Telehealth: Lessons from the COVID-19 Pandemic
Hearing of the Senate Committee on Health, Education, Labor & Pensions
Testimony of Dr. Sanjeev Arora
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Chairman Alexander, Ranking Member Murray and Members of the Committee. My name is Sanjeev Arora. I serve as Director and Founder of Project ECHO at the University of New Mexico, Health Science Center.

Thank you for inviting me to testify at today's hearing exploring telehealth and lessons from the COVID-19 pandemic.

I want to start by sharing a quick story that explains why I am here with you today.

One Friday afternoon 18 years ago, I walked into my hepatitis C clinic in Albuquerque, New Mexico, to see a 43-year-old woman who had driven five hours with her two children.

She had been diagnosed with hepatitis C eight years earlier. Yet she was just now seeking treatment for the first time.

I asked her why—why now?

She said that her doctor told her that treatment would require her to make at least a dozen trips to Albuquerque over the course of a year – and she couldn't afford to take the time off work. She needed that money to feed her family.

So, she didn't seek treatment.

But now she was experiencing abdominal pain that interfered with her ability to work. And that's why she finally came to see me.

But it was too late. She now had advanced liver cancer. She was not a candidate for a liver transplant and the cancer was too large to be removed surgically. There was nothing we could do to prolong her life.

She died five months later.

I asked myself: Why did this mother of two children have to die?

We had the medicines and the expertise to treat her. But she didn't have the resources to get to us. And no doctor in her community had the knowledge to treat her disease.

A five-hour car drive was too great a barrier for her to overcome.

That's why I started Project ECHO over a decade ago. And that's why I'm here testifying to you today.

We need to fundamentally reorient our healthcare system to enable us to quickly move new information and best practices from top experts at academic medical centers to providers at the frontlines caring for patients in communities. The COVID-19 pandemic has only underscored the urgency with which we need to tackle this challenge.

Instead of placing the burden on patients to find us--the medical experts who can treat and cure them--we need to share our expertise with the providers in communities where these patients live. We need to enable patients to get the care they need, when they need it, in or near the places where they live.

And telehealth can play a major role in making that happen. But it starts by understanding that telehealth is more than technology.

Technology can help us bridge wide geographic divides in ways we wouldn't have imagined possible twenty years ago. But technology is simply a tool that enables essential human interaction.

For example, technology allows us to have the virtual hearing we're participating in today, but it's not the technology that makes this discussion valuable. What matters is what the technology enables--the discussion we're having, the expert testimony, the answers we provide to your questions, and, most importantly, how it all informs the decisions you make going forward.

Likewise with telehealth, the technology enables us to interact in ways that ultimately improve health and save lives.

That's where Project ECHO comes in.

Project ECHO is a model for telementoring or what's now called a technology-enabled collaborative learning and capacity-building model. Essentially, models like ECHO leverage technology, including videoconferencing platforms such as Zoom, to ensure that clinicians on the ground have the latest best practices, mentoring and support they need to treat patients in their communities.

On the spectrum of telehealth, it differs from telemedicine, which is typically a one-to-one provider and patient virtual visit. It's also different from an eConsult, which is usually one specialist consulting with one provider about the care of one patient. Technology-enabled collaborative learning models like ECHO involve a team of specialists in a specific disease area connecting to multiple teams of community providers in an ongoing learning community.

Each of these telehealth approaches is needed and valuable. But for the purpose of my testimony, I will be primarily focused on technology-enabled collaborative learning and capacity building, which is the area I know best.

To explain this difference, I often use the example of teaching your daughter to drive a car. I ask how many people would be willing to give their daughter a text book, and then give her the keys to the car. This example points out that for very complex tasks, we need more than a protocol, we need guided practice to help master complexity over time. This guided practice is what the ECHO model provides---and is what makes it different from traditional telemedicine. The ECHO model builds system capacity to implement best practices at scale over time.

When I started ECHO to treat hepatitis C in my home state, I realized that in order to convince clinicians in rural clinics to treat this complicated disease, I needed to create something that mimicked the grand rounds experience of their residencies. We needed to bring the experts to these rural clinicians over video to share up-to-date best practices -- and the clinicians needed to present their own cases and get ongoing guidance and mentorship from experts.

We launched 21 new centers of excellence to treat hepatitis C in rural communities. Each center was run by a primary care clinician. We shared our treatment protocols with them, and they connected with us all together once a week on video to discuss cases with us, at the university and with each other. Soon they had become experts and the wait in my clinic fell from 8 months to 2 weeks. Tens of thousands of patients got treatment. We knew we had an effective model...so we expanded it by training academic medical centers around the United States to deploy for more than 70 healthcare conditions.

The all teach and all learn ECHO model works like this:
Teams of experts at a regional medical centers (called “hubs”) use one to many videoconferencing to engage with local healthcare providers (the “spokes”) in weekly ongoing knowledge-sharing, case-based learning, and tele-mentoring.
Hub and spokes learn from each another, Everyone’s knowledge is constantly improving.

Based on the tremendous need, ECHO has grown from addressing a single disease in one state to addressing 75 different health conditions across 48 states and reaching learners in 154 countries. There are now ECHO projects at more than 250 organizations across the U.S. alone, many of these at major academic medical centers.

And we know the model works. A study published in the New England Journal of Medicine[1] and funded by the Agency for Healthcare Quality and Research focusing on our hepatitis C work in New Mexico showed that patients treated by an ECHO-trained community provider got the same quality care they would get if they went to a specialist. There are now more 235 published papers published on different aspects of the model.[2]

Prior to COVID-19, we had trained more than 100,000 healthcare professions in 20,000 organizations in all corners of the nation. And there was strong demand for setting up new hubs in the United States.

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[1] S Arora, K Thornton, G Murata et al. Outcomes of Treatment for Hepatitis C Infection by Primary Care Providers. N Engl J Med 2011 Jun 9;364(23):2199-207. doi: 10.1056/NEJMoa1009370. Epub 2011 Jun 1.
[2] https://echo.unm.edu/about-echo/research

We had long believed that ECHO could be put to work in a meaningful way in a pandemic. And 12 weeks ago – the world changed.

Now we are deploying our entire network to ensure healthcare professionals know what to do with COVID-19. We mobilized our ECHO community to respond to the pandemic on two levels:

- **To amplify the public health response to COVID-19** in areas like rapid testing, isolation of patients who test positive, contact tracing and follow-up to contain the spread of the virus.
- **And, to scale the clinical delivery response**. What do doctors, nurses, EMTs and other clinicians in the field need to know to treat patients with COVID-19? Remember, this is a completely new disease. There is so much we still don't know about COVID-19, yet we need to provide guidance on best-practice care even in the absence of firmly established science.

ECHO projects in at least 33 states have pivoted their efforts to COVID-19, including states represented on this committee like Kentucky, Kansas, Maine, Pennsylvania, Minnesota, Nevada, New Hampshire, and Massachusetts.

In addition, the ECHO Institute has partnered with the Office of the Assistant Secretary for Preparedness and Response (ASPR) at HHS to launch a COVID-19 Clinical Rounds that serves as a peer-to-peer learning platform for frontline clinicians across the country and around the world. It's supported by more than 15 major medical societies and includes expertise from the National Emerging Special Pathogen Treatment and Education Center established by Congress after the Ebola outbreak. Every week, some 400 to 1,700 clinicians log on to navigate the unknowns of COVID-19 together.

We and our partners are running an estimated 30 training sessions a day, answering question from how to address personal protective equipment in the midst of a shortage and how much oxygen to deliver and what ventilator settings to use. We have trained more than 200,000 additional healthcare professionals (nurses, doctors, community health workers, pharmacists, emergency response personnel etc...) on COVID-19.

In addition, to underscore the interconnection of different telehealth approaches, multiple ECHO projects are now equipping providers to do telemedicine effectively. We need ongoing learning communities to ensure that the doctors, nurses and other health professionals who almost overnight were thrown into a world of virtual medicine get access to best practices and the guidance to implement them.

What does this all mean for going forward? How can lessons from COVID-19 and the experience of telehealth during this pandemic help us to reshape our healthcare system to move life-saving information more quickly and efficiently?

Going forward, we must understand that with healthcare, as with so many other areas, you get what you pay for. Steps that Congress and CMS have taken in areas like increasing broadband

access in rural communities and expanding coverage for the virtual services clinicians can provide are really important ones.

But we also need to continue to move beyond the emphasis on the technology part of telehealth to the health part. Again, like the hearing today, it's what's being virtually delivered across the medium and how that allows us to take action that matter most.

In 2016, Congress -- with broad bipartisan support -- passed the original ECHO Act. It cleared the Senate by a 96-0 vote and was signed into law. We're grateful for the support of that measure by so many of the Committee members here today. That legislation formally recognized technology-enabled collaborative learning and capacity-building and directed HHS to produce a report (released in March of last year) to explore barriers and opportunities to its use and better understand the evidence base supporting it. It was a significant building block in our ongoing efforts to scale up the ECHO model across the country and globe.

Last year, efforts emerged in the Senate and House to take the next step of exploring how to build a sustainable funding stream for technology-enabled collaborative learning and capacity-building in the healthcare system. There are now House and Senate ECHO authorization bills that establish a grant program through HRSA. The House included language in the most recent House-passed recovery package draws on the ECHO authorization bill in the House to create a grant program under HRSA to support organizations that are using technology-enabled collaborative learning and capacity-building for COVID-19 response. If enacted, that program will be a critical support to many efforts connecting providers on the frontlines of the pandemic with the emerging best practices and expert guidance they need to treat their patients.

I urge you to support the House-passed provision of the most recent stimulus bill (HEROES Act, H.R. 6800) as the Senate considers the next recovery and response package. It would be a major next step in terms of both supporting current COVID-19 response efforts and helping to set the groundwork for a more responsive health care system in times of public health emergencies.

While efforts to establish a grant program have proceeded, discussions have also turned to CMS. More than twenty Senators -- including multiple members of this Committee -- signed a letter to the HHS Secretary requesting that CMS issue guidance to states on financing strategies available through Medicaid and explore existing authorities through Medicare as well. **I encourage the Committee to consider directing CMS to move quickly on that guidance.**

I hope this Committee -- and the Congress more broadly -- will commit to exploring longer-term changes to healthcare financing that would create sustainable and ongoing funding for effective telehealth approaches, and specifically for embedding technology-enabled collaborative learning and capacity-building into the system.

If not COVID-19, their lives will be affected by the opioid epidemic, cancer, HIV, diabetes, autism or many other diseases or conditions.

I am committed to working with you to help realize the promise of telehealth, and ultimately seeing the day when a mother's survival doesn't rest on her ability to take a five-hour car ride twelve times a year.

If we together can make that happen, this will have been the most powerful telehealth session I've ever been part of.

Thank you for providing me with the opportunity to testify before you today. I look forward to answering your questions.