

JOURNAL REPORTS: HEALTH CARE

What Covid-19 Taught Us About Telemedicine

The pandemic gave doctors a crash course in what does and doesn't work. Among the lessons: a good bedside manner is crucial.

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BIOGRAPHY

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The Covid-19 pandemic created the perfect test lab for telemedicine.

The closure of clinics and hospitals during the early days of the lockdown, and the subsequent guidelines to avoid venturing out as much as possible, forced a massive shift to video consults, providing a crash course on how they work—and what can go wrong. Now, as doctors resume in-person visits, virtual care is poised to play a permanent role, as evidence shows that not only is it highly convenient, but it often works just as well, and sometimes better, for an unexpected range of care.

“We’ve learned so much about the many different things doctors can do to connect with patients, in ways they never did before, that it will be hard to turn back the clock,” says digital health consultant Daniel Z. Sands, an assistant professor at Harvard Medical School and a primary-care doctor at its affiliate Beth Israel Deaconess Medical Center.

By some estimates, 20% to 25% of all care in the future could be delivered remotely. At Stanford Health Care in Palo Alto, Calif., even as practices have resumed in-person appointments, 30% to 40% of all visits are still virtual. About a third of new-patient visits are using telemedicine, and close to 75% of patients who completed a video visit report that they are very likely or extremely likely to choose a video consult over an in-person visit, according to Chief Medical Information Officer Christopher Sharp.

“It’s not surprising that this was better than nothing, but what is surprising is how highly virtual care is valued by our patients,” Dr. Sharp says.

Future access to virtual care in future depends on the fate of policies adopted at the start of the pandemic, when the federal Medicare program and private insurers began paying doctors the same rate for virtual consults as in-person visits and loosened other restrictions that sharply limited the use of telemedicine in the past. The American Telemedicine Association and other healthcare groups are urging Congress to keep the changes in place after the national health emergency is declared over, though to what extent they will succeed is unclear.

The jury is also still out on whether patients cared for via telemedicine do as well as patients with in-person care, and doctors are clear that some aspects of care must be handled in an office. But when doctors do use virtual appointments from now on, they have a much better idea of how to do it right. Here are some of the lessons that emerged from the pandemic pivot to telemedicine.

Rethink the waiting room

Patients are used to sitting in a doctor's office where they can talk to staff at the desk and see others going in and out of the doctor's office. But in a virtual appointment, it can be confusing if patients log on at the appointed time and the doctor isn't there yet.



'I think we might actually get better attention through telemedicine than in the office, when a doctor is being pulled in two or three different directions,' Ms. Rosswurm says.

PHOTO: COOPER NEILL FOR THE WALL STREET JOURNAL)

“The first telemedicine visit I had scheduled, no one ever came on the line, but there was no one to tell, ‘Hey, something went wrong,’” says Gretchen Rosswurm, who has Parkinson’s disease and chairs a patient-advocacy council for the Parkinson’s Foundation from her home in Texas. She says she waited more than 20 minutes, then hung up and called the office, where a staffer apologized and rescheduled her for another day. “I think they were just overwhelmed,” Ms. Rosswurm says.

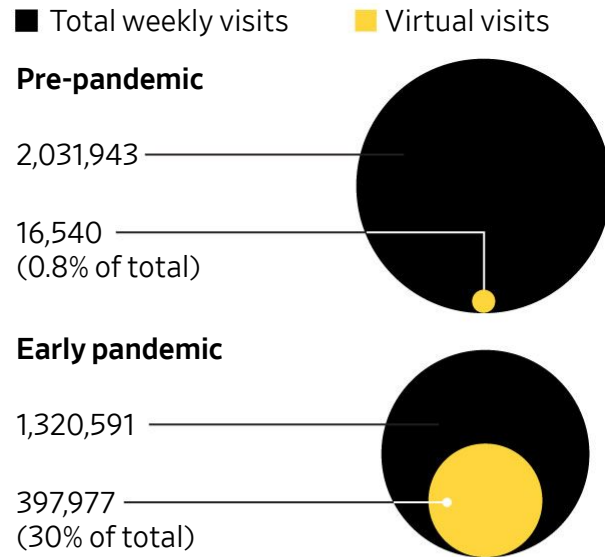
Once she began virtual visits, things went smoothly—including treatment for Covid. “I think we might actually get better attention through telemedicine than in the office, when a doctor is being pulled in two or three different directions,” Ms. Rosswurm says.

At Michigan Medicine, the University of Michigan’s health system, doctors initially ran late when trying to juggle both in-person and virtual visits. That was a big disappointment for patients, who could end up waiting 30 minutes for a virtual call, according to Chad Ellimoottil, a urologist and director of the university’s telehealth research incubator. Some doctors switched to alternating days for in-person and virtual visits, doing the latter from home, where the transition between appointments was easier without the distractions and interruptions of an office.

Thomas Jefferson University Hospital in Philadelphia, part of Jefferson Health, conducts telemedicine consults through a patient portal that alerts patients waiting on the video connection when a doctor is ready for the appointment and can help patients get back on a virtual session if they are disconnected. “No one has solved ‘the doctor is going to be late’ problem,” but such features can put patients at ease, says Judd Hollander, senior vice president for healthcare-delivery innovation and an associate dean at the university’s medical school.

Change in Practice

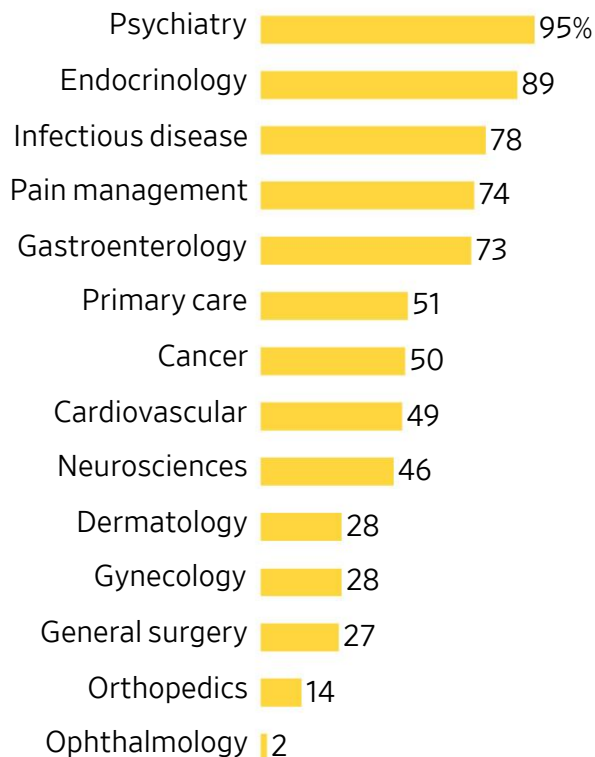
The average weekly volume of total outpatient visits and virtual visits in a group of more than 16 million people before the pandemic compared with the early months of the pandemic*



*Pre-pandemic = Jan. 1-March 17, 2020. Early pandemic = March 18-June 16.

Virtual Demand

Many people are still choosing remote care even with in-person visits available. The percentage of telemedicine visits in these specialties at Stanford Health Care, Sept. 1, 2020, through March 20:



Sources: Health Affairs, February 2021, Sadiq Y. Patel et al., sample of 16.7 million anonymized people in OptumLabs Data Warehouse (top); Stanford Health Care (bottom)

Then there's the problem of preparing patients for visits. At Stanford, "just getting patients engaged, ready and able to do these visits was a challenge," says Dr. Sharp.

Medical assistants experimented with previsit strategies that ranged from a few minutes of online screening questions to 10- to 15-minute sessions.

For the next step—the scheduled virtual consult—patients log on to a virtual waiting room through a patient portal five to 10 minutes before the appointment to help things run on schedule. Medical assistants can jump on a virtual visit before the doctor arrives to ask such questions as whether patients can check their own blood pressure or step on a scale to check their weight. Dr. Sharp says that if he is running late to a video consult, a feature in the electronic medical record lets him instantly send an automated text to ask the patient not to leave the visit.

Develop a good 'websiteside' manner

Translating the intimacy of in-person care to a video screen poses challenges. A study last year with Veterans Affairs Health Care diabetes patients found that they appreciated the convenience and timesaving aspects of telehealth visits. But they also identified concerns compared with in-person visits, including a perception that providers paid less attention to them and difficulty establishing a relationship with the doctor.

"The human element of an in-person healthcare encounter cannot be fully replaced by a virtual one," says Laura Cooley, senior director of education and outreach at the Academy of Communication in Healthcare.

Cleveland Clinic, which went from 37,000 virtual visits in 2019 to 1.2 million in 2020, is now fully open for in-person care but anticipates 20% of its visits will be virtual in 2021, according to Steven Shook, a neurologist who leads digital healthcare for the 19-hospital system. To help clinicians get up to speed, it developed a [digital playbook](#) on how to conduct virtual visits and exams.

A tipsheet suggests orienting the patients to the benefit of a virtual visit—and acknowledging its limitations—with phrases such as, "As you already found out, your home is more comfortable than an office waiting room. But since this isn't in person,

please know that if it seems I'm not looking at you, it's probably because I'm looking at you on the screen."

Because empathy may be harder to convey, doctors might say, "I wish I could be there with you in person" and "I can hear how hard this has been on you."



Nurse practitioner Sadie Paez sets up a telehealth session for William Merry, recovering from pneumonia at his Ipswich, Mass., home last July.

PHOTO: ELISE AMENDOLA/ASSOCIATED PRESS

Some guidelines involve teleconferencing basics, such as making sure doctors have no background noise or distractions, put themselves in the center of the video frame, and adjust the lighting to reduce glare. The wrong lighting from behind can obscure the doctor's face and even seem menacing, says Jefferson's Dr. Hollander. In one of his training modules, he shows a backlit doctor who appears as a dark shape with a halo of light; he labels the image "Angel of Death."

Doctors have also found ways to modify in-person guidelines for the toughest virtual conversations. Researchers in the cancer center at Canada's Queen's University in Kingston, Ontario, adapted a protocol that is widely used as a framework for discussing serious news in person, such as a cancer diagnosis.

Andrew Robinson, an oncologist at Queen's, says that it's more important on video consults to leave longer pauses so patients can digest information and ask questions, and for doctors to convey empathy by saying, "I understand this is difficult news to hear, especially by video."

Where remote exams do work

At Jefferson, before the pandemic, two-thirds of doctors used telemedicine regularly or occasionally, but a third had wanted little to do with it, Dr. Hollander says. When the pandemic lockdowns hit, the hospital used training videos and remote tutorials to get more than 1,000 clinicians comfortable with virtual consults and exams in less than a week.

For example, doctors asked patients to jump up and down within range of the video screen to assess patients for peritonitis, an infection that can happen from a burst appendix. If patients laugh while jumping, an emergency is unlikely.

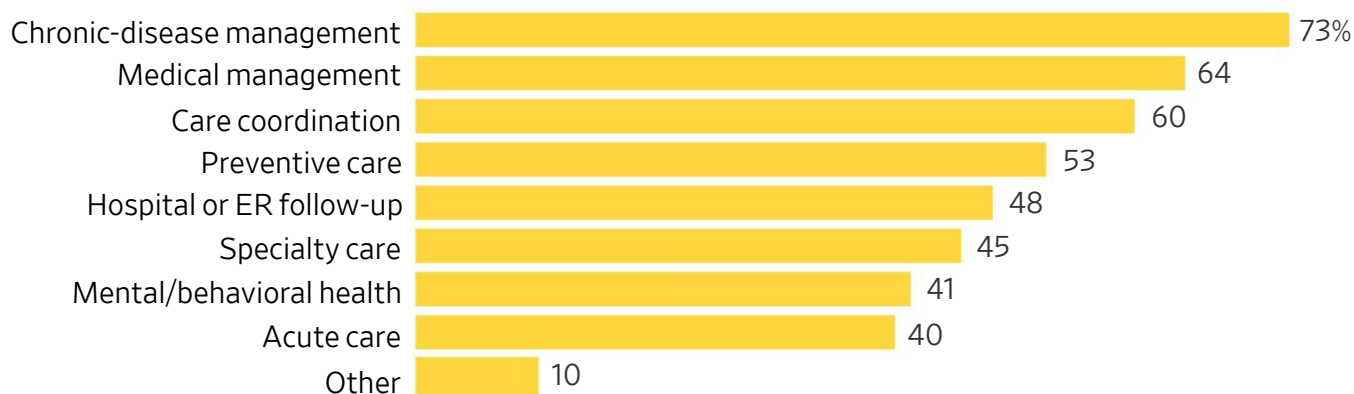
“If they jump once and grab their belly in pain, or are afraid to jump, we can see where it hurt and whether it’s likely they need to be seen rapidly to figure it out,” says Dr. Hollander. In addition to appendicitis, doctors have identified surgical emergencies such as a ruptured ectopic pregnancy and inflamed gallbladder.

Doctors were taught to virtually check a patient for a wide range of symptoms that could signal a serious illness such as breathing problems, pallor, a yellowing of the whites of the eyes and gait problems. In one virtual-exam training video, Dr. Hollander and a medical student demonstrated how a patient can use an iPad to show their open mouth, stick their tongue out and use a phone flashlight to help the doctor check for redness in the throat, as well as feel for lumps in the neck.

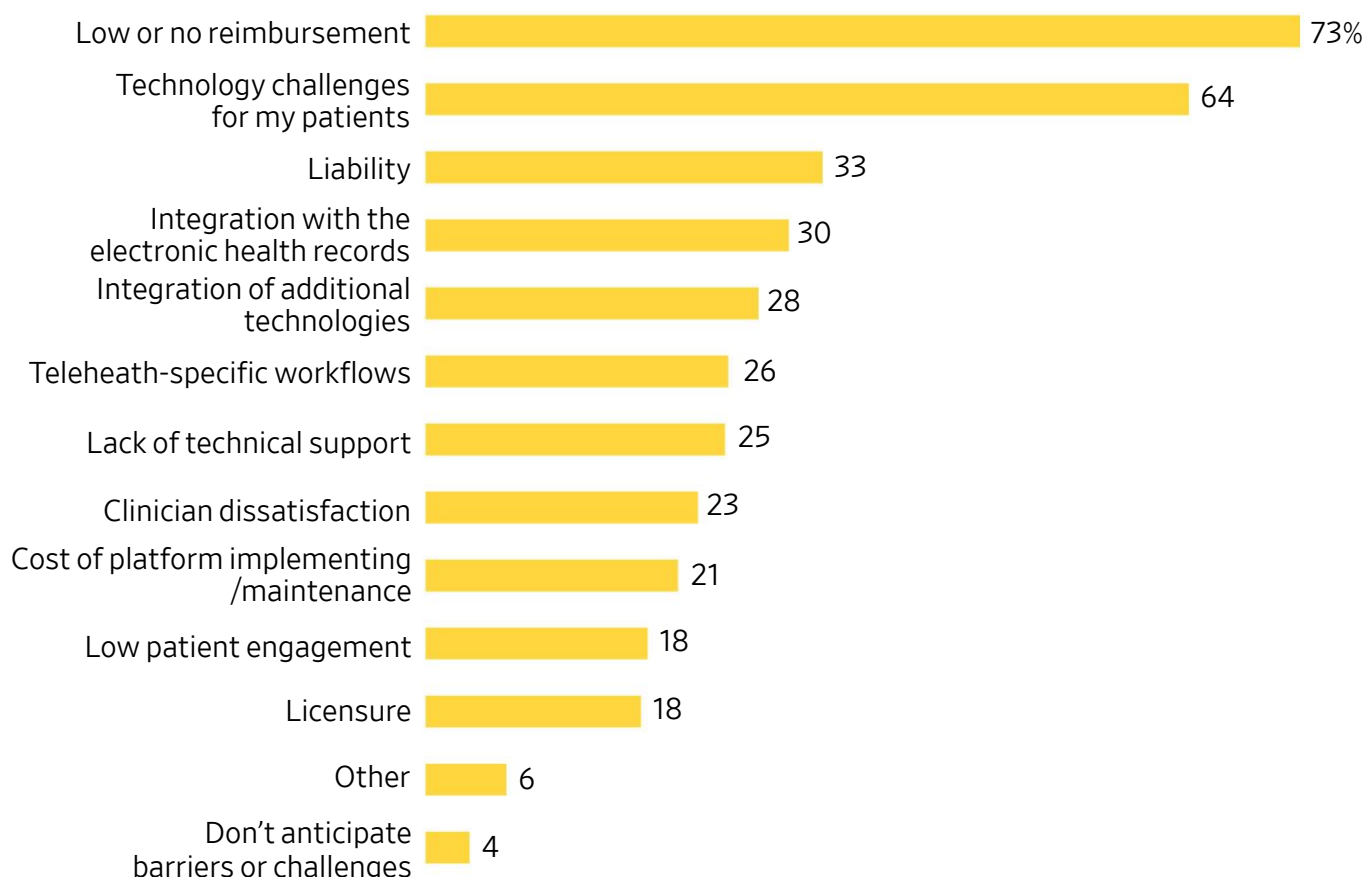
After the Pandemic

Surveyed doctors indicate they intend to continue offering many kinds of virtual visits after Covid-19 abates. But they also see possible obstacles.

What types of visits would you like to continue offering to your patients via telehealth after COVID-19?



What do you see as barriers to the continued use of virtual care after the pandemic?



Source: Covid-19 Healthcare Coalition Telehealth Impact Study, survey of 1,594 physicians and other healthcare professionals, July-August 2020

Stanford created tutorials to help doctors guide patients through self-exams for the most common doctor visits, including upper respiratory infections, lower-back pain and shoulder pain.

Neurologist Roy Alcalay, a movement-disorders specialist who treats Parkinson's disease patients at Columbia University Irving Medical Center, says that in some ways doing an exam on video is better than in a clinic because patients who live far away or have difficulty with traveling don't need to leave home. He can also see patients' home environments and notice, for example, whether hallways may be too narrow for someone with a movement disorder.

He also uses video consults to evaluate patients like Ms. Rosswurm who are participating in a genetics study he is leading for the Parkinson's Foundation.

On a video consult, Dr. Alcalay can perform a version of a standard Parkinson's exam, including looking at eye movements, asking patients to tap their arms with their fingers, fold their arms and stand up. Family members can help by holding a camera while the patient walks or runs. Columbia has used telemedicine to conduct cognitive-function assessments during the pandemic, but tests can take hours, which can be a challenge. For a new diagnoses of Parkinson's, he feels he can do a more thorough exam in his office. "Once Covid is over, it is best to get a diagnosis in person," Dr. Alcalay says.

At Children's Hospital of Philadelphia, pediatric neurologist Ingo Helbig says neurologists who had never conducted a virtual exam quickly adapted to evaluate children with epilepsy and other conditions remotely. Staffers helped families download a patient app on a smartphone that connected them to the hospital's telemedicine portal and offered step-by-step instructions on how to prepare for and navigate the visit.

Then, on the video call, clinicians work with families to engage children, finding creative ways to conduct a neurological exam, such as engaging them with their toys to get them to move their arms to assess strength. Dr. Helbig asks patients to touch his nose on the screen and reassures them they can touch a parent's phone, which usually gets a smile and makes them engage in the exam. He asks families to move the phone around in front of the child to assess eye movements, and asks children to do "crisscross applesauce," sitting on the floor with arms and legs crossed and then stand up without using their arms.

In a study he led of 2,589 child neurology telemedicine visits, published last September in the journal *Neurology*, 90% of doctors found the visits to be satisfactory and most families wanted to do telemedicine again in the future. Since then, with data on more than 10,000 visits, the results are on track with the findings of the study that telemedicine is effective for a large proportion of child neurology care, according to Dr. Helbig.

Where remote exams don't work

Virtual triage has also proved critical in demonstrating when telemedicine doesn't work—and when patients need to make an in-person appointment or head to an emergency room.

Dr. Helbig's study also found that 5% of virtual cases were flagged by doctors in the electronic record as concerning enough to require an in-person visit, either because of technical problems or a child who had issues that couldn't be assessed remotely. In new patients, when doctors had no baseline to judge alertness or mental status, it was not possible to tell if unusual behavior was typical or if there might be an issue such as increased brain pressure that required urgent imaging, and patients were sent directly to the emergency room.

Dermatologists have relied heavily on virtual consults to determine whether patients need in-person visits. Joseph Kvedar, a professor of dermatology at Harvard Medical School and a senior adviser for virtual care at Boston's Mass General Brigham, was able to identify several lesions that he suspected might be skin cancer and schedule an immediate in-person check—and reassure others that their lesions were benign and could wait until their next scheduled visit.

But dermatologists have also found virtual exams less useful for examining areas such as the scalp, which can develop lesions from sun exposure that are hard to see because digital cameras autofocus on the hair rather than the skin. A full skin check for skin cancer is difficult if not impossible.

In general, many doctors worry that without data from hands-on physical exams, doctors may not make a correct diagnosis. “Virtual care is more convenient and efficient, but we have to be sure it is a supplement and not a substitute for in-person care,” says patient-safety expert Peter Pronovost, chief clinical transformation officer at University Hospitals, a Cleveland-based health system. Until rigorous studies are completed, Dr.

Pronovost says, there is limited evidence that virtual primary care doesn't harm patients, such as through misdiagnosis, and achieves the same or better clinical outcomes as traditional care.

Virtual follow-ups can be powerful

Specialists such as orthopedic surgeons are taking advantage of virtual visits for follow-up consults after a procedure, even for such seemingly difficult issues as helping patients care for their incisions or surgical drains.

Some hospitals are also turning to automated virtual-care technology that requires no direct contact with clinicians but sends reminders, alerts, instructions and screening questions directly to patient devices in a chat format.

A virtual platform developed by Conversa Health, based in Portland, Ore., sends queries to cancer patients about the severity of side effects, monitors recovery after a hospitalization or surgery, and checks on whether patients plan to keep appointments.

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What has your experience been with telemedicine? Join the conversation below.

Conversa Chief Executive Murray Brozinsky says results from such programs include reducing by more than half the number of patients who didn't show up for colorectal or cancer screenings and reducing by about a third the number of patients that had to be readmitted to a hospital within 30 days of discharge.

The pandemic experience has also reinforced past research that remote technology can help monitor patients at home and get them more engaged in their own care. At Michigan Medicine, some hospital patients are discharged with a loan of a tablet and remote monitoring devices that measure blood pressure, oxygen levels, blood sugar, temperature and weight, and can transmit data to the healthcare team.

“When patients can use technology to monitor themselves, not only does it help the healthcare provider understand them better, but the patients understand themselves better,” says Michigan's Dr. Ellimoottil.

Ms. Landro, a former Wall Street Journal assistant managing editor, is the author of “Survivor: Taking Control of Your Fight Against Cancer.” She can be reached at reports@wsj.com.

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