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Rehumanizing Healthcare with AI: Turning Data Into Meaningful Outcomes

Dr. Birnholz:

Coming to you from the Medical Affairs Professional Society's Annual Meeting in Denver, Colorado, this is ReachMD *MAPS Chats*, and I'm Dr. Matt Birnholz. Today I'm joined by Dr. Susanna Gallani, the Tai Family Associate Professor of Business Administration at Harvard Business School.

Dr. Gallani, welcome.

Dr. Gallani:

Thank you for having me.

Dr. Birnholz:

You gave a keynote presentation on, as you called it, "From Volume to Value: How AI can Rehumanize Healthcare." I'm fascinated by that. And you framed a lot of the conversation around the ethical progression and the call to arms among the audience to collaborate and think of ways to design a system for utilization of AI in a healthcare model that many people call broken. And I'd love to get your take on what galvanized you towards this area of investigating AI because you have a non-traditional background if we're thinking about this entrance into the healthcare space. Can you talk to us about your background on that?

Dr. Gallani:

Well technically, I am an accounting professor, and my background is in business economics. I study performance evaluation and performance management systems. I joined Harvard Business School 10 years ago, and when I joined, I discovered the world of healthcare. And I had so many questions looking at it from an outsider perspective, where you start asking yourself, "Why is that done in that particular way?" Because we don't see the same patterns in other industries.

The other thing that caught my attention is that everybody complains about it. Nobody's happy about how the healthcare system is working. And so the question is, what can I, as an accounting scholar and an economics-trained researcher, do to contribute to this conversation? And for me, the default, because of my training, went to measurement. What I see as a tremendous opportunity in healthcare today is that we are not measuring the right things, and we are measuring the right things the wrong way. By right things, I mean outcomes—health, not just healthcare. It's not just about delivering care; it's about making people healthy and keeping people healthy, and we don't really have a good way to measure that. So for me, this is an enormous puzzle, and this is a place where we have so much work to do.

Dr. Birnholz:

You talked about something very intuitive—and yet I think many of us are ignorant of it—in medicine, everything is theoretically data-driven. Obviously, at the core of it, there's heart-to-heart communication and empathy. But the science that backs it comes down to what we call outcomes. And you said, "If value is defined as outcomes over cost, how do we define outcomes?" The answer is, there is no standard definition. And if we do define that in one respect, it doesn't work for another, and it becomes enormously complicated to actually track outcomes. Can you talk a little bit about that?

Dr. Gallani:

So one thing that I want to add is that outcomes don't have to be the same or measure the same way all the time. Healthcare is such a human experience, and being human is not standardizable. We share a lot in common, but what makes us patients and what makes us healthy is very different from person to person. One of the practices that I've noticed in healthcare is looking for that universal solution that will fix it for everyone. I would really love to see organizations embrace the hyperlocality of healthcare.

Communities are very different. I live in Boston, and there are, for example, two neighborhoods that we can look at. One is Cambridge, where Harvard is based, and one is Roxbury, which is one of the poorest parts of town. You probably can go from one end to the other in 30 minutes, and the life expectancy difference is 30 years. So how can we even think about a standardized solution when in a five-mile radius, we don't have the same experiences with health and healthcare. So for me, the idea is not so much to come up with an answer; it is more to come up with a methodology and ask better questions. Instead of looking for answers, we need to learn how to analyze the problems of the patient population that we take care of at a hyperlocal level and understand what matters to them.

So when I think of AI as a way to rehumanize healthcare, I mean it from both sides of the equation. Rehumanize the patient by getting more information about them and personalize healthcare to their needs, wants, aspirations, goals, choices, what they want to do, and what they don't want to do because they are in charge of their choices.

But also, rehumanizing clinicians—allowing them to do what they wanted to do when they were little, and they were thinking, “I want to be a doctor to help people when I grow up.” And so for me, this has been exciting because I see artificial intelligence as an opportunity to overcome the cognitive limitations of humans. And we need to do it well. We need to do it ethically, in a way that can improve the lives of people and not all the bad things that humans are known for doing when we give them a new toy.

Dr. Birnholz:

You gave this really good example of completely different outcomes within a very small radius, and that reminds me of this massive galvanization within the healthcare space around social determinants of health. But it seems like there's been an impasse around how to incorporate all those determinants in a way that's meaningful, to aggregate them, and to utilize them. And from what I understand, you're proposing that AI integration can help us really move in on that and find a way to operationalize those determinants—to turn that into calls for action.

Dr. Gallani:

That's right. We need actionability. My way of thinking is inspired by precision medicine, where we can now personalize treatment within all the many ways that breast cancer can manifest. Can we take that thinking and expand it to all of healthcare and say, “You live in this neighborhood, but that doesn't make you identical to your neighbor because you have a different lived experience, different social support, a different job—all kinds of differences that might impact your health.” Can we take that into consideration? It's way too much to ask a human; it's just too much work for their brain. It's impossible. But can we delegate this to a technology that actually is built to take in million data points?

Now, are we always going to get it right? No, and not at the beginning. The fear is, what if we get it wrong? That's a risk. But think of what we do now with surgery that we thought 50 years ago was risky. And I don't take this lightly; I want to be very clear that it's really important we think about mitigating these risks. But at the same time, this shouldn't stop progress, in my view.

So how do we leverage artificial intelligence to take into account social determinants of health, and even patient reported outcomes? These are all the data points that clinicians can use, and they would make them better clinicians. And I have yet to know a physician that says, “I don't want to know that.” I have heard more often, “I don't know how to use that information.” So we need to create those learning paths and those decision support systems that will do the work for you, and then support your decision making so that you can do the best for your patient. I think everybody would agree that's a good idea. I could be wrong; I'm happy to be contradicted on this, but I would really want to have that conversation with somebody who doesn't believe that's the right way to do it.

Dr. Birnholz:

From your vantage point, where are the stumbling blocks in terms of actually operationalizing AI into workflows within the healthcare system and leveraging the systems that will actually make those kinds of impacts?

Dr. Gallani:

That's such an important question. Clinicians don't have thinking time. They are so ingrained in the system, and the train is running a million miles an hour, and now we're asking them to switch the order of the train cars. We have to remember, they need to keep treating their patients. And you can't ethically experiment with the health of patients, so we need to create space for them.

I'm hoping that healthcare leaders will come to the realization that we need to create this space, because if we don't, somebody else will. I firmly believe that this development needs to be clinician-led, clinician-informed, patient-led, and patient-informed. I don't know how to do it, but I don't think it's impossible.

I think there needs to be some prioritization and thinking away from the short term of, what do I need to do this week? How many patients do I need to see this month? And I know that the financial pressures are significant, but we are trading the future for the present.

Dr. Birnholz:

I completely agree with you. And the idea of building the plane as you fly it is nothing new in the healthcare space. However, education is constant. And so I think what you're getting at is not necessarily needing to reinvent the wheel here, but integrating the system in a way that, in real time, produces tangible results for freeing people up so that they can do more of what they were originally trained for, which is to empathize and connect with other people and be good listeners.

Dr. Gallani:

Yes. And let's leverage our younger generations. They were born in a technology-enabled world, so their brains are more prompt to think in those terms, and they can see the world in a less ingrained way than maybe older professionals can. I'm not generalizing; I'm just talking about averages. So I would love to see more energy in medical school and nursing school to open up this experimentation and broad thinking.

As a business professor, a lot of times, we get organizations in any industry that come to us and say, "You need to teach our students AI." And my counterpoint is, "To do what?" I'm happy to teach them anything you want, but I need to know what the use cases are. In this particular space—AI in healthcare—we don't have the luxury because we don't know what we're going to do with it. But what if we could allow them to just think through it with us, and instead of imparting education, maybe make them part and parcel of the development? I think we would have a lot of brilliant minds that are ready to absorb these and take on the challenge.

Dr. Birnholz:

You actually put out a really great challenge statement to the audience. You didn't pose it as an answer or as a provocation, but you said, "There is talk about the integration of AI into medical education itself among those who, as a generation, are already indoctrinated into it. They are working it into their platforms for learning. And the question is, for utilizing these complementary functions for AI, how early to induct them into that. When is the right time? Should people learn the hard way in the form of scribe things because you will learn tangibly, or leverage these systems because they're going to be complements throughout your career? They're not necessarily going away, unless there's a bubble burst around AI. But I'd love to get your thoughts on it.

Dr. Gallani:

At the business school, we are embracing AI, and we're thinking about, where does it help, and where does it not? At the end of the day, we ourselves, as educators and researchers, need to be ready to change the way we do things. And that's hard. But if we want to live this inflection point that we are witnessing as protagonists and not as observers, I think we need to really step in and think about new ways.

The way I like to think about it is, what do I want this person to know at the backend? Ironically, it's another way to think of outcomes. For educational outcomes, what does this person need to know to be a good doctor? And then the method through which we deliver that knowledge might need to change to some extent. So what we want to preserve is that educational outcome—what the doctor needs to be able to do. That is really critical. Now, the means through which we impart that education or we stimulate that development in the person, we'll have to adapt.

Dr. Birnholz:

In my last question to you, where do you see things going forward? Let me just pose that as a broad speculation.

Dr. Gallani:

I have two different answers: where I want them to go, and where I think they're going to go.

Where I want them to go is, I want to hear more conversations about this and admitting that we don't know where we're going, but we have to figure it out together. We have to chart our own way. We're not given a map or GPS, but we kind of know where we're hoping to find. We're also very much open about how we don't know what's there. So let's explore and see what's happening.

And I certainly want to see more collaboration across disciplines, across industries, and across capabilities. This is not a time to think in terms of competitive advantage of this industry over that industry. I think that we have a lot to do to help each other make the world better, to use a cheesy metaphor. But at the end of the day, we have an opportunity.

Where I think things are going to go—I think there's going to be a lot of growing pains. If you think about the classic curve of adoption, right now, I am totally at the height; I think AI can do anything. I'm sure it's not true, but I feel very positive about the promise of AI. Soon, we'll start finding out what it cannot do, and we know a lot of that already—the jagged frontier that has been referred to as, there are things that AI does really well and things that it's really terrible at doing. At the same time, today, we have the worst AI we will ever have because it's developing so quickly.

I think we're going to make mistakes. There's going to be setbacks. And I also think that it is here to stay unless we deliberately and artificially decide to stop it. I don't see it as a danger. There are important risks, and we need to harness and control those risks. But the

upside is also there. That would be my assessment. I don't know if it's a good answer, but that's how I think about it.

Dr. Birnholz:

It gets full marks from me, and I can tell you as far as the collaborations go, Dr. Gallani, mission accomplished. Directly stemming off of your keynote, people were waxing philosophic immediately, and the collaborations, I think, are going to go on from there.

Dr. Gallani:

Thank you. I hope so.

Dr. Birnholz:

I've been talking with Dr. Susanna Gallani from Harvard Business School, keynote speaker at the MAPS Conference. Dr. Gallani, it's been such a thrill to be able to get your insights.

Dr. Gallani:

Thank you so much.

Dr. Birnholz:

This has been an episode of *MAPS Chats* on ReachMD. I'm Dr. Matt Birnholz. To access this and other episodes, please visit ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening.