

### **Can telemedicine reduce rural and other health disparities? Featuring Neal Neuberger.**

Neal Neuberger has spent the past 35 years in Washington as a recognized leader for healthcare and information technology policy and strategy. Mr. Neuberger was selected as the first Executive Director of the HIMSS Foundation Institute for e-Health Policy in 2008 to provide critical educational opportunities in health information technology policy for public and private sector stakeholders. He has been Director of Health Innovation at the Bipartisan Policy Center, and a Senior Policy Consultant to the American Telemedicine Association. He is President of Health Tech Strategies, Inc., a Virginia-based consulting firm focused on the policy environment with regard to research, development and implementation of emerging health care technologies. Under the aegis of a dozen Members of Congress, Neuberger began and facilitated a 23 year-long "Capitol Hill Steering Committee on Telehealth and Healthcare Informatics, supported by major federal agencies, foundations, and healthcare IT organizations that has produced more than 200 lunch briefing sessions and technology demonstrations for Washington policy leaders. With host Bill Finerfrock.

**Bill:** Hello and thank you for joining us for Movement is Life's Health Disparities Podcast. Joining us today is Neal Neuberger. Neal is the president of Health Tech Strategies, Incorporated, a Virginia-based consulting firm that focuses on policy environment on research development, implementation of emerging healthcare technologies. Neal has been involved in telehealth technology discussion and debate here in Washington, DC., for many years, he's one of the leading experts in this area, so we're really pleased to have him here. Neal will be joining us for a panel discussion on virtual - the new normal, looking at, are we all looking at a future in healthcare where the role of telehealth, the role of technology, and we wanted to take an opportunity to talk to him today. Neal, tell our audience a little bit about yourself and how you got into this and some of your background.

**Neal:** Okay, well, Bill, we've known each other for years around health policy here in DC. About 35 years ago, I left the American Hospital Association having been a staffer on the Labor Health and Human Services, Subcommittee of Appropriations in the House before that to join with a partner around information technologies in healthcare and something that I had never heard of before – this is 1993 – called telemedicine. And so, my former partner and I got all caught up in the beginnings of it, including the formation of the American Telemedicine Association, and I became one of the advocates for a better policy, a more conducive policy environment for the adoption of various technologies in healthcare, starting with remote patient care in especially rural underserved areas and inner city, urban areas and things. So, it's been a game of catch up ever since because the technology has evolved in fits and starts just as the policies have, but nevertheless, it has overtaken our ability to regulate what works, what doesn't, under what circumstances to finance telehealth under, say, Medicare and/or Medicaid or private insurance reimbursement to regulate the infrastructure, the broadband through the FCC, to come up with an evidence base for whether technologies are safe and effective and are equal of quality say to in-person care.

So, there's been so much add issue and policy makers at a state and federal level have been kind of slow to come to the plate for no particular reason. These have been nonpartisan issues. Everybody has always thought it'd be great if we could have the doctor in one place and a thousand miles away the patient and them viewing in real-time, their conditions and prescribing and things like that. But it's come down to funding in Congress and in the states and whether or not we're going to allow cross-state licensure

for clinicians who perform telehealth across state boundaries and things like that. All the regulatory and legislative issues have been huge.

**Bill:** Yeah. As you know, I've been involved in rural health and we've done a lot of things over the years, looking at the utility of telehealth for rural populations where they don't have access. When we actually started to first talk about doing this session, it was before COVID, the idea virtual – the new normal – was still emerging; with the advent of COVID, we saw a huge uptick in the utilization of telehealth. It somewhat dropped down a little bit, but certainly not down to the levels. Can you talk about how COVID maybe opened the eyes of a lot of people to the potential for telehealth?

**Neal:** It absolutely has. And to your point, if you look now on TV or listen to the radio, all of the various healthcare organizations' advertising has now all of a sudden started to incorporate the idea of remote consults or telehealth consults or various other related information technologies, mobile healthcare of one kind or another, especially during COVID. I'm a little concerned actually about the way in which it has grown that fast, that quickly for the fact that we already know and should be concerned about the possibilities of waste, fraud, and abuse, lest we, as an industry, get hoisted upon our own petards and it all come crashing down around us if and when the justice department pursues, as it has begun, hundreds of millions of dollars' worth of potentially fraudulent claims in the telehealth space, I've always been worried about that. And now that there's so much of it going on in such an unfettered kind of fashion, it really concerns me.

**Bill:** Yeah. I think those of us who've been involved in health policy for a long time, the potential for things to be abused is always something that is front and center when we're advocating for new policies, you almost have to sit there and try and think like the criminal of, okay, what could they do to abuse the policy and how do I need to design it to prevent that, but yet not impinge the ability of people who need telehealth, or whatever the policy changes, to get that done.

**Neal:** Yeah, well put, and we need an evidence base that, again, in what circumstances is it useful and/or in what circumstances is it just not appropriate? I mean, there are all sorts of things that still are best done in person – palpating the belly, there some reactions of different kinds, neuro reactions and things like that that will never be replaced by technologies and things, but adjunctively, there are very good uses in many of the sub disciplines in healthcare for technology. It's just that it's not going to be an either-or situation it's going to be a combination kind of situation. And that's what people are feeling out right now.

**Bill:** So, I want to get back to that, but I wondered if you could talk a little bit about, because we are the health disparities podcast, one of the things that we are particularly concerned about is how populations can be disadvantaged or don't have access to some of the things that are available to other communities. So, one of the issues we're concerned about is the availability of telehealth. I think a lot of people intuitively recognize the value of telehealth in rural communities because it's understood that distance and availability. You're not going to have specialists necessarily in low population areas, but could you talk a little bit about the fact that, actually, even in urban areas, we have internet deserts that inhibit the ability of underserved urban populations to utilize telehealth or other healthcare technology.

**Neal:** Absolutely. And it's a good news, bad news situation, right? And it's constantly evolving and it's improving, it's getting better, and it's that kind of thing. So, 30 years ago, or thereabouts, when the Telecom Act was last up for real authorization.

**Bill:** The Telecom Act is?

**Neal:** The governing law for the telecommunications in this country, which authorizes, and the Federal Communications Commission gives authority to the Federal Communications Commission for licensing of broadband telephony, TV, all of it. Senators Snowe and Rockefeller put a provision in the act in about 1997, I want to say, that would create a universal service access corporation, it did, and put up a couple hundred million bucks per year, not in taxes, but as a fee on the telecoms, that was kind of a give back from the telecommunications companies over their objections at the time, and they later became kind of enamored with it and saw it as a good thing to help level the cost of high speed internet and broadband between disadvantaged and advantaged communities and things. And so, for schools and libraries, and especially rural healthcare organizations in consortium of the above, they could band together and apply each year and get discounted telecommunications rates, that helps spread telecommunications for a whole host of needs for education, for libraries, for rural healthcare in large parts of the country. It's been overused and underfunded for the last 10 or so years as broadband has become more available – 5g and the like – in rural and in urban areas. And by available, I mean, arguably available because people may or may not have access to it or the underlying technologies you need – computers and all the rest. So, the FCC has been adding on slowly where they could within their jurisdiction to put up more money for more funding for that program. They've come up with a digital equity effort where an emergency broadband benefit is available to help families and households struggling to afford internet services during the COVID 19 pandemic. So that eligible households can access critical health services, virtual classrooms, and so under that program, for example, they get a discount of \$50 a month towards broadband services for eligible households and \$75 per month for households on qualifying tribal lands, that's rural or urban. The universal service access corporations' programs for the most part were just rural.

So now, I think everybody is, again, to your point, looking at those urban deserts and saying, what can we do to fill out the map and make 4g and 5g available everywhere and give access to telecom equipment? The other thing the FCC has been doing is a really robust mapping effort. So, at the zip code level now, the FCC has a very good mapping system that has not only where all of the telco providers are, rural and urban, but where all the disparities are in healthcare. And so, it links to HHS mapping efforts at the Office of Rural Health and numbers of podiatrists in an area and the numbers of primary care clinicians, hospitals, and clinics and all the rest. And a lot of folks in the field, including myself, have been kind of screaming about that in and of itself for years because we didn't even know what we didn't even know. And now we're starting to finally get to the point where information technology concerns, internet companies, telcos, and healthcare organizations that are banding together more and more to provide telehealth related services and remote patient care can know down to the very minute level exactly where those shortages occur. And obviously you can't solve a problem if you don't know what it is to start with.

**Bill:** Right. Neal made reference to the map, we'll provide a link to that at the end of the program if you want to go and look at the map yourself. I want to go back to something you touched on and we've talked about telehealth, which is only one component of technology and how technology can be better utilized to improve access to healthcare. I've given talks where I've asked people, what do you think the most innovative piece of diagnostic technology is now or will be in the next few years? And what I do is, I pull out my phone and I say, you know, every one of you has it in your pocket, probably, right

now, because when you look at all of the different apps, all the different attachments, the things that you could do or you'll be able to do over your phone like an EKG and an otoscope to look in your ear or have someone look into your ear through an attachment. Can you talk a little bit about some of the new technologies? It's more than just a video conferencing capability, there are things that your phone – your smartphone – can do that people are probably shocked.

**Neal:** There's way more bits and bites in your phone than landed on the moon in 1969 by far with Neil Armstrong and Buzz Aldrin. And there are all sorts of scans and information that you can take and gather over the phone and distributed technologies that whole companies are being set up around. On the high end, images of various kinds, like you said, and on the low end, just pooling data and making information about people's care available in mobile situations and things like that. So, they can tap into databases, and they can record their diabetes – the numbers – and get instant feedback through algorithms on what to do and that kind of thing. So, that's why we're kind of getting away from the idea of sort of telemedicine or telehealth and we kind of talk more and more, although telehealth is still code for all of it, about information technologies in healthcare, because we're using artificial intelligence towards decision support. We've got an internet of medical things, which is millions and millions of connected devices out there in people's homes, in schools, in pharmacies, in stores, all connected one way or another, providing all sorts of data back and forth to hospitals and clinics. We're using virtual reality, robotics, holograms in different situations.

Think of your phone as your wearable watch and all of the things that go with that, all of the status monitoring that you can do now with your watch and various websites and things like that. 3D printing of body parts, you name it, it's happening, and we've got arguably the backbone for all that through interoperable electronic healthcare records, so that there are exabytes of data being kept on computer..., again, the good news and the bad news. I'll give you the good news. There're all sorts of information all over the world on everybody's healthcare.

**Bill:** But that's also the bad news because what that leads to is privacy and security issues. And how do we find the balance between making these technologies available, making them easily accessible, but yet also trying to protect the privacy of that health information so people are not vulnerable to having it used for blackmail or other nefarious purposes.

**Neal:** Yeah. So, I'm a recovering information system security professional, having not renewed my little license or whatever it is about 10 years ago and all that, but I got interested in all that about 12 – 15 years ago around, longer than that, around HIPA and did a bunch of work with the military and the medical treatment facilities around the world to try to kind of compare HIPA with the requirements in the medical core, and HIPA has been great as far as it goes---

**Bill:** And HIPA, just for our people, you want to...

**Neal:** Health Information and Portability Accountability. It's actually more about transactions and code sets than it is about privacy and security, but among the 12 or 13 sets of regulations that also led to interoperable electronic healthcare records were the nation's first cohesive laws around information security and privacy or as information security professionals would put it, the CIA of information security, Confidentiality, Integrity, and Assuredness of data. Confidentiality is the privacy. Integrity is the data that goes in on one end, is that reliable, you know, has it been fed reliably? Is it in and of itself quality data? And the Assuredness of that is, is it transmitted reliably so that it comes out the

other end the same way. There are all sorts of problems with information, and we hear all the time about information security in all fields, right?

Ransomware as a service attack is rampant in healthcare now, as it is in all other areas. Spearfishing strategies where people get into email, co-op your email, and cause you to do all sorts of things and let you into their systems and things like that, credentialing theft, all sorts of errors that have been happening that add up to either advert or inadvertent medical errors of various kinds. Sometimes, it's just bad data. Sometimes, it's not that there are bad actors out there sitting in their chairs and in somewhere in Eastern Europe doing bad things to health systems for money, but that just stuff gets going in a system, and it just keeps rolling. That said, over half of Americans' records have now been breached. Half of all health records in the United States have been breached. And that's like data from three years ago. In 2015, Anthem Blue Cross Blue Shield, there were 80 million records breached, single biggest us healthcare data breach to date – names, social security numbers, home addresses, date of birth, and more. That same year, Premier Blue Cross Blue Shield was attacked, medical information, 11 million customers was breached. Excellus Blue Cross, another 10 million subscribers. The 2017 WannaCry ransomware attack out of the UK cost the British National Health System \$120 million cancellation of 19,000 appointments, and it goes on and on. But that's not even the worst part of it, the worst part of it is not just that records are being breached, but what happens when we are, as I said before, hooking together all of these many millions of healthcare devices in what we're calling the internet of medical things, a And here's the scary part, it's been shown by researchers that you can get into medical devices remotely, and because of the increased number of what we call attack surfaces and get into people's systems and actually change the parameters on medical devices. So, think about that, half a million St. Jude defibrillators were compromised on firmware issues, and they pretty well had to shut down that whole thing about 2-3 years ago. University of Alabama students have shown how you can hack pacemakers and change pacemakers in somebody. So, think about it as a terrorist tool.

**Bill:** So, a patient who has a pacemaker, someone remotely could access that, change how frequently it beats or whatever the pacemaker does to ensure that... wow.

**Neal:** Yeah. Israeli researchers showed a couple years ago that by introducing malware, they could show fake cancers in MRIs. And even when they showed it to top radiologists, they couldn't tell the difference between fake cancers and real cancers. Hospira Infusion pumps have been vulnerable for a couple years ago to the point where the FBI had to become involved. So, what's happening isn't just about money, it's about people's grievances and everything else, and the real threat here is what can happen when we become more and more reliant on these devices for everything.

**Bill:** Yeah. Last week, I was at a rural health clinics conference, and we had a presenter from a small rural hospital who had been the victim of a ransomware attack. And their attitude was, well, we're a small rural hospital, we're in the middle of nowhere, nobody really cares about us, you know? And so, they didn't do some of the things that they figured only the big guys need to worry about this. Well, sure enough, somebody found them, figured out how to get access in, and in their analysis after the fact found that someone had embedded something into their software, like weeks before that they became aware that they had been compromised and it was pretty, fascinating, you know, what they had to do and the things that they went through. They didn't lose patient information, but it shut down their system for 72 hours, and didn't have access to medical records, didn't

have access to any of that stuff. And they were like trying to operate a hospital without access to any of that information.

**Neal:** So, I coordinate a rural health IT coalition for some years through the National Rural Health Resource Center funded by HRSA. And we did a thing on cybersecurity about, I don't know, a week and a half ago or so. And a couple of my speakers who I've known for a long time, guys from Minnesota and Wisconsin had said, who do a lot of consulting with and have networks of small rural hospitals up there have been talking increasingly about their ransomware experiences, costing them \$150,000-\$170,000 for a little small rural critical access hospital. That's a lot of money for---

**Bill:** Yeah. Because that was their view is like, we don't have that much money. Why would somebody come after us, if they just looked at our books, they'd know we don't have that kind of money sitting around, but you know.

**Neal:** Yeah. No, you got to get ahead of it and you've got to join some of these, you know, you got to put up a little money upfront and go to some of these organizations that will do constant monitoring and threat monitoring and put in place the kinds of controls that will at least alert some outside organization automatically and routinely when somebody is trying to breach one of your systems, and if you don't, exactly what you described is going to continue to happen.

**Bill:** The other thing that I thought was interesting was, they talked about the fact that they had permission to talk about the experience of their hospital. And they said that most hospitals will not allow their people to go out because they're embarrassed, or they don't want people to know that they're vulnerable. So, there's this conspiracy of silence ---

**Neal:** Absolutely.

**Bill:** --- that's going on that people don't realize how pervasive it really is.

**Neal:** Yeah, exactly. And whether, or not, you identify them by name, they at least have to allow folks like you and me and others to talk about the experience, you know, peripherally, in a way that will get others' attentions because it's just getting worse.

**Bill:** Well, we could probably go on for a couple more hours here, and I don't know if our audiences is fascinated by this space and these topics as I am, but I do think that this is an area where it's emerging technologies, there are policy issues, you know, during the pandemic and maybe we could close out a little bit. So, I mentioned that we saw the uptick in utilization. Part of that was because the government relaxed a lot of policies, some HIPA issues, some other issues, some state boundary issues. You talked about some payment issues that because of the public health emergency, but we're going to have a snap back on a lot of those policies at the end of the PHE unless the Congress and the administration, which bipartisan groups, as you mentioned, this is not a partisan issue, are saying, yeah, we need to adopt some policies that allow this more effective utilization. Can you talk a little bit about some of the policy issues as we try to wrap up here?

**Neal:** Sure. So, Brian Schatz – Senator Schatz – from Hawaii and a 50 - 60 members, both sides of the aisle, and there's a House version, can't remember what it is had introduced - --

**Bill:** Is that Thompson's bill? Bennie Thompson?

**Neal:** Could be, yeah. I think so many times. Yeah. The Connect for Health Act, supported by more than 150 groups. Now, I think it's probably well over 200 by now that would permanently remove geographic restrictions on telehealth and expand the list of originating sites for telehealth to include homebased care and other sites that even under the waivers aren't necessarily currently involved. It would allow federally qualified health centers, rural health clinics, Native American facilities to provide telehealth services

beyond the pandemic. And it would give the secretary of HHS the authority to waive telehealth restrictions during pretty much any public health emergency post pandemic. And so, there wouldn't be a time lag for all of the kind of deliberation that need, this stuff has to happen pretty quickly when there's an emergency. And to our earlier discussion, Bill, it would put up some funds to study how telehealth has been used during the pandemic so that we can look at the effectiveness issue and determine better as a field in concert with CMMS and private insurers, what should or shouldn't be reimbursed for, right, and which payment models are best used, you know, value based payment models, all of the rest. And then, finally, it has some provisions about waste fraud and abuse as we had discussed before. So, I think the field now is pretty well coalesced around the notion that there's a lot to have been learned from that very fast ramp up in the last 18 months or two years, but we have to do that. We have to study what's going on and make sure that leading university health centers and organizations take the time and really look at the success or non-success of some of these technologies and things. And then we can move on, and pretty soon we won't even be talking about telemedicine or telehealth anymore as a separate kind of entity. Everybody is going to get used to it and just view it as part and parcel to how they receive---

**Bill:** Normal healthcare delivery. Well, as I said, I've really enjoyed the time we've had to spend together here and appreciate your taking time to join us for the health disparities podcast.

**Neal:** Yeah, me too. Thanks so much for having me Bill and doing this is such a worthwhile effort that you're engaged in here.

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