing of which they could control, stopping to concentrate on difficult content or multitasking through familiar material.

Dr. Farnan says, "It's funny, because now, post-Covid, students are clamoring for in-person lectures."

Social Justice Intersects with Covid

ALL THE MEDICAL education leaders interviewed for this story spoke of a renewed commitment at their institutions, and throughout the national system that trains doctors, to address systemic racism.

Covid-19's disproportionate toll on communities of color, combined with the social justice movement that came to the fore after George Floyd's death in May 2020, have intertwined to form a prominent thread in the question, Where do we go from here?

The Pritzker School of Medicine at the University of Chicago is reviewing its present curriculum to eliminate racist materials, says Jeanne Farnan, MD, the school's associate dean for medical school education. "Going forward, we are going to include content and competencies around social justice and advocacy," she says.

Marianne Green, MD, vice dean for education at Northwestern University's Feinberg School of Medicine, says that the pandemic has driven home the fact that "we have not made much of a dent in health disparities in this country." Recruiting and developing Black and Latinx physicians has to be part of that effort, she says. "We need to be very deliberate about recruiting providers our patients will trust."

The University of Illinois Chicago College of Medicine, with four campuses, in Chicago, Peoria, Rockford, and Urbana, has graduated more Black doctors than any other American medical school that is not within a Historically Black College or University. "But that doesn't mean we've done enough," says Raymond Curry, MD, senior associate dean for educational affairs.

"We have a good awareness of health inequities and of the social injustice barriers our own students face," Dr. Curry says. Yet Covid-19 and the events of the summer of 2020 "brought a realization that we hadn't attended to these issues to the degree that we need to."