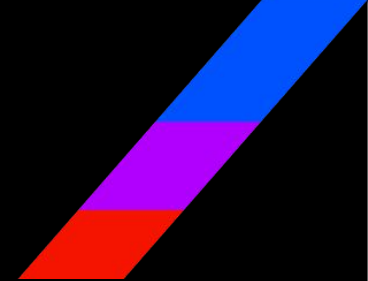


Telemedicine and Digital Health Market



Our Expert :
Richard Dale

Owner, Executive Coach & Strategic Consultant at Dale Advisory LLC

- Senior Vice President of Health System Alliances at Optum, Inc. (July 2021 – October 2023)
- President/COO of OptumLabs at Optum, Inc (April 2013 – July 2021)

Richard holds both executive leadership experience within the Health Care industry as well as Health Care Venture Capital experience prior to joining Optum Inc. At Optum he oversaw OptumLabs which is a healthcare innovation and research center fostering collaboration with partners from across the healthcare ecosystem to improve patient care and patient value. He led alliance efforts for 10-years including \$1-2B cross-enterprise opportunities with multi-hospital health systems. Within his role, he built alliances connecting these clients to various parts of Optum and UHG to meet their specific needs and ambitions, and helping them navigate the enterprise.

Moderator:
Max Le Sieur

Founder & Managing Partner at Rosemont Legacy

- MBA, Harvard Business School 2022
- Investment Banking Associate at BMO Capital Markets (July 2016 - August 2020)

Expert Insights On:

- The current state of telemedicine and digital health
- Market impact of the pandemic
- Medical specialties that are seeing the highest adoption of telemedicine
- Demographic profiles of patients impacted by developments in telemedicine
- Emerging technologies influencing the market
- How do these industries view data privacy and data security?
- Learnings and limitations around patient interaction via technology
- Areas of investment interest within telemedicine or digital health
- Leading players within the space and how has this changed
- Payment models and reimbursement – Changes and Challenges
- Potential future changes to government policy



Introduction -

Max: Hi, Richard. My name is Max, and I'll be leading this call on behalf of Coleman Research today. As you know, the purpose of the discussion is to learn about the digital health market, including key players and trends in the industry. Before we begin, I do want to remind you that we are in no way soliciting any material non-public information or any information that is confidential and related to any company or organization that you are currently or have ever being affiliated with. If you believe the answer to any question involves non-public information, please tell me right away, and I'll take us in a different direction. Any questions before we begin?

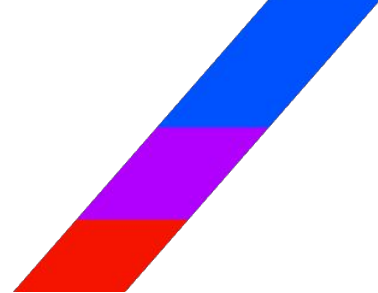
Richard: No, that's great, thank you.

Overview of Telemedicine and Digital Health Industry -

Max: Awesome. Moving to our first topic is just an industry overview. So Richard, could you please start by just describing the current state of telemedicine and digital health as an industry today?

Richard: Yeah, I would be glad to. I think those two things are each their own industry and break down into many different subcategories. So if we just start thinking about digital health, the way I define that is about delivering wellness and prevention and triage and diagnostics or care through digital tools. Sometimes with human intervention, but often we mean more fully automated. Whereas, telemedicine I think about as medical care at a distance and almost always with some human involvement, whether it's a physician or an advanced practice clinician or a community health worker. So not necessarily always a specialist. But telemedicine is about mediating that clinical care from human to human. Now, some cases involve a mix of both digital health and telemedicine. Most simply think about the video call with a clinician that's enabled by digital tools but is delivering medicine at a distance.

And then I'm going to mention the health equity angle that pervades both of these areas because, on the one hand, digital health and telemedicine can ring opportunities for better care and better health for communities who don't have access to specialists or pharmacists or the same level of care as people who are more fortunate or live in better-served areas. And equally, the digital divide can become a health equity divide. And so that's a theme which it would be remiss of us not to have in our minds as we talk about this.



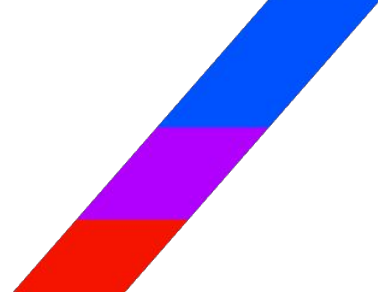
Richard:

I think I would say that telemedicine is more mature than digital health because it started forever ago. Talking to your doctor on the phone in the 1980s was telemedicine, and they tell you they'll write you a prescription for your kid and in those days you had to pick up the piece of paper, but that was care over a distance. Nowadays, we think of much more sophisticated kinds of telemedicine. We've got video calls. We've got asynchronous text and chat. We've got interaction with chatbots and avatars blurring the boundaries again between digital health and telemedicine.

Telemedicine relies on existing ideas about standards of care, and it relies on existing computer networks and applications. And you can see the maturity in more fully developed payment infrastructure. I know we'll get onto that later. So not fully developed but more developed. Digital health is less mature, because delivering care without human intervention is much newer. Just like every day there's a new app or a new kind of app showing up in other aspects of our lives, those same innovative ideas are being mirrored in health and medical care. And so, every time there's a new Quiddler or Snapchat or whatever's new today, there's a new health app that goes along with that.

We've all got mobile phones with great cameras, and so we get dermatology apps or pill scanning apps or urine test apps or eye tracking apps for diagnosing dementia. That's just using the camera. We just all heard about Apple using the Apple Watch for sleep apnea, and we heard about Apple with their AirPods for hearing aids. New technology digital health. And so, level setting on what is or what isn't mature is a very broad spectrum.

And then another angle on both of these are about regulatory oversight. In the same way that nutraceuticals try and avoid regulatory oversight with FDA, some vendors in the digital health space are working to be wellness apps and not really falling under regulatory oversight. But others who are doing similar things are embracing regulatory oversight as a differentiator. And so they are going for clinical trials or they're going for 510(k), they're going for the approvals under software as a medical device and the De Novo and breakthrough designations and so on.



Richard:

So I guess I'll finish this opening point by just thinking about all the categories. So digital health can cover several of these, many of these, all of these, and I'm sure I'm missing a bunch, right? We've got wellness and wellness monitoring, we've got fitness apps, we've got triage, care navigation, mostly now using AI of some kind. Then we have a whole slew of diagnostic capabilities. And then we've got clinical pathway and choice of treatment apps, treatment monitoring. We have signal capture. Think of a continuous glucose monitor or just a smart bathroom scale. Then we have medication management and monitoring. We have rehab, whether it's musculoskeletal or cardiac rehab or post-stroke rehab, there's a bunch of stuff going on in those areas. We have all of mental and behavioral health. We have patient engagement and even something as interesting and seemingly simple as recording and explaining and translating what you hear from a clinician when you're in a clinician visit.

On the telemedicine side, got some of the same things but some different things. Urgent care, primary care, specialist care, hospital at home, long-term care at home, rehab at home, and obviously the overlap with remote patient monitoring and remote patient treatment. And then we have provider-to-provider consultations, which is another form of telemedicine, because it helps bring specialists from afar to help local clinicians. So a lot to cover here.

Max:

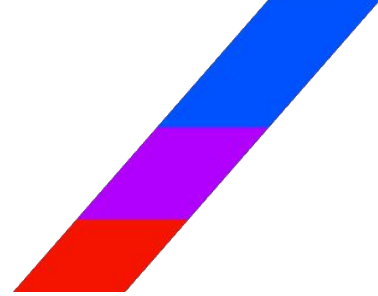
Makes sense. I mean, Richard, are telemedicine and digital health considered standalone industries or are they better described as trends or delivery method improvements within existing industries?

Richard:

Look, the healthcare sector is its own sector and its own industry, and so I'm not claiming that these are separate industries. But it's an oversimplification to just lump them together. Hopefully what I just explained described why I see them as separate and having separate dynamics. We'll see that as we talk about some of the policy and reimbursement matters. Digital health is very broad, right, because it starts with your Fitbit and the Apple Watch just helping you count your steps. Nobody would call that telemedicine. And at the other end you've got hospital at home, which is definitely telemedicine, but nobody would call that digital health. So there's a bunch of overlap in the middle and there's a bunch of separation in a bunch of areas.

Max:

Are they defined enough to be able to ascribe an estimated size of the industry, or that would be difficult to do without clicking into sub-segments?



Richard:

Look, I'm sure that people are doing that. I don't have numbers at the tip of my tongue there, but I think that any number you see, a smart person would ask, "How are you, the person providing me that number, how are you defining it?" Because somebody will say that digital health is X billion dollars and somebody else will say it's half that or 10 times that. And depending on how they define it, they're all right. These are not such well-defined terms, unlike primary care spending. Even that's squishy enough, but we kind of know what is meant when we say primary care spending and we can define it with CPT codes, although not always. These are much squishier. And so it matters less whether somebody's got a number and it matters more whether you understand what they happen to be including in their number.

Market impact of the Pandemic -

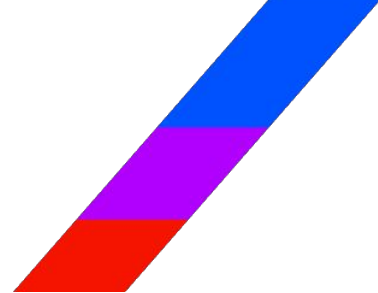
Max:

Yeah. Got it. Can you just briefly touch on the impact the pandemic had on both of these, call them, trends or industries?

Richard:

Yeah. I mean the first thing that COVID forced everyone to do with regard to these industries was think about telemedicine. How can we deliver care over a distance in order to avoid unnecessary exposures and yet still deliver care to people who need care? Whether it was specifically related to somebody who was worried about having COVID or everybody else who was continuing to be sick for the same reasons and in the same way that we always have been. We all saw what happened. The use of telemedicine jumped hugely.

And then related to that, it opened everybody's eyes up to the use of technology in healthcare in new ways. I just recently read something that Michael Greeley of Flair Capital wrote. He said that in 2021, \$30 billion of venture capital was invested in digital health. Now, he didn't define digital health, but \$30 billion. And that is two and a half times more than we'll be invested in this year, 2024. That was because in '21 we were in the middle of COVID and everybody was so excited about that. And there was such a dramatic reduction in the traditional provider capacity arena that telemedicine just took off. A lot of those virtual care models which were invested in then looked to delay or eliminate or reduce the need for more expensive face-to-face interactions or care. That was probably over-invested, which is my commentary now, and that's why the amount is coming down. But it opened the floodgates.



Richard:

The other thing which happened was that the public health emergency rules from the government addressed both payment and licensing. And so, all of a sudden telemedicine was being reimbursed or certainly better than it had been, so on parity with physical in-person visits or better than it had been. And also, there were rules about clinicians being able to practice across state lines during the COVID emergency just in order to deliver capacity to where it was needed, and there was less opposition to that.

And as the emergency has lapsed, some of these rules have been seen as broadly beneficial and there's ongoing discussions. There's something in Congress right now about letting telehealth providers keep prescribing certain medications without needing an in-person visit, and the pros and cons of that.

On the digital health space, there were two big shifts. One was around mental and behavioral health, and that was a broad trend. But how do you help people dealing with stress and anxiety and depression because of COVID? And how do you help people dealing with those and other mental and behavioral health issues for any number of reasons? And can smartphones and computers and new technology help? Some of the things which came up went very well and some not so well. But again, it opened the door to a lot more experimentation.

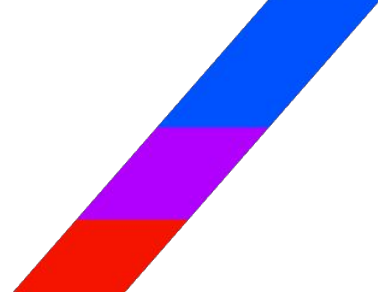
Medical Specialties that are seeing the highest adoption of Telemedicine -

Max:

Awesome. That's super helpful. Moving on to growth opportunities and challenges. I realize we're going to have this challenge of these topics being broad and the industries being big in definitions throughout the conversation, but hopefully we can extract just some of the key insights and generalizable insights. I want to start maybe with the medical specialties that are seeing the highest adoption of telemedicine. Maybe that's a good place to start. What are those specialties?

Richard:

I looked this up because you had kindly shared the questions ahead of time, and there was a recent publication that addressed this. I'm a numbers guy and a data geek, and so I like to be precise, and you heard a little bit of that in a prior answer. I don't want this to sound therefore that I'm getting squirrely on you, but what do we mean by highest adoption rates? Do we mean the highest volume of encounters, or do we mean the highest number of patients who've done at least one visit by telemedicine in that area, or the highest number of doctors who regularly do telemedicine as opposed to those who've tried it once and never come back?



Richard:

It's like website visits. So with that, this article said that the specialties reporting delivering the most total number of visits by telemedicine were psychiatry being the highest, 56.8%. So this is of all the psychiatry visits, more than half are being delivered by telemedicine or in the period being studied. Gastroenterology, interestingly, 54.5%. Endocrinology, more understandable because this is going to be diabetes care amongst many other things, 53%. Psychology, 49%, and neurology, 47.9%. So an interesting mix and not what you'd necessarily think. These are specialties, and so it sets aside primary care and urgent care. So we don't know from that article where those are, but your question was about specialty.

Demographic profiles of patients impacted by developments in Telemedicine -

Max:

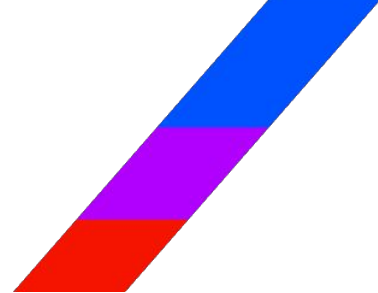
No, that's helpful. Are there differences in the demographic profiles of patients that see or benefit the most from developments in telemedicine?

Richard:

Yeah, I mean, unfortunately in some ways it is people who are most well-off, most economically fortunate who are able to benefit from high-tech interventions because they have the infrastructure. Once you get a commitment on the provider side and on the vendor side to focus on equity, then you realize that in an aging society, and we're aging, we all know the numbers about the number of baby boomers who are retiring, we have to be able to do a good job for our elderly population and especially for our frail elderly population. People want to age at home in their community, and this is a huge growth opportunity because we can't have clinicians living with every person in their home. And so how do we address that with telemedicine and digital health? Huge opportunity there.

Once you flip the story around health equity, you go to, well, where are the underserved areas where even if for some reason the reimbursement rates are lower because it's more of a Medicaid population and perhaps there are pockets of commercial populations who can be better served in rural areas, but those underserved populations where they have much less opportunity to go and see a doctor because to go and see a doctor is an hour away or two hours away? Even for some people just getting to the pharmacy is a struggle. So the right thinking, the right innovation in those areas could deliver huge opportunities and huge growth.

Demographic profiles of patients impacted by developments in Telemedicine -



Richard: I happen to know Andy Slavitt at Town Hall Ventures. He and I worked together when we were both at Optum. Town Hall Ventures is focused on investments in health and healthcare and digital health and telemedicine specifically for people who have traditionally been underserved. So he sees this as a growth area with a capital G, running a traditional venture capital fund that plans to deliver and does deliver industry-leading returns.

Max: Got it. That's great. Interesting that the answer on demographics wasn't senior populations who presumably have some sort of transportation challenge. It sounds like it's more important in your perspective or that you've seen born out is the access to technology and familiarity with technology.

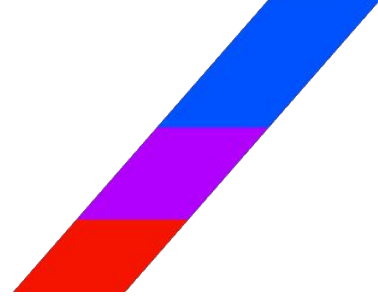
Richard: I guess let me clarify because the second part of my answer about just underserved communities certainly includes those senior populations.

Max: Okay, fair enough.

Richard: And if we can get that right, we should be doing it for everybody. Transportation, which I think is absolutely important, and I've admired the work of big companies like Uber and little companies like MedHaul who are focusing on that, wouldn't necessarily call that digital health or telemedicine. That's related to those, but in the end it's about moving people so they can get to a face-to-face encounter or get to a pharmacy. And so the digital enablement is around the Uber app, but it's not necessarily digital health or telemedicine.

Emerging Technologies influencing the Market -

Max: Right. Got it. Okay. Are there emerging technologies that are having a disproportionate impact on telemedicine and digital health?



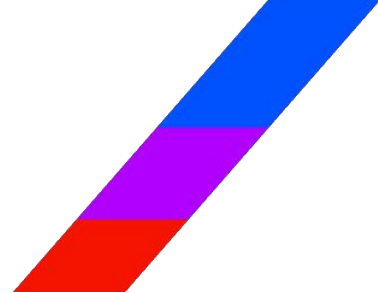
Richard:

Yeah, well, I was thinking how long I could talk about this before mentioning generative AI, and the answer is three seconds, right? That's clearly an important emerging technology and it's still rising on the hype curve, and we will not understand for several years the impact of generative AI, and we can all be pretty sure it'll be huge. I'm more familiar with and lived through a couple of cycles of what are now being forgotten, but the prior generations of artificial intelligence and deep learning work and signal detection from heart monitors or continuous glucose monitoring, all of the work in patient stratification and risk identification to find the patients who need interventions which could be delivered over telemedicine or digital health infrastructure, picking the right pathways for those patients or those consumers. All those technologies continue to be important, and the fact that patient engagement continues to be a major issue tells us that we haven't solved those problems.

Frankly, the best we know about consumer engagement is how to addict them to things. On all of this worry about addiction to social media, in the health system, we wish that we could get our patients addicted to looking after themselves, addicted to engaging in their own best health behaviors. So there's a lot of work to be done there.

Technologies which are having an impact, the better and better visual processing coming from cameras in smartphones and the AI which goes along with that means that you can do blood oxygen monitoring with a smartphone camera. You don't need a pulse oximeter for that. There are people working on deeper and more serious detection of biomarkers related to cardiac, related to other things as well just using the vision capabilities. Similarly, these sensors, whether it's the Apple Watch with the contact sensors or the microphone doing the same thing. I think 5G is another emerging tech that matters. It's not a health technology, but fast network being more pervasive is going to allow for higher bandwidth communication, which is going to enable a lot more good stuff to go on.

And then we've got the emerging idea of robotic care provision, right, a humanoid type robot actually helping with care provision in the home or in a community setting or even in a hospital doing things which previously humans had to do. And in a world where there's a shortage of labor, especially of licensed and expert labor, a robot that can take your blood, maybe it's going to happen in the next few years. And we'll need fewer phlebotomists and having a blood test will be even easier. So I think there are these big mega tech trends which are absolutely having an impact on health and medicine.



Max:

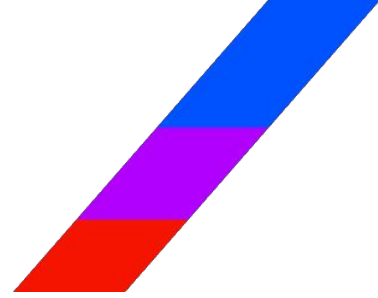
Got it. That's great. What about wearable technology? You alluded to a little bit, but would like to double-click on wearables and remote monitoring devices generally. Have they unlocked something in particular, and are they the starting point? Or are they just the natural evolution or a complementary flavor?

Richard:

Yeah, both and. Implantable cardiac devices have for years had a communication capability, where every single heartbeat can be recorded and analyzed afterwards. That's form of digital health telemedicine capability. But that was kind of a byproduct, a beneficial side effect of getting a pacemaker installed. Nowadays, of course you can get long-term heart monitors installed, which are not pacemakers, but they're just there to listen. And so that's another cycle of evolution there.

What's interesting, and you can see the connection, are the continuous glucose monitors, which are still fairly new and traditionally have been most used for Type I diabetes. But recently over the past three or four, maybe five years at the most, there's been a lot of interest in continuous glucose monitoring for people with Type II diabetes and interestingly, for people with pre-diabetes potentially, for pregnant people who are concerned about gestational diabetes, or every pregnant person in order to screen better for gestational diabetes.

And so, like the old saw, after 20 years, it was an overnight success. I think we're finding with remote monitoring the same kind of thing. On the one hand, it's been with us for many, many years, and on the other hand, the improving form factor, expense, and associated software are turning all of these things into much higher potential opportunities, whether it's in cardiac care, whether it's in diabetes care, whether it's in sleep monitoring and care, whether it's in GI infection screening with these at-home urine tests. Not yet wearable, but I guess there's the famous Japanese toilet which analyzes your urine. I don't know who's wearing who in that moment, but you see the parallel.

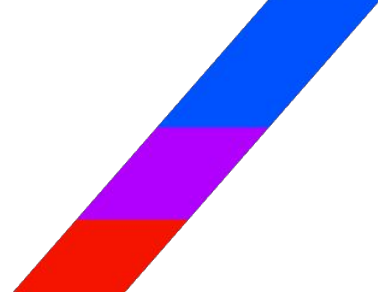


Industry view on Data Privacy and Data Security -

Max: Awesome. That's super helpful. What about shifting gears a little bit away from the technology to concerns like privacy, like data security. Are those concepts that in the field aren't so important because they've been solved via anonymization or when it comes to health, people are generally more trusting? How do these industries view data privacy and data security?

Richard: For the most part, and I'm trying to think of an exception, everybody takes these very seriously. They have not been solved. Hospital systems left, right, and center are suffering from ransomware attacks as we speak, many of which go unreported and the big ones go reported. Ascension I think was the most recent unfortunate case in the press. And this is not to knock them because they, along with many of their peers, have this problem and the costs to them are certainly over a billion dollars. Famously earlier in the year was the Change Healthcare hack, which United Health Group has reported as costing, I think, getting close to \$2 billion for them. So problem is not solved. It's taken very seriously both in terms of maintaining the trust of all of us and not least because there's actually more regulation in healthcare, famously with HIPAA, there are some state laws, and there's focus on whether these laws are good enough. The FTC has been getting involved where it feels that HIPAA finishes there are consumer protection laws that can take over.

And so I would say we're not doing a great job, but it's unlikely for the most part that the health industry is going to be ahead of society in terms of cybersecurity. The cybersecurity needs of everything will help in healthcare. Now, the data privacy area, and you mentioned anonymization as one of the things, data privacy comes in concentric circles. You want to know that your medical records and your medical data are being seen by the clinicians who need to see them. And so, how do you make sure that the right clinicians have access to them, whether it's your regular doctor or an emergency room in another state potentially where you've ended up for some unfortunate reason? And how is that data securely moved? There's more activity in that area than they used to be. And then how do you stop people who shouldn't be having access to it have access to it? Now we're back to general cybersecurity and Microsoft or CrowdStrike or whoever it is who you're relying on help you with that.



Richard:

In terms of security of records for research and for the improvement of artificial intelligence, which is another form of bulk ingestion of data, yes, there are theories around anonymization and de-identification which if done well and properly can assure a much higher degree of security and privacy than a layperson might expect. But like anything, it's not 100%. Nothing is 100%. If it were, we'd never have any aircraft accidents, we'd never have any problems at nuclear power plants where the stakes are just as high. But we do have problems there and we have those problems in the healthcare sector as well.

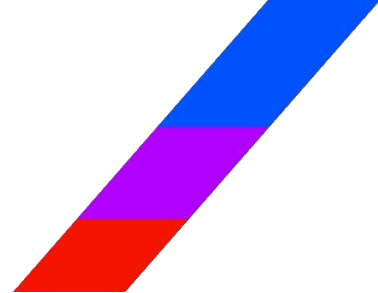
Learnings and limitations around patient interaction via Technology -

Max:

Got it. That's super helpful, which is a nice segue to my next question of patient engagement and interactions. Have there been learnings around patient interactions and the way patients like or dislike to engage with technology? And does that create limitations? The introduction of error rates if, let's say, the patient has to self-report data into an iPad or whatever or them forgetting to do so, I don't know if there are other surprising patterns that have emerged, I'm curious if that patient experience is helpful or challenging with regards to adopting technology.

Richard:

Yeah. I think it's all of the above. Some technologies have been surprisingly poor performance in terms of engagement. Everybody thought that they would succeed and they didn't, and others perhaps have been better performers. Somebody made a very interesting comment once that across the population, more people are engaged in worrying about whether they got their oil changed in their car than they are about whether they got their own wellness visit. And more people are engaged in thinking about their grocery expenses by watching for sale items or tipping coupons than they are in using the data to find high value healthcare. There's something about healthcare which changes how people engage with the world, right? Because on the one hand, they do it for their cars or around keeping the car running but not their own body. And they worry about the budget with the groceries, but not with the high ticket items like healthcare. There are lots of reasons for that.



Richard:

I think that telehealth, digital health allow for more frequent touchpoints. When you're not tied to an office visit, you can meet with whether it's your physician or other clinicians more regularly, shorter periods for check-ins around data. More touchpoints should lead to more engagement, maybe it even defines it. But there are problems with the payment models, which I guess we'll come to. There's a concern that in fact you increase expense by doing this because you don't reduce the number of in-person visits that a patient ends up having and you've just added a bunch of telehealth visits. So there's this thing that you call up the helpline and you say, "I've got this bad cough, should I go to urgent care?" And they say, "Well, let's do a telemedicine urgent care. We'll put you on a video call with the doctor." And so you get on a video call with the doctor and there's another \$50 bill, and at the end of that, either the doctor sends you to or you decide on your own that you're not satisfied with the interaction, you go to the urgent care anyway. So not sure whether we're winning or losing there.

Max:

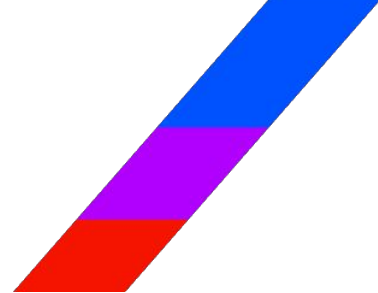
Interesting.

Richard:

There are certain areas where there's been really good scientific research, which is now being digitized, and one example is something called contingency management in opioid use disorder and substance use disorder in particular, where there are incentive programs for a patient. It's like a gamification that at any given moment they can get pinged and they have to go within two or three hours to have a drug test of some kind. If they pass the drug test, they get a reward. Every time they pass the drug test without having failed one in between, the rewards go up. There's good science as to why that in particular works, and it supports, along with other things, a good pathway out of OUD and SUD. And that does not require digital tools, but it's much easier with digital tools. And so that's one area which is really positively benefiting from digital health, telemedicine kinds of capabilities.

One other thing I'll mention is that some research has shown that humans are more honest when they think they're interacting with a computer system or a chatbot than when they're interacting with a human clinician. When the doctor asks you questions and your answer is you might feel embarrassed to answer, whether it's about your mental health or your sexual behaviors or your diet and exercise, you feel judged by another human in a way that research shows you don't necessarily feel judged by a computer. And so there are times that you can get better engagement and better interaction with what a patient believes is a computer system. And in most cases they are. When they did the research, sometimes they had a human behind the computer screen to show that even when it was a fully human interaction which was masquerading as a computer interaction, you got this effect. So there are lots of ways to look at this and lots of opportunities to continue to explore.

Areas of investment interest within Telemedicine or Digital Health -



Areas of investment interest within Telemedicine or Digital Health -

Max:

Got it. That's super helpful. Shifting gears a little bit, Richard, to key industry players. I actually want to reframe the questions I had in mind here to make this more tangible. What, in your opinion, are the most exciting areas for investment within telemedicine or digital health today, and why?

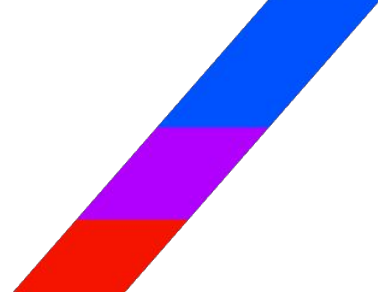
Richard:

I'm hesitating because I believe in the wisdom of the crowd. I spent a dozen years in venture capital, and a good venture capitalist investor is waiting for brilliant ideas to walk in the door and is not prejudging what those brilliant ideas are. And so part of me wants to say, look, I could come up with three or four ideas here, and if I really believe they were great, why don't I go and found the company? Maybe I don't have so much belief in these ideas that I'm willing to sacrifice my career on the opportunity. When a smart entrepreneur walks in the door, then maybe they are.

I think that getting patient engagement right, the mix of automated data collection and feedback to an individual, we still haven't cracked that nut. People, they are willing to get on a bathroom scale, they understand the message that the scale is sending them, and yet they don't do anything about it. Or they find it difficult to do something about it. They're really trying hard to do something about it. From another part of my life, I'm aware of a model called immunity to change. Some people really want to change their diet and exercise habits and they have an immunity to the change that they want to make. This is why people sign up for gym memberships in January and have given up by February. So are there ways using AI, using chatbots, using this potential for better and more honest interactions with a computer system than with a human that digital medicine can increase engagement in a way which is productive and helpful and respectful? I'd like to think so.

I think hospital at home programs and long-term care at home programs and aging in the community programs are all really important for lots of reasons. They share this idea of how do we bring health and care and medicine away from clinical sites into the community? And there are lots of different modalities for that, but I do believe that those are important. I think we're only scratching the surface on behavioral and mental healthcare using digital health and telemedicine type tools. Telemedicine, actually no, we talked about that before, there's a lot of telemedicine going on in behavioral health. There's some research which has come out of Reliant Medical Group, which is part of OptumCare in the Northeast, looking at what they call precision behavioral health. And there was a recent publication about that starting to talk about digital therapeutics in behavioral mental health. I think that is an exciting area.

Leading players within the space and how has this changed -



Leading players within the space and how has this changed -

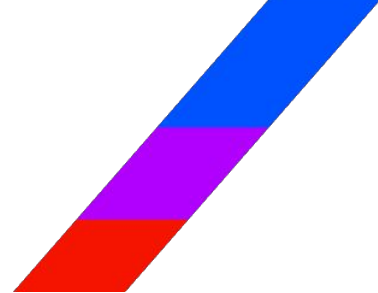
Max: Who are the leading companies, Richard? Are there company names that come to mind in telemedicine, digital health?

Richard: Yeah. And the caveat, of course, is that if you'd asked me this three years ago, I'd be naming companies which have now fallen from grace, right? Amwell, previously American Well, and Livongo and Pear Therapeutics were all darlings of the investment community and not so much any longer. We've got Talkspace and Better Health and, well, Headspace now in therapy amongst many others. We've got Omada in diabetes, we've got SWORD and Hinge in musculoskeletal. We've got Oshi in GI and Maven and Pomelo in maternal health. These are all successful and seemingly growing successes in digital health. Whether those names will stick, I don't know, but I think they represent trends which will end up paying off. So I'm more interested in those long-term trends and getting to better care without taking away from the great work that those companies are doing and the good thinking and persistence of the entrepreneurs and the leadership teams there. Frankly, some of them will succeed and some will fail, and hopefully all of that will be pushing the field forward.

Max: What happened to the companies that were in favor three years ago but have fallen out of grace? Is there a generalizable challenge there, or is just the nature of startups?

Richard: Part of it is the nature of startups. I want to be careful because I'm not an expert in any of these, and so more knowledgeable listeners may disagree rightly with my thinking here. But American Well with its telemedicine offerings clearly had the opportunity to build fast during the pandemic and provide a really important service to the health system and take an opportunity which was presenting itself. My guess is that they overbuilt in some way inside the company. And as telemedicine use modulated after the COVID emergency went away, they found themselves having overbuilt.

Leading players within the space and how has this changed -



Richard:

I think some of the other examples I mentioned, the data just didn't bear out promise. And there's two ways that people are looking at the data. One is, is there really a clinical improvement? Livongo with diabetes care, the promise was more engagement, more data-driven care would lead to better clinical outcomes and secondly, better economic outcomes, right? You throw enough money at anything, hopefully you get an improvement. A lot of healthcare unfortunately is the opposite of that. But some of these companies which were built on the promise of very reasonable hypotheses, those hypotheses did not pan out. Either economically or clinically or both, they were unable to live up to those promises and other startups came along, which perhaps were using different approaches, displaced those companies. So those are the two trends that I would observe.

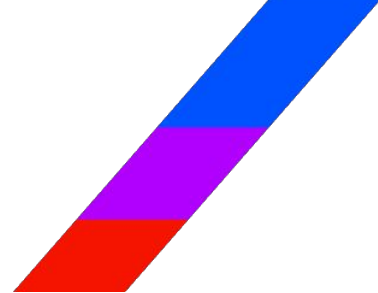
Payment models and reimbursement – Changes and Challenges -

Max:

Awesome. That's super helpful. We're running up on time here, so I want to move on to our final topic because I think it's extremely important. But payment models and reimbursement obviously a huge part of the healthcare industry. I want to leave it open-ended. Are there things that have had to change or challenges that have emerged with regards to payment models in an era of digitization and technology in telemedicine?

Richard:

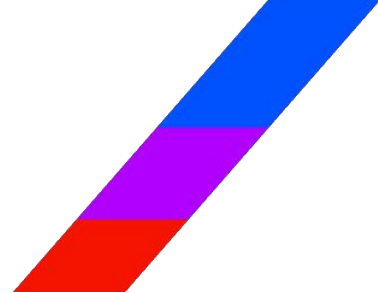
Yes, for sure. And at risks to opening another whole can of worms here, the interplay between a fee-for-service model and a value-based care model starts to be a factor. Many telemedicine and digital health companies, for very good reasons because it's the majority of reimbursement, are focused on CPT codes and fee-for-service reimbursement and can they get coverage and do they get parity? Is a telehealth visit paid for at parity with a similar in-person visit? How do I get paid for answering an email or a message on my chart if I'm a clinician? So there's a lot playing out in that field.



Richard:

In the arenas where there is capitated risk, where the value-based care really incentivizes the best possible care for a dollar's worth of spend, then the best performing digital health and telehealth modalities will naturally rise to the top. Because if I'm a primary care group looking after a population and I'm being paid a fixed amount every year, it's probably very efficient for me to do a bunch of care over telemedicine modality and use digital tools, because that's cheaper than me having a nurse visit every patient every day. I don't care that that particular digital tool isn't reimbursed under a fee-for-service model because it's helping me deliver better care and it's cheaper than other ways, which would be reimbursable if I was in fee-for-service. So the quicker we can move to value-based care, the quicker we take away these weird incentives for finding or for delivering these new innovations in a way that works for fee-for-service but somehow makes it all a little bit unnatural.

And we stop doing things which would be good for patients because we can't get reimbursed for them, and we start doing things which may not be the best things for patients, but at least we can get reimbursed for them. So as I was talking about before, just the ability to reimburse for telehealth is back up in front of Congress because that was allowed for in the public health emergency, and those flexibilities have been expiring. And similar around licensing. There are certain newsletters where the exciting headline of the day is which new CPT code has been approved by the AMA or which new CPT codes are now being covered by Medicare or by commercial Insurers or by Medicaid potentially in various states, which waivers are going through in states for Medicaid payments for certain kinds of treatment. We're spending all of our time worrying about reimbursement and policy and chasing those things where we think we can get money out of the system on a pay-per-drink basis, not necessarily serving the system or the patient as well as a more holistic view would.



Potential future changes to Government Policy -

- Max:** Right. That's interesting. Do you anticipate any changes to policies in the future in this regard?
- Richard:** Yeah. Well, I mean there's an active debate in Congress about telehealth, and that will for sure be ongoing. There are ongoing active lobbying around the fee-for-service reimbursement models, policies, and payments, and that's just going to continue. But the big trend, as I say, is value-based care and capitated risk, global risk arrangements where clinicians can really choose the right modality of care without worrying about those other reimbursement matters, which would show up in fee-for-service to just deliver the best care for the dollar. And so that is, I think, the big trend to watch, even though for many people, most of the time when you talk about value-based care, there are many other factors obviously related to value-based care which are very important. So you don't necessarily think of value-based care and digital health/telehealth being so closely intertwined, but I think we will look back in 10 years that they really were.
- Max:** Got it. That's super helpful. Richard, we're coming up on time here and I think that final answer was as good a place as any to wrap here. Thank you so much for your time. This was super informative and insightful and exactly the kind of conversation we were looking to have. So we appreciate you sharing 60 minutes with us today.
- Richard:** Well, thank you very much. I appreciate the opportunity for the chat and glad you found it interesting and look forward to other opportunities.
- Max:** Thank you so much, Richard. Please enjoy the rest of your evening.
- Richard:** Thank you. Bye

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