

Vitals Transcript—The AI Revolution in Medicine

[00:00:00]

AI as Mind Crane

Girish Nadkarni: I think of AI as a crane for the mind because it amplifies your intelligence and it amplifies your effort and enables you to do things that were not possible before. That is where human judgment, human intuition, and human compassion come in, and there is no chance that AI is gonna replace that, right?

Show Intro and Big Questions

Leslie Schlachter: Hello, and welcome back to The Vitals, the Mount Sinai Health System show that brings you the latest in medical news, research, and innovation. I'm your host, Leslie Schlachter, a neurosurgery physician assistant here at the Mount Sinai Hospital. Artificial intelligence seems to be everywhere these days. It can write essays, generate images, but perhaps nowhere near its greater potential or stakes higher than in medicine.

But what exactly can AI do in a hospital? Does it really help practitioners make better decisions? And what will healthcare look like in five or 10 years from now as [00:01:00] AI becomes increasingly woven into everyday clinical practice? Joining us to answer these questions are two leaders helping us shape that future from different perspectives, Dr.

Robbie Freeman and Dr. Girish Nadkarni. You guys, thank you. This is very exciting. I'm happy that you guys are here.

AI Across Hospital Workflow

Leslie Schlachter: Can you guys just give us, like, an overview of how we're using it here and what you've, how you've heard it makes us so much happier?

Girish Nadkarni: AI is being used, uh, from the back office to the bench to the bedside and back again, right?

From the back office, uh, it's tasks that are administrative, right? Revenue cycle, billing, coding, you know, uh, uh, uh, other tasks that are very administrative in nature. Uh, to the bench, it's being used for research to make new discoveries, but also to help research across all of the administrative functions that research needs.

And then, uh, at the bedside, which I think is the most exciting part and the stakes are high, it's being used for clinical decision support, but also things that sort of bring the joy [00:02:00] back to medicine. For example, Robbie's leading, uh, the, uh, ambient AI, where as a physician, you can talk to a patient- Or

Leslie Schlachter: a

Girish Nadkarni: PA.

Or a PA, sorry. Or

Leslie Schlachter: a nurse.

Girish Nadkarni: Or a nurse. Nurse practitioner or a nurse. Or a nurse. As a clinician, as a clinician- Right?

Leslie Schlachter: Yeah.

Girish Nadkarni: I, I was saying physician because I talk to patients. Yeah.

Ambient Scribe Joy in Care

Girish Nadkarni: As a clinician, you can talk to patients, and before you had to, like, turn over to a computer screen and, like, type in your whole note, sort of breaking the relationship and leading to discontinuity in care, right?

But now it can hear the whole conversation and it can transcribe you, uh, it to a note, and that gives back sort of time to the clinician, but also relieves them some of the c- the cognitive burden of having to remember and type the note. But, and that gives back more time with patient, right? So that's a pretty powerful example of how AI is being used in, um, uh, uh, in healthcare.

I think- Conceptually, I think of AI as an arbitrage of, you know, intelligence for time. Um, so it gives back [00:03:00] time to you in your daily life to do

things that you really want to do, but it also gives you adequate time to make a decision for a clinician to make a valuable decision for a patient, right?

You know, if you have, instead of five minutes, if you have an hour or two hours or a day to know that the patient is getting sick, that sort of time- Right ... that you can have to actually make an actionable decision that can change a life, right? But Robbie, what do you think?

Patient Symptom Checker

Robbie Freeman: We're really thinking about what are the ways that technology and AI can support patients along the care journey.

One, um, interesting example, and we just published, um, on this in the New England Journal of Medicine Catalyst, uh, was looking at- Congratulations. Thank you. Girish was a co-author. And one of the things that we looked at was: How can AI support patients when they start having symptoms? So we created, in partnership, uh, with a startup, a product that we call Check Symptoms and Get Care, where as soon as you start feeling unwell, you can start, um, chatting [00:04:00] with AI.

With those symptoms, we can match those symptoms with evidence-based guidelines and then put patients in the driver's seat for where's the best place for them to go get care.

Leslie Schlachter: And- I've seen this on the app. Exactly. It'll be like, "Do you wanna see this person three blocks down the street at four o'clock?"

"Yes, I do."

Robbie Freeman: Exactly. Yeah. And so we co-designed that with our patients. We're having focus groups. We're talking to them. We're hearing from our patients, "Where can technology w- support you along your care journey?" And then AI is one of those tools that can really help us just reimagine how we deliver care and how we can support patients in their time of need.

Leslie Schlachter: That's amazing. So there's, there is, like, the patient side of things here, and then there's the clinician side of things here, which, by the way, also affects the patient. Um, but I'm just gonna echo what you said 'cause, for me, I've been practicing for almost 20 years, and there is no better feeling when

I go into a new consult or a follow-up, someone I know or someone I'm trying to get to know, that I click the button on [00:05:00] my phone, I know it's listening, and I can actually, like- Not turn away.

Girish Nadkarni: Yeah.

Leslie Schlachter: Like I'm listening, I'm touching, I'm, I'm doing all the things I'm supposed to do, and I'm not at my computer. Okay? And it's just like... And then when it's done, I don't have to do any of that. Like, my notes are done. It really, it really makes it not only a difference in my life 'cause I can get to the gym on time, um, but I am, I am connecting with my patients so much better.

It really is a big deal.

Girish Nadkarni: Yeah, and from the patient perspective, that's probably a much better experience as well, right? Your clinician is focused on you, not like turning to the screen every five- Yeah ... minutes and typing it in, and I think patients actually love that, right?

Robbie Freeman: And we've heard from providers that said, "Because of this tool, I'm gonna practice for more years."

Yeah. "I was thinking about retiring, but now-" Yeah. Good. No, it's cool "... that I have this tool that supports me, I'm gonna spend more years in practice." And so, um, this is one of those technologies that has been such an overwhelming, um, success, and the feedback has been so positive. We've now scaled it to over [00:06:00] 1,500 providers, and we're live across two hospitals.

Yeah. We continue to scale this, uh, at a sustainable pace.

Adoption Tips and Templates

Leslie Schlachter: Are you guys able... Uh, we're- we have, like, so many AI things to talk about, just, like, the agenda is long, but let's just stay here for just a moment. I was just talking- I was just talking to an oncologist who has this, but the thought of teaching it and optimizing it stresses her out, so she hasn't used it yet.

So how, like, how many of-- What percentage of people that have this technology are in that group where it's, like, stressing them out? How do you help them?

Girish Nadkarni: Um, so I think there's a very small percentage of people in that, uh, group who are worried about, like, teaching it and optimizing it, and that also is, like, a little bit of a misunderstanding because the technologies doesn't need to be optimized for that particular task, right?

It obviously gets smarter as, you know, it-- more data flows through it. But it-- y-you shouldn't take a special, you shouldn't take a special effort to, like, teach it or optimize it because- Yeah, just get started ... [00:07:00] 'cause just get started because- Just get started ... you know, it learns m- better and better from interactions- Mm-hmm

right?

Robbie Freeman: That's right. And for-- We started with some of the general kind of, um, areas, particularly areas like primary care, um, knowing that as we get more and more specialized, that there is some tooling that the specialist can do in the way they set up their note- Right ... that could really align with how they're using Ambient.

So I think to Girish's point, you know, it's probably not a technology limitation, but some of it is how you can set up the templates you use in your practice-

Leslie Schlachter: That's

Robbie Freeman: a human limitation ... to align

Leslie Schlachter: with

Robbie Freeman: Ambient.

Leslie Schlachter: Yeah, because you can put the technology in

Robbie Freeman: your smart phrase. Yep.

Leslie Schlachter: Exactly. Yeah, but it requires a whole six seconds of, of optimization.

Yes. Yeah. What other tools other than the Scribe, what other tools can we as practitioners be utilizing that we have right now at our fingertips?

Girish Nadkarni: Uh, so as clinicians, I think, uh, uh, along with the s- if you think about, like, the clinical encounter and, you know, the first part of the clinical [00:08:00] encounter is talking to the patient, sort of, uh, getting their story, right?

Mm-hmm. And that has now been optimized or augmented with AI by, you know, not having to type in data- Right ... every time you talk to the patient.

Leslie Schlachter: Yeah. And just to be clear, for people who are listening, the AI doesn't decision-make for us. The AI is listening to our note and writing what we are saying. Exactly.

It is not doing any medical decision-making for us.

Girish Nadkarni: Absolutely.

Leslie Schlachter: Just to be clear.

Predictive AI and ECG Insights

Girish Nadkarni: But now I think that opens up a sort of a broader aperture, right? I think as clinicians, all what we wanna do is make better decisions for our patients that are data-driven, and we wanna make them as-- with as much time as we can to actually change clinical outcomes and to improve clinical care- Yeah

by making actionable decisions, right? So then two sort of big approaches come in play. The first is predictive AI approaches, and that is, uh Can I tell [00:09:00] what's gonna happen to this patient in a year, two years, five years? Or if it's in more of a h- acute care hospital setting, can I tell what's gonna happen to them in the next 30 minutes- Right

60 minutes- Like a septic patient or something ... an hour. Like a septic patient. Yeah. That's a, that's a great example, right? Um, because, uh, human beings can't-- are not great predictors of what's gonna happen to the... in the future, right? Sometimes they are. Like, as a clinician, sometimes you can look at a patient and say that this patient is sick and needs help, right?

But that varies between clinicians, and, uh, you probably can't tell an hour back or two hours back if the patient's not looking sick that they are gonna get sick.

Right. And more importantly, no clinician can tell among all of the patients in the hospital who's gonna get sick in the next hour or the next two hours.

So predictive AI can actually help with that by giving you sort of- Among all of the patients on your census or on your list, which ones are the [00:10:00] likely two or three that might be sick in the next-

Leslie Schlachter: So it's screening like their vitals, their weight- Exactly, all of that ... past medical history, what their ABG is showing and they're saying, "Hey, look out for this guy."

Girish Nadkarni: Look out for this guy, right? Yeah. Um, but it can, I think, go one step beyond that, right? So I do a lot of work on electrocardiograms, ECGs, and most patients get them pre-operatively as part of routine health maintenance, anytime they hit the emergency room, uh, and it's one of the most utilized tests, right?

But from a ECG, just the waveform itself, there's a lot of information present in there that can tell you a lot about the patient's health status. For example, you can look at an E- an AI algorithm can look at an ECG and say what the ejection fraction is. No cardiologist on the planet, as good as they were, could look at an ECG waveform and give you a quantitative precise estimate of the ejection fraction.

The ejection fraction is, you know, how well the heart is functioning. Yeah, the heart's pumping. Yeah. Um-

Leslie Schlachter: You're saying AI can look at an EKG- Yeah ... and tell you what the ejection fraction [00:11:00] is?

Girish Nadkarni: Absolutely.

Leslie Schlachter: That's magical.

Girish Nadkarni: It's mathematical.

Leslie Schlachter: Are we doing that? It's mathematical.

Girish Nadkarni: Yes. So, so we are in the process of rolling out this program in which we can look at all of the patient's ECGs in the hospital and can tell you within five error points what the ejection fraction is and then put them into care.

Because if you diagnose heart failure early, there's a lot of things that you can do- Right ... in order to not just prevent progression, but in some cases reverse a heart failure, right? You have to put them on medications, you have to refer them to a cardiologist, you have to get them appropriate imaging, all of those things, right?

So that's another ex- ex- uh, an example. And then clinicians need access to the best information and the best evidence that's available out there in a conversational fashion and that's where sort of large language models, which is the modern AI, can summarize information from everywhere and present to them in a conversational, ready-to-understand summary.

Right. And we just started some of that work, but [00:12:00] Robbie, what do you think?

GenAI for Safety and Handoffs

Robbie Freeman: Yeah, I think that probably the hospital that best kind of adopts AI is gonna have the best kind of quality care safety outcomes. Meltzer may have done a lot around how do we use tools like AI to keep patients safe in the hospital.

Mm. So as, you know, Girish mentioned p- predictive analytics in the hospital, we have tools that help us understand who may be likely to fall or fall and have an injury, who may be likely to become delirious. Who may be likely to, um, be at risk for deterioration. I think as clinicians at the bedside, sometimes you would look at the patient, and you would just get that sixth sense like- Yeah

oh, something's gonna happen, right? And probably you were picking up on some patterns, you know, somewhere, but the algorithms do that really well. Yeah. And so I think that this ability to use AI to figure out how do we keep patients safe, uh, becomes really important. And then I think now with generative AI, we're seeing for certain key, um, points of the care, especially on the inpatient side, we're seeing where AI can do things like [00:13:00] summarize what's happened over the shift so that when we do a handoff, we can see what's happened over the last 12 hours, how has the patient progressed towards their care goals, and make sure at that ch- sh- uh, shift change, which can be a time where information can fall through the cracks- Right

AI can make sure that all the key elements get passed on to the next member of the care team that's gonna care for that patient.

Reducing Waste With Nudges

Leslie Schlachter: So it seems like AI is here to keep the patient safe, patient safety, their health, practitioner happiness and time, but also, like, hospitals making money. Is there a way-- I- is our-- Do we have AI right now working for us to catch medical waste?

And by medical waste, like, for example, I was-- I saw a patient, um, yesterday, and I went to go order a whole bunch of tests, and then at the last second I was like, "You know, let me just check Care Everywhere really quick." And I saw that this patient had just had these things done a week before. Is there any way that, like, s- anything that we order, it can catch us and [00:14:00] say, "Hey, this was done somewhere else," or like, "Are you sure you really want that?"

Like, the last three were normal," type of thing?

Girish Nadkarni: So I think we are working towards that, and that is-- that needs to be rigorously tested and evaluated because that almost gets into clinical decision-making, right? Right. And, you know, your point is great, right? Sometimes tests get ordered, like, a day back, right?

As a clinician, I don't necessarily need to order, like, a CBC on every patient-- Right ... every day. S- I mean, that obviously is wasteful, but also, like, causes-- Yeah ... like, in-hospital anemia at some point of time, right? Yeah. Like, if you draw enough blood from people. Yeah. Um, but you could a- also think about, like, the one case where it was needed and you said, m- you know, you don't do it, and as a result of that, something happened, right?

There's that aspect, that safety aspect there as well. So we have to be really, really careful in sort of that because that impinges upon medical decision-making-- Yeah ... or [00:15:00] clinical decision-making.

Leslie Schlachter: Well, not like a hard stop. Yeah. More like a gentle suggestion.

Girish Nadkarni: Yeah. And I think some of the work that we're doing with, uh, Dr.

Nick Gavin, the chief clinical innovation officer, in, like, the Nudge Unit, which thinks about combining AI, digital health, and behavioral economics in order to reduce waste like this, is gonna be really useful. But I would like to say that

these things need to be, like, rigorously tested- Right ... and made as safe as possible before, like, scaling them.

Governance Assurance and Future Tech

Leslie Schlachter: And is that something-- Like, all of these projects and all of these ways that you guys are using AI, 'cause I know you have your own building. Is that like-

Girish Nadkarni: I have an office and a building. I have one office in the building. It's a small office, smaller than his.

Leslie Schlachter: Does it have a window?

Girish Nadkarni: It has kind of a window that looks out into another window.

Leslie Schlachter: So you guys have your AI team.

Girish Nadkarni: Yeah.

Leslie Schlachter: Are you guys doing this all yourself? Are you working with outside companies? Like- Yeah ... where is all this software, hardware- So- ... coming from?

Robbie Freeman: Yeah, there's a broad portfolio. We have one overarching governance, so everything goes through [00:16:00] one, um, governance process. About 20 to 30% of the portfolio are tools that we've developed in-house.

Mm-hmm. The other two-thirds are partners that we work with. So some of the big ones are Epic, our medical record provider. Um, in the radiology space we have a number of kind of the radiology AI vendors- Right ... since they were pretty, you know, early, um, to the space. I see that

Leslie Schlachter: all the time in my reports.

It'll be like, "AI saw this." Just- Right ... you know, the radiologist says this, but AI saw that.

Robbie Freeman: Yeah, because imaging lends itself so well to these m- uh, AI models, they were pretty early. So over the past 10 years there's been a

number of innovations in radiology, and that's why you'll see probably the most number of kind of third parties that we work with in the AI space, um, are serving kind of imaging and radiology type use cases.

Um, but one of the things that we've done that's been a real innovation, uh, under Girish's leadership in the AI department was creating what we call an assurance lab, so that any AI that we use we can test rigorously. So [00:17:00] any time we get a request to work on a new kind of AI project idea, and for the things that we've implemented over the years, we can score them and we can look at what is the risk of something going wrong if this tool were to fail?

And for the high-risk AI tools, we can bring through our assurance lab, um, Dr. Ankit Sakhuja is the leader running the assurance lab, um, where we're gonna-- we bring all these models through, we test them rigorously, and then we can have a performance report so we can know how did these models work? Is there bias?

Does it work as kind of advertised? And make informed decisions around the AI products that we, uh, decide to use pr- in particular, for those that we use for our clinical care.

Leslie Schlachter: Right.

Will AI Replace Clinicians

Leslie Schlachter: So these misconceptions that people have that, like, AI's gonna replace doctors or... I mean, that is just clearly not the case.

You guys test everything. I don't believe that will

Robbie Freeman: happen. Yeah.

Girish Nadkarni: I don't, uh... And Robbie, I'd be very interested in your opinion, not just doctors, [00:18:00] but let's talk about clinicians in general, right? I think that's a very important topic to talk about, so thank you for bringing that up. Uh, you know, AI is great at pattern recognition and pattern matching because at its core, that's basically these are giant pattern matching machines, right?

W- but at the same time- Medicine does not exist in just pattern matching. I think, you know, it's not a series of yes or no decisions, right? As, as clinicians,

you know, take off your tech hat for a minute, Robbie, and go back to a clinician hat, there was-- medicine is never a series of yes or no decision, right?

Every decision in medicine, in clinical medicine is different. Be if you're a physician, you're a nurse, you're a physician assistant, you're a ABP, whatever. Every decision is different because every patient is different.

Leslie Schlachter: Right.

Girish Nadkarni: And that is where human judgment, human intuition, and [00:19:00] human compassion come in, and there is no chance that AI is gonna replace that, right?

I think, you know, Steve Jobs once said that a computer was a bicycle for the mind, and that's a very good, good analogy. Right. But, uh, and this is not my analogy, it's someone I respect deeply, uh, who thinks about this. I think of AI as a crane for the mind because it amplifies your intelligence and it amplifies your effort and enables you to do things that were not possible before.

Like, a human couldn't move a two-ton piece of rock, but a human is in control of the crane moving that two-ton piece of rock, right? Right. So it's an amplification and an augmentation for your effort. Now, will there be parts of the job that get replaced or automated? Yes. But that gives you an opportunity to build something bigger and better and new jobs and new parts of the job- Right

get created that are uniquely human.

Leslie Schlachter: And more time.

Girish Nadkarni: More time.

Leslie Schlachter: Exactly. More time. Just creating more [00:20:00] time.

Girish Nadkarni: What do you think, Robbie?

Robbie Freeman: Yeah, I completely agree. It's very clear that, um, AI, there will not be replacing many aspects of the work that our clinicians do. And although as the technology evolves, our ways of working evolve, I see a future where, um, this technology can really free us up from what has been a burden of documentation and administration and really give us time back, um, to spend with patients.

Hospital Room of the Future

Robbie Freeman: And for the first time, you can see a, a future where you can, you know, in the hospital, literally walk into the room, have that kind of discussion with the patient, and through voice AI and through vision AI, we can capture that without having to even touch a keyboard. And-

Leslie Schlachter: Wait, are you-- can you do that? Can I, like, pull up...

Like, if I'm on my Haiku And I wanna put in a note 'cause I'm rounding on a patient. I can u- how do I use AI in that? 'Cause I, I thought I

Robbie Freeman: could also- It's something we're working on. Yeah. Yeah, and so- Right ... uh, we're live at two hospitals with our nursing [00:21:00] team on the inpatient environment to, for a lot of the kind of EMR-based documentation, to use ambient AI that can fill out things like, um, shift assessments and flow sheets and notes.

And so we're quickly getting to that point where you'll be able to pull out- I'm so ready for that ... your Haiku, but we can take it even one step further. Yeah. I think the ways that we're designing the hospital rooms of the future is that we'll have embedded in the room the technology so you can walk in and have that interaction with the patient, and you won't even have to pull out your phone.

You can just have that natural, um, interaction, and we'll be able to, um, document on the back end. Will it just sense that

Leslie Schlachter: I'm in there, my Haiku is in the room?

Robbie Freeman: Yeah, so besides, you know, two important technologies come into play. One is voice, which drives a lot of the ambient documentation.

Leslie Schlachter: Right.

Robbie Freeman: But we're also thinking deeply about vision.

So how could the AI eyes in the room help, first off, keep patients safe? So make sure that we're looking out for things like [00:22:00] who may be at risk for falling or developing a pressure injury, 'cause if they're not moving around in the bed- Mm ... they can be at risk for a pressure injury. Who could be at risk for deterioration?

Because the vision AI models can look at you and get a sense of what is your respiratory rate and temperature, even things like blood pressure and SpO2. Mm-hmm. Um, and then also help with documentation so we can know that Leslie walked into the room, um, talked about X, Y, and Z with the patient, and we can capture that, uh, within the EMR seamlessly.

Leslie Schlachter: That's amazing.

Wearables Glucose and Automation

Leslie Schlachter: Do you know what I think about sometimes? 'Cause clearly I think about AI in my sleep. You know how, how many patients in Mount Sinai Hospital in one given day have to have their glucose checked with a skin prick? Why can't all of our patients just get, like, a little Dexcom on them? Sure.

And then when the person walk-- like, the nurse comes in the room with the little thingy, it goes, "Ah, Joe Smith is there. Bing. Their glucose is 130." Why do we have to skin prick? I feel like we're past [00:23:00] that.

Robbie Freeman: Well- There's actually a really-- There's a, a project with a really innovative nurse at one of our campuses that's working on just this, uh, an IRB project around, uh, giving patients a, a wearable patch instead of having to prick their finger, so- Yeah

they're- '

Leslie Schlachter: Cause they can leave it on for, like, their whole hospitalization.

Robbie Freeman: Exactly.

Leslie Schlachter: Like, I think we're past this.

Robbie Freeman: Yes.

Leslie Schlachter: Okay, so this is happening.

Robbie Freeman: This is happening- Yeah ... and I think you're spot on that, you know, in the future state, we can just give you the patch, and we won't have to... You know, I remember having- Just, like-

all

Leslie Schlachter: those times having to prick ... walk in the room and it goes... Yeah.

Robbie Freeman: Yeah, all those finger pricks. Not fun for patients.

Leslie Schlachter: No. Yeah. It's not fun.

Girish Nadkarni: Well, I, I-- And I-- You're a, a neurosurgery PA, so you have to maintain glucose in- Yeah ... postoperative surgery. No,

Leslie Schlachter: we mess it up because we give them

Girish Nadkarni: dexamethasone. Yeah.

And y- it's, it's sort of- continuous and laborious to sort of titrate the glucose and the insulin drip, right? Yep. And that keeps patients in the, um, uh, in a ICU bed for longer than they should, right? In the hospital [00:24:00] longer- In a hospital longer ... delays healing, the whole thing. So I mean, think about a future, and Robbie and I are working on this actively, uh, where along with, like, the Dexcom and continuous glucose monitoring, you also have automated titration of insulin with a human in the loop so that you can actually maintain the glucose within a particular range and get people- Yeah

out of the ICU bed, but also the hi- hou- health system faster, right? I mean, like, otherwise it's like prick- Yeah ... titrate, prick, titrate- The, the thing ... prick, titrate. Yeah,

Leslie Schlachter: sliding scale. It's a whole thing.

Girish Nadkarni: It's a whole thing.

Leslie Schlachter: Like, so give me a couple more of those. Give me a couple more of, like, those can't wait for this to happen AI fixes.

Genomics and Sinai Million

Robbie Freeman: Do you wanna talk about genomics and the Mount Sinai Million?

Girish Nadkarni: Yeah, that's a good one. You want- You should talk about it. Yeah. You should talk about it.

Robbie Freeman: I think this future state where everyone brings their genome with them to the clinic-

Leslie Schlachter: Mm-hmm ...

Robbie Freeman: is not so far away, and so we know that if you do full exome sequencing, um, on patients, that about [00:25:00] 8% of the time you're gonna find some sort of actionable finding, right?

Something, some sort of marker- Oh, yeah ... that you could do something about. And so, you know, as you know, um, tho- that, that can have a really big impact on how we care for patients and manage patients, and especially for those actionable findings, we wanna make sure that that becomes part of the care plan, right- Yeah

for patients.

Leslie Schlachter: You really wanna build business at Mount Sinai, check everyone's genome. Yeah. We'll find lots of work to do.

Robbie Freeman: Well, yeah. And in addition, we th- I think that number is probably a lot higher than 8%.

Leslie Schlachter: Yeah.

Robbie Freeman: Right? Those are just the ones we know about. Yep. So I think that now, in one of the, uh, ambitious efforts that's under Girish and Dr.

Alex Charney's leadership, is to do full exome sequencing on one million patients and to use AI to really understand what are all the other things out there, and then how do we then take your genome, combine it with all that rich clinical information that we have, and really truly deliver a personalized care experience for patients?

Leslie Schlachter: Yeah, that's the trick.

Personal Genomics Story

Leslie Schlachter: So, like, I did genetic [00:26:00] testing. Yeah. I did it through, uh, sequencing.com. Um, they... It was just, like, a salivary test, right? So you do the salivary test, you send it in. A week or so later, your whole genome comes back to you. Um, and mine said that I have some sort of genetic mutation that makes me not respond to Coumadin.

Lovely to know. Lovely to know.

Girish Nadkarni: Yeah.

Leslie Schlachter: Um, and then the second thing was, is that I have a very high risk of heart disease. Now put that together with my family history of heart disease, I called one of the cardiologists that I work with. I went in for a calcium scan. I have a 55, which for everyone I know has a zero.

So like everyone- Mm-hmm ... I thought I was gonna have a zero, but I don't. So it came back at a 55, and I'm in the 98th percentile for my age, race, and gender, which means only 2% of women my age have worse scores than me. Um, what's, what, so that's great, so now I'm getting like my stress echo and everything.

I'm starting medication, so I have heart disease. But that's just like a standalone test. That is not integrated into [00:27:00] my Epic medical record or anything else.

Girish Nadkarni: So let me ask you this, right, and if you don't mind sharing, right?

Leslie Schlachter: I'd love to.

Girish Nadkarni: Um, would you have gotten the downstream clinical testing if the initial stimulus of getting your high-risk genetic result were back?

Leslie Schlachter: No, I would've kept doing what I've been doing, which is just getting my blood tests every year. Like, going to my primary care and getting, like, my basic stuff done.

Girish Nadkarni: A- and the blood test didn't show anything, uh-

Leslie Schlachter: So my blood test show... So I've had high cholesterol for years. I've been on five milligrams of, uh, Zocor for a while.

Yeah, me too. No, and then, so I was on five, like, didn't respond at all, so they put me up to 10, like, a little bit better. Um, and then, so that was last year. I'm actually due to go back to my primary care now, and it probably would, it's probably gonna be terrible. But, um, no, I would just keep doing all of that and listening to what...

I would not have gone for that extra test.

Girish Nadkarni: Yeah, because I have a very similar story- 'Cause

Leslie Schlachter: like- ...

Girish Nadkarni: regarding me, right?

Leslie Schlachter: What's your calcium score?

Girish Nadkarni: [00:28:00] Uh, 105. Oh, 105.

Heart Risk Wakeup Call

Girish Nadkarni: Yeah.

Leslie Schlachter: Oh, and how old are you?

Girish Nadkarni: I'm 40.

Leslie Schlachter: Oh, so we're, like, hanging out in the same boat.

Girish Nadkarni: Yeah.

Leslie Schlachter: What, what, what dose Zocor are you on?

Girish Nadkarni: Now I'm back on, uh, uh, 20, but, uh-

Leslie Schlachter: Yeah

Girish Nadkarni: um, uh- Do you

Leslie Schlachter: take that new one, the Repatha?

Girish Nadkarni: No, but the Repatha is coming in pill form.

Leslie Schlachter: Oh, you're gonna do that.

Girish Nadkarni: But I also started on, like, Ozempic-

Leslie Schlachter: Yep ...

Girish Nadkarni: uh, because, uh, it reduces, cuts your cardiovascular risk. Mm. But the, the story is very similar because I got my genome sequenced through Mount Sinai Millian, and I, you know, signed up to get my results back, and my cardiovascular risk was high as well.

Yeah. And it makes sense because my dad has type II diabetes, and his cardiovascular risk is high. Right. And that's why that kicked off the whole chain for me. Yeah. Uh, that's why I was just curious to hear you, your story.

Leslie Schlachter: Yeah, I probably... I just got nervous because, like, looking at my family and, uh, and then, like, my Instagram keeps feeding me that, you know...

When we need to do a podcast on this.

Girish Nadkarni: Yeah.

Leslie Schlachter: Like, you know, heart disease is the number one cause of death in women.

Girish Nadkarni: Yeah.

Leslie Schlachter: And [00:29:00] so, like, I do my mammogram every year. I do my cho- I do everything that I'm supposed to do. So, like, let's take it up a notch. I don't wanna die of a heart attack.

Mammograms Meet Cardiac Clues

Girish Nadkarni: Yeah, I mean, the, now there's technologies which can look at your mammogram and calculate your coronary artery calcification from the mammogram.

Leslie Schlachter: My giant pecs are in the way. It blocks my heart.

Girish Nadkarni: Oh. No, but you can- ... actually calculate the mammary artery calcification which correlates- Oh ... strongly to-

Leslie Schlachter: That's interesting.

Girish Nadkarni: Yeah.

Leslie Schlachter: That's really interesting. Are

Robbie Freeman: we,

Leslie Schlachter: are we doing this?

Girish Nadkarni: No, I think we, we are in the process of doing this because how many mammograms do we do a year?

So many mammograms. Yeah. And so, so yeah, I, I think we

Leslie Schlachter: may have

Girish Nadkarni: enough understanding- So

Genomics Results at Scale

Leslie Schlachter: anyways, so, so the genetic- I was just curious ... so the genetic testing is a blood test.

Girish Nadkarni: Yeah.

Leslie Schlachter: It's a blood test. Also

Girish Nadkarni: a library test.

Leslie Schlachter: Or... Okay. Um, and then do you already have the technological ability to- Yeah ... Okay. So you're going through the chart, and then what happens?

What does it spit out to the patient?

Girish Nadkarni: So right now, I think the way that we, it, it will happen is according to, like, New York state [00:30:00] law, we are allowed to give back results for the 8% of people that have actionable findings. But, like, familial hypercholesterolemia-

Leslie Schlachter: Mm-hmm ...

Girish Nadkarni: card- cardiovascular disease is part of those 8%.

But like Robbie said, that number is gonna grow significantly- Yeah ... over time as more and more things become available. You guys

Leslie Schlachter: are gonna need to hire a whole group of practitioners just to call everyone and tell them what's going on.

Girish Nadkarni: Well, or, or you could use- Have AI do it ... agentic AI to actually call them, right?

Have a

Leslie Schlachter: chatbot call them.

Girish Nadkarni: Yeah. I mean, like, I think a lot of patients, you know, at least 80% of patients in studies wouldn't mind the first outreach for a follow-up test or a follow-up scan being AI, as long as, like, you know, they know that they can escalate to a human anytime that they want, right? Mm-hmm.

And this is actually good because you can reach scale, right? That's right.

Robbie Freeman: Yeah.

Leslie Schlachter: Yeah. And I think these-- the generations coming up, like, they prefer that.

Girish Nadkarni: Yeah.

Leslie Schlachter: You know, like, for me, I always laugh. Like, my patients who are, you know, 60 plus, they [00:31:00] all want phone calls. You know, 30 to 60, they want their MyChart.

Girish Nadkarni: Mm.

Leslie Schlachter: And then, like, the under that, they, like, just don't wanna be bothered. Right. They just, like, don't want it. Like, send them, like, an SOS through a chatbot. Um, yeah, I would imagine if they're signing up for that, they would be fine with, like, some AI communications about all of that.

Girish Nadkarni: Yeah.

Robbie Freeman: And we're, we're thinking a lot about that on the channel communication we can take based on patients letting us know their preference in our app.

We could-- That will decide, you know, do you get a phone call? Do we text you? Do you want an email?

Leslie Schlachter: Right.

Robbie Freeman: Um, do you want all the above? And so we, we take those preferences, and that drives how we do these kind of outreach, um, communication, both for the human outreach but also for the voice, um, AI agents that, um, call patients today.

Leslie Schlachter: Cool. Hold on. There-- You, you were making me think of something. There was a question in here that I wanted to ask a little bit differently.

Girish Nadkarni: I look fine, right?

Leslie Schlachter: [00:32:00] What?

Girish Nadkarni: The mountain I'm in

Leslie Schlachter: Are, are people signing up for that?

Girish Nadkarni: Yeah, we've signed up like- For Mount Sinai ... 400,000.

Leslie Schlachter: So are you hitting the numbers that you were hoping for, for the Mount Sinai billion? Yeah, I

Girish Nadkarni: think so. But I think we now need to like ramp up giving the results back to patients.

Robbie Freeman: One of the things we did, um, that was, I think, fairly innovative, was build that consent process into our app check-in. Yeah. So when, when patients check in for their appointment, they can see they have the ability to opt in if they decide- Right ... if they decide to do so. And so building that into the digital experience, I think helped get us to that.

Helped a lot. Yeah.

Privacy and Trust Tradeoffs

Leslie Schlachter: Yeah, that was actually what I was gonna ask. So, like for me, when, when patients come in, they'll be like, "Do I have to do this, this, and this?" But there are patients that are concerned about their privacy, that the information that you guys are gonna get is gonna be used in ways that, you know, some people just wanna know if it's gonna benefit them, but they also wanna, like, "Are people gonna know my health information?"

So what's-- How do you handle privacy when it comes to this?

Girish Nadkarni: So I think privacy is like our biggest, one of our biggest values, and [00:33:00] all of the information is within our secure infrastructure and our secure firewall. We think about that all the time. And I think that is also something that we try to communicate to patients, that this information will not be shared without your express consent with anyone outside, unless, uh...

But it's two things, right? The more information you share with your health system or your provider, the more opportunities are there for, you know, knowing something more about your health, helping you. But then it's also a broader altruistic thing, right? The more information you share, like people- Everyone benefits

everyone benefits, right? Everyone benefits. Because you need those scale, that scale of studies.

Robbie Freeman: And that's the benefit of, um, going through a health system like Mount Sinai versus some of the consumer-facing, you know, the type of thing 23andMe used to offer and other consumer-facing products. You know, um, I think as a health system, we put the trust, safety first and foremost.

Consumer AI Safety and Triage

Girish Nadkarni: But I think that's a good conversation to have at some point of time about the [00:34:00] consumer-facing AI that's coming up, right? And I see both sides of it. And there's an absolute need for it because a lot of patients don't have access and they want twenty-four/seven care. But there's also like a dangerous side to this where, you know, if you start treating it like your clinician and it tells you something that's obviously not concordant with clinical guidelines.

If you believe it, there's potential for harm there, right? Like there's-

Leslie Schlachter: Yeah, but Bobby said he's testing it in his lab.

Girish Nadkarni: Yeah. No, we are testing- Maybe it's not worth it ... all of those things. You, you wanna talk about the ChatGPT health paper? No, you should, you should talk about it.

Robbie Freeman: Yeah. No, it's something that G- uh, Girish and I and the team talk a lot about is kind of the level of kind of testing safety.

Right. So our assurance lab tests the internal tools, so things that we would use with our own physicians or our own patients.

Leslie Schlachter: But- Like that app thing we were talking about.

Robbie Freeman: Exactly, like- Okay ... check symptoms and get care- Right ... the symptom checker, you know, as an example. Um, the-- there's also all those tool-- There's also the consumer tools that people may just [00:35:00] find Patients may download ChatGPT on their own or go on Right.

I see

Leslie Schlachter: stories on that regularly. Yeah

Girish Nadkarni: Good stories or

Leslie Schlachter: bad stories? Like ChatGPT told someone not to worry about their symptoms and they had end-stage cancer and to trust in God because they were a preacher or something. Yeah.

Robbie Freeman: Yeah, there's a lot, uh, that we don't know yet, and one of the things we saw in, in the study that, um, we had recently published was that oftentimes tools like ChatGPT don't do a great job triaging.

They often either over or under-triage, and sometimes they miss really important safety flags- Mm ... from patients. So we don't think that, that using them for, for deciding where to go for care, for triage, for, for serious safety types of questions, that they're giving the best guidance. And I think there's, you know, more research coming out, you know, regularly I think showing that-

Leslie Schlachter: Take all of what, what, what you believe to be that human error and compare that to like what chat or chat, like a bot would...

Similar?

Girish Nadkarni: I mean, so we've done the follow-up study comparing it to like [00:36:00] actual humans and real-world data, and there's still significant number of over-triaged or under-triaged compared to like a nurse-line triage or a physician-line triage or a PA- PA-line triage. So that, that comparison has been done. Now, don't get me wrong, I'm not saying humans are perfect, and humans are not perfect, but there are con- there are things like no clinician would miss, like no licensed clinician in their right mind would miss like safety signals, right?

Because these are large pattern matching algorithms, there are ti- and there are decisions that are made on the back end, either architectural or guardrail decisions, that things get, will get missed. Now, I'm not saying that like, you know, that you should compare them to a absolute You know, unachievable standard of 100%, but even if you compare them to a human standard, they should be tested and rigorously assured.

And more importantly, there should be clear language to patients, [00:37:00] like telling them that, you know, "Use this for guidance or advice or dietary advice."

Leslie Schlachter: If the

Girish Nadkarni: symptoms persist, go to the ER. Yeah. But if the symptoms persist, go to the ER, right? Or talk to like a clinician, right? Yeah. That I think- Or use our symptom checker Or use our symptom checker, right?

Yeah. That, that, that... Or use like a health system, right? That is, I think, clear guidance that needs to be sort of delivered by us as a medical and a

Leslie Schlachter: clinical community. Yeah, there should be some sort of like FDA-approved statement at the end of any medical... 'Cause like, uh, I'm embarrassed to say, I asked ChatGPT, like I had a rash a couple weeks ago.

I took a picture of it, and I was like, "So?"

Robbie Freeman: Hmm.

Leslie Schlachter: And it gave me a list of what it was, and I was like, "Oh yeah, one of those makes sense." But at the bottom it should've said, you know- This is not medical advice ... "If this doesn't seem right, this is not medical advice. You know, if it persists, go to the hospital," or something.

Robbie Freeman: That's right. Yeah.

Connecting Records for Coaching

Robbie Freeman: And I think there are some use cases where it's great for, you know, health coaching, general education. I connected my ChatGPT Health to my, My Mountain account, and it's helping me train for, [00:38:00] um, a race I'm doing next month. Wait, what

Leslie Schlachter: do you mean you c- what do you mean?

Robbie Freeman: Uh, so chat, uh, now there's the ability to connect tools like ChatGPT, um, with your, um, medical record, so you can actually- Like your MyChart?

Yeah, with MyChart. And so it can actually... And with your, you know, if you have an iPhone, Apple Health, if you have a Android, um, Android Health- Fun times ... and, and wearables. And so it can actually look at things like your sleep, your steps, your laboratory tests, and kind of put the picture together to help come up with a specific kind of coaching plan.

And so- We're gonna have to do a whole separate podcast so

Leslie Schlachter: you can teach us how to connect our Apple Watch to our MyChart. Glad

Robbie Freeman: to, yeah. Glad to. And so I think that there's definitely a role for these tools, and we're starting to really figure out our strategy around how do we empower patients to ask questions with the right tools, with the right guardrails, um, to support them along their care journey.

MyMountSinai AI Assistant Tools

Leslie Schlachter: What other, so what other patient-facing tools are there right now that w- that they, our patients could be using?

Robbie Freeman: Uh, so [00:39:00] within our app, My Mount Sinai, we do have, um, chat with AI. So there's a couple things patients can do. They can do things like if they have a question about their bill, we know that bills in this country, right, can be kind of confusing.

Yeah. For sure. And so we have, uh, the ability to kind of help un- explain it, understand it. Um, we have functionality that can help you book your appointment. If you wanna cancel, confirm, schedule your appointments, um, our AI assistant can do that. Um, some of the things we're working on are things like, uh, medical, um, medical records requests and also pharmacy, like medication refills.

Um, so the transactional things, the AI agents can do really well. You wanna complete a task, you know, they can do that really well, and that, that's where we're focused. Based on our discussions with patients in the focus groups we hold, we take that feedback, and then we prioritize the AI agent to kind of work on the things that the patients say are most important for them.

Leslie Schlachter: I do want my MyChart to send me a MyChart message when my prescription is running low and there's no more [00:40:00] refills left to ask me if I, if they can ask my doctor for another refill. Can we do that?

Girish Nadkarni: I think so.

Robbie Freeman: Yeah. I

Girish Nadkarni: think

Leslie Schlachter: definitely. I, I would like that.

Girish Nadkarni: I think it already sends a message when the p- prints is running out, but adding a layer of intelligence saying that- Yeah

"Would you like a refill?" should be definitely possible. Yeah.

Leslie Schlachter: Yeah, that would be lovely, 'cause then I have to remember to send the message, and then- Yeah ... you know, it's, uh, two days later, and I already ran out.

AI Prescribing and Escalation

Robbie Freeman: And there are parts of the country where they're using AI to actually do the medication- Refill ... r- renewal and refill, um, where AI is essentially the prescriber.

Like, uh, in the state of Utah, there's a company who's doing that today for medication renewal. So we're starting to see things like that where AI is actually serving as a prescriber. Um, Krish, I would love your thoughts on that work.

Girish Nadkarni: So let me just take a step back and say that there's an absolutely a need for something like this, right?

Like, where, um, uh, because of the lack of access to healthcare in this country, the need for proactive as opposed to reactive healthcare, there's a need for something like this. [00:41:00] But I think that there's a disconnect here between two things, right? The one disconnect here is that there's no safety valve for any of this consumer-facing products to e- escalate or no escalation pathway.

Like, in 99% of cases, it might be just a regular rash, right? Right. But in the 1% of casing, it might be necrotizing fasciitis, right? And you, there, for that, you need to go to the emergency room as soon as possible because, um- You know, dying is- Yeah, we don't

Leslie Schlachter: wanna die,

Girish Nadkarni: right? You wanna die, yeah. I don't wanna say that out loud, but, uh, y- you don't wanna die, exactly.

Um, so I think that whenever these consumer health companies build these patient-facing things, they need to worry about safety because it's not like what

would happen in like 90% of the cases, it's what the long tail distribution of the remaining 10% that you have to worry about because that's where... M- I mean, you know this as a clinician, you know this as a clinician, 90% of patients are gonna be safe at any point of [00:42:00] time.

It's 10% of patients- Right ... and you don't, sometimes don't know which ones that might have bad outcomes, right? And, um, it's a, it's a 10% that you have to worry about. The second thing I think is they need some sort of interaction or, um, uh, like at least like a s- escalation pathway to a regular health system which can take those 10% of actually- Right

dangerous cases and have the infrastructure, have the clinical expertise, have the procedural expertise in place to actually handle that. And the third thing is like what you said earlier, there needs to be sort of clear warning labels around what it can do, what it should do, and what it must do, right?

Right. And you know, it can maybe diagnose a bunch of things, but should it diagnose them? Or at least if it does, should it tell you what the worst thing possible is because then you can maybe act on it?

Leslie Schlachter: Right.

Girish Nadkarni: And must there be some sort of a warning label on this that this is not medical advice, right?

Leslie Schlachter: Yeah. I mean, for people in healthcare, do I need that? [00:43:00] Absolutely not. But for the layperson who actually believes that whatever ChatGPT or Claude or whatever says is truth-

Girish Nadkarni: Yeah ...

Leslie Schlachter: yeah, no, there needs to be a warning.

Girish Nadkarni: But there's many more laypeople than people in healthcare,

Leslie Schlachter: right? Exactly, so there needs to be a warning

Girish Nadkarni: Yeah.

Robbie Freeman: And we know that access can be a challenge, right? Yeah, right. Depending on where you live especially, may be hard to get access to

primary care and especially specialists. You know, 50% of the country doesn't have access to a cardiologist when you look across the US.

Leslie Schlachter: No, you were just saying before about like the smart eyes in the room that can like see oxygenation, whatever it might be.

There's a huge s- a lot of... Like pre-COVID, I did like no telehealth, right? COVID, a bunch of telehealth. Now, so much telehealth. Yeah. So there are telehealth ICU doctors. There's telehealth everything.

Robbie Freeman: Right.

Leslie Schlachter: So in those situations where you can actually have AI eyes in the room with a tele provider, that sounds amazing.

Robbie Freeman: Yeah. That's [00:44:00] right.

Leslie Schlachter: That's, that's like life-changing.

Robbie Freeman: Yeah. And we know that, um, the, the evidence-based guidelines are not followed 100% of the time. So I think AI as that tool that's can help us monitor what's going on in the medical record, what's happening in the room through vision and through voice, can help kinda keep us on track with, um, following evidence-based practice and best practice guidelines.

AI in Research to Bedside

Leslie Schlachter: So as we're finishing up, we talked about, like, obviously clinical use, patient-facing. But how, how is AI being used in research right now?

Girish Nadkarni: So I think AI is being used in research in a number of different ways. So we have a program here led by Patricia Kovatch called AI-Ready Mount Sinai that's aggregating all of the clinical but also research data that's generated on patients and sort of linking them together so that we can build models that reason across different types of data, be it images, be it electrocardiograms, clinical data, notes, et cetera.

And that helps us both build [00:45:00] models that understand holistically, uh, the whole care experience, but also, like, help, uh, uh, test different models that, you know, comment on, on, on our own data in order to, like, make sure that

they're safe and responsible and unbiased. Uh, but I think that the most interesting part about Mount Sinai and One Mount Sinai is that the gap between research, translating the research into clinical practice, and then making it into the clinical practice is, is, um, very, very small, much lower than other places.

Because developing an accurate AI model is 5% of the job, maybe 10%. Translating that into clinical care and then scaling it in order to improve outcomes- Right ... that's, like, the remaining 95% of the job. What do you think, Ravi?

Robbie Freeman: And that's where we really focus, is solving that last mile. Yeah. And so the ability that we can go from the amazing, innovative research, you know, using tools like platforms like RMS to make new discoveries, and then [00:46:00] take those discoveries and implement them in the clinical setting and do it in a way that's, you know, safe, effective, efficient, is where we're heading.

Mm-hmm. And I think there's so many examples of where we've seen that work well, um, where, and where we're empowering both, both the care teams and patients, uh, with this technology.

Leslie Schlachter: I love that. Okay.

AI Slop and Critical Thinking

Leslie Schlachter: So as we're finishing up, you guys spend a lot of your day talking about and working with AI. What would you guys both say your biggest pet peeve with AI is, whether that's, like, here within the hospital or just on your own personally?

Robbie Freeman: I think there's still a challenge with what some people call AI slop, meaning you may have AI create, let's say, a long, I don't know, PowerPoint presentation or Word document, and, like, a lot of the information on there may look great at first, but when you dive into the details, there's a lot of filler information there.

So I think we need to figure out how we start to manage, uh, AI slop.

Girish Nadkarni: My biggest pet peeve is when people outsource their thinking to AI, [00:47:00] and that I think is, uh, dangerous.

Leslie Schlachter: Like, in the workplace?

Girish Nadkarni: Anywhere, right? Like, basically, I think- It goes

Robbie Freeman: along with AI slop

Girish Nadkarni: in a

Leslie Schlachter: way. Yeah, it's AI slop, yeah.

Girish Nadkarni: There's a, there was an interesting article that saying that you should only be allowed to use AI after you're 40, because by that time you developed your critical thinking skills.

Yeah. And I think that we're gonna, if we give access willingly or people start using AI to generate AI slop, they're gonna stop developing the mental muscle- Critical thinking, yeah ... the critical thinking skills.

Robbie Freeman: De-skilling.

Girish Nadkarni: Uh, de-skilling or im- never skilling, right? Should not- Never skilling Never learn those skills.

You know, you, you didn't have a... I mean, de-skilling is a big thing because you had the skills and then you lost them, but, like, the bigger problem is you never got those skills at all, right? Yeah.

Leslie Schlachter: No,

Girish Nadkarni: you gotta think first. So I think that we need to reimagine education.

Leslie Schlachter: Like, you should only get to use it if you've put in a certain amount of thought first.

Exactly. Like, you put co- you paste something in or ask it a question and it's like, [00:48:00] "No, you haven't done critical thinking yet." Yeah. "We can't answer." I, like, I just, I forgot to add earlier that one of my favorite uses of it is, like, I am very statement oriented and fragment oriented in my responses to patients, and it can come across Just short or firm.

I don't like it. So I use that feature where you say, like, "Make this sound better." Mm-hmm. Right? So I do that little thing that looks like a little whatever. That's a

Girish Nadkarni: great

Leslie Schlachter: use, yeah. And I say, you know, ple- like, make this sound so much kinder and thoughtful. Like, I'm doing, I'm answering it, it just doesn't sound great.

Girish Nadkarni: Yeah, but that's- I

Leslie Schlachter: love that ...

Girish Nadkarni: augmentation, not outsourcing your thinking. That's helping-

Leslie Schlachter: No, I know. I'm just saying, like, I forgot to add 'cause I was talking about the AI Scribe, but I also use it for, like, my MyChart messages- Mm-hmm ... and responses to things 'cause I- That's a good use ... I give, like, a painfully terrible response, and then it makes it sound amazing.

Robbie Freeman: Yeah, and I think on our learners, you know, like, I'm pretty amazed. I recently spent time with some of our students here, and they've kind of brought AI into the, to their whole operating system. Like, they talk about how AI helps [00:49:00] take their notes, and then they use AI to then turn those notes into a podcast that they listen to going to and from class, and then that podcast turns into, like, flashcards.

Yeah. So they're using it to, like, help them learn. And so-

Leslie Schlachter: So maybe they'll become smarter, that they didn't have to go through all the critical thinking.

Girish Nadkarni: I, I don't know. It's a slippery slope there, right? Like, basically if you don't exercise that mental muscle and do the hard work to start off with, it c- I mean, yeah, it could help you learn faster, but there's, you know, the, the learning about learning, that goes away, right?

Yeah.

Robbie Freeman: We're gonna have to figure that out. Yeah. Yeah, it comes up when we think about, you know, how soon should we give a clinician Ambience?

Girish Nadkarni: Yeah.

Robbie Freeman: Should it be a student? Should it be a fellow? Should it, if we wait till they're, you're an attending or you're out there practicing- No, I

Leslie Schlachter: think they, they have to figure it out first.

The, that, you have to, I think you have to earn it. You know, I, I think that- I feel like I'm at a phase where I, I am so grateful for AI 'cause I will [00:50:00] say, "Hey, this is what's going on. This is what I think. This is, like, these are..." Whether it's clinical differentials or whatever. And then sometimes it says like, "Have you thought about this?"

And I'm like, "I didn't. Thank you so much for telling me." It really has tremendously augmented my ability to do things, and I think for the better. Um, but yeah, no, I think you need that critical thinking background first. You really do.

Girish Nadkarni: Yeah, because you learn, you, you know, you take-

Leslie Schlachter: I have expertise because I did it myself

Girish Nadkarni: exactly. You did

Leslie Schlachter: it yourself. Right. You said you walk into a room and you have that gut feeling. It's not a gut feeling. Yeah. It's experience.

Girish Nadkarni: Yes. Exactly.

Leslie Schlachter: You know? It's like you need that. You don't wanna lose that.

Girish Nadkarni: So I think we have to reimagine the way of doing things, the whole operating model of healthcare, and this is a good time to do so.

Leslie Schlachter: Yeah.

Girish Nadkarni: This is an excellent time to do so.

Leslie Schlachter: Just develop a protocol where it scans your frontal lobe to see if it's fully formed with good critical thinking, and if it has, you've been granted access to the AI.

Closing and Where to Follow

Leslie Schlachter: So that's all for this episode of The Vitals. I'm your host, Leslie Schlachter. Subscribe to The Vitals and Mount Sinai Health System's other programming on YouTube, Apple, Spotify, or wherever you get your [00:51:00] podcasts.

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