Educators discuss integrating telehealth in student curriculum

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**Featured topic and speakers**

In today’s COVID-19 Update, educators talk about how telehealth is transforming health care during the pandemic, and the bigger challenge of not how to use telehealth, but rather how to integrate it into training for students and residents.

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**Speakers**

- Richard Van Eck, PhD, associate dean, teaching and learning, University of North Dakota School of Medicine & Health Sciences
- Brian Garibaldi, MD, associate professor of medicine, Johns Hopkins University School of Medicine
- Vimal Mishra, MD, medical director, telehealth and informatics, VCU Health

**Transcript**
Unger: Hello, this is the American Medical Association’s COVID-19 update. Today we’re talking about how to teach and evaluate performance in telehealth. An increasingly important issue for educators is telehealth continues to transform care during the pandemic. I’m joined today by Dr. Richard Van Eck, associate dean for teaching and learning at the University of North Dakota, School of Medicine and Health Sciences in Grand Forks, North Dakota, Dr. Brian Garibaldi, associate professor of medicine, physiology and health sciences informatics at Johns Hopkins University, School of Medicine in Baltimore, Maryland, and Dr. Vilma Mishra AMA’s director of digital health and the medical director of telehealth and informatics at VCU Health in Richmond, Virginia. I’m Todd Unger, AMA’s chief experience officer in Chicago.

Dr. Van Eck, let’s start with you. When the use of telehealth quickly wrapped up at the start of the pandemic, how did students and residents fit into that process and were they able to continue their education?

Dr. Van Eck: Well, we’ve been integrating telehealth in our phase one curriculum built around our AMA consortium project. So we’ve been working on this for a while, but we had a real challenge being a regional medical school because every one of the systems that our students are doing their clerkships in have their own telehealth systems. They have their own processes, and of course, everybody was getting used to this in a hurry. So our students really didn't have much access to telehealth in the health care settings, but some of the challenges, even if we'd had that access, I expect a lot of the challenges would have been around this idea of integration versus use. So a lot of people focus on how do I use telehealth technology, but the real question is how do I integrate it into my practice? And that's not just health care, it's also now teaching students in that same process.

So when clinicians are learning this process and this technology for the first time and students don't know what to expect, a lot of students get relegated to that observational role. And so we know we have to build our training around those things. That's one of the reasons that Brian and I and others are working on a telehealth playbook with the AMA to help provide that guidance to people about what do you do if you just got a little bit of time, about what do you do if you have more time to take advantage of the real strengths of telehealth.

Unger: Dr. Garibaldi, any thoughts?

Dr. Garibaldi: Well, I think it was a real shock to our system. We had not had a lot of prep time in terms of ramping up telehealth particularly amongst our residency programs for internal medicine. And back in March and April when clinical care essentially shut down outside of COVID care for several months, telehealth is really the only way that our residents were able to keep up their continuity clinics and to maintain contact with patients.

And there's a huge institutional wide effort to get the technology working, obviously. But once we had the technology and the capability we realized, wow, we have a whole generation of clinicians who
haven't used telehealth, who are now in charge of training others to use telehealth during their own training. So I think their huge challenge is user opportunities, but the residents themselves stepped up and really met the needs of their patients that have been helping us figure out what it is that they need to learn and they need to do to get better as we all navigate becoming better at telehealth business.

Unger: Dr. Mishra, obviously telehealth was being used in a somewhat more limited capacity prior to the pandemic. Talk a little bit about how students and residents were being trained, if at all in telehealth and how did they ramp up to kind of close that knowledge gap as we enter the pandemic?

Dr. Mishra: As shared by the panelists here, this has been a big change in how we deliver care and how we train our students and residents. So before COVID, nationally, telehealth was used for about less than 1% of total encounters in volume. If you think about this and boom mid-March, you're seeing about 60 to 70% of the visits delivered through telehealth. And of course there's been lot of challenges. There we realize the parchment is the impact and challenges and how to integrate. We have to, of course initially take students out of the learning environment, also residents, and there has been lots and lots of challenges to begin with.

Unger: What do you think, when you're teaching that, what's the unique skill set that's required for telehealth, versus kind of being in-person and what makes that so hard to teach?

Dr. Mishra: That's a fantastic question. And again, we need to kind of deconstruct the in-person visit to begin thinking about how it changes overall, how we deliver care virtually. Telehealth is not one technology, it is not a video, audio conference in system, there are lots and lots of technology. Again, telehealth has helped deliver from a distance. And now think about the paradigm that we live in, where we organize care around us, our clinical environment, our physicians, and now that telehealth, you have to organize the same care with the same kind of effectiveness and quality around the patient. And think about the challenges of change in the workflow, change in how we do physical examination. We don't have the expertise of getting the same kind of physical examination when the patient is in front of the screen, you have to learn a new ways of examining patient.

Do assisted physical examination. You gain few things, but you also lose that fidelity of getting complete patient physician interaction and integrate students and resident in there. So there's lots and lots to learn the chains cognitive load of kind of juggling with technology, thinking about how you are interacting with the patient, engaging patient, where the learners are learning as well. You have to teach them. Plus, the physician is not very confident in what they are doing, they are learning themselves. So it's a very interesting environment.

And the other question you asked about what we did, we had an M4 elective before this whole thing started, and it was more of an elective. These students would say, "All right, yes, I think telehealth is something, it was unappealing than a traditional health care delivery." Now it was more of a need. So we quickly ramped up and created M3 curriculum and try to teach them. Good part of this is the students, they learn so quickly. They actually helped attending physician to navigate with the
technology as well. So lots of learning, lots of challenges, but I think this is a beginning of a new era.

**Unger:** Dr. Garibaldi or Dr. Van Eck, what do you think in terms of that skill set that you need to teach to be effective in telehealth?

**Dr. Van Eck:** I think that one of the real challenges is people think it's going to be easier than it is because they haven't done it. So all of the faculty development, all of the student training, you can do all the didactics you want, but until you're in the midst of doing it, you don't really understand what's involved. And we had in our robust telehealth interprofessional training; our students we provided them with training ahead of time on what it meant to be on camera, how to manage, modulate your voice, how to run the technology, all of these things. They really didn't pay a whole lot of attention to it. And lo and behold, right after the scenarios, the debrief was full of comments like, I had no idea telehealth was so hard, I couldn't understand what they were saying, And I couldn't see them, they kept saying, who are you? Which one are you? And I couldn't read body language.

And so until you're in the midst of it, you don't get it. So I think that's a real key aspect of the training that we have to put people in those simulated and realistic environments to do that training, or they just don't understand it.

**Dr. Garibaldi:** Well, I like to think about it as going back to this first principle. So William Osler said a 100 years ago, over a 100 years ago that the whole art of medicine is an observation and telehealth is all about observation. And it provides unique opportunities to observe patients oftentimes in their home environment where we never would be able to share that experience with them before. And I think there's lots of things that you can get from observation through telehealth that you'd also get during an in-person visit that we sometimes take for granted.

And so I think when we've kind of taken a step back and said, what are the essential elements that go into a history and physical exam over telemedicine? It really comes back to observation. Yes, there are certain things that you can do with assisted physical examinations but at the end of the day, watching a patient walk across the room, or, watching the way in which they speak, if you're worried about shortness of breath, there's so much information that I think we oftentimes have lost at our in-person counters. And I wonder and hope that telemedicine is actually going to bring us back to taking advantage of those wonderful cues and observations that we can make that can help us in all of our patient encounters.

**Unger:** Dr. Garibaldi, just kind of following up on that, and you think about kind of that skill and you talk about observation. So now put yourself in the position of evaluating someone who's learning. In evaluating their performance in telehealth, what are the factors that need to be considered and, what are the challenges in doing that?

**Dr. Garibaldi:** We've been thinking about this a lot. We started as part of our AMA reimagining residency grant. We've been looking at creating real world encounters for our residents and seeing
how they conduct the clinical examination, including the history and the physical exam, and doing that under direct observation with faculty members who themselves, have to meet the patient and do a history and physical and decide what they think is going on with that patient and then provide real world feedback in real time for our residents. We were doing that with live in-person encounters. And in some ways it was easier to recreate those encounters over telehealth because we can use similar technology based systems that we're already using for telehealth in our institution. And we've been able to collect a wonderful group of volunteer patients who have real problems medically on history, but also on physical examination.

And we're able to actually watch our learners go through these encounters in real time and then provide them real time feedback on things that they might want to incorporate into their next encounter. So the next time they see someone with shortness of breath or, problems with ambulation or problems with sensory loss, they actually know, what can I accomplish over telehealth? And I think equally importantly, when do I need to say, "You know what, I'm not going to be able to get the answer through telehealth. This is someone I need to prioritize for an in-person visit or another evaluation."

So I think trying to recreate those experiences with as much fidelity as possible and as much real world experience as you can is critical to understanding where our learners are. But I also think that as we were talking about earlier, the faculty development that comes out of that is incredible.

Dr. Garibaldi: If you have to sit down and watch a resident, do a telehealth visit and then decide with a co-faculty member, what do I think they should have been able to do? What should they be able to accomplish as a graduate resident? Let's say, you have to have that conversation about what is it that we should be able to do during telehealth in general. And that's a conversation that is happening all over the country. And I don't think there really is yet a consensus on what should you be able to do for this chief complaint or this type of problem over telehealth.

And so I think these evaluation discussions are going to lead to a much broader discussion about what it is that we should be able to do over telehealth as we move beyond the pandemic, and we can mix telehealth in with in-person visits. And so I think this is really just a wonderful opportunity to go out of from both the evaluation standpoint, but also setting expectations for what any clinician should be able to do over time, moving forward.

Unger: We run up the topic of faculty development, Dr. Mishra, one of the key things here is that during this pandemic, about almost half of folks are using telemedicine for the first time. And so that makes teaching and evaluating performance in this area, particularly challenging. So how do you address that?

Dr. Mishra: You're bringing up a great point, Todd, and I think we do need to provide resources to the educators, to evaluate not only their performance, but also the student performance. So, we don't really have an answer or a solution at this point of time, but glad to note that AMA and the
subcommittee is working to create a playbook and giving you some possible work, what we have done through the AMA has been creating a playbook to integrate telehealth into practices. And that was a first attempt to help practicing physician, to understand how to, and what to integrate in a clinical environment. And similarly, hopefully the AMA resource will be helpful resource for educators to start thinking about what the learning environment should look like, what are the roles and responsibilities of learners and educators, and how to think about it. Also, double AAMC came out with some of the competencies, which are really helpful to start thinking about the evaluation process and how we think about competency.

**Unger:** Very interesting. Well, last question I'd love to hear from all three of you. We know that telehealth is going to continue to change care delivery, post-pandemic, but in the big picture, how do you see this influencing the -evolution of physician training over the long-term?

**Unger:** Dr. Van Eck will you start?

**Dr. Van Eck:** So North Dakota is very much focused on rural health and on chronic disease. And so this is where we see one of the biggest impacts long-term is on rural health care, because it gives you the potential to reach people in different ways. But it also brings along a series of huge challenges and just like the pandemic taught us that we can teach online, but doing so is very hard. It taught us the same thing about telehealth. We know that it's possible, but it also revealed all of the barriers. So for example, broadband access, do people have the technology?

For example, as part of our HRSA grant, we plan to do interprofessional team-based geriatric assessments of Native Americans in different reservations. One of the questions that comes up is do you train the patient? Do you ask the patient to come into a health care center? Do you train a surrogate? Do you send out a set of technology that's plug and play? What are the best ways? And it's not going to be a one size fits all. You have to understand rural isn't all the same. Rural on the reservation is different than rural in Walhalla. And so you have to really understand those things. Those challenges are going to be huge, but the benefits are equally large.

**Unger:** Dr. Garibaldi, how do you see this kind of evolving post-pandemic in terms of training?

**Dr. Garibaldi:** I think there are two important issues we need to consider. In addition to what we've already talked about. One is this issue of access to care. And I think the pandemic has clearly highlighted vast inequities in our society. And certainly health care is a big part of that. We need to understand from a patient's point of view, what they need to be successful during a telemedicine visit and how we can take advantage of the potential widening of the scope of health care by providing certain technologies and access to this technology, to serve patients. I think that's probably one of the most important things we need to deal with.

The other thing I would love to see is us taking advantage, not just in the video and the audio, but beginning to use other technologies that we're already using in the hospital, point of care devices that
can tell you your pulse oximetry, that can tell you your heart rate, that can tell you maybe even digital stethoscopes that we can deploy in the home or even ultrasound machines that can guide the patients actually get additional information. I think there’s a whole host of untapped resources that we can apply to telehealth that’s going to greatly expand what we can accomplish not in-person.

**Unger:** Makes a lot of sense. I've already developed my own gym equipment collection here. Why not have my own medical devices that tie to what I need to be tracking on a chronic basis. That makes a lot of sense.

**Unger:** Dr. Mishra, your final thoughts.

**Dr. Mishra:** Today, health care is being delivered as to how our work is being delivered in a broken delivery system. And that's what technology is going to help. How do we improve our delivery system to a point that we can provide same technologies, same kind of care, wherever the patient is? It's going back to the future where the physician used to go to the patient to take care of the patient in their environment. And the technology is going to bring back the same essence back to the patient's control. I see the future of health care, where it is led by the patients and guided by the physicians. So we need to kind of start embracing that from sick care to well care from physician delivered care to physician guided care, and how do we do it? There are lots and lots of technologists around us.

How do we organize it in a way which really impacts the patient care, improve the outcomes, rather than just thinking about one thing, big electronic medical record or telehealth? Similarly, how do we really think about the future of the technology? How the AI will be integrated in health care? How can we enhance our physicians' performance? Not only asking them to do the same physical examination, the techniques we learnt a 100 years ago. Maybe we need to start thinking about new ways to innovate and integrate in the curriculum where the physician is leading the health care rather than we being led by the innovations around us. I think that's the future.

**Unger:** It's pretty exciting to see a new frontier where the rules aren't exactly written and people are learning how to do it better. Thanks to all three of you for making that possible. Dr. Garibaldi, Dr. Van Eck, Dr. Mishra, we appreciate your perspectives today. We'll be back soon with another COVID-19 update. In the meantime for resources on COVID-19, including AMA's guide to telehealth, visit ama-assn.org/COVID-19. Thanks for joining us, please take care.

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