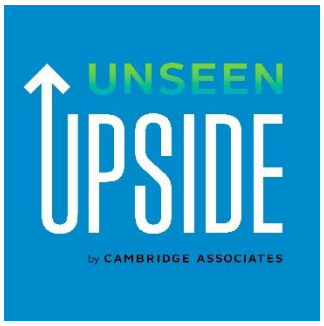

Season One: Episode Four
Digital Health: How is Tech Revolutionizing Healthcare?
Launch Date: November 2, 2021

DISCLOSURE: All opinions expressed by host and podcast guests are solely their own opinions. The host, podcast guests, and/or Cambridge Associates clients and employees may maintain positions in the securities discussed in this podcast. This podcast is for informational purposes only and should not be relied upon as a basis for investment decisions. Please listen to the full disclosure at the end of the podcast for additional information.

Tuoyo Louis: So I broke my leg last December. OK, slipped on ice, body went one way, leg went the other way, cracked, passed out…the whole nine. So, I go to urgent care and they tell me, they say, "you broke your leg." I was like, yeah, I know. And they hand me a CD. I have a 2005 car. That's the only time I see CDs, right? And I don't even drive anymore, so it gets better.

Luke Charest: I'm Luke Charest at Cambridge Associates and this is Tuoyo Louis. He's a Co-Founder and Managing Partner at Seae Ventures, a healthcare venture capital firm.

Tuoyo: So now I have to take that CD, I go to the orthopedic surgeon, I hand them the CD and they say, "we can't read this. We've got to take new images." Who has to pay for that? Right. They take new images. He comes back and he says, "You need surgery right away. We're going to put a rod in your leg and put some screws in your leg."

Luke: This all sounded a little *off* to Tuoyo. And he has the advantage of being able to ask for advice from others.

Tuoyo: For me, I have my own personal care team, right? My sister is an E.R. doc. My brother-in-law is a physical therapist. My mom—I'll just call her 'chief medical officer.' So they're like, "Tuoyo, you probably get a second opinion." So, I go to the lead doctor of the Boston Celtics, and he says, "It's healing fine. You don't need surgery." He brings in his partner. He said, "Just take a look at this. Does he need to have surgery?"

Luke: Tuoyo's experience—being able to ask for a second opinion times four—isn't typical. And the stakes are high for all of us—it could be a broken leg, or cardiac rehab, or diabetes prevention and treatment. Underserved populations, such as people of color, women, rural populations and low income communities, are especially vulnerable and have less access to care.

Tuoyo: I told you my sister was an E.R. doc. I used to tell my sister every day before she'd go to the E.R., I'd say, "save lives." And she'd tell me, that's what I do. And so, I don't think this is just venture capital for me. I'm in the business of saving lives as well, and that's how we think about it. How do we find these solutions that address some of these populations?

[THEME MUSIC]

Luke: This is Unseen Upside from Cambridge Associates -- it's investments beyond the returns. This season we're meeting the people who take risks on the technology that will change the way we live -- and hear why they're doing it.

Seae Ventures invests in early-stage healthcare technology and service companies, but unlike other firms, Seae specifically focuses on companies founded by women and people who identify as Black, Indigenous and People of Color.

And for Tuoyo, his journey to venture capital investing began a long time ago.

Tuoyo: I'll take you way back. I grew up in a family of scientists and my mother was a microbiologist and a biology teacher. My father was an otolaryngologist. I used to have a t-shirt as a kid that said, 'my father's an otolaryngologist.' I like to say that whenever I can. I always thought I wanted to go to medical school. I'd say probably in the mid-90s, my father encouraged me to do something else. He said that medicine currently—how he was practicing it, he called it 'McMedicine' and said, "It's fast-food medicine, Tuoyo. Patient comes in and in 15 minutes, they're out the door and I see the next one." He was like, "try to do something else."

My sister followed in his footsteps, and she was the E.R. doc. She's now president of Oscar Medical Group. But when I looked at their lives and just some of the, you know, talk about great dinner stories, a lot of the trauma that she saw in the E.R. every day—one story is a young black male came in dead on arrival, sheet was over him. He had the same Nike that I did, and my sister said, "Oh, my God, is that my brother?" I didn't really want that stress.

Luke: At the time, Tuoyo was teaching high school chemistry in Washington D.C.

Tuoyo: And I saw a lot of the kids that just had poor nutrition. We saw social determinants of health up live in front. And so, I started studying public health. I went to School of Public Health at Emory University. I studied behavioral, social, and health education. And I started doing health interventions in the prison system. I quickly realized I didn't want to be doing that for the rest of my life, studied finance, and

actually, I ended up getting recruited to Blue Cross of Massachusetts to start their New Ventures program. So that's how I started my venture career.

Luke: This combination of experiences led to the co-founding of Seae in 2019.

Now, I read a quote of yours in an interview where you said you started Seae because you didn't see anybody that looked like you at the managing partner level in the venture capital space and also didn't see a lot of women at the managing partner level and how did those experiences impact and influence your work now at Seae?

Tuoyo: So I fundamentally believe that racial, ethnic and gender diversity is a critical piece of just transforming this world. Women, the Latinx community, and African-Americans are woefully underrepresented in this industry, period, full stop. So, I didn't see check-writers that looked like me. Women represent less than 14% of decision-makers at funds. African-Americans represent 3%, Latin X, 3%, transgender, no data, LGBTQ, no data.

And so that's really why we founded Seae and we don't pretend to solve the problem, but we're part of the solution and I go to bed feeling great that I'm working on solving this problem. And the thing that's puzzling is if you look at just outcomes, it's already been proven that ethnically diverse founding teams outperform by over 30%. Women-led teams outperform by 35+%. But we're still having challenges in funding and supporting these companies.

Luke: You know, aside from putting capital to work, you do a lot more in your day-to-day. So, I'm curious, what other kind of actionable steps are you taking or thinking about in terms of trying to perpetuate the change you really want to see in this industry?

Tuoyo: Let's just talk about the pandemic for a moment. The last year and a half was a year of just collective trauma and the pandemic destabilized a lot of people. There was a 70% increase in opioid-related deaths in black men in Massachusetts during the pandemic. African-Americans are 20% more likely to struggle from mental illness due to societal factors. Now, you layer on top of that the pandemic. We also know that 50% of African-Americans drop out prematurely from therapy compared to the general population, which is around 33%. And it's also been proven the more you identify with your clinician, the better your outcomes. Only 2% of psychiatrists are black. So, this really isn't a system that's meeting the needs for everyone. We want to invest in solutions that are going to actually think about the underserved community, that think about and address population health.

Luke: Tuoyo says Seae has seen an acceleration in the use of health-related technology in the last couple of years, and they see it as a way to address the needs of a wider range of communities.

Tuoyo: I think the ability of these solutions is that you can really go from one-to-one to one-to-many. So let's talk about cardiac rehab for a moment. Most individuals are not able to go to cardiac rehab two days a week at two o'clock in the afternoon, right,

particularly as you think about low-income folks and minorities. So you take a company like Moving Analytics that's doing remote cardiac rehab, where now I can do that at home. I don't have to go anywhere and I don't have to pay to get to the clinic.

Luke: On this episode, we're talking about the role of technology and how it can help treat some chronic diseases like diabetes, and you've invested in companies that have been working to treat diabetes.

Tuoyo: Interestingly enough, another case study about Tuoyo Louis is that I rolled my ankle five years ago. I gained a bunch of weight. I was prediabetic, and I was right at that line of becoming a diabetic. So, I lost 40 something pounds and it really scared me. And, you know, I had all these resources at my disposal, thankfully. And again, most Americans, the average American, does not. So how do you think about some of these solutions and be able to provide better outcomes for individuals? I don't believe that we need to continue to have just inpatient visits for everything. It's inefficient. Not everyone can just get up and take two hours to drive in to go see the doctor for 15 minutes. And I think just from a productivity standpoint, from an economic standpoint, it's not feasible. I think the rate of adoption for these solutions has really gone from single digits to double digits.

Luke: And the hope of VC firms, companies, and my investment colleagues at Cambridge Associates is that digital health options like telehealth technology and robust mobile apps continue to expand. After all, as we said at the beginning -- stakes are high. Because of the name of our show, I had to ask Tuoyo what he would call the unseen upside of investing in digital health.

Tuoyo: As we think about population health, the unseen upside is that a family has more time together. Because they're living a healthier life.

[pause]

--

[scene change]

Sami Inkinen: This is Sami Inkinen, Co-founder and CEO of Virta Health, a healthcare tech company. And I guess my most important role in life is I'm a father of two little girls.

Luke: In the summer of 2014, Sami and his wife Meredith had an unusual adventure.

Sami: We hopped into a rowing boat in Monterey, California, and rowed across the Pacific Ocean, nearly 3,000 nautical miles, completely unsupported. Nobody was there helping along the way, and all the food and everything we needed was packed into the boat.

There's a lot of questions. Why would anybody do that? You must be a little crazy. I'm sure we were a little crazy. But what we tried to accomplish with that, besides an adventure for two of us before we had kids, by the way, was to raise awareness around healthy nutrition and specifically awareness against sugar. So we wanted to show to everyone, particularly for young folks, that you could exercise 16 to 18 hours a day, the same as running two marathons in terms of caloric burn, finishing two marathons every day for 45 days nonstop with zero sugar or sports products or gels or soda. In fact, very limited carbohydrates to begin with, and we broke the world record. I'm happy to report I'm still married to the same woman.

Luke: You may recognize Sami's name. He was the Co-Founder of Trulia, which he guided to an IPO before starting Virta in 2014.

Sami: We are a telemedicine company on a mission to reverse, not manage, but reverse type two diabetes in 100 million people, which nobody has really done before. My background is in science and computers and software and not really in healthcare, and it was very obvious to me that diabetes and particularly, type two diabetes and obesity are massive, massive problems in America and globally.

Luke: Like Tuoyo, Sami had a personal diabetes scare.

Sami: So the thing that made me very curious and perhaps opened my eyes that maybe the way we are treating type two diabetes and obesity isn't exactly the full or the right solution was that soon after I won the World Championships in triathlon in my age group—so this was in 2011, 2012—shockingly, I discovered that I was pre-diabetic and on my way to becoming type two diabetic, which just didn't make any sense to me as a lean athlete who's exercising 10 to 15 hours a week. I thought, I'm the last person in the world to worry about prediabetes or type two diabetes. So that was really the spark that first opened my eyes. I started asking a lot of questions and I met with a couple of scientists trained at Stanford and MIT who had done research in this area for two or three decades. But it was that personal experience that frankly made me humble, opened my eyes, and made me ask questions.

Luke: He soon learned how widespread the health problem is, and that the traditional way of treating diabetes is by managing -- not reversing -- the disease.

Sami: So the way we treat type two diabetes today is we prescribe ever increasing amounts of hypoglycemic drugs—diabetes drugs usually ending with insulin to lower the blood sugar. Well, the problem with that is the disease is not going away. It's brewing there and always is progressively getting worse.

Luke: Virta's treatment goals are different.

Sami: We actually make patients so healthy, so healthy that they don't have to take any diabetes medications. And they reach this point where we can call it reversing type two diabetes. And under the hood, it's a combination of two things. One is nutrition—it is a behavior and health-based protocol that allows us to deliver these results.

Luke: But we all know the best nutrition and behavior is hard to do consistently unless we have accountability. So Virta uses technology to reach their patients.

Sami: So the second part that we do is we have a licensed telemedicine company with our own full time physicians delivering care. But we deliver it in a new kind of a way that allows us to keep 24-7—multiple times a day—support to our patients. And we call it continuous remote care. Think of your experience in a hospital where you are attached to all kinds of sensors and doctors get nearly constant feedback on your biomarkers, and if anything is going wrong, we provide that type of experience to our patients fully virtually and fully remotely.

Luke: For example, Virta patients input biomarker data -- such as blood sugar -- into an app, which is reviewed by Virta's clinicians. And the proof that their approach is working is in their numbers *and* peer-reviewed studies.

Sami: So typically, diabetes remission or diabetes reversal in traditional care is about 0%. So people with type two diabetes just don't get rid of it. It's a progressive disease. In our clinical trial at one year, 60%, so six zero percent of all patients had type two diabetes reversed. Of course, people always ask, well, that's all well and good, but how many people will stick to it? We actually had 83% retention rate among all patients at the one year mark—83%, which compares very favorably to just taking a pill because the adherence to a drug for chronic disease patients is around 50% at one year. To me, the ultimate proof that what we do changes lives, transforms lives, is one of our patients who literally decided to tattoo—to get a permanent tattoo of the logo of our company. So, she decided to tattoo the Virta logo on her body after we reversed her type two diabetes.

And you know, it's a little crazy, but I do admit that it made me cry just to see that photo and say, wow, this must be rare in healthcare.

Luke: Clearly you're taking a totally different approach to solving a really chronic disease. What were people saying was their skepticism or how have folks reacted within the medical community?

Sami: So we certainly had a lot of that kind of skepticism and resistance initially. And now, of course, we've come a long way over the last two or three years working and commercially working with nearly 200 large entities ranging from the Veterans Administration to our health plans like Blue Chip of California, Blue Cross Blue Shield North Carolina, hundreds of large employers, household names from Comcast to US Foods to Home Depot and so forth. So we still have work to be done to make type two diabetes reversal, let's say, a household name and known as the number one objective for someone with type two diabetes. But it certainly is a different world now than five years ago when we started.

--

[Scene Change]

Luke: Now that we have heard from a VC and a company creating healthcare solutions, I wanted to speak to an organization creating more equitable health outcomes in their region. Rochelle Witharana is the Chief Financial Officer at the California Wellness Foundation. She manages all of the financial functions for the foundation, including oversight of their investment portfolio, which they use to further their mission.

Rochelle Witharana: Our vision is that every person in California should enjoy health and wellness. And that means living in a safe and healthy community and having access to quality education and good jobs, clean drinking water and having access to healthy foods. But you know that a lot gets in the way of people enjoying health and wellness and so at California Wellness, we partner with communities and community organizations to help support removing these barriers to individual and community wellness and to support putting into place more equitable processes and systems.

Luke: Could you kind of define in your own words at Cal Wellness what your mission related investment and program related investment programs? What are those?

Rochelle: So the mission-related investments are market rate investments. We are expecting to get market rate return for our broader endowment and we invest in all asset classes within our mission related investing portfolio. Of course, all investments have risk, but there's a lot of due diligence that goes into selecting these market rate investments. On a program related investment side, those are below market rate investments, and these have a higher impact in that they are more closely aligned with our grant making portfolio.

Luke: Give us a little kind of idea around maybe the size and scope and how long you've been pursuing kind of MRI and PRI programs.

Rochelle: So our board approved a 50 million dollar mission related investing carveout in 2018. This carveout was implemented as a mini endowment with similar asset allocation to the broader portfolio, really to be able to test this theory. And so, since inception in 2018, I can tell you this mission MRI carveout has performed in lockstep with the broader portfolio. So we have proven the theory that mission aligned investments can return market rate investments and we can do good and make money at the same time.

Luke: In this mission-related carveout, Cal Wellness has invested in private equity and venture / health-related funds.

Rochelle: For example, have invested in a fund that focuses on women and minority founded healthcare services and technology companies. And this fund, in turn, has invested in a platform that's designed to offer self-care and support for mental health services to the African-American population. Another example is a fund that also invested in a woman and a minority led digital healthcare platform that provides customized information about maternity benefits for women and their families. And here,

the team really believes that the digital app can help monitor critical metrics and really help bridge that gap. There is a large disparity in maternal health and healthcare for women of color versus white women. And so, this is, again, another example of digital healthcare that reaches the communities that we want to serve.

Luke: Cal Wellness is diligent with how they select fund managers.

As you think about your diverse manager program, I would imagine that it's not just kind of check the box investing in a certain diverse manager here or there. My sense is you guys go a level deeper.

Rochelle: Yes, our diverse manager program, we ask very specific, detailed information of every new manager regarding the diversity within their organization. We not only ask for the metrics and the stats of the diversity, we also engage in a conversation with each new manager to learn how they incorporate DEI practices into their hiring, retaining and promoting women and persons of color within their organization. And our hope is that having these conversations will support moving the needle and for the investments and the managers to understand that we are asking these questions. And this is important in helping to make some systemic change. But we also do give priority to diverse managers that are committed to investing in diverse entrepreneurs. This really helps to trickle down, to support underserved communities and create the good paying jobs and helping to build that wealth within those communities and really, again, helping to break down that tremendous wealth gap that exists within this country.

Luke: And all this intentionality has paid off.

Rochelle: I want to say that over the past six years, we have grown our diverse investment manager portfolio. We went from 0% in 2015—the number of diverse managers—to now, 43%.

Luke: That is awesome.

--

[scene change]

Jasmine Richards: I think if I'm successful in my job one day, I will not have a job. My goal is to work myself out of a role.

Luke: This is my colleague at Cambridge Associates, Jasmine Richards. She heads up our Diverse Manager Research team which sources and evaluates investment management firms across all strategies that are women and/or minority-controlled, owned, or directed.

Jasmine: And so me and my team get to work across all asset classes. But our lens of the world is focusing on firms that are owned, led, investing in, impacting communities that are underrepresented. And through that mandate, we also get to meet with clients,

educate clients, help them build out their portfolios, help us build internal research around really investing in this area and I hope that we are also on the forefront of that.

Luke: I asked Jasmine if she could define what a diverse manager means to her.

Jasmine: When we say diverse managers, what we mean are populations that are underrepresented—people and investment ideas that are bringing something different to the table. Currently, we're focusing on women and people of color because those are some of the largest lenses which are underrepresented in the industry and also the lenses that we currently have data to measure. The reason that we intentionally left it open is because I believe that that will morph over time, that it doesn't always have to be solely ethnicity or gender, but it can be other areas that in the future, I think we will be able to measure as well as have data to understand why those areas are important to focus on.

Luke: When Jasmine's team is vetting a firm, they have a number of questions they focus on.

Jasmine: So what does the management of the firm, what does the composition of that look like? What is the composition of the investment team and the composition of the firm overall? Because if we look at those additional layers, what we're hoping is that we can predict what a firm will look like in the future, as well as hold fund managers accountable for that progress. And so, in addition to ownership and leadership, we also think that it's worthy of looking at who are the founders that a strategy is looking to invest in, particularly on the private equity side. And then finally, we will also include products and services that intentionally target underrepresented communities, because we think that those also are opportunities that have been underrepresented.

Luke: Jasmine, this space feels like it has a ton of momentum and it also feels like it's changing very rapidly. And so, I'm curious, as you think back and reflect on the last 12 to 18 months, how are the conversations with clients or colleagues changing?

Jasmine: So over the last year, plenty of our clients, even outside of just endowments and foundations, everyone took a step back and thought about what can they do from their seat in the ecosystem. We saw fund managers think differently about how they were investing, but also our clients take a step back and think differently about how they were deploying their assets and how not only could they generate the best returns, but be more equitable and impact different communities.

Luke: Are the capital flows to diverse managers starting to shift in a way that is commensurate with the amount of discussion being had or said differently, are people walking the walk yet?

Jasmine: That's a great question and one that I think now that we're a year after the murder of George Floyd, I think this is an area where we have started to see a lot of inquiry around and rightly so. I think there was an initial reaction just to deploy assets.

And what we wanted to do was more thoughtful because what we don't want to see is five years from now, people remove those assets or change those investments. We want our clients to really understand the investment thesis here, understand that there is no trade off in returns, make sure that they are investing in the managers that are appropriate for their portfolio and that they're not doing something that they think is charitable. This is not charity. This is investing.

Luke: I'm curious if you think of something like health and diabetes that tends to disproportionately affect communities of color, how might a diverse manager actually be better at understanding not only the problem and the size of the market, but also the solutions?

Jasmine: This actually was something that I thought about a lot as we saw the vaccine rollout during during covid-19. And so in the beginning, what we saw was that we want everyone to get a vaccine, we just make them available everywhere and therefore everyone will have access. But what we realized was that there was a difference between equality and equity. Right? So equity is realizing that even if I make vaccines available at every pharmacy, if people don't have transportation to the pharmacy, if people don't understand, you know, how to get on the Internet and make an appointment in an environment where websites are crashing, everyone still does not have the same access. And so, part of the reason we are investing in diverse managers is because different people will have different understandings of different problems—that cultural competency that you're looking at.

Luke: I also asked Jasmine if she had an example of a diverse manager who's investing at the intersection of technology and healthcare, *and* has a racial equity lens to sourcing and investing in companies.

Jasmine: One that comes to mind that I think was very relevant over the past year is a company that one of our portfolio managers has invested in that was focusing specifically on the underrepresentation of people of color in drug trials. And so this company intentionally realized that part of the reason you had that underrepresentation is, again, that access to the knowledge of enrolling in trials, but also being able to figure out how to participate, having access to transportation, to show up for a trial when you when you should. But then also sticking through the trial—they realized through telehealth or different points of delivery or different ways of distributing information that you actually can have better equitable representation in trials and then produce drugs that are more effective, which obviously has been tremendously important over the last year.

Luke: Jasmine, for folks that are listening and are really interested or intrigued by this intersection of diverse managers or the intersection of digital health and technology and all of these things we've been talking about today, what would be your advice?

Jasmine: I think there are several reasons that you can come to realize that equitable investing is important to you, your firm, your portfolio. We think that there is no reason

that we shouldn't have access to the best talent across the world and invest in those equitably. We also have clients who want to invest in diverse managers because maybe they are a foundation with a social equity mission and they want better alignment in their portfolio and their mission and that is absolutely valid. We think that this doesn't necessarily have to be an either or—you can achieve those goals. But what it does is necessarily shape the definition: And so that's where we always start with clients, is figuring out what are your goals and therefore, what does diversity mean to you?

Luke: Since March 2020, public health issues have become much more of public *knowledge*, especially to folks outside the medical and policy worlds. It's now clear to *all* of us what disparities can arise during a pandemic; and our guests have shown what disparities exist in "normal" times, too.

Healthcare equity has more of a chance at success with the escalation of digital health technology -- if foundations, investors, and the medical community come along for the ride. And it matters, because after all, a chance at equity in healthcare can lead to a chance for a longer life. And like Tuoyo said, more time with family.

[CREDITS]

Luke: If you want to learn more about investing in digital health, please visit our website: cambridge associates dot com slash unseen upside or check out the show notes. Stay tuned for more upcoming episodes of Unseen Upside. If you like what you are hearing, leave us a review and tell your friends and colleagues.

I'm Luke Charest. At Cambridge Associates, our podcast team is led by myself and Hillary Ribaudo.

From PRX Productions, Producer and writer Genevieve Sponsler; associate producer Se'era Spragley-Ricks; Sound design and post-production engineering by Samantha Gattsek. The Project manager is Ian Fox. The executive producer of PRX Productions is Jocelyn Gonzales.

Before you go, one of my colleagues has an important message about the contents of this podcast.

[DISCLOSURE]

Associates is not providing any financial, economic, legal, accounting or tax advice or recommendations in this podcast. The receipt of this podcast by any listener is not to be taken as constituting the giving of investment advice by Cambridge Associates to that listener, nor to constitute such person a client of any Cambridge Associates entity.