Weitzman Institute
2022 VIRTUAL
Symposium

Panel Presentation #2:
Transforming Primary Care and Achieving Health Equity through Digital Health

Reimagining Primary Care through a Health Justice Lens **May 4, 2022**

Dr. Andrey Ostrovsky | Dr. Connie Hwang | Dr. Sofia Noori | Dr. Sanjay Basu | Dr. Ian Tong

PANEL PRESENTERS:

Connie Hwang, MD, MPH
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Ian Tong, MD
Chief Medical Officer, Included Health

Sanjay Basu, MD, PhD
Co-Founder, Waymark

Sofia Noori, MD, MPH
Clinical Instructor, Yale Department of Psychiatry

PANEL CHAIR/MODERATOR:

Andrey Ostrovsky, MD
Former Chief Medical Officer of the U.S. Medicaid Program; Managing Partner, Social Innovation Ventures

LEARNING OBJECTIVES:

By the end of this session, participants will be able to:

- **Discuss the importance of digital health in the context of the current COVID-19 pandemic**
- **Identify current and promising digital-based innovations for improving the delivery of care for marginalized populations**
- **Examine short- and long-term implications of the digitalization of healthcare on primary care health systems and workforce development**

I. Introductions

Dr. Andrey Ostrovsky: I'm so excited to talk about how we're going to transform primary care and achieve health equity through digital health. We've got some amazing speakers and I'm really honored that I can prompt these folks with questions. We've got Dr. Tong, Dr. Noori, Dr. Basu, and Dr. Hwang. I'll hand it over to them to introduce themselves momentarily because I cannot do justice to their background and all the various things that they're working on.

Just a little bit of context and background on myself so everyone can be oriented and take everything I say and ask with a grain of salt. I'm Andrey Ostrovsky. I'm the Managing Partner at Social Innovation Ventures. My focus is on investing in diverse founders that are trying to close health equity gaps. Most of the companies that I invest in are either trying to serve the Medicaid space or the dual space. I do have some companies that I have invested in that are targeting challenges in the employer-insured space, but even those companies are squarely focused on closing health equity gaps. I've got over two dozen companies I've invested in. If I reference a company today it's possible that data is from one of my portfolio companies. All of my portfolio companies are listed on the fund website so everyone can have a very transparent line of sight into where I've made investments. Having said that, I will try not to reference anything that is not actively peer reviewed, or in the process of being peer reviewed. I am a practicing pediatrician—I tend to children in D.C. Nothing I say represents the views of Children's National Medical Center. These are just my own views. I've had a couple of operating roles in the startup space, as well as two stints in Federal service, so I have a lens through policy and regulations.

I am so excited to hand over the reins to our panelists so they can introduce themselves. We can start with Dr. Connie Hwang.

Dr. Connie Hwang: Good afternoon everyone. I am Dr. Connie Hwang. I'm the Associate Chief Medical Officer at Twin Health, which is a diabetes reversal company that leverages the latest wearable sensors and digital twin technology to help patients improve their metabolism and achieve normal blood glucose values off of medications. My background and training is as an internal medicine physician and I focus on population health and clinical innovation. I also have the privilege of serving on the Board of Governors for the Patient-Centered Outcomes Research Institute (PCORI), an independent nonprofit

research organization focused on patient-centered comparative effectiveness research and grants that promote dissemination and implementation.

I am excited to be on this panel today because I feel that digital health has an important opportunity to drive us towards better health equity. Since the start of the COVID-19 pandemic over two years ago, we've all seen and experienced an unmatched surge and adoption of telehealth and virtual care tools both among patients and provider stakeholders. This surge was aided by temporary national and state level telehealth flexibilities. I do think there's some good news here. The Administration and Congress appear to have a sense of bipartisan agreement on the importance of extending or making permanent these flexibilities. There was an article posted in the May 2022 edition of *Health Affairs* that's relevant to our conversation. It looks at telehealth among Medicare beneficiaries in disadvantaged neighborhoods and came from a research team from Johns Hopkins that observed an increase in telemedicine use during the pandemic particularly among those in disadvantaged neighborhoods as defined by the social deprivation index. All of this is very encouraging and suggest that telehealth can improve access to healthcare for more marginalized individuals and groups without worsening disparities. I'm hopeful, together, we can continue some forward progress and momentum in expanding access to telehealth and I look forward to today's conversation and will hand it over to my next fellow panelist.

Dr. Sofia Noori: I'm Dr. Sofia Noori and my pronouns are she/her. I am currently a psychiatrist at a Federally Qualified Health Center (FQHC) in Connecticut and I also am working on a practice that focuses specifically on Post Traumatic Stress Disorder (PTSD) patients and deploying new treatment models for PTSD. I currently live in Connecticut but am from the Bay Area originally and was always very interested in health equity from an early age. I worked at the Clinical Excellence Research Center (CERC) at Stanford, which helps deploy new clinical treatment models and pilots them. When I was in medical school in San Francisco, I also got very interested in digital health, where I worked at a number of mental health startups early on including Lyra Health, and then continued to consult for a number of mental health startups while I was in residency at Yale. I agree with Dr. Hwang that there's a lot of opportunities for digital health to improve healthcare. I also think that one of the fundamental issues when incorporating digital health is whether or not it really embraces what I like to call it the "full catastrophe of healthcare." There are a lot of tools out there that are for wellness or for things that are subclinical, but, the things that are going to help in digital health are the things that really help to either improve services to things that people can't normally get and also helps to streamline some of the workflows for providers and patients to kind of put some of the magic and delight back into health care. I am sure that I could talk forever with these three panelists so I'm going to let them introduce themselves before we dive in.

Dr. Sanjay Basu: Thank you for the opportunity to take part in this symposium. I'm Sanjay and I'm a primary care provider at a community health center and am also trained as an epidemiologist. My comments are rooted in some work concerning my 2005 co-founding of an organization called Possible Health. They sought to answer questions about Community Health Worker (CHW) organizations and programs that offer digital tech to communicate between patients' homes and providers or hospitals. The results were published in *JAMA* and other venues where they observed reductions in all-cause mortality particularly in black-white and indigenous-white disparities when those providers were more integrated into primary care and really even continuous training and support, rather than just up front or temporary support.

My other comments are rooted in working in an organization called Waymark. It's a new public benefit organization that works with CHWs, that tries to overcome limitations of our earlier model, by enhancing our work, particularly with advanced practice pharmacists to help titrate meds, especially when providers are not available. Just like we refer to anticoagulant clinics for blood thinners, we've seen that some of the reductions in black-white hypertension disparities, for example, when pharmacists can titrate, blood pressure meds have been reduced—that's a study in press now. One of their key learnings has been to advocate, not just for health equality, but for health equity and digital health by focusing on solutions that are specifically tailored to minority populations. For example, instead of smart watches, we have seen a lot of patients benefiting from tap water quality monitors. Outbreaks of coliform bacteria, pesticides, and contaminants among some of our rural patients have led to a number of illnesses, as have air quality problems related to industrial pollution and forest fires. We've seen as we recently reported the reduction in race/ethnic disparities and emergency room visits from asthma when pharmacists can proactively do early refills and titrate meds for asthma-Chronic Obstructive Pulmonary Disease (COPD).

We're also learning a lot about bias and machine learning. We have published the correction to our heart disease equations because Black populations had been sampled in more recent years and had a smaller sample size, so the standard equations were over fit and hadn't corrected for secular trends. These types of learnings are helpful for a digital first or combined digital and in-person context. We continue to learn with people and colleagues on this panel how we can better triage patients between digital and in-person visits, so you don't lose access to that physical exam when you have asthma or heart failure. They can benefit from convenience of digital health, particularly for our patients who have unreliable phones, but what can we do about phone-based digital health, in addition to apps for video-based and getting that access for broadband as part of our workflow. Thank you for having me. I'm excited to continue this conversation with the rest of this group.

Dr. Ian Tong: It's great to be with this group and you all. I know this group really cares about moving healthcare forward, making sure that our patients get better healthcare encounters, and there are so many different ways to do that. The group has already outlined different ways that it can be done. I'm the Chief Medical Officer of Included Health. I'm an internist, Adjunct Clinical Assistant Professor at Stanford, and I've been working in this area for about 15 years, when I first got introduced to virtual care.

Some of you may be familiar with Doctor On Demand, a 50 state, virtual medical practice, behavioral health, primary care—every day same day, everyday care urgent care and coaching. Then you can think about Grand Rounds Health, which was more navigation

advocacy and data analytics to help find outstanding specialists. Included Health is a merger of those companies, but also a third company that you might be less familiar with, which is Legacy Included Health, which was a company that was focused on advocacy and navigation for members of the LGBTQ+ community. I spent my entire career trying to figure out how to use technology and resources to improve healthcare access with the goal of impacting health equity as the end goal and clinical outcomes. Very similar to Sofia, we do that through clinical outcomes, but more recently with Included Health, also looking at what we would all refer to as wraparound services, or these navigation and advocacy services, that allow patients to come to us with healthcare conditions, but also need to understand their benefits a little bit better. We have attempted to put these different services together so that patients can find everything from primary care to navigation through a really complex healthcare system at Included Health. The mission is to improve the standard of care for everyone and we take the "everyone" part of that pretty seriously.

Fifteen years ago, I was at the U.S. Department of Veterans Affairs (VA) as a VA clinician and as Medical Director of Veterans Outreach. That's where I actually got introduced to telemedicine. For me, it was an obvious tool and platform that would improve healthcare access and improve quality of care. Specifically, I was looking at rural veterans and had a grant to engage those populations because I couldn't get my mobile clinic out to all of those places as efficiently as I wanted. I thought telemedicine was an outstanding tool to use and a necessary tool that we were going to have to use.

What I have seen in my experience, through the last nine years, that not only can virtual mean improved access and patient experience, but it actually had another unexpected impact, which was that we actually ended up building a very diverse practice at Doctor on Demand and now Included Health. This is historical data, so this is not the current numbers because we've continued to grow pretty rapidly, but prior to COVID, over 60% of our clinicians were women, over 40% of those clinicians were Black, indigenous, people of color, and about 20% of our behavioral health practice identified as members of the LGBTQ+ community. I see this platform as an equity platform from the very beginning. The work that I've been doing for the last nine years has been to build this workforce that can be leveraged across distance and time, and to provide that access and great experience to people, wherever they are in a given state—whether they're in a rural health desert or an urban primary care desert. I am also currently working on the Black Community Innovation Coalition, which is a coalition we formed with seven large employers: Walmart, Best Buy, Target, Accenture, State Farm, Medtronic, and Genentech. The goal is to outreach and survey employee resource groups, members of the Black community within these organizations to get their feedback on their healthcare needs and wraparound service needs, and then build a solution that's actually going to address those needs.

II. Importance of Digital Health in the Context of the Current COVID-19 Pandemic

Dr. Andrey Ostrovsky: Dr. Tong, I love how you are describing the diversity in your provider population. There is robust literature showing how patient/provider concordance improves outcomes, and that's a huge driver of improving patient and provider concordance. I wonder if we can use that as a springboard to our first question.

The Future of Telehealth Utilization

Dr. Andrey Ostrovsky: Question—In the context of this OIG (Office of the Inspector General) report that came out a couple months ago that measured telehealth use prior to COVID and telehealth use in the more recent months and found that there was a doubling of telehealth use in terms what appears to be a new steady state. 5% of all health care services and Medicare were administered through telehealth prior to March of 2020, and during more recent months it appears to be a steady state of 10%. ***I'm curious what do folks think will be the ultimate steady state over these next couple of years? Do we think that it's going to level out around 10%? Do we think it's going to drift or regress down to 5%? Do we think that we're going to see a steady increase and that steady state will become 15%, 20%, 30%, or 40% of telehealth services?***

Dr. Ian Tong: This has been an amazing journey. As you said, early in COVID, we saw 150% increase in overall demand. We published a paper in late 2020 in the *Journal of Medical Internet Research*, with the RAND Corporation and Harvard University that meant to talk about COVID cases and show the uptick in interest in virtual care and demand for virtual care. We thought the story was going to be mostly about COVID cases, but it actually turned out to be much more about the uptick in demand for chronic disease management and behavioral health services. It wasn't a story about COVID or urgent care and transactional encounter based activities, but can you help me with my chronic illnesses? Can you help me with a more meaningful relationship-centered approach to my conditions? We also published a paper with Harvard in the *Mayo Clinic Proceedings: Innovations, Quality, & Outcomes* journal where we did a descriptive analysis of when someone gives us a five-star rating, what do they say in the comments about that? **The number one thing that they highlighted was about establishing rapport with their provider.** We categorize: did you get what you wanted, did the doctor share information, or did they establish rapport? There are about seven different core competencies in doctor-patient communication. They overwhelmingly identified establishing rapport and sharing information in the study.

To get to the answer to your question, I think telehealth utilization is going to end up leveling off where it is now, but then over time, as people gain more and more experience in virtual care, they will turn to it more and more for the convenience and the access. The clinical quality that they're going to get it is going to be outstanding and their ability to find diversity of clinicians is going to be improved by virtual means as well. We'll see it continue up and it'll eventually get past 20%. I do believe that. It has to, honestly, for our system to work.

Dr. Andrey Ostrovsky: Thanks a lot for that Dr. Tong. Just a quick note of a really great point made in the attendee chat, which is that there's likely going to be variability by specialty in terms of sustained uptake.

Question: Next, we can go to Dr. Hwang with your reaction to that question, and perhaps you could also bias your response based on ***what implications does that have for person centeredness? If it's 10% versus 40%?*** You've got a unique lens through your PCORI board position.

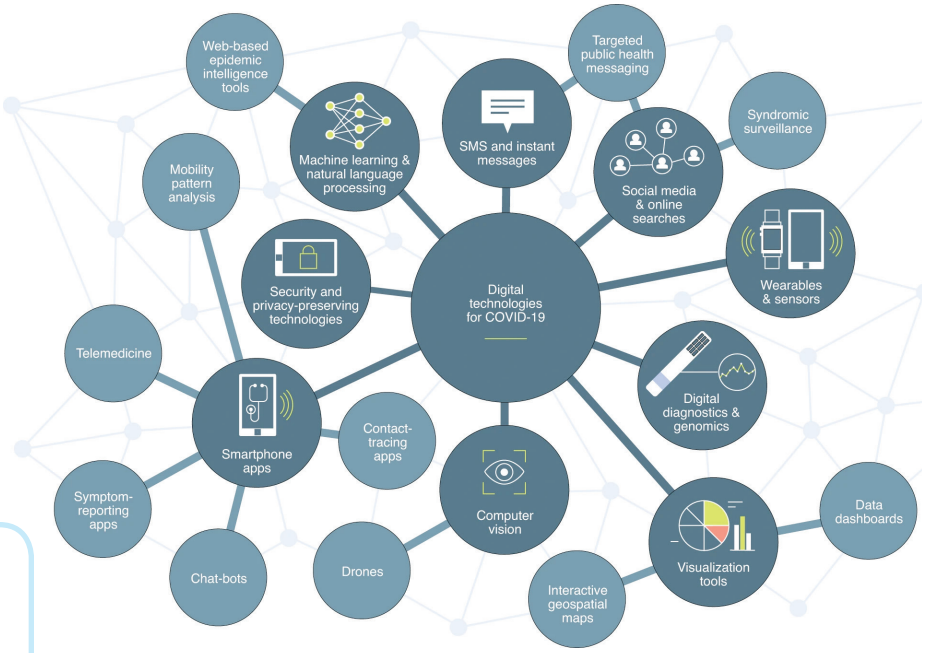
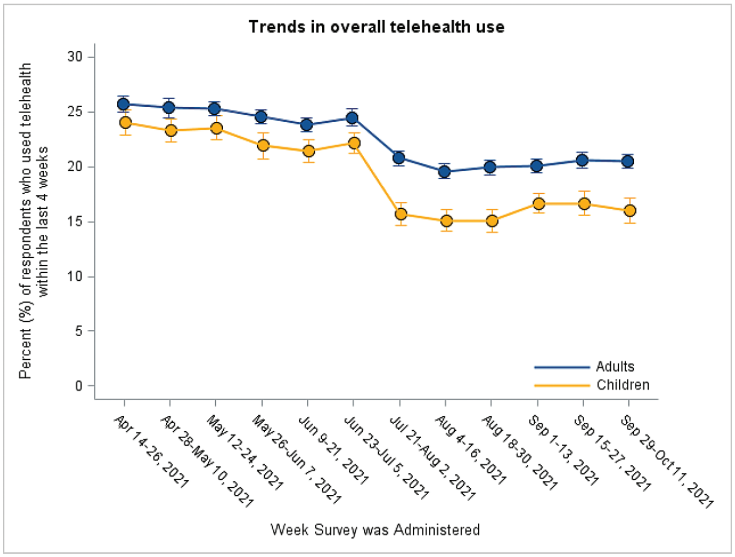


Figure 1. The interconnected digital technologies used in the public-health response to COVID-19. Source: Budd, J., Miller, B.S., Manning, E.M. et al. Digital technologies in the public-health response to COVID-19. Nat Med 26, 1183–1192 (2020). https://doi.org/10.1038/s41591-020-1011-4

Dr. Connie Hwang: I feel similarly bullish like Ian. There's a lot about being able to build rapport. Prior to the pandemic, there might have been some skepticism about whether you can have that relationship through audio only or video. But, we've seen healthcare catching up with the modern world, and that those types of relationships and trust can be built.

As far as the rates, I think we're going to go upwards. It depends on some of the studies that you look at in terms of the telehealth usage. Recently, I was looking at the Assistant Secretary for Planning and Evaluation's Office of Health Policy issue brief from February 2022, which noted the huge surge as we've all seen at the start of the pandemic, which obviously has leveled off. **But, they found that through April through October 2021, roughly one in four households (23%) reported utilizing telehealth in the past four weeks.** It is encouraging that we're already potentially pushing that envelope. They also go on to note that the telehealth visits had the highest rates among Medicaid, Medicare and among Black individuals and those earning less than $25,000. Again, some interesting sort of signals in that direction.



Note: *Reflects telehealth use reported by adult respondents for any child in the household over the previous 4 weeks.

Figure 2. Percentage of Adults and Children Who Used Telehealth Services, April 14–October 11, 2021. Source: The National Trends in Telehealth Use in 2021: Disparities in Utilization and Audio vs. Video Services. (Research Report No. HP-2022-04). Office of the Assistant Secretary for Planning and Evaluation, U. S. Department of Health and Human Services. February 2022.

Prior to joining Twin Health, I worked a lot with nonprofit community-based health plans. In talking to those leaders about that big surge in the beginning of telehealth use and adoption, many of them wanted to keep the momentum and were aiming to try and keep that closer to 40%, which is ambitious if you're saying that we're somewhere hovering around 10% to 20%. There really is this push to do a lot of these things and a lot of care more virtually, and there's some good advantages to that which we can talk about later.

You've got some outstanding examples in that space, particularly in nonprofit community health plans and integrated systems. Kaiser Permanente already does well over 80% of their visits are some form of virtual care, so we've got great leaders in that space as people are making that transition.

The one other thing I'll mention based on the previous question, payment parity that was part of the changes in the waivers. In terms of what are we going to compensate in terms of providers doing this, its a really important question as we move forward about how we're thinking about valuing those services.

Behavioral Health & Telemedicine

Dr. Andrey Ostrovsky: Dr. Noori, I'd love to pitch this question over to you, and especially in the context of early data and recent data showing that the highest sustained utilization of telehealth is in the behavioral health space. ***I might modify the question to not just be where do you think steady state is, but what about the notion of audio only, especially for behavioral health?*** I feel like you might have some unique perspectives on it.

Dr. Sofia Noori: I was about to say about the comment in the chat about how it's going to be different and specialty-specific. I completely agree because, in psychiatry especially, the switch to telehealth has really turned things on its head. A lot of providers, behavioral health providers, really appreciate the use of telehealth as well, because as Ian was saying, people prefer in telehealth rapport building and the therapeutic relationship, which are incredibly important in behavioral health.

What I've also seen anecdotally with my patients is that some of them feel safer disclosing some of their issues when they're in their own home. **Also, actually seeing folks by video is super helpful in the mental health setting to actually see what their house looks like and what their surroundings are, and who's with them. In some ways, I actually find it to enhance the clinical care quite tremendously, especially in specific populations within behavioral health.** I'll say with my trauma survivors, in particular, patients with PTSD, where avoidance is a symptom of the illness, telehealth actually really helps because they are in a safer environment where they feel more likely to disclose. It brings down one barrier to care which is having to come to the clinic. In some ways, it's actually harder for them to avoid.

There's actually data to show that around PTSD and doing telehealth PTSD treatment, some folks actually prefer it for those reasons. Going back to your point about audio only, audio only can also can be very helpful, and for a lot of my patients who have SMI (Serious Mental Illness) or who don't have access to the internet, it's still a way to provide care, which is great. I will say, though, that at least in my practice, and from what I've seen from other behavioral health providers, because the visual part is so helpful, especially when we're taking care of mental health patients, and to see their surroundings and hygiene, that we really prefer the video. We'll take the audio if we can get it and at least it helps people not present to care, like we're not having as many as lapses, because we have these other ways, these other modes of reaching out, even just by phone, if we could get it.

Role of Telehealth Usage by Non-Clinical Providers

Dr. Andrey Ostrovsky: Thank you so much for that—really appreciate it. Dr. Basu—***I'd love to know what you think about the role of telehealth usage by non-clinical providers?*** You've done some research that projects out the per member per month (PMPM) costs for investing in social determinants of health (SDOH) interventions. ***Is there an applicability of telehealth to those types of interventions? How much of them can actually be done virtually and what do you think the impact of that would be on this overall telehealth utilization number, not just medical but functional upstream drivers as well?***

Dr. Sanjay Basu: We've seen a lot of cool innovations in the space of people being able to do SDOH interventions by better accessing data across agencies. The state of Washington is certainly very proactive about integrating many of their data systems across housing and health services, as well as food insecurity services, and between the incarceration system. Whatever our opinions may be around the incarceration system, but at least recognizing that upon release, there's the inevitable drop of being able to link them properly to primary care and other challenges with being dropped off in the middle of the night in a community.

We definitely see a lot more case management being able to be done in creative ways, not just audio or video, but also through SMS. Being able to link patients in an informal check-in manner is helpful and having a single point of contact, where people can SMS quickly and be able to tell us what their location is or whether something has happened in the middle of the night, is super helpful.

Also, to the points that were made in the comments, we learned so much from Ateev Mehrotra's Commonwealth Briefings during COVID on how much people are using patient visits, how much they rebounded, how much telehealth continues to perpetuate (I would love to get those during non-COVID times), and also understand a little bit about the longitudinal patient journey. Who's using in-person and telehealth visits and for what? Should we really even be calling them telehealth visits or different modalities for different people at different times? We've learned a lot about trying to customize to different patient personas. Some people just respond better to a phone call from a pharmacist versus SMS from a CHW versus a warm door knock from a social worker and for different things. How do we integrate those well so that we're giving the right service opportunity for the right patient at the right time—both for engagement purposes, but also longer term?

There was a nice RAND Corporation study in *JAMA* in December 2021 that also talked about the out-of-pocket cost implications and depending on which cost barriers there were, who ended up choosing which modality. I'll just end by saying it's important for us to be

our own good self-critics about this space and many of you probably saw the **Stat News article** this morning about Adderall prescribing. There's a wide variety of players in the space with different incentives, and so improving access and engagement is one thing. **It's hard for us to say that all engagements in this is positive engagement. Are we playing up patient satisfaction rather by providing prescriptions that might be done more carefully? Who's really developing a longitudinal relationship versus kind of one-off opportunistic relationship, and how do we navigate that space smartly in an area that's not yet regulated as much as maybe in a few months or years?**

III. Guardrails for Clinician-Innovators in Private Sector Settings

Dr. Andrey Ostrovsky: You brought up a fascinating point with the articles you're alluding to with the perhaps less than wholesome clinical practices of online prescribing of ADHD medication. Everyone on this panel has actively served patients that are predisposed to injustices left and right. Most of us here are working for some private sector entity. There's been consistent literature showing that, at least in the private equity space, when private equity gets involved in healthcare, outcomes become worse. Now, I don't think that it necessarily has to be the case in the future and I don't think we have literature on venture capital involvement. Nevertheless, we can't ignore this association, maybe not causation, but association, between private sector money and worse outcomes, mostly in the skilled nursing facility in the home health space. ***What guard rails can we introduce to ensure that our private equity and venture capital colleagues with the financial pressures don't override what is the correct thing to do for patients?***

Dr. Ian Tong: I would just say that we need more clinicians in venture capital and private equity. **Boards of companies should be putting doctors that have the service orientation, community awareness, and cultural competency to allow the diversification of these boards.** I don't know the statistics, but I'm pretty sure it all skews towards one demographic or just a couple of demographics. I'm sure it's been getting better over time, but if we don't change what we're doing now, we'll get the same outcomes. The data that you are pointing to is going to be the same in 10 years and might even just continue to worsen. We see that with widening gaps in care and broadening of health inequities, or just consistent health inequities that have just you know existed over decades.

There should also be **equity dashboards** that we are putting in place. Some people may worry that this will slow some innovation, but the reality is, I believe, it will actually speed up innovation. **If we are competing on providing equitable care and that becomes a competitive differentiator across companies, that's the kind of innovation, we really want to see, and we want to drive.** But we need the right people in the boardroom and on the executive C suite level of these companies to have that voice for that to happen.

Dr. Sanjay Basu: The only two points to add that I could think of one is to your point Andrey, there's the association studies, but I don't know of as many studies on which guardrails have or haven't worked. We know the problem, but it is unclear how much I've seen solution-oriented testing. It's interesting to think about the core of the problem around the incentives. Who's making money off of what? How are the incentives aligned? Good social venture bonds and how much evidences of those might be able to help other innovative financing that just tries to realign the incentives fundamentally with the patient outcomes? There's more work to be done there in order to test that.

The other guardrails are around how much does transparency help, and for whom? In which setting? We're all in this healthcare space so we see the limits of transparency as much transparency has been pushed. We're seeing right now hospital prices. There's a lot to be learned from, for example, a Medicare Advantage space as corrections happened in that space. It helps us learn what was it about risk or gaming versus actual quality improvement that took place? **What are the incentives that are in place to actually align payment with quality improvement?** There's that wonderful three part series of the *New England Journal of Medicine* that's come out that looks back at the quality improvement metrics and how we think about metrics and how much are they helping us versus strangling us. We're going to continue grappling with it, but I'd love to see more proactive research on just testing out this guardrail versus that and seeing whether we can correct that association.

Dr. Andrey Ostrovsky: I want to connect two dots here. Dr. Tong pointed out more representation at the board level, especially diverse clinicians. I wonder Dr. Hwang, how much of a variable is that compared to consumer representation on the board, where Federally Qualified Health Centers have that kind of representation. ***Is there a role to systematically include more consumer representation at the board level of private sector entities or whatever direction you want to take that question?***

Dr. Connie Hwang: I did resonate a lot with Ian in terms of when you think about funding (private equity, venture capital, etc.). Having more diverse clinicians in the room helps remind us the distinction of the mission versus the business case which is important. Andrey—you bring a great point about the consumer–patient perspective and role. I would tie that a little bit more back to my work with PCORI and its right in the name its "Patient-Centered Outcomes Research Institute." One of the things that they have done,

and could hopefully be reflected in other industries and groups, but in essence, there is no research done without the patient voice. The patient voice is a critical part of any kind of funding that happens from PCORI. **It is critical to be able to drive to the things that matter for the individuals that we're trying to improve health and well-being with.** I'm a fan of that. There are organizations that do that better than others, in full transparency. **Also, when you think about bringing the patient voice, it's not just grabbing a consumer and sitting them down in a boardroom.** There is a lot in terms of supporting their ability to be successful in navigating that. The organizations that do that the best have training, stipends, and support to really bring those diverse voices to the table. It's not just throwing them in a room. **You really have to embrace and support that voice and perspective.**

Dr. Andrey Ostrovsky: Dr. Noori, what has been your experience to date? ***Has there been anything that you feel like has worked really well to create those guardrails in balancing a profit optimization motive with, what I think is even more important, the end of improving outcomes equitably?***

Dr. Sofia Noori: When I was just going to medical school and seeing the hairiness around healthcare and finances, that's when I already started to think about how, in America, our healthcare system fundamentally—just zooming out from digital health, innovation, and private equity—we fundamentally have a conflict. There is a conflict between healthcare and finance sometimes. That's actually one of the great struggles in our healthcare system, generally. Sometimes I have to remind myself that capitalism doesn't love me. All of us need to think about how to make a profit, but the one thread that we're all talking about is that we think that clinicians and having those diverse voices at the table inherently help business because we've taken an oath to do no harm, to really care about the patient first.

Another guardrail we should be doing is having business people who want to come into healthcare do the same thing and really take that kind of oath or have some transparency. I'm not exactly sure how we would make this into policy or legislation, but if you want to do anything in healthcare, this clearly has to be about patients first, do no harm. Not only having more clinicians in venture capital, but as we can all attest having more clinicians around any type of innovation table when you're creating something new must happen. But, also the physicians and the clinicians should have the power, too. How many of the Chief Medical Officers of these startups or how many of these clinician leaders actually have the power to say no, the buck stops here? That's important. That's something that's not happened as much with innovative models. It's starting to happen, we can all attest, but it really needs to happen more where those clinical voices are actually the loudest and the strongest.

IV. The Role of Payment Models

Dr. Andrey Ostrovsky: The American Medical Association has this initiative that is called **In Full Health** whereby they've pulled together five strategic recommendations in how to embed more equity principles into the innovation ecosystem for health care. There's some very specific guidance, and then there's a toolkit that will be coming out sometime soon. The investment in this body of work is quite impressive so that might be a useful resource for folks.

Figure 3. "The exclusion of the majority of the U.S. population from health innovation resourcing is preventing meaningful progress in national health improvement." Source: In Full Health.

I want to transition to a topic that incorporates both buying telehealth that we've been talking about, as well as this notion of guardrails to ensure that capitalist approaches don't go off the rails and adversely impact patients and that has to do with incentive structures: payments. The vast majority of U.S. healthcare is still on a fee-for-service basis. I've observed even in settings where there is a category three alternative payment model, like an Accountable Care Organization (ACO), that telehealth is used in that fee-for-service mentality, and broadly for virtual care, including remote monitoring. In other words, there may very well be an incentive a year out to improve outcomes, but the incentive for tomorrow is to drive value. I've seen hesitancy and skepticism by payers and managed services organizations, who are doubling down on virtual care, because they perceive it to be another source of driving up utilization, maybe unnecessarily, as opposed to if providers had full capitation, they would more judiciously use virtual services.

Dr. Andrey Ostrovsky: ***What are folk's thoughts on the role of payment models? Do we have to have full risk value-based payment in order to see the full potential of virtual care and digital health?***

Dr. Connie Hwang: I'm a huge fan of the movement towards value. Telehealth is a modality like any kind of other service and certainly the same principles should apply. We're really trying to manage holistically an entire population, their health, and well-being. Certainly,

from a payment perspective, we should have telehealth be part of the value movement. When the pandemic first began, what was very interesting to me was groups that were in full staff Health Maintenance Models (HMO) models, something where you were already disconnected from that fee-for-service like hamster wheel, those integrated practices and health plans could pivot incredibly quickly in terms of "what do we need to do to reach our members? Should we email them? Should we call them? Should we do this video visit?" They were in some ways freed up to really focus on what's the best modality to use at this time, and not worry about billing code, needing a modifier, or knowing what they were allowed to bill for. **It was striking to me that, even if you had sort of the ability to do some telehealth or move to a virtual environment, how much of a leg up for practices that when they were in a value-based contract, where you're not just dependent on fee-for-service, office visits, and traffic coming through your door.** The amount of bandwidth and focus you could have just to be present and adapt to the challenges of COVID at the time. I'm a fan of that. We need to keep moving that forward. We should really be thinking more about what's the best telehealth service to use at that time. We're agnostic. Let groups manage that and manage global outcomes and population health results. That's where I stand on that one.

Dr. Ian Tong: I completely agree. Clinicians and provider groups have taken oaths to approach these questions and these conundrums responsibly, and they're going to weigh that. I'm not naïve, there will be practices out there that will game any system that you put in front of them. We will accrue that data over time, that will prove that we'll be able to do this very efficiently. **I feel like we have an entire generation now of clinicians that have been raised with value-based care at least being a thing, which we didn't have 20 years ago.** We've not fully divorced ourselves from the fee-for-service model and I don't think we have to fully, but we have to pay for the care we are going to provide. We have to figure that part out and what I have seen is many payers are seeing the lower cost opportunity of virtual care and then they want to drive the volume through that because of the lower cost, but they may not want to pass those savings along to the patient. They are finding margin in there. I worry about that piece of this. If we can have an honest discussion about whether our costs about providing primary care and putting the right investment into primary care, then let's also put in the rewards for the groups and practices that can do that efficiently and can drive great clinical outcomes at a lower cost. They should be retaining that for their practice so they can reinvest that in more tools and better resources. I think that will drive innovation, but we're not there yet. We don't have that level of alignment. We're sort of in the adolescent phase of it right now.

IV. Audience Question & Answer

Dr. Andrey Ostrovsky: We've got a question from the audience. Many states are now exploring use of telehealth to prevent access disparities and obtaining outpatient treatment for COVID-19. We get medications, but without HRSA reimbursement for the prescribed visit and even the $75 fee may be a barrier. ***Is there an opportunity for telehealth to work with public health on a solution?***

Dr. Ian Tong: I would say there is. This is where my mind went early on. We could work with FQHCs and we can partner with them. I had the belief, for instance, in Native American or American Indian populations in reservations, maybe we could figure out ways to use telemedicine, for that group in a more efficient way then the health centers that are local or proximal to them. **But what I found is that in some cases, there's a concern that you might be disintermediating in the relationship between the primary care clinic or the FQHC and the member or the patient.** I would say that it has not been easy to figure that kind of partnership out has been difficult. During COVID, we were put in place with the Medicaid payer, but they pushed us to the back end, so rather than being upfront they were like, well you can be the safety net for our safety net. It was going to be a difficult arrangement because it was requiring people to go through other hoops before they could even find us.

Dr. Andrey Ostrovsky: The next question from the audience: ***How is telehealth addressing the intersections of health literacy, linguistic barriers, and meta-communication challenges, as well as rural access and underserved communities?***

I'll focus that question on some of the linguistic and cultural challenges. I've observed my portfolio companies as much as I push health equity, they have to start somewhere and they start with English. It is a bit like pulling teeth to go to a second language. Some have done that. One has gone to a third language and that's just language. There's cultural competence as well. It's a real lift but it is absolutely essential. ***What are your all perspectives on the linguistic and cultural competence aspects of digital health solutions?***

Dr. Connie Hwang: I resonate with that question. The digital divide is real. In terms of broadband access, affordability of smartphone devices, and digital literacy (how to use all these things). Those are critically important and when we think about expanding access to telehealth, we have to make those bridges meet people where they are at. I will say just from some of my day-to-day experience at Twin Health, there's a lot of time spent upfront with individuals who are going to go through our diabetes reversal program. We really assess the model and make of their phone, their reliable internet access, how they feel about using apps, and if we can take them through that. Based on some of these questions, we will tailor how long that introductory sort of education orientation is versus others. Some are

ready to go, but those that require a little bit more time. We will spend that upfront and for some of the partnerships that we have we can actually subsidize a smartphone. We can actually go in and support that. We offer 24/7 sensor and tech support, which is critical. People use it and really appreciate that it is available. **These types of supports are critical for us if we are to make global progress on telehealth. Making sure that we are not losing sight that the digital divide and those barriers are real.**

Dr. Sofia Noori: I can also share some experience that we had during residency. I used to be a resident at the Connecticut Mental Health Center, which is a safety net clinic for undocumented folks, folks on Medicaid with SMI (serious mental illness), and we had actually started a tech group to help patients learn how to use apps that might be beneficial for their care. What we ended up finding out is our patients don't know how to turn on their phones sometimes or let alone use Google maps or an app. **The group helped us realize that part of psychiatry and part of healthcare is helping patients develop this digital health literacy and tech literacy.** Then, we were kind of like the geek squad for our patients and we taught them how to use Google maps. That is something that is important to health care if you can get to the clinic. We also developed a digital psychiatry residency curriculum to teach the residents how to assess what we call digital health literacy with their patients, which involves asking, "Do you know how to use your phone?" and "If you do use your phone what are the activities that you usually do?" If they have low digital health literacy, we've helped residents learn how to do some of these basic components on their phone so that they can just navigate some of the basic issues in healthcare. **We're all starting to learn that tech literacy and digital health literacy are just healthcare issues now that people need help with and that's part of our jobs.**

Dr. Andrey Ostrovsky: I will call out there's a great question. ***Is it viable to use telehealth as a modality of treatment for addressing substance use disorder?***

Dr. Andrey Ostrovsky: I put into the chat **an article** I helped senior author within the National Academies of Medicine that provides a framework for how to do prevention, treatment, and recovery for substance use disorders. Telehealth has a prominent element of that, but like all evidence-based modalities, the question is with what level of fidelity does telehealth implement said evidence-based practice? That goes for in-person care as well. There can be poor fidelity and adherence to evidence-based practice in-person, just like there could be with telehealth. **For the most part there's data to be published showing that telehealth increases access and engagement in treatment, which is really the primary outcome with substance use disorders.**

Let's go around and have each of our panelists provide one closing comment and one key takeaway they want the audience to walk away with. I suspect everyone will be available afterwards offline, LinkedIn, Twitter, etc., to field more questions.

Dr. Sanjay Basu: Let's make some Open Source protocols for how we handle our patients. What should we do in-person? Where should we do virtual? Which virtual? For whom? Compare notes between our systems as we come through this part of COVID and see which protocols really work best for which people and under what context.

Dr. Sofia Noori: A lot of folks, especially clinicians, don't necessarily see themselves as the innovators in healthcare. **But I do think that healthcare is not going to be hacked by like a businessperson from the outside, or something like a technologist.** It's going to be you and me coming up with new ways of doing things for patients and getting down and dirty with it, and I hope everybody here thinks of themselves as an innovator.

Dr. Connie Hwang: We have this great opportunity with telehealth, virtual care and the momentum, but to everybody's point, we need to be critical about where we're having real success. I would point out that PCORI has a very large portfolio, especially during the time when we entered COVID, there was a lot of pivot and additional funding to really test when a lot of these interventions were switching into virtual or telehealth; some that related to substance abuse treatment or prenatal care etc. I would really advise folks here to look at the **website** and you will see a lot more of studies and insights are going to come out, looking at that switch in telehealth. The other thing, is that the genie is out of the bottle in terms of telehealth and virtual care. We really do need to continue to support that with the extension of flexibilities. None of these old sort of provider limitations, geographic limitations, you can't do telehealth from your own home—we're well beyond that. **How do we make sure that we have a space that is very favorable for innovating and really learning about where we're going to be most effective in terms of the care that can be provided?**

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