



Episode 6 — Sami Inkinen

The mission is to reverse type 2 diabetes in 100 million people. Very few people, if anyone, is making the problem smaller. And we are.

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Welcome to "The Cure for the Common Company," a podcast series looking at innovations in the world of employee health and well-being.

Steve Blumenfield and Lindsey Conon, from Willis Towers Watson's health-and-benefits practice, are talking to entrepreneurs and industry leaders who break new ground, to meet the needs of today's workforce, and deliver benefit solutions that can separate employers from the pack.

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On this podcast our guest was remote, so you may hear a difference in sound quality.

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Sami, great to have you here with us. Welcome to the podcast.

Yeah, absolutely delighted to join, and thank you so much for inviting me.

Hi everyone, this is Steve Blumenfield, joined by my colleague.

I'm Lindsey Conon.

And we are joined today by our guest, Sami Inkinen, the co-founder and CEO of Virta Health.

Born and raised in Finland. Trained as a physicist. Started a career in a nuclear-power plant, which was kind of a weird jump given I grew up on a little farm in southeastern Finland.

But then, eventually, came to America, 2003, by second graduate school, which was Stanford. And I'm happy to say a little bit more about my background-- how I ended up starting Virta with a group of scientists, in 2014. But that's my background briefly.

And I should add that I'm a father of two little girls, two and four-year olds. And I live here in San Francisco Bay Area.

Well, that's wonderful. That's so great to get those personal elements of you, too. So I did not realize you were a physicist. You're even cooler how to me than you were before.

The only cool part of me starting my career at the nuclear-power plant is that I can still read in the dark.

[LAUGHTER]

And you know how to make things glow, too.

Exactly.

So why don't you start out by telling us all a bit of the founding story for Virta.

Yeah. So as I mentioned, my background is in technology. And starting in 2004, I co-founded a company called Trulia, an online real-estate marketplace-- which went public in 2012, and is now part of Zillow.

Oh, that little thing. Yeah. [LAUGHS]

So that obviously does not qualify me to do anything in health care. But what happened to me was throughout those years that I was building Trulia, I was a pretty high-performing endurance athlete-- to the point that in 2011 I won the world championships in triathlon in my age group.

And the reason I tell that story is soon after that I discovered that I was on my way to becoming type 2 diabetic. So I was pre diabetic.

Sami, just to interrupt you for a second-- I have to interrupt you for a second here. So I know this story. But everybody else listening to this is like, I can't keep track. So this guy's a physicist. He starts a company when he's like probably still just barely wearing adult clothes, and he's a world-class athlete. So just pausing to give our folks who are listening a second to digest. All right, keep going.

Was it too many gels that led to the diabetes?

Oh, yeah-- well, nobody knows. But part of that is the reason why I started Virta. So in my own frustration and puzzlement, trying to understand how someone who exercises 10 hours a week and really has no extra body fat to carry as an athlete-- how can you be on your way to becoming type 2 diabetic?

And fortunately, I met this scientist, Dr. Stephen Phinney, who then ended up becoming the co-founder and chief medical officer in Virta. And he shared with me, based on his three decades of research-- and he had graduated from Stanford as an MB and went to MIT to do a PhD in nutritional biochemistry.

He said, Sami, one, we are treating type 2 diabetes as a disease of obesity, which, in fact, it is not.

Two, there is in fact a way to not just manage the disease, but to reverse full-blown type 2 diabetes, and get patients off of medications-- even those who are already using insulin-- by using nutrition and individualized carbohydrate restriction as a tool to reverse type 2 diabetes.

And of course, at that point, I was rolling my eyes. And I was like, well, that just sounds too good to be true. If that's possible, you would have won a Nobel Prize.

And he said, well, the science works, but it's very difficult to deliver this type of the treatment. You will need to deploy millions of doctors for millions of people living with type 2 diabetes, to ensure adherence, individualization, and then a safe, de-prescribing of medications very rapidly.

And he said, yes, science works, but we don't really know how to deliver this. And of course, my background in technology, I immediately thought-- this was 2014. I said, hey, wait a second, why don't we build a technology-enabled virtual clinic led by real providers. And if we deliver this virtually, on a 24/7 basis, we can give that kind of experience that you're talking about very cost effectively, and without hiring millions of physicians following each of these patients living with type 2 diabetes.

So long story short, we started to Virta in 2014, with the mission of reversing type 2 diabetes in 100 million people by 2025. And here we are. And I'm happy to share what has happened since.

But that was the founding story. And it really is about trying to fix the type 2 diabetes epidemic, and finally have a way to actually reverse the disease-- as opposed to just trying to manage it with more medications.

Amazing. It's just such an amazing story, every time I hear it. It's just an amazing story. Now, one of the things that you do at Virta is start every day with a story from one of your members-- one of your patients-- who has transformed their life based on the Virta experience. Could you share one of those stories for our listeners?

Yeah, absolutely. Well, first of all, I should say, you mentioned that the theme of your podcast is innovation with purpose. And I should say that Virta is perhaps as purpose driven a company as it gets. Our mission is to reverse diabetes in 100 million people by 2025.

And everything starts from the patient. And that's really at the center of our culture and values. And as you mentioned, every Monday our all company all hands is one of those patient stories.

Well, I'll just give you a couple of examples of the transformative nature of the results. One, at the end of last year, 2018, we had one patient who reversed her type 2 diabetes-- got rid of insulin, which is sort of unheard of.

And she was so excited about the outcomes that she decided to take the Virta corporate logo as a permanent tattoo on her body. And I literally started crying after I saw the photo. Because I thought, this is why we do this, and this is unbelievable.

That is amazing.

The only other brand that I know where patients or users take the logo as a tattoo is perhaps Harley-Davidson. [LAUGHS] I don't know any other.

Yeah, yeah, yeah.

So that's one example. And then, I'll give you another example. Reversing diabetes is getting your blood sugar under control and lowering medications. But for most of our patients it's life transforming, and enables much higher level things.

I can think of one of our patients, Tim, who's a Navy veteran. And he said that his biggest win is not getting rid of all those medications. It's not losing dozens of pounds, and being able to ride his motorcycle again. He said his biggest win is that he knows that now he's going to be alive, and he's going to be able to see his granddaughter get married.

Wow, that's crazy.

And those are the kinds of things that people start thinking about when you get rid of a disease that you thought was going to be the end of your life eventually.

I was going to say, Sami, one of our mutual employer clients had shared a video of one of their employees, who had talked about using Virta to reverse her diabetes, lose a ton of weight, but no longer having to make a decision between paying for her electric bill or paying for her insulin. And as a benefits consultant, you watch these videos and testimonials for every single vendor. I was just brought to tears. I was sobbing.

This woman was talking about how it's also helped transform her life with her husband, whose also lost weight, because he's on the diet. At work her manager commented about how much more present she was, and the energy she now brought into her job. In the past, she was just exhausted all the time. And so it was one of those things that you could just see. It was palatable about how transformational this was. So I mean, I appreciate you.

The tattoo is super interesting. I've not seen that person's testimonial. I'd love to see that one. It's just another flavor of some other things that might hit upon some of our employer clients around-- just some of the impact that they may see in some of their employees.

You mentioned that there was this person who said, oh, I didn't know if I could pay my utility bill, or co-pays for my diabetes drugs. It's a very important point. Because I don't know if all of your listeners know, but diabetes drugs is the largest drug category, in terms of dollars spent in the US today. And unfortunately, it's also the fastest growing. And so, obviously, there's a massive burden on the individuals living with diabetes-- particularly, type 2 diabetes.

And so some health plans, and even some employers, have tried to help by either lowering or capping the copay, or even paying 100% of the copay. And that's wonderful. But that's sort of a Band-Aid. It's not a solution. The optimal solution would be to get these people completely off of these type 2 diabetes drugs.

And that's exactly what Virta does. And that's what we've delivered. And it's usually the result that most people have the hardest time believing that it's possible.

And the reason we get patients off of type 2 diabetes drugs is not that we just optimize the drug cocktail, so to speak. It's because we make the drugs unnecessary. We make them unnecessary, because we eliminate the underlying cause of type 2 diabetes.

So I just wanted to highlight that, that diabetes drugs is a massive problem. It is ballooning. But there is now a way to actually lower that total burden.

Sami, that was really helpful. So for our listeners out there, can you tell us a little bit about just the Virta user experience, and how it differs from some of the diabetes management approaches that are out there. Because this is truly a reversal. Like, you are eliminating diabetes in these people. Like, no markers of disease. So can you just tell us a little bit about what your members go through? I know you talked about a little bit earlier being at a virtual clinic. What does that look like for the member?

Yeah, absolutely. And I'll start from the differentiator. Really the reason Virta exists is the outcomes. How we get there is sort of secondary. But I will explain that. But it's really the outcomes of reversing the underlying cause of the disease and the disease. And therefore not even diabetes pharmaceuticals are needed anymore. So that's the reason we exist, and that's our differentiator. That's how we also get paid.

But how do we do it? It's really a combination of two things. One, it is this technology-enabled virtual clinic, where full-time providers, who are full-time Virta employees, remotely monitor our patients on a daily basis-- including blood glucose, blood ketones, symptoms, blood pressure.

So we monitor all these biomarkers on a daily basis, and use that data to both individualize the treatment as well as help our patients to problem solve any issues that they might have. So that's one part of the Virta treatment, this virtual-clinic model. It takes health-care delivery from this historic episodic 15 minutes every three-to-six months to two-to-three interactions a day, on a continuous basis. So that's one part of it. And it's absolutely critical for the delivery of what we do. And I believe that it's generally critical for treating a chronic disease.

And then the second part of it is, even if you have the best care delivery model, and support, and technology, you aren't going to reverse type 2 diabetes, unless you have a treatment-- the protocol to do that. And we use nutrition, not exercise, as the tool to reverse insulin resistance in type 2 diabetes.

And from the scientific perspective, the core is highly-individualized carbohydrate restriction. Which by the way, is now referenced as an example of first-line therapy by the American Diabetes Association, as well, in their 2019 guidelines.

So what does that mean in practice? It means that we individualize our nutritional treatment to each of our patients depending on their background, maybe even ethnicity, their preferences-- somebody might be vegetarian, vegan. Somebody else might really like to cook at home, and anything goes.

We're treating truck drivers, for example, with US Foods. Many of these individuals only have access to 7-Eleven and fast food. So we individualize the treatment, really, based on the needs of the patient. But in the core there's an individualized-carbohydrate restriction.

So it's really a combination of those two things-- virtual clinic, and then a specific-individualized treatment to reverse the disease.

So Sami, some of the pushback I've heard a little bit, just in general, is are these carb-limited diets, ketogenic diets safe? It sounds like you know the ADA has approved this as a form of treatment. But I know some of the questions we might get from employers is, is this really safe? Has this been tested in the long term?

Yeah, well, first, a little bit tongue in cheek, I would ask, how safe is the standard American diet?

Yeah, absolutely.

[LAUGHS] Exactly.

That was in my head as well. We haven't tested that diet long term, but we do know it kills people.

Yeah. And this is not a joke. I'm kind of serious. What are the results of the standard American diet? Heart disease, type 2 diabetes, obesity. The latest results came up-- the obesity rate has exceeded 20% in every single one of the 50, 51 states in the US-- inflammation. So the standard American diet doesn't seem to be working very well.

What we've done-- again, it's highly individualized. Our provider and the patient individualizes their nutritional treatment. But if you look at the outcomes, we published six peer-reviewed papers. I forgot to mention that in the beginning, that when we talk about outcomes, it's very easy to pick anecdotes.

So we've now published six peer-reviewed papers. We get blood sugar down. We get patients off the medications. We get inflammation down. We improve 22 of 26 cardiovascular disease risk markers, and lower total cardiovascular disease risk.

We published a peer-reviewed paper on improving the markers of non-alcoholic fatty liver disease. And of course, obesity, we show sustained past-two-year weight loss. And very substantial at that. So when you talk to any of our patients, would you like to be as you used to be? Or, would you like to be as you are today? We haven't yet found a single patient who would say, no, I'd love to be on the path to having my type 2 diabetes get worse, and worse, and worse.

So what about the long-term piece of that question? Because we do get that, particularly from the clinical establishment, actually. We get a fair amount of that. What's the Virta position on that?

Yeah. Well, first of all, everything we do, everything we say, we try to be 100% evidence based. And so purely from Virta's perspective, our clinical trial is now about four years into it. And we've published two-year peer-reviewed results, and shown remarkable sustainability and improvement in all the key markers - relative to the baseline where the patient started.

And so we already have data past four years. But obviously, that's not yet published and peer reviewed, so I can't comment on that. But all the data that we have is very promising. And keeping the type 2 diabetes away, obviously, is the biggest win. Because we know the outcome of that is very unfortunate.

So maybe another question that we have to get to is, so people actually stick to this diet. So I try to be gluten free 90% of the time. It's harder at certain times than others. But how are you teaching people the habits to cook this way? I know it could be hard to restrict carbs, like you said, because of just life and circumstance. So how are your practitioners working with your members and your patients to ensure that they can cook this way, or they can eat this way?

Yeah. The top three things I would highlight-- one, again it starts from the outcomes and the benefits. If I ask you to do something that is frustrating and painful, but I say, stick with it and five years later you'll be

feeling better, or something, it would be very, very hard for a great majority of people-- unless you're like an Olympic athlete. Suffer for four years and maybe you win Olympic gold.

So that's not what we do with our patients. They see results and positive results very quickly, and sustain. And whether that's getting rid of their diabetes medications, being able to sleep better-- I forgot to mention that we have a published peer-reviewed paper on sleep as well. So that's the number one thing.

If patients receive benefits within days, and weeks, and months-- and they sustain-- why would you not do that? And I use this analogy that if you have the very first cup of coffee in your life-- and you're like, whoa, what happened, I am so energized-- you probably want to go for the second cup of coffee the next day. And there's a little bit of that going on with patients. The benefits are just so visible and tangible. So that's the number one thing.

Number two-- you used the word diet. We never use the word diet. We just say, individualized lifestyle. And what that means is, we find ways to make the changes sustainable.

And after we reverse type 2 diabetes, usually there's much more flexibility for most of our patients. Because once we reverse diabetes' insulin resistance, the body can actually metabolize and tolerate much more things-- and many more things than very initially, when we started treatment. So that's the second thing.

Give us an example of what that's like. I've heard stories about how the coaches interact with some of the members. Could you just make that really tangible for us? So on a very practical note, if someone is very, very type 2 diabetic-- he's already on insulin-- initially, we may need to-- for example, with vegetables-- be very strict about taking all the starchy vegetables out-- maybe even eating berries. You have to be very, very careful, or not have them at all.

But then later, once we reverse the disease and insulin resistance has been either eliminated or lowered, we can reintroduce things. That may mean more starchy vegetables. That may mean more dairy. That may mean more berries. It doesn't mean that we reintroduce mocha Frappuccino with extra squirt of maple syrup [INAUDIBLE]. But you know, we can be much more flexible.

And then, again, it's not arbitrary. We follow these biomarkers, and our providers and other care team members individualize the recommendation to each of our patients. But that's a big part of it.

So to get back to your question, it's the outcome-- the benefit that the patient feels. It's the individualizations.

And then, thirdly, it's this technology-enabled 24/7 support. So we are kind of a doctor and a coach in your pocket, in a very evidence-based way. And that's very important.

So we provide support long term. It's not that we reverse diabetes and then we go away.

The skills and tools that our patients need in the maintenance-and-sustainability phase are very different from the initial, very clinical, let's reverse the disease and de-prescribe your medication. So it's that whole experience that's critical for long-term success.

So let's lift up to the employer level for a second. We have a point of view in this space that diabetes is a massive problem for every employer. Different members, different patients, in the parlance you're talking about in this podcast, are at different points on a continuum, and want to handle themselves differently. Employers are sometimes attuned to different things.

We think of it as metabolic syndrome, or pre diabetes. This is the state that you mentioned you were at, when people have diabetes in their future with some level of certainty, unless they've taken action. And there are solutions out there that can do something to address that.

Then, there's diabetes management, which Lindsey mentioned. And this is making sure that you're doing the right things. You might be doing testing. You might have meters and strips in your life, to maintain your diabetes. And then, there's this new class of reversal, that really Virta came to deliver, and really put on the map.

So we explain to our clients there's that continuum. And we say, where do you want intervene? Ideally, we say to go ahead and attack all of those, so that members, wherever they are in that spectrum, there's something for them-- if they're ready, or if they're not ready.

What's your message to employers as to when they should think about Virta? And what percent of their population is appropriate for reversal?

Yeah, absolutely. Well, first I would just say, I 100% agree with you. This idea that one thing is going to be for everyone-- or, if one thing is not for everyone, it's not good enough. And someone jokingly said that in health care, unless you're in North Korea, nothing is 400%.

[LAUGHTER]

Right, right.

It just doesn't work like that. And from an employer's or health-plan perspective, in fact, you don't want to be stuck with one thing-- whether that's a vendor, or provider, or whatnot. That's not even a good position to be. You want to make sure that there's a portfolio of things for your people to choose. And then from a quote unquote business perspective, you want to have flexibility. So I fully agree with you.

Then, specifically to your question to why does Virta exist and who should think about Virta, again, we have the first and only evidence-based and scalable solution to actually reverse type 2 diabetes-- and get people off of diabetes drugs, because they don't need it anymore. So that's why we've created this whole new category of type 2 diabetes reversal.

And many people may still think that, well, diabetes cannot be reversed. Well, we only get paid for results. So if it doesn't work, we would go quickly out of business.

So I guess my message would be, there is no downside introducing Virta as an option. There's no fixed fees. We only get paid on a per-patient basis, and if we deliver results.

And there is a portion of your members, likely growing, who are not excited about living with the disease, and this slow progression that eventually leads into complications-- then perhaps the last and worst possible outcome, of death.

So I would introduce Virta as an option, and say, if you are tired of living with your type 2 diabetes, here's an option to potentially reverse your disease. And we will work with all of the employers-- obviously, carefully, hand in hand-- to then reach out to the employees.

And to speak to your question, for what percentage is Virta for, of course from my perspective, I'd say, well, who would want to live with the disease? If we can reverse it, why wouldn't you? So I would like it to be 100%, 400%, but it has to be patient opt in.

And historically what we've seen-- and I want to be very realistic-- is, we can get to about 25% to 30% of the eligibles enrolled in this treatment by end the end of one year. So that's a realistic target. And that's massive. And it's massively impactful from a cost-savings perspective, as well. Because, typically, the people who enroll are the ones who have the most inconvenient and most quote unquote pain with type 2 diabetes. And these are the people who also incur most of the costs, because they might be on injectables and other drugs.

So long story short, I would introduce Virta as an option for the people who want it. And you might be surprised how many people don't like living with the disease.

Yeah, fascinating. I love the way you describe that. There's so much to unpack there. You mentioned opting in. And we're big fans of making things available that people can opt into, using behavioral economics, and using word of mouth, to generate enthusiasm-- interest in the program. A select program, if you're able to, if you're interested-- limited number of seats type of thing, and followed by word of mouth.

I was going to say the other thing is, when you talk about the outcomes and what patients are seeing, it's just intrinsic motivation, right?

Absolutely.

And immediately they're seeing results. And so you don't have to necessarily tie it to extrinsic motivators, when you see results immediately.

Exactly. And it's being there when they're ready-- bringing them out into Mohammed, if you will. I'm not sure if that actually works, but let's just say it anyway.

So you mentioned that. And then 25% of the population, 30% of population-- when employers think about addressing a condition-- so they see diabetes in their population-- because there are so many other loud voices competing in the diabetes space, sometimes the message of reversal gets muted, or there might be competitors, or clinicians, or good-meaning people of all sorts who might say, I don't know if that's true. I'm not sure the science is there-- just because they don't know.

Or, perhaps, because they have a vested interest. Because they might be looking to manage a different part of the solution. Or, they might be thinking, gee, 70% of the population can do really well with my solution. That's only for 35%, or 30% of the solution.

So I just want a position that. So I get the notion that you only get paid when the employer wins, which we think is fantastic. It works. There's alignment. But how do you talk with an employer who says, I just have time, energy, money to go after one thing this year, and I want to make the biggest impact possible?

Well, first I would say, it's everyone's own decision. I'm not here trying to sell hard. If that's your decision, that is your decision.

But I would think about it this way. If there's a treatment that's life saving, and type 2 diabetes reversing, it can literally save eyes and limbs, money, and reverse the disease. Why would you not make that available to your members, or employees?

Or think the other way-- what does it tell about you and your organization if you don't make it available? You say, oh, there's this treatment that can reverse your disease, get you off of insulin, help you lose 30 pounds on average-- [INAUDIBLE] cardiovascular disease risk-- but we decided not to make it available.

But yeah, these guys are working with the Veterans Administration to treat veterans now nationwide. We're working with statewide health plans, like Blue Shield of California made Virta treatment available to all of their members.

And we work with large companies, like Comcast, [INAUDIBLE], [INAUDIBLE]. But we are not going to make that available, because-- I don't know how you fill in the blank? We won't make it available because we're too busy. We know we can reverse your disease, but we're too busy. So that would be one way I would look at.

And then the second one, just to involve hardcore numbers, I would say, how big of a problem is type 2 diabetes drug costs to you? And how big of a problem is specifically insulin costs-- just to pick one. Are any of your solutions addressing that? Oh, absolutely increasing and making that. Because type 2 diabetes management-- intensive management, trying to drive adherence to diabetes drugs-- increases those costs.

So I'm very confident in saying that Virta is the only solution out there-- maybe outside of bariatric surgery-- that can actually address the rapidly rising cost of type 2 diabetes drugs. If you have a solution for that other than Virta, fantastic. But there really isn't one, I believe-- anything that has proven on a population level that it works.

And I'll just drop one statistic. So I know two-year published and peer-reviewed paper, the average insulin dose at year 2-- first of all, it comes down rapidly, within days and weeks. But even at the end of two years was reduced by 80-- 8-0%. Can you believe that?

It's amazing.

People are talking about lowering insurance costs of 5%, 10%-- optimizing the doses. We reduce 80%. And that's one drug. But the same thing happens across other drugs.

So that would be my, I guess, tailored value proposition, to say, yeah, if you want to eliminate these type 2 diabetes drug costs, there is one solution for that. That's Virta. And by the way, you only pay if we deliver results. So why not?

All right.

And something I actually want to go back to, when Steve was talking a little bit about how we think about the continuum-- starting at metabolic syndrome, and diabetes management, and diabetes reversal.

I know a few employers also offer you to pre diabetics, and those with metabolic syndrome. Is that rare? Is that normal? It also just increases the population that an employer can think about targeting with you. So can you talk maybe a little bit about how the protocol may differ for those with metabolic syndrome, or pre diabetes?

Well, first, 20 seconds of biology. Type 2 diabetes is really a definition for a highly insulin-resistant person. So it's really a continuum. So if you say pre diabetic, or type 2 diabetic, or late-stage type 2 diabetic, it's just a matter of how high the blood sugar happens to be. But from a biological perspective it's a manifestation of the same thing, and it's kind of a continuum. So it's not really a different disease-- pre diabetes, type 2 diabetes.

And then there's a lot of comorbidities that come with that high inflammation-- and usually, lipids and cardiovascular dismarkers as well-- hypertension, and so forth. So we are effectively treating the same disease wherever you are in the continuum. And this is the reason why Virta has been successful, and our treatment has been successful in treating type 2 diabetics on medication, type 2 diabetics not so much on medication-- and then, also, pre diabetics.

And to answer your question specifically-- indeed, we do have employer customers who have asked us to treat both pre diabetics and type 2 diabetics. I would say this. From an improving human health perspective, both absolutely make sense. For better or worse, the question really comes down to economic savings and ROI.

And specifically, just to take an example of myself, when I was a world-class triathlete and I had pre diabetes, me reversing my pre diabetes as an athlete did not save the health care system a penny. It probably saved 20 years later, but within a year it didn't save a penny.

So this is really an employer decision. Reversing type 2 diabetes among someone who is on insulin, we will save hundreds of dollars a month-- which is thousands of dollars a year-- within weeks. So the savings some massive.

If you take a pre diabetic who loses seven pounds-- and the average blood sugar comes down a little bit-- literally there's likely zero savings within a year. And of course this is bad for me to say this, because I should say that you can somehow make the math work and you [? save ?] save a lot of money, but that's just how it is.

So from helping a human being be metabolically healthy, and perhaps eliminate costs 5, 10, 15, 20 years later, wonderful. But if you're purely calculating on hardcore ROI, for in-year savings, treating pre diabetics isn't very quote unquote valuable.

Yeah. It's the difference, potentially, between cost saving and cost effectiveness, in a way.

So let's talk a little bit about your experience moving from the consumer world to the employer world. What have you learned working with companies, serving their employees?

Well, first, I would say, we've tried to be very patient and consumer centric in our product and treatment design, and patient experience-- and bring the consumer technology, consumer user interface, consumer experience level and quality of design to health care.

But yes, we do work with employers-- now health plans as well, and then even government, with the Veterans Administration. It's been very humbling.

And I think the most important thing I've learned is that it's a whole different customer. And it's very important to take the time to fully understand the needs and obstacles that the employer might have, and how they think about their employees or associates. So it's truly like another absolutely critical customer, who we have to understand. And it's highly individualized. I think that's the most important learning that I've had.

And then the second learning, I would say, the job of a benefits leader is really tough. Because in most cases, they are completely under-resourced. They're building an entire health care experience, plus other benefits experience to their employees, with a tiny, tiny team. And then it's one of those jobs-- a little bit like IT infrastructure-- where when everything's working, nobody notices. And once anything goes wrong--

Yeah, that's right.

--everyone is pissed.

That's kind of like the software world, right? It's not working. I've got a bug.

Yeah, exactly. So I've developed a level of empathy for that role. And so we try to do our part. And like you mentioned, these patient testimonials, it's wonderful. And I've heard this from a couple of benefits leaders, when they come to us and say, it's wonderful that I rolled out something where I'm actually getting thank you cards and invitations to weddings or birthday parties, as opposed to an angry email that my xyz isn't working. So those are some of my learnings.

But it's a really tough job. And we've tried to do everything we can, so that working with Virta and deploying Virta is actually one of those highlights-- that it's easy and smooth. And then ultimately, the patient and the employee outcomes hopefully deliver the rewards for the benefits leader as well-- not just economically, but in words and [INAUDIBLE] the outcomes.

The mission is to reverse type 2 diabetes in 100 million people. The problem is massive. Somehow lots of people are making a lot of money out of diabetes, but very few people, if anyone, is making the problem smaller. And we are. We're trying to solve this problem finally, and make people better.

So it's three to five years from now. What is the headline in your favorite business magazine, for Virta? I think I can guess it based upon what we've talked about. But I want to see if it's different than what I think it's going to be.

Virta brings hope to people living with type 2 diabetes. And maybe the subtitle is, millions of people have reversed type 2 diabetes and eliminated the need for their diabetes medications.

Yeah. I thought the headline was just going to be, based upon a few times you said it, Virta reverses diabetes in 100 million people.

Yeah, it could be. I was thinking the US business press. And fortunately, there are quote unquote only 30 million people living with type 2 diabetes. So I [INAUDIBLE].

[LAUGHTER]

But I like that. I'll take that.

All right. But you coined that. We just repeated it. So a few more here for you. If Virta were an animal, what would it be?

[LAUGHS] This is probably the most dangerous question to answer. I think it's going to be used against me by somebody-- more likely from our team.

[LAUGHS]

I mentioned this word, individualization, many times. But it would probably be very many different animals, because we have to individualize practically everything we do to--

That's a chameleon.

--equals [INAUDIBLE] patient. You've got it. So I'd probably say, chameleon.

And of course, technology enables this high degree of individualization at a population level. Chameleon have actually has a lot of technology-- biological technology. So I'd say, chameleon.

All right. Lindsey's two for two on improving your marketing so far.

If you said you have a two and a four-year-old, you may know the book *The Mixed-Up Chameleon*, by Eric Carle. Definitely check it out. And if you don't have it, I will send it to you. It's a favorite of my two-year-old.

Well, I guess I have to thank you, Willis Towers Watson, for the formal partnership that Virta has with you. And I'm very enthusiastic and optimistic about our ability to help employers, your customers, together. So thank you for the partnership that we have together.

Well, thank you. But when we first heard of Virta-- when we first met your team, we were excited. And we took that continuum. That's when we added [INAUDIBLE] reversal to it.

And we talked to the team and said, bring us back some clinical trial results, so that our clinicians can get excited about this as well. And you did. The discipline was fantastic. The results were even better. And we're just delighted that you're in the market.

We're delighted to tell as many employers as possible that there is a possibility to reverse diabetes in a significant proportion of the population. Reduce their costs, keep people happier, healthier, and maybe even sell discounted Virta tattoos.

Do you have a Virta tattoo yet?

So this is the most embarrassing thing. I'd say, we have a patient-- perhaps a number of people-- who have the Virta corporate local as a tattoo on their body. And me, as the CEO and co-founder, I still don't have one.

But one thing I'll tell you-- which I will actually mail you a couple-- we did print temporary tattoos after that, so that our employees when they want to, and if they go to events, they can show off their temporary tattoo. So that's sort of a baby step towards--

That's awesome

--getting the courage. Yeah, if you want one, I'll mail.

The last thing I was going to add-- sometimes people ask, so what do you think the future is? Is type 2 diabetes reversal going to happen?

And I always say, well, let's take a step back. If type 2 diabetes can be reversed, and the use of diabetes medication can be made unnecessary, diabetes will be reversed. It's as simple as that. It's not quite, but it's not far. If somebody says, hey, we can cure cancer, what's going to happen? Cancer will be cured. It will happen.

If diabetes can be reversed, and we've not shown it will, then it will be reversed. There's just no point why someone would be losing eyes, and limbs, and potentially dying-- and in the process costing the health care system, employers, health plans, governments millions and now billions of dollars. It will be reversed.

That sounds like a great place to close. Sami, thanks so much for being here with us. Steve and Lindsey, thank you so much. I very much enjoyed. And have a wonderful day.

Thank you for joining us for this Willis Towers Watson podcast, featuring the latest thinking on the intersection of people, capital, and risk. For more information, visit the Insights section of WillisTowersWatson.com.

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