Are patients out of patience?

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00:06–01:15 **Heidi:** Have you ever tried taking your medical records from one place to another because you moved? How many times have you filled out the same medical background form? Why is access to your own health information and making sense of it so hard? Now, what if it wasn't? What if you had full control of your data, were able to integrate that data seamlessly with a personalized picture of your health, and what if you were enabled by intelligent, virtual assistants who help not just make sense of it all, but also proactively intervene with you to help you make better choices and avoid illness or disease? This is Tales of Transformation. We're here today at Exponential Medicine to continue our exploration of the future of health as we look forward to 2040. Today I have Neal Batra and David Betts, both principals with the Life Sciences and Health Care Practice of Deloitte Consulting LLP, to discuss the transition from consumer-centric care to consumer-driven care to the role that will play in the future of health. Welcome gentlemen.

01:16–01:17 **David:** Great to be here.

01:17–01:17 **Neal:** Thank you.

01:18–01:24 **Heidi:** Okay, so let's kick it off. David, can you give us an example of what this kind of future might look like to a consumer of health?

01:24–02:24 **David:** So imagine that you wake up in the morning and you walk into your bathroom, and seamlessly sensors in your mirror, assessing your health status, understanding your body chemistry, testing whether or not you are dehydrated, all without any kind of intervention or wearable. We're talking about invisibles if you will, and while you're preparing for your day, you get a notification from a virtual assistant that says something like, “Hey David, I noticed that since you went out last night, your potassium levels are low and you seem a little bit dehydrated. I also noticed that we have a high pollen count and I moved your workout from this morning until this afternoon after it's expected to rain for about 20 minutes, and I've worked with your coworkers' virtual assistants to rearrange your calendar for the day. And by the way, on your way out the door, don't forget to pick up the supplement that's just been dropped off by drone specifically for you. Have a great day.”
Are patients out of patience? | Tales of Transformation: S2/E2

02:24–03:11 Neal: I would layer on top of that this notion of sensors everywhere detecting things that are even nontraditional to us today, right?—sensing our mental health status at the moment, or our emotional status. Actually getting deep into what anomalies am I seeing in your biochemistry and how is that factoring in with the environment? And what does all that mean? So I think it's the vision you painted and I think it's over the horizon in terms of technology in our understanding of health and it's really this idea that health is on the go, always on, and we're far away from this notion of a world where it's episodic and periodic and symptomatically driven. And when you're in that world, now all of a sudden health is everywhere and it's always monitored, and I could go do different things now. I'm in front of disease. And I can get on with the things I really want to do.

03:11–03:22 Heidi: There's so much out there for the consumer to do and to track and to measure, so what are the signals in the market today that make something like what you gentlemen describe plausible?

03:22–04:13 Neal: You're seeing lots of startups and organizations that are established working on these data-rich sensing tools, where sort of capturing dynamics of health that are broader than the traditional factors; everyone's trying to make sense and connect these data sets. When you look at your sleep, coupled with the number of steps you took, coupled with maybe tracking your diet, can you figure out when you feel good versus when you don't feel good? That is the earliest stages of what's possible here. You know, I don't talk about version 1.0; I think this is version 0.1. These spot solutions—Vinod Khosla while speaking here at Exponential Medicine talked about clumsy spot solutions. That's exactly what we're seeing. It's clumsy spot solutions, but clumsiness starts connecting, starts getting more robust, and as these things come together. You actually have the world that David and I opened up talking about—which is “always on,” a connected world where I can see.

04:13–04:42 David: So there's nothing like walking out the door of your house on a Sunday morning and your phone lights up with a notification that says it's 20 minutes to the grocery store. Didn't know I was going to the grocery store, or did I? Because I go to the grocery store on Sunday mornings. I think that's a signal to expand that sensor set, expand that data set, expand the concept into the realm of health, and we have the ability to leverage that data in very different ways to be more proactive, to get ahead of diseases, to even get ahead of simple illness.

04:42–04:55 Heidi: What I want to talk about is this idea now of data ownership. How does access to and ownership of health data drive a shift toward sustaining wellbeing from this traditional model of care delivery?

04:55–05:59 David: So, if we look at the health care system historically, it's a series of walled gardens. Health systems have invested heavily in large-scale clinical data repositories and billing systems, and they've believed that can give them some competitive advantage to own that customer. But what we're seeing is consumers take ownership of their data. They're making choices based on value, and I think that what is driving fundamental transformation is, the ability for that individual to understand their data, to have access to it, to combine it with other data, to leverage the power of computing and AI, to derive insight from it, and to make choices about what they do, in their health, how they receive care if they need it, and where and when they receive care. And so, democratizing this data really fundamentally changes this industry in ways that I think over the next several years we're going to see organizations respond to in very different ways, and some of those ways will be highly effective and some of those ways will not.

05:59–06:42 Neal: Let's talk about the other side of the coin here, which is the economics associated with data. Health systems have been tremendously successful on asymmetry of information and having that consumer data and being able to monetize it, clinical trials, or even how they market and commercialize it. That's a real asset for the individual. So I think a big part of this is the education of the health care consumer to recognize that their health information is a valuable asset, not just because it matters to me, but because businesses make money. So yeah, pay me for my data, and if I grant it to you and I don't like the compensation back I'm pulling it back, and over time you will you realize who are the trusted vendors versus nontrusted vendors, and this marketplace starts playing out really quick.

06:42–06:55 David: There was a speaker here at Exponential Medicine that talked about creating a virtual copy of your biology and putting it on blockchain and then renting it to organizations to do research and discovery.

06:55–06:55 Neal: Perfect example.

06:56–07:05 David: It's just phenomenal. It opens up the world to a consumer-driven model of health, and I'm not specifically using care in this context.
Are patients out of patience? | Tales of Transformation: S2/E2

07:03–07:19 Heidi: I think it is an interesting proposition because we could get to play our role in the control of the data. Education is paramount, where the consumer understands that value proposition. So what do you see as the future state of the physician-patient relationship?

07:19–07:50 Neal: You've got a cohort that’s controlled the environment for so long: physicians and their knowledge and understanding—but that’s a closed system with real bottlenecks. And so I actually think this is a breaking point on the physician-patient dynamic, the educated patient starts gravitating towards health options that give them transparency, data, and ownership towards value, quality, and cost. If the physician wants to come along on that ride, great. But, if they want to continue as closed-off systems, they’re going to be beat. You're going to go around them.

07:50–09:09 David: As we democratize health and we commoditize many of the routine, simple interventions, and enable through AI, through big data, and consumer engagement to address many of the issues that today they go to a physician for on their own, at home, with the help of a virtual coach, that allows physicians to focus on highly complex, high-acuity, very challenging procedures that still need to be performed by an expert, and enable the humanity to still exist in this model. I had a conversation with a physician recently. What he used to see in general medical he never sees any more, in the hospital, and what he used to see in ICU, he sometimes sees in general medical, and what he sees in ICU today, he never saw before. That acuity curve will continue, and less and less care for routine, highly commoditized procedures or interventions can be done far outside the four walls of the hospital, and there will always be some highly complex, uncertain, unknowable disease today that needs to be treated by a specialty care provider in some form or fashion.

09:09–09:19 Neal: And all of a sudden now, what you do is create enormous capacity and system for the best docs to work on the hardest problems, and for the volume as well understood, let's have a machine do it.

09:19–09:40 Heidi: At the heart of this model, we’re talking about consumer behavior; we’re saying let’s have the algorithm help us make that decision with you. The computer does not replace that human interaction. What about this behavior change that you’re describing as you consult with companies? Are you able to help them make decisions moving forward?

09:40–10:36 David: I think there’s three things to this: health literacy is an area where we can continue to leverage the capabilities of smartphones and the “always-on” continuous learning that we see in the younger generation—help them become more literate about their health and engaged in it. The second is advocacy. I think there will always be those individuals who are struggling to get engaged and need an advocate to act on their behalf. And then there’s agents, who can engage an individual who otherwise can’t be engaged on their own, and I think that’s probably a new player in this space, but it’s necessary to have a highly engaged consumer base, focused on health and not health care, in order for us to be able to sustain, because without engagement I think this all sort of falls apart, and we’re seeing signs of a higher level of engagement in people's health across the spectrum today.

10:36–11:10 Neal: Let’s not feel like this is a massive heavy lift, because engagement happens when the consumer population is actually engaged, when the engagement model and the tool in the mechanism is so compelling and the value you get from it is so clear, you educate yourself, you figure it out. I don't think it's a push-only model. There will be enormous pull from the consumer because they want the data, they want to self-navigate and have their own view of what health and wellness means to them. So if you create the tools and interfaces that allow them to get in front of disease and intervene more quickly, all of a sudden you have a very different world.

11:10–11:35 David: There’s a study we just published that looks at consumer behavior and health, and what we see is 15 percent of consumers today are what we call trailblazers; they are out ahead of this already. And there’s another 30 percent roughly who are prospectors, they’re trying things out. So you’re talking about 45 percent of consumers today are to a large degree already engaged. Now we have to address the other 55 percent.

11:35–11:40 Neal: But you tap those 45 and that's a revenue model that will let you figure out the other 55.

11:40–11:51 Heidi: We all have experience with machines and software. We should talk about trust and security. Is it an issue? Is it something we need to be concentrated on as a central point or one of the points?

11:51–12:39 Neal: It's a running concern from clients. How do I develop trust or how do I earn trust and to what extent do I have permission, i.e., trust to even enter in? As you look at businesses that emerge that are data-driven, the data and how you use it in the platform is trust creating or not. What you do with the data is also trustworthy or not, and the market votes very quickly. So this is not...
an example of having to build trust over years. This is an example of building trust over weeks. Think about a new active pharmaceutical ingredient that you would combine with your personal biology to create an end-of-one pill that's specific for David and it doesn't work. You better believe they're going on a health care review site. So trust to me is fundamental, and it's core to how consumer markets work. It will happen very quickly in this market.

12:39–13:13 **David:** There's inherently trust already in the system today when a physician prescribes you a pill and you pick it up at your pharmacy. You trusted the physician that it was the right choice, the pharmacist that they filled it correctly, and the manufacturer that it was made correctly. So we have to figure out how to continue that trust in two different engagement models; it can be created very quickly and it can be destroyed in an instant, and that's a challenge of the future industry players is, how do they create and maintain trust, with the data, as they move forward into this data-driven world?

13:13–13:38 **Heidi:** Health care consumers are increasingly important and influential drivers of change. This new relationship will be key for the patient and physician, our health care providers, our insurers. All of them play a role in how we all will process this journey of health. I want to thank my guests, Neal Batra and David Betts, for joining me at Exponential Medicine on our program, Tales of Transformation. Thank you.

13:39 **Neal:** Thank you.

13:39 **David:** Thank you.

13:40–13:45 **Heidi:** Stay tuned as we continue our series exploring the future of health.