Digital Health Coalition

On September 26th, the Digital Health Coalition hosted the DHC Midwest Summit at Takeda. As a part of the afternoon's content, DHC Co-Founder Mark Bard interviewed Takeda's VP and Head of External Partnerships and Business Operations, Nicole Mowad-Nassar. We are happy to provide that exchange here for you.

Mark: *I think the great thing is always, and we love to do these when we do these type events, is have someone that thinks beyond digital where it's not digital first. It's really digital is just part of the ecosystem. It's how you do business today. What we wanted to do in this final roughly 10 minutes is to talk about some of the things you have very deep experience on and get your thoughts on how this all ties together for a lot of the folks that are in a brand role, or they're in an innovation role, or they're just trying to figure out where things are headed. One thing I wanted to start off with, in your bio, you use this term patient experience. How do we improve and optimize this patient experience? I just wanted to put it in the context of how do we think about patient experience, how do we track it, are there metrics, and maybe how do we think about that also in the context of a pharmaceutical company or brand.*

Nicole: Thank you for the opportunity to provide some closing comments. For those I haven't met, again, my name's Nicole Mowad-Nassar. My background is primarily as a commercial leader in the pharma industry where the majority of my time at Takeda was heading Marketing, but the last two years I've been spending in External Partnerships. What that means for Takeda is spending a lot of time trying to understand the digital trend, and particularly, partnerships with digital companies.

When we talk about the patient experience as it comes to digital technologies, we're really talking about understanding the patient journey a lot more intimately.

With digital technology, with wearables, and with some of the passive collection and empathy devices that are out there, there's a better opportunity to understand the patient journey in a way that we couldn't previously. I've been spending a lot of time looking for technologies that allow us to get closer.

At Takeda, our CEO, Christophe Weber, who came to the company about three years ago, also has spent a lot of time focusing us as a corporation thinking about the patient first. I think that that language is typical in the industry now, putting the patient at the center of everything we do, but I think it's become part of the fabric of who we are at Takeda where we're putting patients first, trust second, the reputation of our company third, and business last. I think that as we have been following, what we refer at Takeda as PTRB, it's also become a construct for us to be able to make decisions here.

If we're making some decision that's in the best interest of the patient, it's easier for us to get alignment from our regulatory friends, from our commercial colleagues, from our sales colleagues, around what's the best interest for the patient. I think patient means many things from a digital perspective. It's helping them with their journey, but for Takeda, it's also a framework for how we make decisions.

Mark: *One thing we hear about is a lot of these digital health solutions come out of Silicon Valley, and they're developed by young males that are running marathons and trying to quantified self. If we think there are certainly some patients that want to be at the center of the patient experience, how do we think about a lot of those patients that just want people to do things for them? How does that fit in, and how do we think about technology? I won't name the company, but there was a company saying we need to figure out how to imbed these devices in the people that don't want them, which might ought to report, but how do we think about those people that they need a patient experience, but they're fine letting other people make the decisions for them?*

Nicole: Yes, I think one thing that's changing about patients today is they're not fine having other people make decisions for them. With the advent of technology, they're able to check Google first and come to the doctor armed with a lot more questions and better informed sometimes, specifically on their condition, than even their primary care physician is. I think those that are embracing technology early are what a lot in the industry refer to as the worried well and not necessarily those that are really sick because those that are really sick don't yet have the right tools from a digital perspective to help them.

We are trying constantly to imbed wearables into our clinical trials here at Takeda, and we're just not comfortable yet that they're regulatory grade, that they're capturing data that's meaningful for a physician, that's capturing data meaningful for a treatment intervention, so I'd say that a lot of the – and you're right, there are a lot more males than females in Silicon Valley making products – but I'd say, generally, regardless of gender, there's a lot more people in Silicon Valley making products without understanding the unmet need. If they started understanding the unmet need of what patients are requiring on their treatment journey, they'd have a lot more success. They're coming up with really, really cool inventions and trying to retrofit it into a

healthcare system that doesn't need that solution, but needs something to fulfill an unmet need.

One of the things that has been helpful coming from a commercial background, without having any tech experience, no technology, I don't even have a social profile out there. I'm not on Facebook and hope never to be, but I do understand how decisions are made in the healthcare environment. I understand our therapeutic areas, and I hope I understand go-to-market strategies given my experience, and that's been really useful to go talk to technology partners who don't understand healthcare at all, but who have really rapid innovation timeframes, and who have greater agility than we do in pharmacos, and try to figure out how can we collaborate and combine our unique skills together.

Mark: *We hear a term, beyond the pill, all the time, and maybe we could probably chart it on the hype cycle. It means a lot of different things. In many cases, it means you're doing something beyond a chemical compound or a biologic, but when we talk to physicians, physicians are grounded in today. They're having trouble with the EMR. They're trying to make ends meet. They're trying to move into this digital health arena. If you ask physicians about beyond the pill, they say patient education, reimbursement support, really basic stuff, but a lot of times in pharma or digital health, we're thinking adjustable cameras, artificial intelligence, all this stuff that's really out there. What's that balance between help me meet my needs today with the EMR and all those struggles and where we're trying to get to?*

Nicole: I think it's evolved. When you say beyond the pill to me, what that says is we need to provide a holistic solution to the patient. As a pharmaco company, we can't just be selling a pill in today's environment. That's both because the environment requires more, but also because we have a lot of reputation to improve, and we can't just be selling a pill. We have to be enveloping that patient with a lot better support, whether that be reimbursement support up front, to patient education, caretaker guidance, adherence help, the pill, maybe a wearable. I mean we have to wrap around that patient to understand all their treatment interventions, and we have to care about them before they get on our drug, and we have to care about them after they get off our drug. I think that's what I think when I think about beyond the pill.

One way we're trying to practically bring that to life at Takeda is to integrate in the EMR system because if you really want to have a beyond the pill solution, you have to be getting information to the physician. You have to be intervening at the point of care. You have to be getting patient reported outcomes, which even the FDA is wanting us to get, and so we've done a pilot program with a small digital startup here in Chicago called SonarMD. It was actually started by a GI physician in a very large GI practice, and he has a software program that's integrated with the EMR system. He went, and he

negotiated an agreement with Blue Cross Blue Shield of Illinois where he's got a risk-based agreement already in place to show reduction of hospitalizations and other costs within the system.

There's a PR outpatient reported outcome that's coming through a text-based message to IBD patients, and so Takeda's trying to help that company scale because it's got all the right components for beyond the pill. It's tracking any treatment, not a Takeda treatment. It's getting patient outcomes into the EMR, which the physician cares about, and it's already negotiated the payer solution so that you can have physician adoption. What they're showing to date is that, actually, biologic use is going up, but hospitalization is getting reduced by over 65 percent. The whole system is saving costs, even though you're seeing drug costs increase, so I think that's a great example of beyond the pill, and beyond, honestly, the pill of your company, but treating the patient in your therapeutic area.

Mark: *You touched on this, but I want to dig a little bit deeper. You've talked a lot in the past about how to use technology to provide increased access, whether it's rural populations, or telemedicine, or we see all these cool ideas of you're going to use chat pods and everything else to communicate in populations that don't have access. That was a great example that you just mentioned, SonarMD. Are there other examples when we think of this technology, and from a pharma company's perspective? It's what an earlier speaker was talking about, the build vibe, and companies look at that whole range, the companies that are connecting a patient with a physician. Where does pharma fit in that process? Is it learning? One like with the SonarMD in trying to understand where that process goes? Are there other ways to think about connected care, remote care, remote patient monitoring, where pharma can play?*

Nicole: Telehealth is interesting. Telehealth, I think, is most interesting in rural populations. Telehealth is really interesting in the field of mental health because so many patients are waiting for psychiatrists as there's a shortage of mental health experts in the United States – availability of mental health experts in the United States. Telehealth is really an interesting concept while you're waiting for a psychiatrist or while you're waiting for a clinician to serve you.

I think that the more interesting future is passive collection of data. I mean there's so much that's available just to read off of your cell phone if you give access rights, from voice inflection, from how often you're posting on social media, to how often you're texting, to the speed at which you're typing. There's companies out there that are collecting 360 different metrics off your phone that have, speaking of machine learning and AI, algorithms that are running that can tell you whether you are about to fall out of remission in depression.

There are crisis hotlines out there that are following adolescents, looking at their texting, and can tell you based on a few key words whether they're going to make a suicide attempt. They're sending interventions out there. I think the cooler future is not what you can get by consciously putting on your Fitbit and tying it to some device, but unconsciously being followed by data that you're allowing based on a condition that may be known. Mental health is an area that's totally right for that.

Mark: *That's a good example. I was in a conversation with someone at Google a couple weeks ago, and now there's an ethical question. Google knows you're very high risk for suicide and something else. Do they act on that data? Who acts on that data? Do you feed it to a physician, to a family member? Those are great. Wait, what do we do with all this data? As you say, how do you get it back to the physician?*

Nicole: Andy Conrad at Verily, which I think most people know is the health arm of Google, has been trying to get the baseline study off the ground, and what they're trying to do is create a baseline of what does a normal patient look like. What is normal, and then have standard deviations from normal so that they know based on this phenotype how you're progressing, and they can do an intervention. It's still pretty far off, but I think it's really cool when you think about what it could do to healthcare.

Mark: *I had to ask this given your current role - If we think about startups innovation, and this is the ongoing question, I think, in the industry as you see the accelerators, you see companies running shark tanks and different things, this is what you do. I know it's hard to summarize sometimes, but how to you take some of those insights of how can we learn from that and apply it internally? I know you do, as you mentioned the Silicon Valley model. We saw companies. Let's go tour. Let's go do the tour of Facebook and others in the Valley. What are some of your insights over the past couple of years on how do you translate some of that learning?*

Nicole: When I was asked to take this role two years ago, I didn't think it was a gift. I thought it was a strategy role, and as a line leader, I was not thrilled about a strategy role. At the time, our CEO said I want a commercial person out in Silicon Valley because I want to be able to know whether or not we're going to make money on something. I've put tech people out there. I've put medical people out there, but a commercial person can see the linkages. I think that the biggest learning I've had in the last two years is how to separate the wheat from the chaff.

There's a lot of interesting companies out there, but there are not a lot of interesting companies that are going to be successful. I think there's a great deal of data that says, I want to say, it's close to 70 percent of digital companies are the walking dead. We've

come up with a rubric right here at Takeda to evaluate digital companies. To make it easy for everybody to remember, we've put it under the acronym, SAFER. SAFER, basically the S stands for scaling. Is the company going to be able to scale the solution that they're talking to you about? That means do they have the right infrastructure? Do they have the right support, the right contracting structure to be able to scale it? We've made mistakes. I've made big mistakes by partnering with a digital company that could not scale with us.

Acumen is the A, and acumen is really around their board structure. Are they one founder who's the head of the board, who won't listen to anybody else, and they've got no healthcare expertise, or do they have a board made up of healthcare people that are advising them, that are giving them sense into the complicated regulatory healthcare system that they're going into? F is funding. If you are their largest funder, maybe not run, but have a good sense of how much commitment you have to this company because many of these companies are in very early stages of their seed funding. You want to be able to know that they're going to be able to survive, and they're not going to be dependent on you being their largest equity investor. The E is effectiveness. I mean there's the solution's got to work. It's got to meet an unmet need, and so just how good is the solution to survive in the environment?

The R is regulatory. People will have different views on this. At Takeda, we're not interested in a company that just wants to allow you to download an app from the App Store. We want companies that are looking at this, understanding we've got a social and ethical obligation because we interact with patients. We want to make sure the data is protected. It's private. That they're working with the FDA, that they're not making claims that are going to impact our reputation or harm patients, and so we like the companies that are considering themselves more medical devices and who want to pass those audit tests, as opposed to those that want to be consumer companies and get a monthly fee for downloading their device. SAFER, scalability, acumen, funding, effectiveness, and regulatory, is how we're differentiating the companies that we're talking to.

The DHC thanks Nicole Mowad-Nassar for sharing her thoughts with us and allowing us to share them with you here!