Podcast intro and guest introduction

waffle. I don't waffle. I don't typically eat like breakfast stuff, but typically eat like breakfast stuff, but it was like interesting waffle place. it was like interesting waffle place.

>> Nice. Where are you Where are you >> Nice. Where are you Where are you actually? actually? actually? >> Oklahoma City. >> Oklahoma City. >> Oh. >> Oh.

>> Oh. Well, everyone, and welcome to the show, Well, everyone, and welcome to the show, Signals and Symptoms podcast with my two Signals and Symptoms podcast with my two besties and co-host, Ed and Harvey. We besties and co-host, Ed and Harvey. We have an amazing, exciting guest today.

have an amazing, exciting guest today. We are super excited to see for him to We are super excited to see for him to come to our Oh my god. What did I do?

come to our Oh my god. What did I do? Uh Uh Uh and I and I >> am really, really looking forward to >> am really, really looking forward to talk to him for some time.

talk to him for some time. Uh this is Dr. Walsh. Uh this is Dr. Walsh. Uh and uh he is at Memorial Hermann Uh and uh he is at Memorial Hermann Health System. I mean, if I go into his Health System. I mean, if I go into his CV, it's going to take me an hour by CV, it's going to take me an hour by itself. He's just super impressive. But itself. He's just super impressive. But uh he is officially the CMIO and of uh he is officially the CMIO and of course a physician, then an informist, course a physician, then an informist, and then most importantly, I love this and then most importantly, I love this line that he says, "Double board line that he says, "Double board certified and he's human brush machine." certified and he's human brush machine." And I love that tagline because that's And I love that tagline because that's what uh you know, Harvey keeps saying what uh you know, Harvey keeps saying about it. And if you look through his about it. And if you look through his resume, one of the things that pointed resume, one of the things that pointed out to me is also that he was uh out to me is also that he was uh residency director. Uh residency director. Uh of family of family uh yeah, here you go, associate director uh yeah, here you go, associate director of residency in family medicine. So, of residency in family medicine. So, this is really the culmination of things this is really the culmination of things that we have been talking about for some that we have been talking about for some time, how technology, education, time, how technology, education, behavioral change, and AI is going to go behavioral change, and AI is going to go ahead and onslaught it. So, as usual, I ahead and onslaught it. So, as usual, I apologize for the bad introduction. I'm apologize for the bad introduction. I'm going to ask going to ask um um um Our third bestie is here, Dr. Mandering.

Our third bestie is here, Dr. Mandering. She is uh over here as well. So, we She is uh over here as well. So, we actually have the full quorum right now.

actually have the full quorum right now. Um she is officially now a co-host, so Um she is officially now a co-host, so we're going to be adding her on the we're going to be adding her on the roster on a regular basis.

roster on a regular basis. I just did a brief intro introduction of I just did a brief intro introduction of Dr. Walsh. Dr. Walsh. Dr. Walsh, how tell us your journey.

Dr. Walsh, how tell us your journey. And And And before I'm actually going going to ask before I'm actually going going to ask Harvey's question, what drives you? Why Harvey's question, what drives you? Why as a CMIO and through the whole journey as a CMIO and through the whole journey and then tell us about yourself. More and then tell us about yourself.

Dr. Walsh's career origin story

More importantly, what excites you in health importantly, what excites you in health tech and hopefully more specifically in tech and hopefully more specifically in AI.

AI. AI. >> Oh, man. >> Oh, man. That was a lot of questions, you know That was a lot of questions, you know that, right? You're going to probably that, right? You're going to probably have to You're probably going to have to have to You're probably going to have to prompt me along a little bit later, but prompt me along a little bit later, but no, thanks for such a nice introduction.

no, thanks for such a nice introduction. I hope you didn't set the bar too high I hope you didn't set the bar too high starting right out, but starting right out, but >> [snorts] >> [snorts] >> [snorts] >> no, it's funny. Folks that know me and >> no, it's funny. Folks that know me and get to talk to me a lot know that I I get to talk to me a lot know that I I tell them my career is what I call the tell them my career is what I call the Forrest Gump of health IT in that a Forrest Gump of health IT in that a series of lucky coincidences series of lucky coincidences has really sparked a lot of where I've has really sparked a lot of where I've gotten in my career and gotten in my career and the way I mean that is the way I mean that is I actually got started my intern year of I actually got started my intern year of residency, so 2002 residency, so 2002 and yes, I did just say that. Um and yes, I did just say that. Um uh uh uh we were I was at a hospital that we were I was at a hospital that actually was starting EHRs before the actually was starting EHRs before the HITECH Act, which I think actually is HITECH Act, which I think actually is pretty rare really. Um pretty rare really. Um And so in my hospital system when the And so in my hospital system when the system wanted to do something system wanted to do something where do you come and do it? Well, you where do you come and do it? Well, you do it where you got a captive audience, do it where you got a captive audience, right? And residents are a captive right? And residents are a captive audience. They will do what you tell audience. They will do what you tell them or at least they would back then.

them or at least they would back then. And so they said, "Hey, we're going to And so they said, "Hey, we're going to put this EMR at the residency." Great.

put this EMR at the residency." Great. And they wanted they actually did a nice And they wanted they actually did a nice thing and they said, "We're going to ask thing and they said, "We're going to ask the residents what they think. We're the residents what they think. We're going to put them, you know, in the going to put them, you know, in the governance and the setup, etc." governance and the setup, etc." So they came in and they said, "Does So they came in and they said, "Does anyone know about computers?" anyone know about computers?" And I I literally raised hand and I And I I literally raised hand and I said, said, said, "Well, I've "Well, I've built one and I break it all the time built one and I break it all the time and I spend a lot of time fixing it.

and I spend a lot of time fixing it. Does that count?" And that was like the Does that count?" And that was like the highest level of knowledge anyone had.

highest level of knowledge anyone had. And voila, 20 25 almost years later now, And voila, 20 25 almost years later now, here I am. But I was really lucky that I here I am. But I was really lucky that I had some incredible sponsors and had some incredible sponsors and mentors. Dave Track and Barb got my mentors. Dave Track and Barb got my residency and then residency and then our first CMIO, Keith Nepp, our first CMIO, Keith Nepp, just kept helping me advance and um you just kept helping me advance and um you know, paid for me to go get an MMM and know, paid for me to go get an MMM and all of those sorts of things. And so, all of those sorts of things. And so, you know, really you know, really I lucked into it, but kept on with it as I lucked into it, but kept on with it as well. So, it's always been well. So, it's always been um part of my practice. And it I think um part of my practice. And it I think to me it goes a lot with teaching.

to me it goes a lot with teaching. Um so, as we started to adopt the Um so, as we started to adopt the technology, we had to teach how to use technology, we had to teach how to use the technology. Um the technology. Um we also, you know, as an informaticist, we also, you know, as an informaticist, a big part of our job isn't just a big part of our job isn't just technology, but it's really figuring out technology, but it's really figuring out how to, how to, you know, you know, figure out the quality of information, figure out the quality of information, how we get information to people in the how we get information to people in the right place, right time, right context, right place, right time, right context, all those sorts of things.

all those sorts of things. And that leads me a little bit to And that leads me a little bit to what drives me or what has kept driving what drives me or what has kept driving me, which is you know, as you see me, which is you know, as you see colleagues working on things that are colleagues working on things that are just incredible clinicians just incredible clinicians and they come to you and they say, "Man, and they come to you and they say, "Man, you know, you know, this is either this is either getting literally getting in my way, getting literally getting in my way, um you know, how many meme videos do we um you know, how many meme videos do we see about, you know, uh Epic or, you see about, you know, uh Epic or, you know, the EMR de jour getting in the know, the EMR de jour getting in the way? Um way? Um uh-oh, I literally just had my screen go uh-oh, I literally just had my screen go blank. Can you guys still see me?

blank. Can you guys still see me? >> Yeah, you're coming out clear. >> Yeah, you're coming out clear. >> Yeah. >> Yeah. >> Yeah. Yeah, like one of my monitors literally Yeah, like one of my monitors literally just shut itself off and it's the one just shut itself off and it's the one that I'm actually staring at. So, that that I'm actually staring at. So, that was very jarring. Um, was very jarring. Um, I'm going to see if I can actually get I'm going to see if I can actually get that to come back.

that to come back. >> Yeah, you're still good to us. We can >> Yeah, you're still good to us. We can see you. see you. >> Well, I can't see a doggone thing. Well, >> Well, I can't see a doggone thing. Well, any which way. So, any which way. So, that's neither here nor there. We're that's neither here nor there. We're just going to We're going to keep going just going to We're going to keep going like that never happened. Um, like that never happened. Um, >> Just the AI got it.

>> Just the AI got it. Something you said. Something you said. >> Actually, I'm going to >> Actually, I'm going to do it real quick. Hold on. I'm going to do it real quick. Hold on. I'm going to give you the extreme close-up and I'm give you the extreme close-up and I'm going to try unplugging that monitor and going to try unplugging that monitor and see if that see if that brings everything over to my other brings everything over to my other screen and it screen and it seems like it might have that.

seems like it might have that. Hey. Hey. Hey. All right. All right. >> Yeah, physician self-diagnoses himself >> Yeah, physician self-diagnoses himself the situation and has the [laughter] the situation and has the [laughter] has the fix. So, we're we're good.

has the fix. So, we're we're good. >> Yeah, but where I was going with that >> Yeah, but where I was going with that though is, you know, obviously most of though is, you know, obviously most of us that got into medicine got into us that got into medicine got into medicine because we like helping people medicine because we like helping people and I found that IT and informatics was and I found that IT and informatics was a way that I could scale that to some a way that I could scale that to some extent. Um, but still practicing is a extent. Um, but still practicing is a way that I can have those individual way that I can have those individual relationships that matter so much to.

relationships that matter so much to. So, I get the best of both worlds. The So, I get the best of both worlds. The whole have have your cake and eat it, whole have have your cake and eat it, too. So, sorry for the long story, but too. So, sorry for the long story, but that that is that's my story. Um, you that that is that's my story. Um, you >> So true. I mean, uh, if you look at many >> So true.

AI excitement in healthcare and research

I mean, uh, if you look at many stories, uh, who are innovation is a is stories, uh, who are innovation is a is a is a suddenly an accident and Ed's a is a suddenly an accident and Ed's story is fascinating in that regard as story is fascinating in that regard as well. So is mine and, uh, well. So is mine and, uh, what I realize is that overall, if you what I realize is that overall, if you have a curious personality, if you are have a curious personality, if you are an overzealous person to actually help an overzealous person to actually help and understand that, uh, software runs and understand that, uh, software runs the world and of course AI is going to the world and of course AI is going to eat software and we're going to talk eat software and we're going to talk about it. Uh let me start with about it. Uh let me start with uh first question to Harvey as usual. Uh uh first question to Harvey as usual. Uh Harvey, uh why don't you start up Harvey, uh why don't you start up today's uh discussion?

today's uh discussion? >> Well, first of all, great seeing you. Uh >> Well, first of all, great seeing you. Uh nice to see a fellow Texan and I think nice to see a fellow Texan and I think when you went to residency is uh when I when you went to residency is uh when I started residency. So, we're probably started residency. So, we're probably about the same.

about the same. >> Oh man, like you didn't even get any >> Oh man, like you didn't even get any gray hair yet? Come on. gray hair yet? Come on. >> Uh it's that damn Hispanic gene and I'm >> Uh it's that damn Hispanic gene and I'm doing all sorts of longevity hacks. I doing all sorts of longevity hacks. I put myself on metformin and all sorts of put myself on metformin and all sorts of stuff to uh delay my aging process.

stuff to uh delay my aging process. I'll just throw this out there. Since I'll just throw this out there. Since we're talking AI, I uh have an AI we're talking AI, I uh have an AI algorithm that I added to my phone. So, algorithm that I added to my phone. So, I look at it and it analyzes uh my skin, I look at it and it analyzes uh my skin, what I'm eating, my sleep, and then it what I'm eating, my sleep, and then it gives me a gives me a cuz I'm a doctor, it gives me my own cuz I'm a doctor, it gives me my own prescription of what I should eat, prescription of what I should eat, drink, pills, uh hydration, and then I drink, pills, uh hydration, and then I get it access to all my pictures. And get it access to all my pictures. And then it scans the last like 15 years of then it scans the last like 15 years of pictures and tells me when I was aging pictures and tells me when I was aging the most, when I was aging the least, the most, when I was aging the least, reverse, and then helping me with reverse, and then helping me with longevity. So, just longevity. So, just >> Harvey, you got to >> Harvey, you got to >> [clears throat] >> [clears throat] >> [clears throat] >> you got to talk to me about this >> you got to talk to me about this offline. I got to I got to understand offline. I got to I got to understand how like how like I thought I had a in-depth setup, but I thought I had a in-depth setup, but man, that that's impressive.

man, that that's impressive. >> And then and then uh I haven't set this >> And then and then uh I haven't set this guy up, but everything I told you I set guy up, but everything I told you I set it up with this guy. I just built him it up with this guy. I just built him and the skinny is uh and the skinny is uh I'm training him to have access to my I'm training him to have access to my digital twin and since I'm on an digital twin and since I'm on an intranet and nobody else can have access intranet and nobody else can have access to this, to this, uh I can ask him like, "Hey, how's my uh I can ask him like, "Hey, how's my HRV?" and and all of that and then it'll HRV?" and and all of that and then it'll go back and forth and "Hey, I'm going to go back and forth and "Hey, I'm going to give a talk. Uh can you help me up on my give a talk. Uh can you help me up on my talk?" So, anyway, it's something I've talk?" So, anyway, it's something I've been programming. Uh it's it's it's on been programming. Uh it's it's it's on the market. It's called Richie Mini. And the market. It's called Richie Mini. And but then once you have it, it has dummy but then once you have it, it has dummy dummy terminal. So, sorry about the dummy terminal. So, sorry about the delay. So, here's your question, my delay. So, here's your question, my friend.

friend. friend. Um Um Um what do you get to the most excited what do you get to the most excited right now about technology in the right now about technology in the future? What Like when you see it, you future? What Like when you see it, you hear it, you're there in in the medical hear it, you're there in in the medical center, what what When you think about center, what what When you think about all this, it's like, "Man, I'm really all this, it's like, "Man, I'm really stoked about what?" stoked about what?" >> So, there's a >> So, there's a a lot of things. Um a lot of things. Um and I'll probably bore you with the and I'll probably bore you with the first one, but honestly, first one, but honestly, to me, one of the most exciting things to me, one of the most exciting things is that I feel like technology or where is that I feel like technology or where we are at we are at is finally is finally making making making EMRs and health tech, which I've now EMRs and health tech, which I've now been doing for almost a quarter of a been doing for almost a quarter of a century, century, century, do what we thought it was going to do do what we thought it was going to do when I started. I think everybody had when I started. I think everybody had this vision of you know, you log in and this vision of you know, you log in and you'll know where all the information is you'll know where all the information is and you know, you're you're not going to and you know, you're you're not going to have to take notes. It'll record it and have to take notes. It'll record it and transcribe it for you and do all these transcribe it for you and do all these things, right? I mean, and we told things, right? I mean, and we told people that for or at least we we people that for or at least we we theorized that that would happen for theorized that that would happen for ever and ever and ever. And I mean, so ever and ever and ever. And I mean, so many of my mentors have since retired.

many of my mentors have since retired. Some have even passed on. And this Some have even passed on. And this hasn't happened. Um hasn't happened. Um and now as we see it, it's not only and now as we see it, it's not only happening, but it's happening at a pace happening, but it's happening at a pace that I mean, I like it, but I mean, that I mean, I like it, but I mean, wow, I've never I mean, I thought that wow, I've never I mean, I thought that the dot-com boom was the dot-com boom was uh uh uh fast. This is This is fast. This is This is even much faster. So, that is one thing even much faster. So, that is one thing that excites me, but the other thing that excites me, but the other thing that really excites me is that really excites me is how AI will how AI will not streamline, but uh well, maybe not streamline, but uh well, maybe streamline, but speed up actually streamline, but speed up actually biological sciences research. You know, biological sciences research. You know, hopefully we don't end up engineering hopefully we don't end up engineering something that like destroys us all, but something that like destroys us all, but you know, you know, >> Like the AI virus that came out this >> Like the AI virus that came out this week that they didn't know week that they didn't know >> Yeah, like yeah, we'll talk about >> Yeah, like yeah, we'll talk about harnesses and and loop engineering at harnesses and and loop engineering at some point, but um some point, but um No, the idea that we may see actual No, the idea that we may see actual medicine and the human condition medicine and the human condition improve rapidly based on this technology improve rapidly based on this technology as well, I think that really really as well, I think that really really I I honestly think, you know, we're I I honestly think, you know, we're going to see cures going to see cures to things coming out more quickly, to things coming out more quickly, not just more information thrown at us not just more information thrown at us more quickly.

more quickly. >> And and since you said that, I got to >> And and since you said that, I got to throw in my public service announcement. throw in my public service announcement.

Because of what you said, I believe the Because of what you said, I believe the same thing and I tell everyone, and I same thing and I tell everyone, and I know they're smiling at me and they know know they're smiling at me and they know that they know what I'm about to say is that they know what I'm about to say is take care of yourself because over the take care of yourself because over the next four or five years, we're going to next four or five years, we're going to see so many things being cured. And in see so many things being cured.

Peptides, wellness, and preventive medicine

And in our lifetime, if we can take care of our our lifetime, if we can take care of our body, there's a good chance that body, there's a good chance that there'll be things that they'll be able there'll be things that they'll be able to reverse, give you a new XYZ, um and to reverse, give you a new XYZ, um and as a result, I really think we're going as a result, I really think we're going to live longer. So, I'm telling to live longer. So, I'm telling everybody out there, make sure you eat everybody out there, make sure you eat well, make sure you sleep. I know that well, make sure you sleep. I know that sounds like lame, but no, trust me sounds like lame, but no, trust me because there's going to be things that because there's going to be things that that you may damage that in your that you may damage that in your lifetime they'll fix, but the damage is lifetime they'll fix, but the damage is so far along that they may not be able so far along that they may not be able to fully fix, whereas some of the things to fully fix, whereas some of the things they won't they will. So, please take they won't they will. So, please take care of yourself.

care of yourself. >> I wonder what the life expectancy will >> I wonder what the life expectancy will be when my kids are adults, you know, be when my kids are adults, you know, it's so crazy to think about and to jump it's so crazy to think about and to jump on both of your points, you know, I on both of your points, you know, I think um all of this innovation that think um all of this innovation that we're seeing highlights what the human we're seeing highlights what the human brain is capable of thinking up, you brain is capable of thinking up, you know, and I think that's the amazing know, and I think that's the amazing thing. That's what excites me is the thing. That's what excites me is the technology there is now able to match technology there is now able to match the ideas you know, we're capable of the ideas you know, we're capable of having, and I think that's incredible.

having, and I think that's incredible. >> Agreed. I was just at the >> Agreed. I was just at the ophthalmologist's office yesterday, and ophthalmologist's office yesterday, and he was doing retinal scans and and he was doing retinal scans and and showing me and all this, and I'm like, showing me and all this, and I'm like, "Oh my god." I was like, "Dude, send me "Oh my god." I was like, "Dude, send me those images cuz I am totally going to those

images cuz I am totally going to start playing with them." start playing with them." Um just being able to do that. But the Um just being able to do that. But the that fact like 5 years ago when Ryan and that fact like 5 years ago when Ryan and I are in all of us were in med school, I are in all of us were in med school, that didn't exist. Like, you know, I that didn't exist. Like, you know, I remember looking in the back of the eye, remember looking in the back of the eye, and I'm like, "Yeah, I can kind of see and I'm like, "Yeah, I can kind of see that optic nerve, and I can kind of see that optic nerve, and I can kind of see this stuff." The image I saw yesterday, this stuff." The image I saw yesterday, I was like, "Oh my god, it's like I was like, "Oh my god, it's like nice." nice." nice." >> And we say this a lot, but knowledge is >> And we say this a lot, but knowledge is power, and then you can choose what you power, and then you can choose what you want to do with that knowledge, but just want to do with that knowledge, but just the fact that it's more accessible, I the fact that it's more accessible, I think is amazing.

think is amazing. >> Yeah, you're starting from a whole >> Yeah, you're starting from a whole different place, right? Like different place, right? Like you used to have this long kind of you used to have this long kind of preamble to even kind of collect and and preamble to even kind of collect and and get the data into one place, get the data into one place, and especially to to have it start to and especially to to have it start to make some sense.

make some sense. And and now a lot of that can be, And and now a lot of that can be, you know, done before, and then you get you know, done before, and then you get to spend more time thinking about what to spend more time thinking about what to do with it, how it impacts people, to do with it, how it impacts people, and, you know, I don't know how often and, you know, I don't know how often you guys do it, but one of the things you guys do it, but one of the things that AI actually that AI actually helps me with the most is as a thinking helps me with the most is as a thinking partner. So, I like to bounce ideas off partner. So, I like to bounce ideas off of it and just have it give me other of it and just have it give me other Sometimes it gives me trash. Don't get Sometimes it gives me trash. Don't get me wrong. I mean, but me wrong. I mean, but sometimes it just the process of sometimes it just the process of literally having somebody to bounce literally having somebody to bounce something off of and spit out some something off of and spit out some ideas, and maybe you discard even, you ideas, and maybe you discard even, you know, half or more of them, but, you know, half or more of them, but, you know, occasionally you come up with know, occasionally you come up with something that I would not have thought something that I would not have thought of that.

of that. >> So, Ryan, I'm curious. >> So, Ryan, I'm curious. How are you speaking? How are you typing How are you speaking? How are you typing when you do that?

when you do that? >> So, um I actually right now um you know, >> So, um I actually right now um you know, I don't want to like, uh, use, uh uh, I don't want to like, uh, use, uh uh, a product endorsement or anything, but a product endorsement or anything, but when I need speech-to-text, I use when I need speech-to-text, I use Whisper Flow, um, just cuz it seems to Whisper Flow, um, just cuz it seems to be more accurate than some, but I may be be more accurate than some, but I may be starting to do that just in whatever starting to do that just in whatever native AI app I use cuz they seem to be native AI app I use cuz they seem to be getting better and faster.

getting better and faster. I've just started using Open AI's I've just started using Open AI's advanced voice chat. advanced voice chat. And, um, And, um, I if you guys haven't used that yet, I if you guys haven't used that yet, especially with Codex, uh, Harvey, I especially with Codex, uh, Harvey, I don't know how much of a Codex guy you don't know how much of a Codex guy you are.

are. are. >> I am. I've been programming. If you go >> I am. I've been programming. If you go to my insightnow.com, I got whole thing to my insightnow.com, I got whole thing is Codex and Claude talking to each is Codex and Claude talking to each other by code.

other by code. >> Oh my gosh, we're like kindred spirits. >> Oh my gosh, we're like kindred spirits. I I I have my Claude and Codex talk to I I I have my Claude and Codex talk to each other pretty frequently. Um, each other pretty frequently. Um, in fact, a lot of times the Claude in fact, a lot of times the Claude drives Codex for me, and then they pass drives Codex for me, and then they pass the baton back and forth, so they stay the baton back and forth, so they stay synced.

synced. synced. >> Yep. >> Yep. >> Yep. >> But, I'm telling you the advanced voice >> But, I'm telling you the advanced voice function in, um, in Open AI and Codex, function in, um, in Open AI and Codex, to me, it feels like Jarvis from Iron to me, it feels like Jarvis from Iron Man.

Man. Man. Like, you can be on a walk with your Like, you can be on a walk with your iPhone, and I just you I'm sure you iPhone, and I just you I'm sure you could do it on Android, too, and could do it on Android, too, and you go into your remote, and so it's you go into your remote, and so it's working on your computer that you have working on your computer that you have on all the time.

on all the time. You're asking it and telling it what to You're asking it and telling it what to do, and it's running your computer while do, and it's running your computer while you're out on a walk, and you're just you're out on a walk, and you're just having a chat with it like you would having a chat with it like you would with anybody else. It's with anybody else. It's And again, you know, you asked what's And again, you know, you asked what's exciting, right? Like, that kind of an exciting, right? Like, that kind of an interface interface interface wasn't wasn't wasn't even even even >> I just want to show, so if you go into >> I just want to show, so if you go into Codex chat GPT, if you go into Codex chat GPT, if you go into connections, you can control this Mac, connections, you can control this Mac, control other devices, you can control control other devices, you can control through SSH. So, I actually have an through SSH. So, I actually have an always-on computer just to run Codex, always-on computer just to run Codex, and then it just runs the code in the and then it just runs the code in the background.

background. background. >> with everyone in it. >> with everyone in it. I am. Is it not showing? I am. Is it not showing? >> Yeah, no. We just see you.

>> Yeah, no. We just see you. >> We just see you, which is great. >> We just see you, which is great. All right. Now it's there. All right. Now it's there.

>> Yeah, man. We love seeing you. It's just >> Yeah, man. We love seeing you. It's just >> So this is where you can literally >> So this is where you can literally connect through. So this is now a remote connect through. So this is now a remote computer that I'm basically coding.

computer that I'm basically coding. And this just stays on. And this is what And this just stays on. And this is what my Mac is. So I can turn this off and my Mac is. So I can turn this off and then walk around. And then if you go then walk around. And then if you go into connections, you go to control this into connections, you go to control this Mac control loader, and you can even Mac control loader, and you can even control SSH. And by the way, my whole control SSH. And by the way, my whole team actually represents this.

team actually represents this. I just want to give you two two guys two I just want to give you two two guys two corrections. Number one, corrections. Number one, uh uh uh So Harness is going to be So we have the So Harness is going to be So we have the AI memory ops, which is a complete AI memory ops, which is a complete software development life cycle agent software development life cycle agent ops that we have released. And then we ops that we have released. And then we have what we call SDLC ops. And I am have what we call SDLC ops. And I am personally working on what you personally working on what you suggested, Harness operations. And suggested, Harness operations. And you're absolutely right. The the way the you're absolutely right. The the way the industry is moving is essentially me industry is moving is essentially me building on my own my own Harness building on my own my own Harness operations. And of course, with local operations. And of course, with local LLMs, and that is the next big thing.

LLMs, and that is the next big thing. And that also is important because my And that also is important because my tokenized token count is you know, in tokenized token count is you know, in the last 3 months it's gone 30x. In the the last 3 months it's gone 30x. In the next 3 months, I'm looking at 300x next 3 months, I'm looking at 300x usage. So I need to optimize costs as usage. So I need to optimize costs as well. But one thing that I do disagree well. But one thing that I do disagree is unfortunately that within the FDA is unfortunately that within the FDA operations, and by the way, Ryan, my operations, and by the way, Ryan, my company's Safelife AI is now has company's Safelife AI is now has software software software five. It's actually four FDA SAMD five. It's actually four FDA SAMD devices underneath our belt with high devices underneath our belt with high cyber security.

cyber security. But I just I'm done with FDA. I'm just But I just I'm done with FDA. I'm just now going to go through break through now going to go through break through the device designations. And I'm also the device designations. And I'm also clearly adding what we call an IRB-based clearly adding what we call an IRB-based approach, which you know, releases some approach, which you know, releases some of these high-end innovations and models of these high-end innovations and models that I've already developed, but I can't that I've already developed, but I can't even show you know, I'm showing it to even show you know, I'm showing it to investors and then I have to say investors and then I have to say disclaimer, I don't know when FDA is disclaimer, I don't know when FDA is going to have a pathway. So, um I I going to have a pathway. So, um I I from a software device, yes, uh but I do from a software device, yes, uh but I do agree 100% that overall the the cycle is agree 100% that overall the the cycle is definitely decreasing. From uh definitely decreasing. From uh especially in biologics, uh peptides, especially in biologics, uh peptides, and uh other sort of and uh other sort of innovations because I don't know if you innovations because I don't know if you saw the FDA's peptides, they actually saw the FDA's peptides, they actually approved five of them.

approved five of them. So, um this is where actually I want to So, um this is where actually I want to ask you both, Ryan and Ed. Ed is a big ask you both, Ryan and Ed. Ed is a big proponent of and so is Harvey. I mean, proponent of and so is Harvey. I mean, everyone is big proponent of health and everyone is big proponent of health and wellness as compared to wellness as compared to medical, which is, you know, medical, which is, you know, unfortunately sick care in this country.

unfortunately sick care in this country. What are we What are your thoughts in What are we What are your thoughts in general with with these peptides uh general with with these peptides uh updates, uh Ed and Ryan, if you had updates, uh Ed and Ryan, if you had followed them?

followed them? >> I am just starting to learn about them, >> I am just starting to learn about them, so to say that I have enough so to say that I have enough to comment from what I would feel like to comment from what I would feel like would be a medically would be a medically uh uh uh uh uh uh appropriate standpoint, I don't think appropriate standpoint, I don't think I'm quite there yet.

I'm quite there yet. But what I do know is I I do like to try But what I do know is I I do like to try and be and be if not on the bleeding edge, at least on if not on the bleeding edge, at least on the cutting edge of preventive medicine the cutting edge of preventive medicine and and uh and wellness. And it's just and and uh and wellness. And it's just like you said, right? We have a a pretty like you said, right? We have a a pretty darn good sick care system, but uh it's darn good sick care system, but uh it's pretty hard to keep people well. I think pretty hard to keep people well. I think part of that is human nature, and then I part of that is human nature, and then I think part of it is, of course, how think part of it is, of course, how we've engineered things and um you know, we've engineered things and um you know, how we've uh valued different things.

how we've uh valued different things. So, So, So, um you know, who doesn't want to see um you know, who doesn't want to see decreased human suffering, I think. Um decreased human suffering, I think. Um I hope I hope everybody wants to see I hope I hope everybody wants to see that, at least at least everybody on that, at least at least everybody on this show, uh you know.

this show, uh you know. >> Yeah. >> Yeah. >> Yeah.

AI adoption, tools, and personal workflows

>> I know I don't know enough about the >> I know I don't know enough about the peptides just yet. I've seen the the peptides just yet. I've seen the the news articles and news articles and that'll probably be something I actually that'll probably be something I actually start looking into start looking into relatively relatively relatively soon.

soon. soon. >> Well, Janae, let me jump in. Well, yeah, >> Well, Janae, let me jump in. Well, yeah, um I get my peptides from this lovely um I get my peptides from this lovely clinician. Um so, I'm a big believer, clinician. Um so, I'm a big believer, but she could speak to it much more but she could speak to it much more medically than I can. I just say, "Okay, medically than I can. I just say, "Okay, honey, whatever you want me to take, honey, whatever you

want me to take, I'll take." Uh I'll take." Uh The But, I want to I want to go back The But, I want to I want to go back really quick and just say a couple really quick and just say a couple things, Janae, and then we'll keep going things, Janae, and then we'll keep going forward. And there are some great uh forward. And there are some great uh comments. Uh a great um comments. Uh a great um uh friend of ours, Ryan, uh Dr. Alan uh friend of ours, Ryan, uh Dr. Alan Weiss also had a comment um in the Weiss also had a comment um in the stream. But, we are our we are on the stream. But, we are our we are on the frontier. We we are like to hearken frontier. We we are like to hearken back, you know, to Star Trek, cuz back, you know, to Star Trek, cuz everyone can relate to or everyone knows everyone can relate to or everyone knows about it, no matter what age you are. Uh about it, no matter what age you are. Uh you know, they were like out there you know, they were like out there exploring, you not knowing what they're exploring, you not knowing what they're going to run into. And I think we are at going to run into. And I think we are at that moment. Uh and things happen so that moment. Uh and things happen so quickly, right? And it just reminded me, quickly, right? And it just reminded me, Ryan, when you were talking about when Ryan, when you were talking about when you were tapped and got into uh you were tapped and got into uh informatics, yeah, I I don't think most informatics, yeah, I I don't think most of the audience may know because cuz of the audience may know because cuz they're all a different generation, but they're all a different generation, but literally, before 2010, uh there were literally, before 2010, uh there were hardly any hospitals using anything. Uh hardly any hospitals using anything. Uh I was fortunate to land at a hospital I was fortunate to land at a hospital that was advanced using CPOE. And so, I that was advanced using CPOE. And so, I that's what helped accelerate my career.

that's what helped accelerate my career. It just so happened that we had a bunch It just so happened that we had a bunch of smart docs there, and I was at the of smart docs there, and I was at the right time, right place. But, you would right time, right place. But, you would literally have to train nurses and and literally have to train nurses and and uh physicians on how to use a computer uh physicians on how to use a computer before you even go to the EHR. I mean, before you even go to the EHR. I mean, imagine that. Yeah, and that took a imagine that. Yeah, and that took a whole whole lot. So, we are definitely whole whole lot. So, we are definitely on the frontier, which is super, super on the frontier, which is super, super cool. And And the other thing I wanted cool. And And the other thing I wanted to say about Ryan, not only all the to say about Ryan, not only all the professional accolades that we've professional accolades that we've already talked about, but what I was already talked about, but what I was most impressed with is he actually uses most impressed with is he actually uses AI like on a personal level, cuz you AI like on a personal level, cuz you know, that's always been one of my kind know, that's always been one of my kind of one of my themes is that to be of one of my themes is that to be innovative you have to be innovative.

innovative you have to be innovative. You you can't just talk about innovation You you can't just talk about innovation you yourself as the same with AI. You're you yourself as the same with AI. You're going to talk about AI, try to lead AI going to talk about AI, try to lead AI at your health system or your clinic or at your health system or your clinic or or in your company, you better be using or in your company, you better be using AI on a personal level and that's what AI on a personal level and that's what really impressed me. I never remember really impressed me. I never remember right I were having lunch and I was right I were having lunch and I was like, "Oh my gosh, that this is amazing like, "Oh my gosh, that this is amazing and no wonder that you're so far and no wonder that you're so far advanced." So, I advanced." So, I >> Well, now I feel like a Luddite compared >> Well, now I feel like a Luddite compared to Harvey, my goodness.

to Harvey, my goodness. >> [laughter] >> [laughter] >> [laughter] >> Harvey's But but here's a counterpoint >> Harvey's But but here's a counterpoint at some point. We let's not take time to at some point. We let's not take time to go there now, but I just want to throw go there now, but I just want to throw it out there. I put in the comments as it out there. I put in the comments as well. You know, there was another old well. You know, there was another old movie. I can't even remember what the movie. I can't even remember what the name of it was, but everyone sort of name of it was, but everyone sort of died at a certain age like when they died at a certain age like when they turned 30 because turned 30 because just lifestyle reasons and no one wanted just lifestyle reasons and no one wanted to get old.

to get old. But at the end of the movie, you know, But at the end of the movie, you know, they find these people who are just they find these people who are just enjoying life. They didn't have all the enjoying life. They didn't have all the tech or anything. They were just tech or anything. They were just enjoying life. And I I think that's an enjoying

life. And I I think that's an important principle we cannot forget in important principle we cannot forget in all of this cuz you could become so all of this cuz you could become so consumed with tech that you forget to consumed with tech that you forget to live. And there's nothing wrong, you live. And there's nothing wrong, you know, with with know, with with smoking a cigar and having a glass of smoking a cigar and having a glass of wine and and just reminiscing with old wine and and just reminiscing with old people around a campfire. We don't ever people around a campfire. We don't ever want to lose that. So anyways, I wanted want to lose that. So anyways, I wanted to throw that in.

to throw that in. And there are a couple of comments. And there are a couple of comments. Janaid, so whenever I want to make sure Janaid, so whenever I want to make sure >> Yeah, Alan, I saw a question from our >> Yeah, Alan, I saw a question from our friend Dr. Alan Wise.

friend Dr. Alan Wise. >> Yes. >> Yes. >> Yes. >> Yeah, I thought that was a So, do we >> Yeah, I thought that was a So, do we think that AI is going to help us reduce think that AI is going to help us reduce the cost of health care?

the cost of health care? I'll give you my answer in that. So, I'll give you my answer in that. So, I think I think the cost of production of units the cost of production of units of health care of health care can be decreased. But I think that the can be decreased. But I think that the cost of health care cost of health care actually has a lot more components than actually has a lot more components than just what the delivery of the health just what the delivery of the health care is. So, yes, I think it will it care is. So, yes, I think it will it will decrease what it costs will decrease what it costs to to to people healthy and to produce uh people healthy and to produce uh health-related products. Now, health-related products. Now, you know, companies are going to do what you know, companies are going to do what companies are going to do. So, when I companies are going to do. So, when I invest in the stock market and I'm in a invest in the stock market and I'm in a publicly traded company, publicly traded company, man, I want them to make money. They man, I want them to make money. They better make money cuz better make money cuz you know, I want their stock to improve, you know, I want their stock to improve, right? So, the motivation, right, is to right? So, the motivation, right, is to make money. And so, make money. And so, will AI cause those companies to lower will AI cause those companies to lower their prices, change their incentives?

their prices, change their incentives? I don't know about that. Um I don't know about that. Um it should. it should. >> I'm going to jump in and say >> I'm going to jump in and say we're going to definitely see a change we're going to definitely see a change because there's going to be people because there's going to be people Uh at one point I owned emergency rooms Uh at one point I owned emergency rooms here in Texas and hospitals. And my here in Texas and hospitals. And my competitive advantage was I could move competitive advantage was I could move quickly and beat my competition. So, quickly and beat my competition. So, sometimes to mess with the hospital sometimes to mess with the hospital systems, I would tell them what I was systems, I would tell them what I was doing because I knew it would take them doing because I knew it would take them 12 months or 24 months to compete with 12 months or 24 months to compete with me. And so, I was like, "Hey, this is me. And so, I was like, "Hey, this is what I'm going to be doing." what I'm going to be doing." And my point is this, And my point is this, companies will see the leverage, will be companies will see the leverage, will be able to decrease the price, and will able to decrease the price, and will create a competitive advantage. Also, create a competitive advantage. Also, the insurance companies are going to the insurance companies are going to jump into this bandwagon. So, you will I jump into this bandwagon. So, you will I see this as outside of the US, we're see this as outside of the US, we're going to see a lot of pressures and the going to see a lot of pressures and the flows uh decreasing the price of flows uh decreasing the price of medicine and it'll flow here.

medicine and it'll flow here. >> Dr. Manering, what are your thoughts on >> Dr. Manering, what are your thoughts on this? this? this? >> Well, I I was just going to say so many >> Well, I I was just going to say so many things will shift. You know, it's so things will shift. You know, it's so hard to predict where hard to predict where the where that will leave us when it the where that will leave us when it comes to the net cost, but I I don't comes to the net cost, but I I don't think it's going to be as a whole more think it's going to be as a whole more and more expensive. I think so many and more expensive. I think so many things will change that we will see the things will change that we will see the benefits of it elsewhere. But, I mean, I benefits of it elsewhere. But, I mean, I think that's a fascinating question and think that's a fascinating question and I don't know that we really have like a I don't know that we really have like a real answer to that, but it's just real answer to that, but it's just something to keep thinking about.

something to keep thinking about. >> Well, and what is the sentiment of yours >> Well, and what is the sentiment of yours and your other board members that you and your other board members that you >> You know, when we talk with our board, >> You know, when we talk with our board, especially especially especially and you know, you bring up a good point and you know, you bring up a good point and I was a little cynical. Um but the and I was a little cynical. Um but the economic pressures, right? You know, so economic pressures, right? You know, so we've got a lot of folks that are we've got a lot of folks that are uh you know, on our board that are on uh you know, on our board that are on other boards. Um and in Houston, we have other boards. Um and in Houston, we have lots and lots of very large employers, lots and lots of very large employers, large companies, right? And when they large companies, right?

Healthcare costs, deflation, and market incentives

And when they are dropping the percentages of their are dropping the percentages of their gross margin on healthcare that they are gross margin on healthcare that they are um um um you know, and they are also for-profit you know, and they are also for-profit publicly traded companies, publicly traded companies, the the that motivation and impetus has the the that motivation and impetus has to change, right? Um and yeah, we've to change, right? Um and yeah, we've been saying it for a long time, right?

been saying it for a long time, right? The you know, the percent of healthcare The you know, the percent of healthcare spending to GDP is on the rise and it's spending to GDP is on the rise and it's gotten to where it's not sustainable.

gotten to where it's not sustainable. It's got to change and it has the can It's got to change and it has the can keeps getting kicked down the road, but keeps getting kicked down the road, but I do think I do think finally, we've got the ability and finally, we've got the ability and technology that may help us actually get technology that may help us actually get there. Um and we are probably getting there. Um and we are probably getting closer to that point where it has to.

closer to that point where it has to. So, actually, maybe maybe I'm willing to So, actually, maybe maybe I'm willing to change my thought process and say that change my thought process and say that AI will actually help us to change, but AI will actually help us to change, but it'll be like Harvey mentioned, right?

it'll be like Harvey mentioned, right? That we we will have to move in ways That we we will have to move in ways that we haven't thought of before and that we haven't thought of before and around some of the traditional around some of the traditional structures and um structures and um and things that we've seen.

and things that we've seen. >> My opinion is a little nuanced. Uh let's >> My opinion is a little nuanced. Uh let's understand the software industry. We had understand the software industry. We had in one copy of word document and an in one copy of word document and an Excel.

Excel. Excel. Every time a new user comes in, it was a Every time a new user comes in, it was a copy of the saved software and your copy of the saved software and your revenue grows without any revenue grows without any you know, with a very what we call you know, with a very what we call variable variable variable in in risk of including your you know, in in risk of including your you know, pricing.

pricing. pricing. But hope but the AI is different. AI you But hope but the AI is different. AI you still have to put energy, GPU cost, still have to put energy, GPU cost, infrastructure, all of that. So AI is infrastructure, all of that. So AI is not exactly software which people not exactly software which people forget.

forget. forget. So that's number one. Number two, all So that's number one. Number two, all technology by definition are technology by definition are deflationary, right? I used to order an deflationary, right? I used to order an ultrasound. By the way, I'm not too old ultrasound. By the way, I'm not too old too young Ryan and Harvey and realized too young Ryan and Harvey and realized that. I'm only 5 years old. But anyways, that. I'm only 5 years old. But anyways, I used to I had to order an ultrasound I used to I had to order an ultrasound machine that was $75,000. It took 9 machine that was $75,000. It took 9 months to go through the whole process months to go

through the whole process of board approval. 3 months later, I of board approval. 3 months later, I bought a 5,000 ultrasound machine and I bought a 5,000 ultrasound machine and I put it on the patient right now. So put it on the patient right now. So definitionally all technology is definitionally all technology is deflationary. It's just the point is deflationary. It's just the point is that initially it's always inflationary.

that initially it's always inflationary. But however, keeping that in mind that But however, keeping that in mind that software and AI is different because software and AI is different because software was a software was a copy but AI is still a service. GPU as a copy but AI is still a service. GPU as a service, anything as well. So that's service, anything as well. So that's important. Now number two that I just important. Now number two that I just want to create a real example. I want to create a real example. I apologize to toot my own horn but oh apologize to toot my own horn but oh well.

well. well. So we just basically created ISMDI which So we just basically created ISMDI which is not just describe EHR data is not just describe EHR data integration etc. clinical. I'm not going integration etc. clinical. I'm not going to go through all of that. We just to go through all of that. We just released what we call AIRN.

released what we call AIRN. Now which is basically documentation Now which is basically documentation dollars converting all revenue cycle. My dollars converting all revenue cycle. My point is when I go to the RCM companies, point is when I go to the RCM companies, what I'm saying is that that by the way what I'm saying is that that by the way through my voice agents and all the through my voice agents and all the collections and everything which is collections and everything which is agentic AI, what I'm saying to you is agentic AI, what I'm saying to you is now that if you needed 400 people to now that if you needed 400 people to quote and quote do your which is by the quote and quote do your which is by the way BPOs in Philippines, India, way BPOs in Philippines, India, Bangladesh, Pakistan, we are looking at Bangladesh, Pakistan, we are looking at decreasing it by 40, and more decreasing it by 40, and more importantly, and this is something is importantly, and this is something is dear to me now, is we can bring those dear to me now, is we can bring those into US as well, which Medicare and into US as well, which Medicare and Medicaid is going to start to do. So, uh Medicaid is going to start to do. So, uh clearly, we're going to have an impact.

clearly, we're going to have an impact. And that it is going to be an asymmetric And that it is going to be an asymmetric impact, in my opinion. It is going to be impact, in my opinion. It is going to be initially a dystopian and inflationary initially a dystopian and inflationary event, and then it's going to be event, and then it's going to be euphoric and you know, you know, event euphoric and you know, you know, event where you're going to be deflationary.

where you're going to be deflationary.

AI governance, clinical risk, and medicolegal concerns

And that's one of the reasons that's And that's one of the reasons that's very different is slightly different very different is slightly different from software industry, is because from software industry, is because you're not just copy-pasting.

you're not just copy-pasting. Because I mean, that's the whole game Because I mean, that's the whole game right now, token efficiency, token right now, token efficiency, token efficiency, by the way. So, what I'm efficiency, by the way. So, what I'm saying is that that's that's my general saying is that that's that's my general term, and I don't know how the policies term, and I don't know how the policies are going to change, and this is very are going to change, and this is very important. This is where US is going to important. This is where US is going to change, and it has changed. If you look change, and it has changed. If you look at the history of US, it is a at the history of US, it is a protectionist protectionist protectionist country, no matter who's on the top. At country, no matter who's on the top. At the end of the day. So, well, and so is the end of the day. So, well, and so is Texas. So, what I'm saying is that that Texas. So, what I'm saying is that that you're going to see that great shift, you're going to see that great shift, that even you're going to think that that even you're going to think that it's going to be deflationary, but we're it's going to be deflationary, but we're going to you unpo- we're going to going to you unpo- we're going to basically, basically, basically, you know, remove a lot of jobs that are you know, remove a lot of jobs that are done

outside the country because of AI, done outside the country because of AI, but still the jobs here are more but still the jobs here are more expensive. So, the the benefits of expensive. So, the the benefits of deflationary are not going to be as deflationary are not going to be as visible as it should be. So, that's visible as it should be. So, that's that's my two cents again. I don't know, that's my two cents again. I don't know, maybe I'm wrong. Uh but you guys can maybe I'm wrong. Uh but you guys can continue. And now, um continue. And now, um going back to the comment that you said, going back to the comment that you said, that the residents may feel that the residents may feel obliged and may listen.

obliged and may listen. And that's very where we come to Ed's And that's very where we come to Ed's biggest thing, and I just want to biggest thing, and I just want to basically let Ed reframe that question.

basically let Ed reframe that question. The behavioral change to adopt AI, and The behavioral change to adopt AI, and the behavioral change due to AI. So, Ed, the behavioral change due to AI. So, Ed, do you want to reframe that question do you want to reframe that question better for me, and then we can better for me, and then we can have a discussion on that because, yeah.

have a discussion on that because, yeah. >> Well, and we love all the questions and >> Well, and we love all the questions and comments that are coming through. So, comments that are coming through. So, this is a great opportunity for all of this is a great opportunity for all of you to interact with amazing clinicians you to interact with amazing clinicians that are online, and especially Dr.

that are online, and especially Dr. Walsh. Walsh. Walsh. Um Um Um So, So, So, yeah, I'm going to throw it to Ryan yeah, I'm going to throw it to Ryan because I want him to I want I want because I want him to I want I want everyone to learn from him. So, yeah, everyone to learn from him. So, yeah, how how do we, you know, educate how how do we, you know, educate ourselves, adopt, utilize, ourselves, adopt, utilize, uh all that sort of thing. Ryan, what uh all that sort of thing. Ryan, what >> First of all, remember to get yourself >> First of all, remember to get yourself off mute before you start talking.

off mute before you start talking. >> Yes. >> Yes. >> Yes. >> It's the my number one piece of advice. >> It's the my number one piece of advice. Just kidding.

Just kidding. Um Um Um So, for me, I'm an experiential learner. So, for me, I'm an experiential learner. Um and Ed, you know, like you said, Um and Ed, you know, like you said, "Hey, "Hey, "Hey, um you know, I I love that you use AI." um you know, I I love that you use AI." And for me, to learn about AI, one of And for me, to learn about AI, one of the only ways that I can do that, the only ways that I can do that, for me, personally, is to experience it for me, personally, is to experience it and use it. Just like I I mentioned when and use it. Just like I I mentioned when I started my career, right? Does anyone I started my career, right? Does anyone know about computers? Well, I thought know about computers? Well, I thought building one was a really cool idea. So, building one was a really cool idea. So, I went and learned how to build one. And I went and learned how to build one. And then, you know, I'm pretty sure then, you know, I'm pretty sure everybody remembers the fragility of the everybody remembers the fragility of the old DOS-based Windows PCs.

old DOS-based Windows PCs. Like they broke a lot. And I also broke Like they broke a lot. And I also broke it a lot from my lack of knowledge. it a lot from my lack of knowledge.

Then I had to fix it. All right, so Then I had to fix it. All right, so let's move on to AI, right? Um let's move on to AI, right? Um I think I think it's just like you said, it's just like you said, use it, get to know it. What are the use it, get to know it. What are the Learn the limitations. Um and learn them Learn the limitations. Um and learn them quickly. Um I think, you know, one of quickly. Um I think, you know, one of the things that you have to understand, the things that you have to understand, if you're going to use LLMs, if you're going to use LLMs, is that is that they can be very confidently wrong. Um they can be very confidently wrong. Um and if something doesn't sound right, um and if something doesn't sound right, um you really need to double-check it. You you really need to double-check it. You need, you know, if you're quoting a need, you know, if you're quoting a number or a source, where did that come number or a source, where did that come from? Show me the source article and the from? Show me the source article and the actual sentence you got it out of so actual sentence you got it out of so that you know that it

put it in the that you know that it put it in the right context. Now, now the volume at right context. Now, now the volume at which you see that information comes in which you see that information comes in sometimes is so great that it's hard to sometimes is so great that it's hard to read. So, now we have our AIs checking read. So, now we have our AIs checking our AIs and you have, you know, rubrics our AIs and you have, you know, rubrics of how they're supposed to check whether of how they're supposed to check whether or not they're done well and how they're or not they're done well and how they're supposed to iterate. Um supposed to iterate. Um so, I guess, so, I guess, you know, it's just like I tell my you know, it's just like I tell my residents, um residents, um read, learn, use, experience. Um read, learn, use, experience. Um you know, again, it's a cliché, but you know, again, it's a cliché, but right, see one, do one, teach one. Um right, see one, do one, teach one. Um and I think and I think they're clichés for a reason. They work.

they're clichés for a reason. They work. And so, And so, you know, that's my advice is get out you know, that's my advice is get out there. Don't be afraid of it. Um there. Don't be afraid of it. Um And also try and de-risk your situation, And also try and de-risk your situation, too, right? I think there's too, right? I think there's times that it's really appropriate. If times that it's really appropriate. If I'm if I'm making a I'm if I'm making a life-altering decision with somebody, life-altering decision with somebody, I'm going to really make sure that my I'm going to really make sure that my sources and and things like that are sources and and things like that are well-checked, well-referenced, um well-checked, well-referenced, um well-stated versus, you know, well-stated versus, you know, if we're deciding on what paint color to if we're deciding on what paint color to put on the wall, I can always over, you put on the wall, I can always over, you know, I can repaint that. So, know, I can repaint that. So, that's that's that's >> That's >> That's >> That's >> it. So, try it, but try it in situations >> it. So, try it, but try it in situations where it's appropriate. Um and, you where it's appropriate. Um and, you know, know, know, give yourself the guardrails to uh make give yourself the guardrails to uh make that trying and experimentation safe.

that trying and experimentation safe. >> Yeah. That's good. And listen to Signals >> Yeah. That's good. And listen to Signals and Symptoms every week, Wednesdays.

and Symptoms every week, Wednesdays. >> You know it. >> You know it. >> So, give it given that uh two things I >> So, give it given that uh two things I want to ask.

want to ask. So, So, So, there's a skill that I created for my there's a skill that I created for my applications and it's called conversions applications and it's called conversions research. It fans out 16 different research. It fans out 16 different angles for research with five different angles for research with five different LLMs. Does web search through LLMs. Does web search through perplexity, perplexity, perplexity, extra, and tavili and then brings in all extra, and tavili and then brings in all the information and synthesize it for me the information and synthesize it for me and then I put it into my this is and then I put it into my this is actually the intellectual property of actually the intellectual property of the company which is called vectorless the company which is called vectorless index. I don't believe in rag. Rag index. I don't believe in rag. Rag actually hallucinates so we need 100% actually hallucinates so we need 100% accuracy so it creates a citation which accuracy so it creates a citation which actually we use in our EHR chat. By the actually we use in our EHR chat. By the way, one of these days I'm going to show way, one of these days I'm going to show that. And then of course the AI RCM part that. And then of course the AI RCM part which is extremely important because you which is extremely important because you need ICD-10 CMs, ICD-10 PCS and not only need ICD-10 CMs, ICD-10 PCS and not only when you write the ICD you actually get when you write the ICD you actually get explainability explainability explainability and that's extremely important and we're and that's extremely important and we're going to come one day Ryan bring you going to come one day Ryan bring you back and actually show and tell and more back and actually show and tell and more importantly you can say what your importantly you can say what your thoughts are on explainability. Before I thoughts are on explainability. Before I get into this there was another comment get into this there was another comment and which is by the way I'm going to and which is by the way I'm going to Harvey's right there listening. You know Harvey's right there listening. You know he actually gets jitters now when he he actually gets jitters now when he cannot use access to broad code or cannot use access to broad code or codex. There's literally you can see him codex. There's literally you can see him like Harvey it's okay you're going to like Harvey it's okay you're going to get access to your AI give me one get access to your AI give me one second. I'm just saying second. I'm just saying and it's me too.

and it's me too. I'm just going to be very honestly I I'm just going to be very honestly I know I'm putting Harvey my

good friend know I'm putting Harvey my good friend on on spot here but uh on on spot here but uh is there any ADHD? I mean right now I'm is there any ADHD? I mean right now I'm you said something and I go want to go you said something and I go want to go in and then type it out on my codex and in and then type it out on my codex and cloud code. Have you seen a behavioral cloud code. Have you seen a behavioral change in yourself, your learning change in yourself, your learning habits, your own and then second habits, your own and then second are you able to see are you seeing that are you able to see are you seeing that in your residence as well that they are in your residence as well that they are very much even with the hallucination very much even with the hallucination risk and everything risk and everything uh you see that behavior change of what uh you see that behavior change of what I call an increased ADHD to AI because I call an increased ADHD to AI because of AI.

of AI. >> So, >> So, >> So, interestingly, and I don't know if it's, interestingly, and I don't know if it's, you know, they they've talked about the you know, they they've talked about the the generational the generational mistrust of AI.

mistrust of AI. Um Um Um I have actually been surprised I have actually been surprised at how few of my residents at how few of my residents use AI to look up outside sources. So, use AI to look up outside sources. So, you know, we'll be precepting in clinic you know, we'll be precepting in clinic or on rounds, and and they'll come back or on rounds, and and they'll come back and have a question or they'll be and have a question or they'll be talking about a case or a patient and talking about a case or a patient and say, "Hey, you know, I don't know where say, "Hey, you know, I don't know where to go with this." And to go with this." And you know, I the first thing I say to you know, I the first thing I say to them is, "Well, did you look it up? You them is, "Well, did you look it up? You know, what are the what are the sources know, what are the what are the sources say?" Um and you know, whether I don't say?" Um and you know, whether I don't care if they use regular UpToDate or, care if they use regular UpToDate or, you know, whatever it is. Um you know, you know, whatever it is. Um you know, so now I I'm think most of us are so now I I'm think most of us are probably uh experienced or used Open probably uh experienced or used Open Evidence or even UpToDate's Evidence or even UpToDate's uh LLM product. Um I just got on to uh uh LLM product. Um I just got on to uh Open AI's new uh GPT for Chat GPT for Open AI's new uh GPT for Chat GPT for clinicians.

clinicians. clinicians. And by the way, if you haven't tried And by the way, if you haven't tried that yet, uh you you need to try that. that yet, uh you you need to try that. Um Um Um the point being, I've actually seen a the point being, I've actually seen a bit of hesitancy more than I expected.

bit of hesitancy more than I expected. Um Now, interestingly, they will use the Um Now, interestingly, they will use the summaries a lot inside of our EHR epic.

summaries a lot inside of our EHR epic. You know, so we have AI summaries of of You know, so we have AI summaries of of things. things. things. They don't check those enough. So, when They don't check those enough. So, when they see it right in their EHR, they see it right in their EHR, they trust it implicitly for some they trust it implicitly for some reason. And I've actually seen that reason. And I've actually seen that stuff hallucinate before.

stuff hallucinate before. Um Um Um but going to the outside sources, they but going to the outside sources, they seem to be more skeptical. And seem to be more skeptical. And I actually would love to I'm I'm going I actually would love to I'm I'm going to actually consider doing a poll to actually consider doing a poll and maybe like some observational and maybe like some observational research on on their attitudes towards research on on their attitudes towards that.

that. that. >> Yeah. >> Yeah. >> Yeah. >> All right, that's a good >> All right, that's a good >> Yeah. >> Yeah. >> Yeah. Go ahead. Go ahead. >> Yeah, I think that's surprising and I >> Yeah, I think that's surprising and I wonder if it's because they don't feel wonder if it's because they don't feel like they have invested the time to use like they have invested the time to use it safely, effectively, and it's almost it safely, effectively, and it's almost overwhelming because a lot of what we've overwhelming because a lot of what we've talked about, you know, you have to use talked about, you know, you have to use the tech yourself, you have to the tech yourself, you have to experience it, you have to know its experience it, you have to know its pitfalls, its strengths, and if you pitfalls, its strengths, and if you don't have that experience, you haven't don't have that experience, you haven't invested the time into it, it can be invested the time into it, it can be intimidating. Um and so I'm wondering if intimidating. Um and so I'm

wondering if that's the limitation, but that that's the limitation, but that surprised me. I would expect them to use surprised me. I would expect them to use it more regularly.

it more regularly. >> Yeah, I think >> Yeah, I think >> some places they do and and in some >> some places they do and and in some cases they've really seemed to cases they've really seemed to >> Yeah, I I think is worthy of an entire >> Yeah, I I think is worthy of an entire uh new episode. Uh and Ryan, maybe bring uh new episode. Uh and Ryan, maybe bring It would be fun to have Brian bring some It would be fun to have Brian bring some of the of the other residents.

other residents. >> Yes, it is. >> Yes, it is. >> Because because we're seeing it in >> Because because we're seeing it in broader society. There has been a broader society. There has been a pushback and and I haven't seen the pushback and and I haven't seen the videos, so I have to say that up front.

videos, so I have to say that up front. I just read articles about the videos, I just read articles about the videos, but there's some speeches right at the, but there's some speeches right at the, you know, when people graduate, whatever you know, when people graduate, whatever that's called, you know, you bring in that's called, you know, you bring in the superstar and they the val- not the the superstar and they the val- not the valedictorian, but you know, the person valedictorian, but you know, the person commencement speech. And they're talking commencement speech. And they're talking about AI, let great future in AI, and about AI, let great future in AI, and there's boos from the college students there's boos from the college students because because because I think there's a pushback cuz people I think there's a pushback cuz people have a fear, it's in medicine and have a fear, it's in medicine and everywhere, that it's going to take the everywhere, that it's going to take the place of authentic relationships. And place of authentic relationships. And and so there's this careful balance. And and so there's this careful balance. And so yeah, so there's a pushback. I I so yeah, so there's a pushback. I I think that pushback's going to continue, think that pushback's going to continue, but I think it's going to I think we'll but I think it's going to I think we'll see a correction as people gain more see a correction as people gain more confidence, right? Cuz there's a free confidence, right? Cuz there's a free There's that fear of the machine taking There's that fear of the machine taking over and the hallucinations, all that over and the hallucinations, all that kind of stuff. So and then there's also kind of stuff. So and then there's also a fear that I'm going I'm going part of a fear that I'm going I'm going part of my soul. Like if I jump all into AI and my soul. Like if I jump all into AI and all that kind of stuff, I'm going to all that kind of stuff, I'm going to lose part of my soul. It's like, I don't lose part of my soul. It's like, I don't want that. And I'd rather give up a long want that. And I'd rather give up a long life, and I made a little comment about life, and I made a little comment about that earlier in the stream.

that earlier in the stream. Uh I I would give up a a 150-year Uh I I would give up a a 150-year lifespan that's made up of uh lifespan that's made up of uh so much tech for 100 years of just love.

so much tech for 100 years of just love. So So So >> That's fair. >> That's fair. >> That's fair. >> Yeah. >> Yeah. >> Yeah. >> Yeah, uh that's fair. [laughter] And I I >> Yeah, uh that's fair. [laughter] And I I was in a physician group recently, and was in a physician group recently, and the comments about using the comments about using um you know, AI to look up clinical um you know, AI to look up clinical scenarios and help with patient care.

scenarios and help with patient care. One of the things they commented on was One of the things they commented on was that they were afraid of losing their that they were afraid of losing their skills, like their clinical skills.

skills, like their clinical skills. >> Right, yeah. >> Right, yeah. >> And that's something to consider, too. >> And that's something to consider, too.

But, I'm with you, Ed. I think there has But, I'm with you, Ed. I think there has to be a balance, and I think that's why to be a balance, and I think that's why it's so divisionary, you know, people it's so divisionary, you know, people are either just on one side or the are either just on one side or the other. And the reason I'm here is I other. And the reason I'm here is I think there needs to be a bridge, and I think there needs to be a bridge, and I think we have to learn the tech tech is think we have to learn the tech tech is not going anywhere. We have to learn to not going anywhere. We have to learn to embrace it in a way that serves us, use embrace it in a way that serves us, use it as a tool, not let it take over our it as a tool, not let it take over our lives or replace our relationships. But, lives or

replace our relationships. But, I think if people kind of reach that I think if people kind of reach that middle ground, they're not going to be middle ground, they're not going to be as fearful of it anymore.

as fearful of it anymore. >> Well, and Ed, how how long did we see >> Well, and Ed, how how long did we see that as EMRs were becoming that as EMRs were becoming you know, the norm, right? Like you know, the norm, right? Like Oh, these things, you know, it's going Oh, these things, you know, it's going to ruin medicine. It's, you know, all to ruin medicine. It's, you know, all these these these >> Yeah.

>> Yeah. >> Yeah. >> You're right. >> You're right. terrible things are going to happen, and terrible things are going to happen, and well, I mean well, I mean >> Yeah, you're right.

>> Yeah, you're right. >> I mean, it kind of did, but >> I mean, it kind of did, but >> Yeah, there's a little little dip, and >> Yeah, there's a little little dip, and then it goes pow. And I think we're kind then it goes pow. And I think we're kind of I I don't think we're down at the of I I don't think we're down at the bottom of that dip. Uh I think it's bottom of that dip. Uh I think it's going to go down a little further, and going to go down a little further, and then, yeah, you're right, Ryan. Yeah, then, yeah, you're right, Ryan. Yeah, we've had all sorts of pushback, right?

we've had all sorts of pushback, right? We're going to kill people, all that We're going to kill people, all that kind of stuff. And we didn't. In fact, kind of stuff. And we didn't. In fact, we saved a lot of lives, and that's what we saved a lot of lives, and that's what this is going to do. But, yeah, this this is going to do. But, yeah, this whole balance thing is just important.

whole balance thing is just important. And and Juneid, not to put pressure back And and Juneid, not to put pressure back on you, but there's a lot of comments on you, but there's a lot of comments and stuff uh and stuff uh >> No, I'm sorry. I have not been able to >> No, I'm sorry. I have not been able to Actually, I did address this. I love it Actually, I did address this. I love it that you bring it up and that's why I that you bring it up and that's why I showed the RCM denials and claims and showed the RCM denials and claims and everything.

everything. everything. Uh if I'm missing anyone, Uh if I'm missing anyone, uh uh uh yeah, this is the same question. yeah, this is the same question.

Um love it. What I'm What I'm actually Um love it. What I'm What I'm actually seeing here is that Now, let me switch seeing here is that Now, let me switch gears and this is very important. So, I gears and this is very important. So, I don't know if everyone is actually don't know if everyone is actually following a clinical trial of a mom that following a clinical trial of a mom that killed her three kids and then uh the killed her three kids and then uh the psychiatrist was on the stand and the psychiatrist was on the stand and the psychiatrist says that what the psychiatrist says that what the lawyer asked the question that uh you're lawyer asked the question that uh you're saying deteriorating, deteriorating, saying deteriorating, deteriorating, deteriorating and you didn't do deteriorating and you didn't do anything, which she did, but anyways, uh anything, which she did, but anyways, uh um um um what I'm saying is that that the answer what I'm saying is that that the answer of the psychiatrist was very of the psychiatrist was very interesting. He said, "In my EMR, this interesting. He said, "In my EMR, this is not AI. Nothing No no AI scribe.

is not AI. Nothing No no AI scribe. There are only three options. Improving, There are only three options. Improving, no no change, and deteriorating." And no no change, and deteriorating." And she was slightly deteriorating, so I had she was slightly deteriorating, so I had to just click the deteriorating part.

to just click the deteriorating part. And therefore, you know, this is it. And And therefore, you know, this is it.

Practical governance frameworks and rollout strategy

And this is where um this is where um the issue with the tool and maybe I I the issue with the tool and maybe I I actually honestly, that's where the actually honestly, that's where the confusion comes in. I She had used the confusion comes in. I She had used the clinical scribe to detail it out or not.

clinical scribe to detail it out or not. And so, long story short, Ryan, what I'm And so, long story short, Ryan, what

I'm getting to it is uh getting to it is uh the medicolegal aspect of it.

the medicolegal aspect of it. And how that is going to play out. And And how that is going to play out. And you clearly suggested that even you clearly suggested that even summaries in AI that are at a at a very summaries in AI that are at a at a very massive, you know, massive, you know, company, $6 billion, is not just company, $6 billion, is not just accurate, uh how are you looking through accurate, uh how are you looking through your lens your lens of a medicolegal implications of these of a medicolegal implications of these technologies?

technologies? technologies? >> So, I think >> So, I think it is again, similar to a lot of rapidly it is again, similar to a lot of rapidly diffusing technology that we've seen in diffusing technology that we've seen in the past.

the past. And the way I mean that is that And the way I mean that is that governance, law, governance, law, um and even sometimes how we think about um and even sometimes how we think about it is sometimes outpaced by the it is sometimes outpaced by the advancement of the technology. And I advancement of the technology. And I feel like we are feel like we are in in in that area now. So, what does that mean I that area now. So, what does that mean I think at our organization? So, as we think at our organization? So, as we onboard onboard onboard new AI, new AI, um um um we are starting to run it through um you we are starting to run it through um you know, a reasonably know, a reasonably uh you know, I I don't know if you guys uh you know, I I don't know if you guys have heard of the the Chai framework. Um have heard of the the Chai framework. Um uh it's it's a you know, a consortium uh uh it's it's a you know, a consortium uh on I think it's consortium on healthcare on I think it's consortium on healthcare AI is actually what the the acronym is.

AI is actually what the the acronym is. Uh I might be messing up the C, but Uh I might be messing up the C, but where I'm going with that is they have where I'm going with that is they have kind of a framework and rubric on, you kind of a framework and rubric on, you know, the risk and and how autonomous know, the risk and and how autonomous uh things are and then based on that uh things are and then based on that rubric, how much rubric, how much uh you uh you kind of have to double-check and how how kind of have to double-check and how how thorough you are with your evaluation.

thorough you are with your evaluation. So, So, So, uh I think it was Vishal who mentioned, uh I think it was Vishal who mentioned, right? Hey, it's a lot different when right? Hey, it's a lot different when you're using something, for example, in you're using something, for example, in the rev cycle where the rev cycle where yeah, you could mess up a patient yeah, you could mess up a patient account, but the you know, the idea that account, but the you know, the idea that you're going to hurt somebody you're going to hurt somebody physically or permanently is is pretty physically or permanently is is pretty unlikely, right? Um whereas um you know, unlikely, right? Um whereas um you know, you've got something like real-time you've got something like real-time sepsis where, you know, if you miss sepsis where, you know, if you miss that, you know, a patient can get hurt that, you know, a patient can get hurt pretty quickly. And so, the point being pretty quickly. And so, the point being you have to look at what's at stake, um you have to look at what's at stake, um how quickly things are interacting, uh how quickly things are interacting, uh where the human is in the loop, all of where the human is in the loop, all of those sorts of things. Um so, we have a those sorts of things. Um so, we have a clinical AI governance council that clinical AI governance council that helps us onboard things and then we're helps us onboard things and then we're we're big into the pilot uh, we're big into the pilot uh, work just like anything else. So, we work just like anything else. So, we typically will onboard something with a typically will onboard something with a few few few fairly tech-savvy clinicians that will fairly tech-savvy clinicians that will give it a good deep dive and come back give it a good deep dive and come back and and report on, you know, "Hey, I saw and and report on, you know, "Hey, I saw this report X incorrectly." Um, and you this report X incorrectly." Um, and you know, I think you guys have probably know, I think you guys have probably seen this. And we saw it with regular seen this. And we saw it with regular EMRs. I don't know if AI's speeding it EMRs. I don't know if AI's speeding it up or not, but up or not, but you know, garbage in, garbage out, you know, garbage in, garbage out, right? It's the an age-old story in right? It's the an age-old story in technology in general.

technology in general. Um, in AI though, like if it's Um, in AI though, like if it's summarizing my note summarizing my note and my note was wrong, and my note was wrong, it doesn't say, "Hey dude, your note was it doesn't say, "Hey dude, your note was wrong." At least not yet. Maybe someday wrong." At least not yet. Maybe someday it will

get there. Um, it will get there. Um, but it just says what I said in my note but it just says what I said in my note cuz we only told it to summarize it. We cuz we only told it to summarize it. We didn't say to correct it. Um, didn't say to correct it. Um, and so [clears throat] it can perpetuate and so [clears throat] it can perpetuate those things and do so believably and we those things and do so believably and we have to be have to be careful. Um, so you have to have careful. Um, so you have to have governance. You have to base the governance. You have to base the governance on the amount of risk. Um, governance on the amount of risk. Um, medical legally medical legally I don't know that it's I don't know that it's any different than any different than you know, when we started to get into you know, when we started to get into EMRs. Except I do think it is EMRs. Except I do think it is a bit harder to kind of show that a bit harder to kind of show that reasoning chain. Um, so I think it'll be reasoning chain. Um, so I think it'll be interesting, you know, when they start interesting, you know, when they start to get into discovery like, to get into discovery like, you know, do you have to go back and you know, do you have to go back and show how the LLM reasoned, show how the LLM reasoned, you know, what it told you? I I think you know, what it told you? I I think that might be that might be a thing. So, I'll be interested to see a thing. So, I'll be interested to see how some of that plays out, but how some of that plays out, but unfortunately, that will take bad things unfortunately, that will take bad things happening and people getting sued, which happening and people getting sued, which is not awesome.

is not awesome. Sorry, that was a lot. Sorry, that was a lot. >> Ed, what are your thoughts about this >> Ed, what are your thoughts about this when you're sitting with a board member when you're sitting with a board member or or or basically presenting to multiple boards basically presenting to multiple boards as you do, uh what you're looking at is as you do, uh what you're looking at is two two options. One is of course, uh two two options. One is of course, uh when we see a device, a physical device, when we see a device, a physical device, a stent that broke off.

a stent that broke off. And then you're going to or even fully And then you're going to or even fully catheterized. I mean, we see this all catheterized. I mean, we see this all the crap. I mean, there's clearly a the crap. I mean, there's clearly a quote-unquote manufacturer quote-unquote manufacturer issue versus issue versus clinician issue. And we can clearly sue clinician issue. And we can clearly sue the manufacturer. We I don't know if we the manufacturer. We I don't know if we can sue Epic, but I'm pretty sure we can sue Epic, but I'm pretty sure we can't. And that's what I'm trying to can't. And that's what I'm trying to talk about like as a software and one of talk about like as a software and one of the reasons I did go through the the reasons I did go through the software part is essentially saying that software part is essentially saying that you know what? At this point in time, you know what? At this point in time, you are actually uh liable or not. And you are actually uh liable or not. And that's that's the distinction I want to that's that's the distinction I want to ask Ed uh when And that's where the ask Ed uh when And that's where the governance comes in. And where's the governance comes in. And where's the governance responsibility? Because And governance responsibility? Because And by the way, uh by the way, uh uh there's a whole AI governance part uh there's a whole AI governance part coming through Save Life AI, which will coming through Save Life AI, which will be available. Ryan, you should look into be available. Ryan, you should look into it. Every freaking node 100 This was a it. Every freaking node 100 This was a scribe part. This was the summary part.

scribe part. This was the summary part. So, you can review it, de-identify it, So, you can review it, de-identify it, and score it. So, therefore, you can and score it. So, therefore, you can actually and use for any other Of actually and use for any other Of course, you can use with our technology, course, you can use with our technology, but you can use for any AI, including but you can use for any AI, including visions and everything. But, long story visions and everything. But, long story short, AI governance, I completely short, AI governance, I completely agree. I I love it. I believe in it. I'm agree. I I love it. I believe in it. I'm building it a platform just so that it building it a platform just so that it becomes easier for you to evaluate. But, becomes easier for you to evaluate. But, having said that, Ed, uh having said that, Ed, uh you know, there was a device, which is you know, there was a device, which is very interesting. I want to give it My very interesting. I want to give it My software as a medical device, which is software as a medical device, which is reminder cuz software there was no reminder cuz software there was no pathway.

pathway. pathway. So, therefore, FDA does software as a So, therefore, FDA does software as a medical device. Anyways, Ed, what are medical device. Anyways, Ed, what are your thoughts?

your thoughts? >> Well, I >> Well, I not a lawyer. not a lawyer. So, maybe that's another guess we should So,

maybe that's another guess we should have at some point.

have at some point. A practical, you know, someone from a A practical, you know, someone from a practical point of view. And I think practical point of view. And I think that that's what we look at from the that that's what we look at from the board perspective, and that's a question board perspective, and that's a question I get from boards when I present to I get from boards when I present to them. Is you know, the CHI framework is them. Is you know, the CHI framework is a good one that Ryan mentioned. Again, a good one that Ryan mentioned. Again, we're not promoting any specific we're not promoting any specific framework. It is a standard out there. I framework. It is a standard out there. I put a link in there.

put a link in there. Uh when you said CHI though, Ryan, it Uh when you said CHI though, Ryan, it made me long for like CHI. made me long for like CHI.

>> Yeah, like >> Yeah, like I'm I'm I'm hankering for some tea soon. hankering for some tea soon. >> Yeah. Um >> Yeah. Um and I'll try to post the image but you and I'll try to post the image but you can't post the image in the in the can't post the image in the in the stream. So, so I think there's a stream. So, so I think there's a reasonable test that that we typically reasonable test that that we typically look for. And is are we taking a look for. And is are we taking a reasonable approach reasonable approach um to leveraging any sort of technology, um to leveraging any sort of technology, whether it's AI, and it doesn't even whether it's AI, and it doesn't even have to be tech, anything. Is there have to be tech, anything. Is there are we using a reasonable approach that are we using a reasonable approach that that the majority of other organizations that the majority of other organizations like us also adopt? And and and that's like us also adopt? And and and that's sort of considered sort of the gold sort of considered sort of the gold standard in terms of like defensibility.

standard in terms of like defensibility. Is like, based on what we all know Is like, based on what we all know today, the body of knowledge today, is today, the body of knowledge today, is what we're doing is this a reasonable what we're doing is this a reasonable approach? And I think that's that's approach? And I think that's that's that's the sort of a litmus test uh that that's the sort of a litmus test uh that we look at. There's nothing that's we look at. There's nothing that's foolproof, and if we look for foolproof foolproof, and if we look for foolproof solutions, and I've said this before, I solutions, and I've said this before, I think governance kills people more think governance kills people more people than sepsis.

people than sepsis. Um because we've gotten so focused on Um because we've gotten so focused on governance, I'm not just talking about governance, I'm not just talking about AI, but in general.

AI, but in general. >> get that as a quote? That is like >> get that as a quote? That is like and I'm I'm I'm and I'm I'm I'm Yeah. Governance has killed more people Yeah. Governance has killed more people than sepsis. I like I am saving that.

than sepsis. I like I am saving that. >> I I put it out on a video clip, which >> I I put it out on a video clip, which don't get as many views just cuz of the don't get as many views just cuz of the algorithms in LinkedIn, and and I almost algorithms in LinkedIn, and and I almost came out, and I am going to at some came out, and I am going to at some point come out and say it. But you know, point come out and say it. But you know, sepsis is supposed to be the leading sepsis is supposed to be the leading kill cause of death inside of a kill cause of death inside of a hospital, uh preventative type death, hospital, uh preventative type death, but I think actually it's governance.

but I think actually it's governance. And cuz we've we've kept life-saving And cuz we've we've kept life-saving technologies out of the hospitals, out technologies out of the hospitals, out of the ORs for a couple of years at a of the ORs for a couple of years at a time because we're so concerned, right?

time because we're so concerned, right? And and it's good to have concern. We And and it's good to have concern. We have to have concern. We have to take a have to have concern. We have to take a reasonable approach, but I think reasonable approach, but I think sometimes we get so caught up in our own sometimes we get so caught up in our own internal politics of our organizations, internal politics of our organizations, we take a such a unreasonable approach we take a such a unreasonable approach because of fear. But in that fear, we're because

of fear. But in that fear, we're we're we're we're we're we're not allowing all the technologies we're not allowing all the technologies and the great clinician and the great clinician minds that you all represent to fully, minds that you all represent to fully, you know, be exploited in a good way. So you know, be exploited in a good way. So anyways, that that's how I look at it anyways, that that's how I look at it today.

today. today. >> No, I love it that the discussion came >> No, I love it that the discussion came through and I love your code. But here's through and I love your code. But here's the problem. I'm an IT physician, right?

the problem. I'm an IT physician, right? And the problem is that I just somebody And the problem is that I just somebody comes in and tells me that this is the comes in and tells me that this is the AI you're going to use. And there's a AI you're going to use. And there's a fascinating sensitivity and specificity fascinating sensitivity and specificity that was reported to FDA my own, but that was reported to FDA my own, but then did I actually get that in real then did I actually get that in real life? So this whole platform I have to life? So this whole platform I have to build and just because I want to make my build and just because I want to make my patients safe, right? On real life patients safe, right? On real life patients on a regular basis, the board, patients on a regular basis, the board, the director of radiology, director of the director of radiology, director of neurology will get sensitivity neurology will get sensitivity specificity to deposit By the way, specificity to deposit By the way, Harvey, this is for you, by the way. And Harvey, this is for you, by the way. And this is you can literally add any model this is you can literally add any model through basically a workplace through basically a workplace that how you're going to basically add that how you're going to basically add that model. And then on live patients that model. And then on live patients because you have HIPAA compliance, it because you have HIPAA compliance, it will give you first of all de-identified will give you first of all de-identified if you can because you can accept it.

if you can because you can accept it. And then it was going to give you And then it was going to give you essentially a QA. essentially a QA. A QA is very important too because let's A QA is very important too because let's say the problem is that say the problem is that issue with the AI, another issue that I issue with the AI, another issue that I want to want to basically in terms of governance and I basically in terms of governance and I want to basically And you're right, want to basically And you're right, first of all, you're absolutely right.

first of all, you're absolutely right. The other issue is that let's say I put The other issue is that let's say I put in a breast cancer in a breast cancer thing. And then the radiologist thing. And then the radiologist disagreed, but the AI said that disagreed, but the AI said that reading that it's positive, and then 3 reading that it's positive, and then 3 years down the line it does come back years down the line it does come back So, the board says, "You know what? I So, the board says, "You know what? I don't care. Let's just not put it in." don't care. Let's just not put it in." But, the benefit of this sort of But, the benefit of this sort of governance part in the terms that you're governance part in the terms that you're talking about and actually talking about and actually operationalizing it for the board, for operationalizing it for the board, for everyone, is the idea behind is the same everyone, is the idea behind is the same way. The first of all, you know in real way. The first of all, you know in real life how that is performing, but also life how that is performing, but also more importantly you do a automated QA more importantly you do a automated QA that the director is notified or that the director is notified or radiologist can read it, but you know, radiologist can read it, but you know, it is coming up or you know, Ryan says it is coming up or you know, Ryan says that I did not dictate this note. What that I did not dictate this note. What the hell happened? Or the note went to the hell happened? Or the note went to another patient. All of these things another patient. All of these things need to be governed. Because, you know, need to be governed. Because, you know, I I I build software for a living now I I I build software for a living now and I understand that. And in being a and I understand that. And in being a clinician and a builder, clinician and a builder, uh you're so right that there are uh you're so right that there are life-saving issues that are not being life-saving issues that are not being propagated, but as you always said Ed, I propagated, but as you always said Ed, I think uh everyone needs a sandbox in think uh everyone needs a sandbox in their hospitals.

their hospitals. Essentially, a sandbox with this kind of Essentially, a sandbox with this kind of governance sitting on it, using it for 3 governance sitting on it, using it for 3 months, and then actually doing a proper months, and then actually doing a proper buying decision.

buying decision. Um that's why I built it. That's why I Um that's why I built it. That's why I made sure that everyone

is actually made sure that everyone is actually looking into it. But anyways, uh Ryan, looking into it. But anyways, uh Ryan, your final thoughts on governance? As a your final thoughts on governance? As a CMIO, how are you going to implement CMIO, how are you going to implement governance in your institution?

governance in your institution? >> So, we I talked about it a little bit. >> So, we I talked about it a little bit. Um you know, we have Um you know, we have we have an overarching AI governance we have an overarching AI governance council that will uh council that will uh cover all of our AI. Um and you know, we cover all of our AI. Um and you know, we use it in multiple areas, right? Patient use it in multiple areas, right? Patient outreach and interactions, revenue outreach and interactions, revenue cycle, um marketing, all those sorts of cycle, um marketing, all those sorts of things. And then we of course have kind things. And then we of course have kind of sub parts of that, right? Our of sub parts of that, right? Our clinical AI um governance group. Um so, clinical AI um governance group. Um so, how do we do that? So, as we like I how do we do that? So, as we like I said, as we onboard it, we onboard it, said, as we onboard it, we onboard it, pilot test, um, and and iterate. Um, so pilot test, um, and and iterate. Um, so we're it's we're it's it you know, it's in its it you know, it's in its infancy or its nascent stage, but I infancy or its nascent stage, but I think we're spinning it up think we're spinning it up actually pretty rapidly, actually pretty rapidly, um, and because um, and because like Ed said, right, you know, uh, like Ed said, right, you know, uh, governance kills more people than governance kills more people than sepsis.

sepsis. sepsis. Um, Um, Um, I think I think >> Love it. >> Love it. >> No, and that's uh, >> No, and that's uh, man, I I've got I've I am going to I'm man, I I've got I've I am going to I'm going to use the heck out of that Ed. I going to use the heck out of that Ed. I might quote you though. I'm going to say might quote you though. I'm going to say you know, Ed Marks said you know, Ed Marks said >> Protect yourself. Yeah, do >> Protect yourself. Yeah, do [clears throat] not, yeah.

[clears throat] not, yeah. >> But where I was going with that in all >> But where I was going with that in all seriousness is seriousness is I think we as an organization I think we as an organization have actually gotten to the point where have actually gotten to the point where we say we say yeah, there is some risk to not using yeah, there is some risk to not using some of these things that can really some of these things that can really help us.

help us. How do we bring this How do we bring this out in a way out in a way which is which is rapid enough so that we're doing the rapid enough so that we're doing the right thing but with enough guardrails right thing but with enough guardrails to make sure that we are, to make sure that we are, uh, as Ed said, I'm not going I'm going uh, as Ed said, I'm not going I'm going to do another quote that was I think to do another quote that was I think also quite wise, which is what is also quite wise, which is what is reasonable and proper to do. You know, reasonable and proper to do. You know, so did we think about it hard enough and so did we think about it hard enough and in a reasonable enough fashion that we in a reasonable enough fashion that we did our due diligence and would somebody did our due diligence and would somebody that's reasonable look at it and say that's reasonable look at it and say yeah, these guys checked it out and yeah, these guys checked it out and maybe you did have a bad outcome, but it maybe you did have a bad outcome, but it wasn't because they were careless wasn't because they were careless or, uh, you know, uh, or, uh, you know, uh, foolish, it was because sometimes you foolish, it was because sometimes you have have bad outcomes. Um, have have bad outcomes. Um, and so I think it's very important that and so I think it's very important that we don't you know, uh, we don't you know, uh, I'll I'll toss out another cliche, throw I'll I'll toss out another cliche, throw out the baby with the bathwater, you out the baby with the bathwater, you >> With that, do not throw out the baby >> With that, do not throw out the baby with the bathwater, we're going to with the bathwater, we're going to conclude today's session. We're going to conclude today's session. We're going to bring Dr. Walsh back with hopefully some bring Dr. Walsh back with hopefully some of his residents and fellows.

of his residents and fellows. Any other, Any other, you know, opportunity. I think we need you know, opportunity. I think we need to dedicate two different episodes, one to dedicate two different episodes, one specifically for AI governance both in specifically for AI governance both in the vision, VLM, and LLM models and how the vision, VLM, and LLM models and how we should have a governance on them and we should have a governance on them and you should bring your, you know, you should bring your, you know, governance team and we can brainstorm so governance team and we can brainstorm so all other hospitals learn from your all other hospitals learn from your innovation because that's, as I said, is innovation because that's, as I said, is going to probably save more lives

than going to probably save more lives than sepsis.

sepsis. sepsis. >> [laughter] >> [laughter] >> [laughter] >> Uh because that is important to bring >> Uh because that is important to bring this into it. And then the second this into it. And then the second session, I believe, is going to be all session, I believe, is going to be all about healthcare education, bringing in about healthcare education, bringing in the new blood and how they think, how the new blood and how they think, how they see the future in this regard.

they see the future in this regard. >> I'll tell you first of all, thanks for >> I'll tell you first of all, thanks for having me. This has been great. Junaid, having me. This has been great. Junaid, I want us to bring on uh some partners I want us to bring on uh some partners of mine, Chaitanya Vempati and and Sonya of mine, Chaitanya Vempati and and Sonya Chandrasekhar. They are our our Chandrasekhar. They are our our analytics gurus at Memorial Hermann and analytics gurus at Memorial Hermann and they help us do some of the actual they help us do some of the actual testing and analytics behind it. So I testing and analytics behind it. So I saw uh the relatively sophisticated saw uh the relatively sophisticated setup that you have. I bet you and setup that you have. I bet you and Chaitanya would absolutely hit it off.

Chaitanya would absolutely hit it off. And you you want to see the people that And you you want to see the people that really know this, really know this, those are the guys.

those are the guys. Well, I should say lady. Yeah. Well, I should say lady. Yeah. >> Thank you so much again. See you next >> Thank you so much again. See you next time. Thank you.

time. Thank you. >> See you all. >> See you all.