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Telemedicine is getting trendy, but doctors may not be keeping up

By Dhruv Khullar  April 22 at 7:00 AM

For years, doctors have been told to look at the patient — not the computer — when providing medical care. What we haven’t been told is what to do when there’s only a computer.

Telemedicine is perhaps the most rapidly evolving area in health care. About 15 million Americans receive some form of remote medical care every year. Investment in on-demand health-care services is estimated at $1 billion annually, according to Accenture Consulting. Kaiser Permanente, the nation’s largest integrated delivery system, provides more visits virtually than it does in person.

All of which raises an important but overlooked question: Do doctors know how to use telemedicine?

As is often the case with technological change, our capacity to generate innovation has exceeded our capacity to understand its implications. With telemedicine, we’ve done what we generally do: Introduce a new treatment, technology or care model, and assume doctors will figure out how to use it.

But as telemedicine moves from a technology used to manage minor ailments — coughs, rashes, sore throats — to one that affects nearly every field of medicine, it’s important to consider whether its increasingly complex application is being matched with increasingly sophisticated training.

Misdiagnosis, for example, remains a fundamental problem in medicine, and it’s not clear whether telemedicine will ameliorate or exacerbate it. Much of medical diagnosis remains clinical gestalt: an integrated assessment based on labs, history and exam. But how should this evaluation vary by the medium in which a patient is cared for? Should doctors feel comfortable making some diagnoses remotely, but not others? Should they adjust their threshold for ordering more tests, or dismissing minor complaints, when caring for patients on a screen instead of in an office?

Building rapport with patients remotely is also more difficult than in person. The subtle cues that bond doctor and patient are largely absent during a virtual visit, and some argue we should teach not just bedside manner but also “website manner.”

Clinical rapport is no small thing. It can help patients lose weight, control blood pressure and manage pain. It has sometimes been found to have as large an effect on disease prevention as commonly used medications. And it’s a central driver of patient
“Today, telemedicine usually means a video chat,” said Eric Topol, digital health expert and executive vice president of the Scripps Research Institute in La Jolla, Calif. “But soon, telemedicine will be a data-exchange platform, in which patients are generating and transmitting data — vital signs, genetic scores, microbiome information — in real time to doctors. Are we preparing physicians for that kind of future?”

The case of “telestroke” services is illustrative. By some estimates, patients going to rural hospitals with stroke symptoms are only 10 percent as likely as certain patients in urban areas to get the clot-busting drug tPA. (A tissue plasminogen activator, or tPA, must be given within hours of symptom onset.) This has prompted growth of telestroke programs around the country.

The decision to administer tPA is not easy. A neurologist must review images remotely, evaluate subtle changes in patients, consult with on-the-ground physicians and nurses, and manage delicate conversations with patients and families about complex trade-offs. (A tPA treatment can rapidly dissolve clots, but it can also cause catastrophic brain bleeding.)

But there are few formal ways to evaluate neurology trainees or to help them manage telestroke consultations. Those who do receive formal training report marked increases in their comfort with telestroke care.

“It’s different caring for patients on screen, especially when it comes to stroke,” said Amanda Jagolino-Cole, an assistant professor at McGovern Medical School at the University of Texas Health Science Center at Houston and a member of the tele-neurology team. “How do you build trust? How do you get clinicians in the room to help with exam maneuvers? It all needs to be taught and practiced. These are life-changing events for patients.”

Rahul Sharma, emergency physician in chief at New York Presbyterian-Weill Cornell, thinks we need not just more training but a new medical specialty entirely: the “medical virtualist.” Medical virtualists would be doctors who spend most or all of their time caring for patients remotely and who receive dedicated training and certification. He argues that specialties such as intensive care, interventional radiology and surgical subspecialties were born from advances in medical knowledge and technology, and the same should now hold true for telemedicine.

Sharma helped launch one of the country’s first telemedicine programs based in an emergency department. When patients with minor complaints enter the emergency department, they’re given a standard in-person triage evaluation, but then they are offered the option to be seen virtually. Those who accept the offer enter a room with a computer monitor through which they videoconference with a physician who can order X-rays and prescriptions, and, if necessary, ask an in-person clinician to assist with minor procedures such as removing stitches. Wait times for those with non-urgent conditions have dropped from more than two hours to less than 40 minutes, and fewer than 2 percent of patients have had to return to the hospital unexpectedly.

“Patients love it,” Sharma said. “And not just millennials. Twenty percent of our telemedicine visits are for patients over 65. We’ve even treated people over 100. If you can get them to buy in, you can get anyone to buy in.”

To train doctors to provide virtual care, the program enlisted consultants who specialize in presentation and public speaking and held workshops on best practices. It also taught them methods for examining patients remotely. Physicians can, for
example, ask patients with sore throats to take a photo with their smartphone, or ask family members to help with basic physical exam maneuvers.

Medical students at Weill Cornell can also now take a two-week telemedicine and digital health elective in which they learn to interview patients virtually, participate in telestroke and telepsychiatry visits, and understand the legal and regulatory issues around telemedicine.

We often assume that if we get the finances and regulation right, telemedicine will be incorporated into clinical practice and create positive health outcomes for patients. But its integration and effectiveness may depend in part on whether doctors feel comfortable using it: Providing medical care virtually is fundamentally different from providing it in person — in ways we haven’t examined carefully or sought to address.

Going forward, more-effective telemedicine may require more-effective telemedicine training.

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