RingPlan

5 Ways Telemedicine is Upending Healthcare

From Our Knowledge Base

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Why is This Information Important?

Learn about advancements in the healthcare industry in response to the global COVID-19 Pandemic.

5 Ways Telemedicine Is Upending the Healthcare System

The entire healthcare industry struggled in 2020, but one bright spot emerged: the unprecedented rise of telemedicine. "Overnight, the industry just flipped from in-person to virtual," healthcare entrepreneur Drew Schiller said this month. "It's fantastic to see how fast we were able to make that switch."

How quick was the switch? In the month after the pandemic hit, researchers estimate that 80 percent of outpatient appointments were conducted via telemedicine.

These statistics didn't escape the notice of venture capitalists. Digital health companies raised almost $14.7 billion in funding last year. In October, Teladoc's acquisition of Livongo wasn't just the year's biggest deal in telemedicine — it was one of the year's biggest deals, period.

Investors didn't just fund the latest gadgets, although hundreds of groundbreaking devices were unveiled, including Korean startup iMediSync's helmet-like device that performs brain scans aimed at early detection of dementia. They poured money into companies that connect technologies with each other and with existing healthcare platforms.

Other headlines in 2020 included healthcare systems improving their telemedicine capabilities in emergency rooms, technology companies finding ways that their existing products and services could be used in the fight against Covid-19, and researchers looking for ways to close the "digital divide" that gave some people less access to healthcare.

Here are some of the most interesting advances in telemedicine, ones that are bringing major changes to the healthcare system.

Module 1: Closing telemedicine's "digital divide" for older Americans

Pullout: Patients older than 75 are 33% less likely to complete a telemedicine appointment.

There's a clear digital divide in telemedicine, according to several recent studies. And for many Americans, that divide only gets wider as they get older.

Srinath Adusumalli, assistant professor of clinical medicine at Philadelphia's Hospital of the University of Pennsylvania, surveyed the records for nearly 150,000 patients who had scheduled telemedicine appointment between mid-March and mid-May, the first wave of Covid-19 cases in the U.S. He and his fellow researchers found that older patients were far less likely to follow through on telemedicine appointments:

- *Patients between 55 and 64 were 15% less likely to complete a telemedicine appointment.*
- *Those between 65 and 74 were 25% less likely to complete an appointment.*
- *Those older than 75 were 33% less likely to complete an appointment.*

The study, published in the monthly medical journal *JAMA Network Open*, also found that older patients were put off by using video during telemedicine appointments.

In San Francisco, researchers affiliated with the University of California San Francisco's School of Medicine found that such disparities in access to care had "alarming implications" for older Americans and other "vulnerable populations."

In a report published in *NEJM Catalyst*, the team related several steps that are showing some success, including having staff members reach out to patients 65 and older to help them practice making telemedicine calls. Another step is to remove barriers that discourage older patients who often have lower digital literacy, such as requiring them to first enroll in patient portals.

Module 2: Emergency rooms augment cardiac care with video conferencing

Pullout: After the beginning the Covid-19 pandemic, emergency room visits for suspected cardiac events dropped 35%.

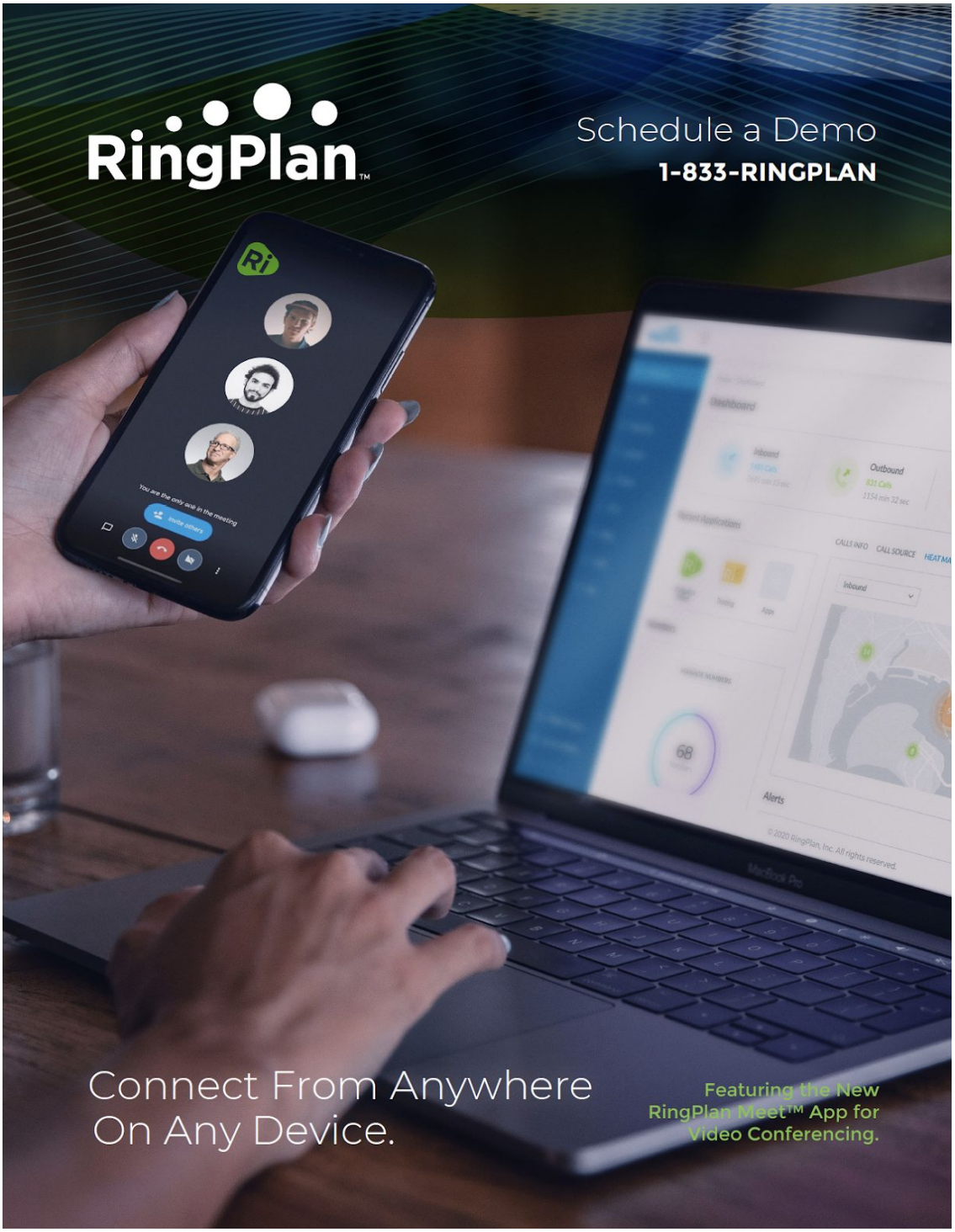
When a patient having a stroke is admitted to the emergency department at the University of Colorado Hospital, they have immediate access to some of the best neurologists in the region. And those same experts are also on call 40 miles north at Longs Peak Hospital, 90 miles south at Pikes Peak Regional Hospital, or at any of the 12 facilities run by UCHealth.

These specialists are among the team of physicians, nurses, and technicians at UCHealth's Virtual Health Center, tucked away in a facility about 15 minutes away from University of Colorado Hospital.

Rich Zane, UCHealth's Chief Innovation Officer, said the newly developed Telestroke Program allows neurologists to consult immediately with emergency rooms doctors, improving chances patients will have a full recovery.

"We call it telehealth and virtual health, but there's nothing virtual about it," said Zane, speaking at the Digital Health Summit at this month's Consumer Electronics Show. "What we are delivering is actual care. I would rather call it 'technology-enabled actual care,' but that just doesn't come off the tongue quite as nicely as 'virtual care' or 'telehealth.'"

UCHealth also has a Mobile Stroke Treatment Unit, described as one of the first in the country, that uses virtual health to bring neurologists to the patient's home to begin treatment even before they go to the emergency room.



A December report in the medical journal *Circulation* *found that emergency room visits for suspected cardiac events dropped 35 percent after the start of the Covid-19*

pandemic. Author Michail Katsoulis, from University College London, found this led to a significant rise in deaths from cardiac disease.

Module 3: New tools to monitor patient health

Pullout: At this year's Consumer Electronics Show, 419 digital at-home health devices and 219 wearable devices were showcased.

Easily fitting in the palm of your hand, the device closely resembles a computer mouse. But MedWand can do much more than move your cursor. It's a stethoscope, pulse oximeter, heart-rate monitor, and thermometer, for starters. It can also perform single-lead EKGs, retinal scans, and inner-ear examinations.

But what sets MedWand apart from devices that are already in your medicine cabinet is that it can transmit the results of all these diagnostics directly to your doctor. It's cutting-edge technology that is currently awaiting emergency approval from the FDA.

There were hundreds of medical devices competing for attention at the Digital Health Summit at this month's Consumer Electronics Show. The challenge is making a compelling case for yet another stand-alone device, said one vendor, because "there are only so many that a person can possibly wear."

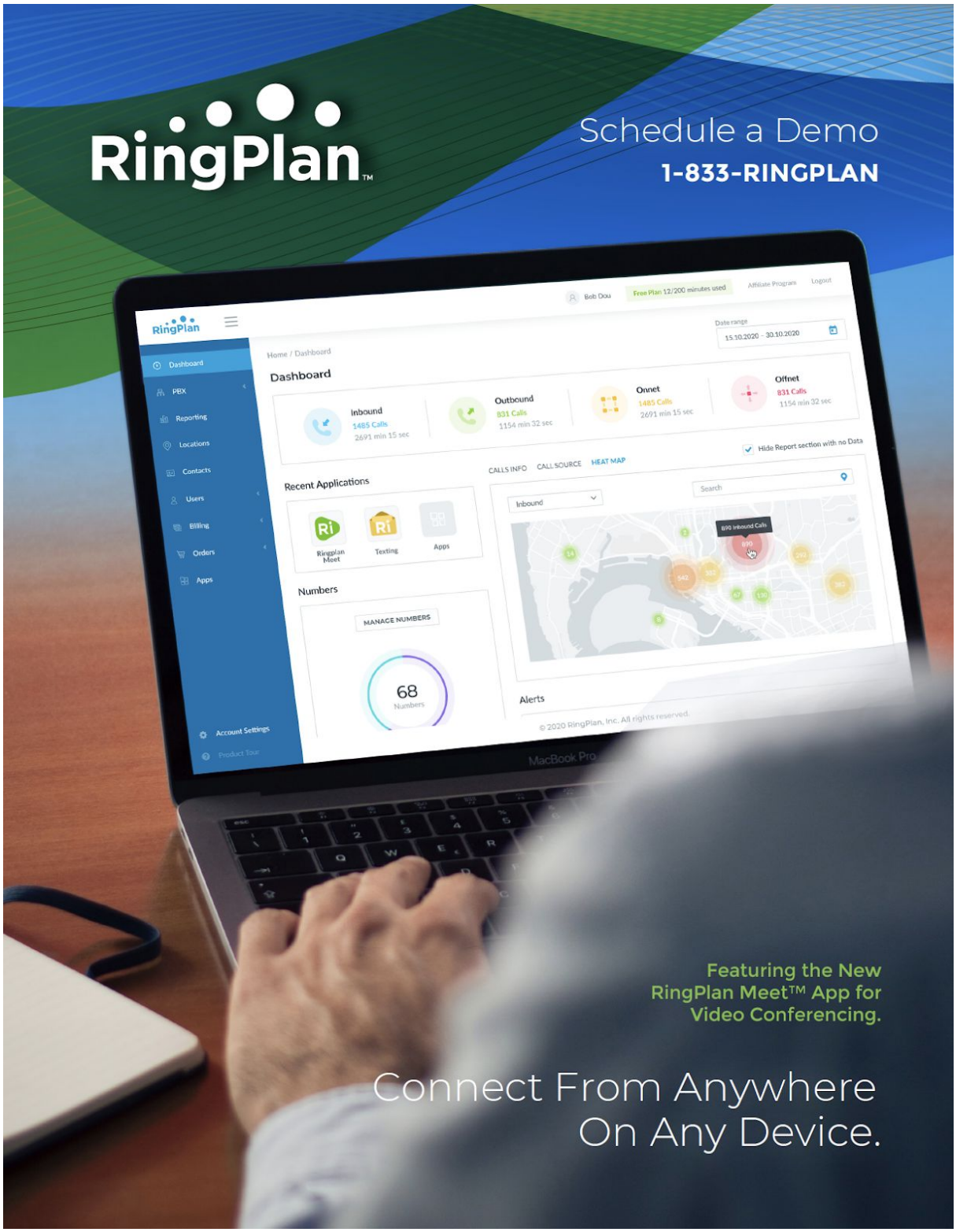
The focus at this year's event was simplifying at-home diagnostics. No matter how innovative a device might be, it has to be able to sync with existing platforms.

"One of the things tech companies get wrong is they think they can create something and then go look for the problem it solves for," said Samir Qamar, CEO of MedWand.

Validic CEO Drew Schiller, whose company collects continuous data from close to 500 at-home devices, said the advantage is that it's more accurate than taking a reading once or twice a day.

"This actually provides a more robust, comprehensive view of what's happening in a person's life," said Schiller.

Other at-home devices that got attention at CES include Rebless, a robot that can help patients with physical therapy, and OrCam Read, which can use verbal commands to read text on a printed surface or a digital screen.



Module 4: Existing technologies emerge in fight against Covid-19

Pullout: Kinsa Smart Thermometer detected outbreaks two weeks before the CDC's own surveillance tools.

Released years before Covid-19, the Kinsa Smart Thermometer was originally intended to track flu outbreaks. Using anonymous data from users, the app-based system served as an early warning signal when there were an unusual number of people with fevers in a particular area. By early 2020, it was detecting flu outbreaks quicker than Centers for Disease Control and Prevention.

But soon after Covid-19 began devastating New York City, the app picked up on high levels of fevers in other communities that had reported few or no cases.

"That's not what we expected," Kinsa founder Inder Singh said earlier this month. "We caught COVID-19 everywhere in the country three weeks before cases started piling up in states."

The pace of healthcare innovations has been breathtaking since the beginning of pandemic. Some were completely new, while others, like Kinsa, were existing technologies that turned out to be unexpectedly effective in the fight against Covid-19.

One such success story is DnaNudge, which a year ago was a small DNA testing company intended to let people know when they might have a predisposition to certain genetic diseases. But after Covid-19 struck in the U.K., founder Christofer Toumazou, a professor at Imperial College London, suspected that his technology could be used to recognize the genetic footprint for SARS-CoV-2, the virus that causes Covid-19.

His hunch paid off, and the resulting rapid tests were so accurate that the government quickly purchased 5.8 million. They are currently being used in public hospitals to test patients for Covid-19, along with several other respiratory diseases. The test is also being rolled out to nursing homes, urgent-care clinics, and other facilities across the U.K.

Module 5: Mental health is a continued success story for telemedicine

Pullout: Early in the pandemic, 30% of mental health patients used video calls for telemedicine, as opposed to 14% for physical health patients.

In the months before the Covid-19 pandemic struck the U.S., a higher percentage of people were taking advantage of telemedicine for mental health than any other specialty. And that number continued to grow as the global crisis continued.

In a study published in the *Journal of General Internal Medicine*, Shira Fischer, a researcher for the RAND Corporation, revealed that 48 percent of people receiving treatment for behavioral health issues had tried telemedicine before the pandemic hit in mid-March. By early May, that percentage had grown to 54 percent.

Fischer also found that patients were twice as likely to use video calls for a mental health appointment. About 30 percent of behavioral health patients opted for video calls, as opposed to 14 percent of physical health patients.

Fischer said the results of the study confirm the widespread expectation that telehealth will continue to grow after the pandemic ends. Her assertion was echoed by other experts in the field.

Iris Berman, vice president of telehealth services for Northwell Health, believes that mental health is one of the success stories in telemedicine. “Telehealth is fabulous for behavioral health issues,” she said. “it’s one of the best ways you can use it.”

But not all communities were benefitting equally from the rise in telemedicine for mental health issues. Parity Health founder Iris Frye, whose company is dedicated to improving healthcare for underserved communities, said there is still a stigma around mental health in black and brown communities. Telemedicine may be helping ease that stigma.

“I've spoken with so many mental health providers who stated that telehealth has really exploded their business when it comes to the minority community,” Frye said.

If you would like to get more information or to schedule a demo with a representative, please contact RingPlan at 833-RINGPLAN or at demos@ringplan.com