

**REMARKS OF FCC CHAIRMAN AJIT PAI  
AT THE CONNECTED HEALTH CONFERENCE**

**BOSTON, MA**

**OCTOBER 18, 2018**

It's good to be in Boston. I would say "it's great," but I'm still licking my wounds after the Patriots beat America's Team, my Kansas City Chiefs, last Sunday night. I was *so* looking forward to gloating. I guess I'll just have to wait until the rematch in the playoffs.

But I will congratulate all the Red Sox fans here on your recent series win over the Yankees. Even if America resents Boston for its many, *many* recent championships, you'll never be as despised as the Yankees.

In all seriousness, it is quite an honor to have this opportunity to meet with and learn from many of the country's leading experts on digital health. And it's a privilege—and a challenge—to follow my federal colleague, Dr. Richardson-Heron from the National Institutes of Health.

You just heard about some of the exciting new ways NIH is using data to drive better health outcomes. I'd like to share what we are doing at the FCC to seize the opportunities of connected health. Much to my physician parents' chagrin, I never went to medical school, so I can't do much about the "health" half of that equation. But I am fortunate now to have a role in helping Americans get more connected.

I will concede that this is also a personal mission, not just a professional one. When I was a kid in the late 1970s and early 1980s, my dad, a urologist in the small town of Parsons, Kansas, would often hit the road. He would drive long distances across southeast Kansas to make sure that patients in even smaller surrounding communities could see a specialist who could help them. Even now, I'm amazed at the time he spent on the road.

But there are fewer like him around. And it's becoming harder to recruit doctors to serve rural communities. It's becoming harder to keep rural hospitals afloat. And so it's becoming harder for many rural patients to get healthcare—ironically, at a moment when vital signs for those patients and rural America generally are suggesting trouble. That's what makes the combination of technology and health so critical—and why this issue matters so much to me.

On my first day as Chairman of the FCC in January 2017, I said that my top priority would be closing the digital divide. Every American who wants it should have access to the Internet. High-speed Internet access, or "broadband," is increasingly important in our lives, perhaps most clearly in its potential to make us healthier.

I've seen that potential firsthand. Since becoming Chairman, I've logged more than 11,000 road miles in rental cars and visited 41 states and two territories to get a first-hand look at both the opportunities and challenges created by the digital revolution. Time and again, I've seen how connected health can transform lives and communities.

Take Allen County, Kentucky, a lower-income rural area near the Tennessee border. The school system there has over 3,000 students—but not one pediatrician. The nearest one is a decent drive away in Bowling Green. But now, thanks to broadband, local students can see a pediatrician simply by walking down to the school nurse's office. There, they can be seen virtually by a top-notch physician from Vanderbilt University's Children's Hospital, which has a partnership with the school district. They've also developed an app that allows parents to remotely monitor the visit. Think about what a difference all this makes: students are healthier, parents worry less and don't have to take time off work, and teachers can focus on teaching. Amazing.

Then there's the time I spoke to a veteran who lives in Paradise, Texas, population 441. He told me the mental health treatment he received from the VA helped him lose 80 pounds and get off blood pressure medication for the first time in 15 years. Here's the twist: I was speaking to him from the VA hospital that treated him, in Salt Lake City—1,200 miles away. Again, that's the power of telehealth.

One of my first visits as FCC Chairman was to the Cleveland Clinic, where Dr. Shazam Hussain explained how their mobile stroke unit uses wireless connectivity to assess and stabilize patients 38 minutes quicker on average. This is vital, considering a patient in the early stages of a stroke loses around two million brain cells a minute.

And in rural Staunton, Virginia, I visited a hospital that developed a software tool for real-time patient monitoring that has cut mortality rates from sepsis by 34%.

I know this conference will explore the future of digital health and what the next big breakthrough might be. I love that forward-looking vision of connected health. I got a glimpse of that vision during a visit yesterday to MIT. Brilliant researchers shared their work with me—things like applying deep learning techniques for early detection of breast cancer, and using a Wi-Fi-like radio device to wirelessly track tiny movements like heartbeats, and even using 5G millimeter-wave technology to monitor the internal rate of blood flow.

But until then, technologies that are available right now can dramatically improve the quality of healthcare for millions of Americans. Getting everybody connected and promoting adoption of current tools by both doctors and patients would be a game-changer. The most pressing problem is that the anecdotes I shared earlier are still the exception, not the rule.

Just last week, *The New England Journal of Medicine* released the findings of a new study that subtly makes this point. The study examined 210,000 video consultations with doctors from 2014 to 2017. Two findings stuck out. One was that patient satisfaction was very high: 93% said the visit met their needs. The other is that video consultations still account for less than 1% of all office visits. Now, I don't know what the percentage of such visits should be. But given this enthusiasm about video visits, it seems undeniable that telemedicine hasn't reached its full potential.

So what are we doing about that? Let me share some of the FCC's work to realize this potential.

It all starts with the basics: making sure that every American has high-speed Internet access. According to our latest public data, about 24 million Americans lack access to home broadband service at speeds of at least 25 Mbps downstream and 3 Mbps upstream. And those who could benefit most from telemedicine are disproportionately being bypassed. About 30% of rural households—again, in communities that have more trouble attracting physicians, and particularly specialists—lack access to high-speed fixed broadband.

To connect people in unserved parts of the country, the FCC manages the Universal Service Fund, a group of federal subsidy programs. One part of the USF provides direct funding to broadband providers to build upon—not displace—private capital expenditures. This summer, our Connect America Fund awarded \$1.5 billion to leverage private investment that will bring fixed broadband to 700,000 unserved homes and businesses.

Similarly on the wireless side, the FCC will invest up to \$4.53 billion over the next decade through its Mobility Fund to deploy 4G LTE service to rural Americans who don't have it today. This is significant when you consider a third finding from *The New England Journal of Medicine* study, which was that 73% of patients used smartphones for their video visits.

The FCC's Rural Health Care Program is another essential tool for closing these disparities. This program helps health care providers afford the connectivity they need to better serve patients. Unfortunately, in Funding Year 2016, demand for this funding began to exceed the Program's spending

cap. That is hardly a surprise when you consider the Program was established in 1997 during the days of dial-up, and its funding limit had never increased, not even for inflation.

I wanted to update this program to better reflect the needs of and advances in digital healthcare. So this summer, I proposed and the full FCC agreed to do just that. We increased the annual funding cap from \$400 million to \$571 million for Funding Year 2017. This reflects where the funding cap would have been if it had been adjusted for inflation from the beginning. Speaking of, we're giving providers more certainty by adjusting the cap annually for inflation and allowing any unused funds from prior years to be carried forward to future years.

And on the subject of Rural Health Care Program funding for Funding Year 2018, I have some good news to share. Based on information provided by the Program administrator, we expect to fully fund out of the 2018 \$581 million budget *all* eligible amounts for single-year 2018 funding requests from participating rural health care providers. In English: Every rural clinic or hospital seeking to lower its cost of service for this next year is eligible for full funding.

One important proviso: this money must be not just distributed, but distributed wisely. That's why we're aiming to end waste, fraud, and abuse in the Program. Each Program dollar that's wasted is by definition a dollar that isn't going to improve digital health. And unfortunately, some carriers have been treating the Program as a piggy bank to be raided and haven't been complying with our rules. To date, we've made real progress in rooting out this abuse, including by taking enforcement actions, and we're not going to let up until the problem is solved. America's taxpayers and patients deserve nothing less.

We not only want to make sure our current universal service programs are working effectively and efficiently; this past August, the FCC launched an initiative to more fully realize the potential of digital health for low-income Americans. Specifically, we're considering a program to promote the use of broadband-enabled telehealth services among low-income families and veterans. Our thinking is that patients would benefit from services delivered directly in their homes—such as sensor-based remote monitoring—instead of just brick-and-mortar health care facilities. We're looking at a proposed \$100 million budget for this so-called "Connected Care Pilot Program," and we are seeking public input on how best to design it.

Promoting connected health doesn't just mean helping to fill today's connectivity gaps. It also means promoting the technologies of tomorrow. I saw that there is a panel at this conference on the Internet of Things. A huge key to unlocking the promise of the Internet of Things will be next-generation wireless networks, what we call 5G. What's the big deal about 5G? Whereas today's wireless networks support 1,000 connected devices per square kilometer, we hope that 5G networks will be able to support 1 million. On top of that, these new networks could be 100 times faster and much more responsive, with lag times that are one-tenth of what they are today. And as we know, for the sickest of patients, every millisecond matters.

The FCC is pursuing a comprehensive strategy to spur the deployment of these next-generation networks. We call it our 5G FAST plan. It has three key parts: freeing up spectrum, promoting wireless infrastructure, and modernizing regulations. We're aggressively pursuing each. On top of this, the White House convened a 5G summit three weeks ago with leaders from across government and the private sector. I'll spare you the particulars of everything that we're doing to advance 5G. But you should know that promoting U.S. leadership in 5G is a national imperative, and that the FCC and others are doing so with urgency and determination.

Getting everyone, everywhere connected occupies a lot of our time. But we're also working on some more targeted digital health initiatives dealing with challenges like cancer and the opioid crisis. I'll briefly touch on each of these initiatives.

First, cancer. According to the Centers for Disease Control and Prevention, rural Americans are more likely to die of cancer than their urban counterparts. To address this, the FCC entered into a

strategic partnership last year with the National Cancer Institute. We want to study how increasing broadband access and adoption in rural areas can help address the burden of symptom management for cancer patients. This initiative, called “L.A.U.N.C.H.,” has its roots in addressing the needs of rural, underserved communities, such as Appalachian Kentucky.

As a founding member of this initiative, and through its Connect2Health Task Force, the FCC brings together government, academia, industry, health care providers, and community organizations to bring high-quality cancer care closer to where patients work and live and to make access more reliable and consistent over time.

As it develops user-centered, technology solutions, we hope L.A.U.N.C.H. will be a scalable model for other communities in need. This unique public-private partnership is featured as part of the conference’s Innovation Zone. I encourage you to visit its booth to learn more from the Connect2Health Task Force and our collaborators.

And second, the opioid crisis. Perhaps no healthcare challenge testing our country right now is more urgent than this one. Last November, the White House issued a report on combating the opioid epidemic. It identified telemedicine as a critical part of the solution, especially for rural areas with limited access to health services. It noted that telemedicine can connect opioid patients to caregivers when there is no other option. And it suggested that wearable biosensors could detect real-time drug use and alert a family member or first responder to intervene.

At the FCC, we agree that connected health can help address the opioid challenge. To that end, I’m pleased to make two exciting announcements.

To help address the opioid epidemic, the FCC is expanding its Mapping Broadband Health in America platform to include critical drug abuse data. This data is needed by providers and consumers, both to understand the problem and to gain insights about effective connected health solutions. Our mapping platform will allow users to rapidly visualize, overlay, and analyze broadband and opioid data at the national, state, and county levels.

Additionally, our Connect2Health Task Force is going to launch a national “chronic pain management and opioid solutions” challenge. We hope this challenge will stimulate innovation in broadband-based solutions—solutions that could complement and extend current interventions for drug abuse and opioid use disorders. For example, broadband can facilitate more robust Prescription Drug Monitoring Program solutions. It can provide alternate or complementary pain management strategies. It can increase access to mental health providers via telehealth. It can help better target methadone management and other addiction services for rural and remote populations. It can enhance opioid abuse and mortality surveillance. And it can enable predictive analytics among the most at-risk populations—just to name a few possibilities.

We’ll have more to report on these initiatives in the coming months. But for now, I’m encouraged with our efforts to address these national concerns.

Let me close with one big advantage we have as we work to improve healthcare delivery in America—an advantage in rare supply these days. That is bipartisan support for action. Earlier this year, I joined with President Kennedy’s first FCC Chairman, Newton Minow, to issue a call for the expanded use of telemedicine. We concluded our message with the words of JFK, who memorably said that we “refuse to see this country, and all of us, shrink from these struggles which are our responsibility in our time.”

That sense of mission, of purpose, motivates us in this cause. We have the technology. We have broad support across ideological lines. We have the energies of the public and private sectors. We can harness the power of digital technology to improve the health of our citizens. As we gather five miles from where President Kennedy was raised, his words remind us that not only can we do this; we must do

this. Constantly striving for something better is what we Americans do. I hope you share this prescription for digital health. If you do, let's work together to fill it.