Precision Medicine Meets the EHR: Are Health Systems Ready for Genomics at Scale? Transcript

(Transcripts are generated by AI and may contain errors)

Podcast Introduction and Guest Welcome

Good morning everyone and welcome to Good morning everyone and welcome to Signals and Symptoms podcast again with Signals and Symptoms podcast again with my two besties Edward Marx and Issha uh my two besties Edward Marx and Issha uh and co-hosts and I'm very very grateful and co-hosts and I'm very very grateful for Dr. Alan Weiss to join us today. He for Dr. Alan Weiss to join us today. He is an innovative executive physician and is an innovative executive physician and pharmacist and this is not just one of pharmacist and this is not just one of his titles. I mean he has a proper his titles. I mean he has a proper history of providing innovations to history of providing innovations to multiple different institutions and he's multiple different institutions and he's going to tell you more about how uh going to tell you more about how uh clinical systems have evolved, what his clinical systems have evolved, what his journey has been and how we're going to journey has been and how we're going to go move forward. Uh I know I've not been go move forward.

DeepSeek, Open Source AI, and Harnesses

Uh I know I've not been doing a lot of updates but I just want doing a lot of updates but I just want to give you one big update uh that has to give you one big update uh that has really shook the industry from an AI really shook the industry from an AI perspective and that is actually the perspective and that is actually the deepseek harness. Uh those who do not deepseek harness. Uh those who do not know what harness means, harness is know what harness means, harness is essentially what claude code is. Um essentially what claude code is. Um think of the model as a powerful amazing think of the model as a powerful amazing horse. And the harness is where the horse. And the harness is where the horse is actually trained to walk in a horse is actually trained to walk in a way that is proper in terms of this. So way that is proper in terms of this. So how to get the files, how to get this, how to get the files, how to get this, how to get that, what is the system how to get that, what is the system prompt that goes into it. That's all prompt that goes into it. That's all goes into the harness. And what DeepSync goes into the harness. And what DeepSync did was essentially open- source their did was essentially open- source their own complete harness. And not only that, own complete harness. And not only that, they wrote an 88page research of why they wrote an 88page research of why their harness is important. And then their harness is important. And then most importantly and the most lovely most importantly and the most lovely part of everything is a plug-in. And part of everything is a plug-in. And this really changed the game in the this really changed the game in the industry that how we're going to see the industry that how we're going to see the future. And this is really where uh we future. And this is really where uh we have been discussing and we'll talk to have been discussing and we'll talk to Dr. advice about it, what his opinion is Dr.

AI in Healthcare and the Doctor Debate

advice about it, what his opinion is about what the Chinese about what the Chinese AI industry is doing, what US AI AI industry is doing, what US AI industry is doing, how it impacts industry is doing, how it impacts clinical AI uh because these clinical AI uh because these opensourcing opensourcing opensourcing is is good and a bad in the situation is is good and a bad in the situation that where is the mode now because cloud that where is the mode now because cloud code lost this mode because now I can code lost this mode because now I can take the deepseek completely open source take the deepseek completely open source model with the deepseek harness model with the deepseek harness basically launch my own cloud basically launch my own cloud in a 100,000 machine that is going to be in a 100,000 machine that is going to be ROI with a capex of 100K but a O opex ROI with a capex of 100K but a O opex over 5 years decreases significantly and over 5 years decreases significantly and now the whole calculation as a founder now the whole calculation as a founder of save life AI is completely changed in of save life AI is completely changed in my mind uh this was one shocking event my mind uh this was one shocking event of course uh in the industry and I'm of course uh in the industry and I'm just telling you it is a it is a wave it just telling you it is a it is a wave it was much better than open sourcing was much better than open

sourcing another model which by the way there another model which by the way there were seven models that I'm not going to were seven models that I'm not going to talk about even open source last week.

talk about even open source last week. Seven of them, sorry, five of them were Seven of them, sorry, five of them were from China, two of them from US, one was from China, two of them from US, one was from Nvidia and one from FA Meta.

from Nvidia and one from FA Meta. Finally, Meta is back back in the game Finally, Meta is back back in the game with gleamer. But anyways um we are with gleamer. But anyways um we are seeing a lot of uh not just open seeing a lot of uh not just open sourcing and open waiting the model from sourcing and open waiting the model from China but the whole harness around it is China but the whole harness around it is not is open source with a proper not is open source with a proper reasoning 88 page uh documented reasoning 88 page uh documented discussion which I never know because discussion which I never know because now really if I think about it is cloud now really if I think about it is cloud code the whole harness is a black box on code the whole harness is a black box on top of the model being a black box. So top of the model being a black box. So there's another thing in my mind what am there's another thing in my mind what am I controlling if I'm controlling I controlling if I'm controlling anything or not. So it's not just about anything or not. So it's not just about using it, it's also about understanding using it, it's also about understanding it that how things are going to be it that how things are going to be moving as we go along. So long story moving as we go along. So long story short, this was significant. But now short, this was significant. But now again uh we have had another major again uh we have had another major discussion and that is AI going to discussion and that is AI going to replace doctors? Let's just be honest.

replace doctors? Let's just be honest. Uh it doesn't matter what you think or Uh it doesn't matter what you think or what I think or not. It's like this like what I think or not. It's like this like you know is are you going to use you you know is are you going to use you know a car because if you have a horse know a car because if you have a horse or buggy or not? I think that discussion or buggy or not? I think that discussion is honestly over. The question really is honestly over. The question really here is is this and that is very here is is this and that is very fascinating that came out. This is a fascinating that came out. This is a study will autonomous AI exceed AI aided study will autonomous AI exceed AI aided physicians as the best medical care but physicians as the best medical care but within this paper it's actually much within this paper it's actually much more argued and by the way this is from more argued and by the way this is from Neil Kosla. So Kla Ventures has put in Neil Kosla. So Kla Ventures has put in practically somewhere between a billion practically somewhere between a billion to a5 billion dollars betting towards AI to a5 billion dollars betting towards AI physicians. uh they can say AI aided physicians. uh they can say AI aided physicians now but their whole core goal physicians now but their whole core goal venode Kosla has actually openly said venode Kosla has actually openly said multiple times that they are building an multiple times that they are building an AI physician. So the question really is AI physician. So the question really is that within this paper through American that within this paper through American college and I think this is a very college and I think this is a very important read that you that anyone as a important read that you that anyone as a physician should read and if anyone has physician should read and if anyone has any doubt about AI as a physician this any doubt about AI as a physician this is it. This is this is the real problem is it. This is this is the real problem of the paper. When will human physicians of the paper. When will human physicians >> Wow.

>> Wow. >> So yeah, I mean this is uh this is >> So yeah, I mean this is uh this is insane territory we are. And let me give insane territory we are. And let me give you another perspective behind it and you another perspective behind it and I'm I'm glad Dr. Weiss is here with his I'm I'm glad Dr. Weiss is here with his immense experience. He's going to first immense experience. He's going to first what what what exactly we're talking what what what exactly we're talking about is this. When Uber first came out, about is this. When Uber first came out, I don't know if you remember, taxi I don't know if you remember, taxi drivers were actually openly assaulting drivers were actually openly assaulting it.

it. it. Do do you remember those days? Do do you remember those days? >> Uh that you know what, we're going to go >> Uh that you know what, we're going to go ahead and assault it because they're ahead and assault it because they're going to be part and parcel of this. I'm going to be part and parcel of this. I'm not saying that's going to happen, but I not saying that's going to happen, but I just want to put all of these small just want to put all of these small pieces into perspective of towards pieces into perspective of towards today's discussion. And then,

of course, today's discussion. And then, of course, we're going to put everything in the we're going to put everything in the show notes. I'm grateful to mob. I show notes. I'm grateful to mob. I apologize Dr. Weiss for a crappy apologize Dr. Weiss for a crappy introduction. I I do that for every introduction. I I do that for every every so much you have to discuss. I every so much you have to discuss. I just don't know how to encapsulate it.

just don't know how to encapsulate it. So please properly introduce yourself. So please properly introduce yourself. Tell us what your journey has been, what Tell us what your journey has been, what has been driving you, what is the why has been driving you, what is the why behind it? And then we can start the behind it? And then we can start the discussion wherever you want to lead us discussion wherever you want to lead us starting with hopefully some of the starting with hopefully some of the stuff I have said today.

stuff I have said today. Uh, you know, first of all, you feel Uh, you know, first of all, you feel free to call me Allan. There's there's free to call me Allan. There's there's no reason to to use title. Totally fine.

no reason to to use title. Totally fine. And I, you know, I like to describe And I, you know, I like to describe myself as a nerd turned doctor. Gone myself as a nerd turned doctor. Gone back to being a nerd again. I I actually back to being a nerd again. I I actually have an undergraduate degree in computer have an undergraduate degree in computer science. Spent some years in the science. Spent some years in the pharmaceutical industry. Helped me pharmaceutical industry. Helped me create databases and analyze them for create databases and analyze them for the FDA and medical journals. Got me the FDA and medical journals. Got me interested in medicine. I got an MBA interested in medicine. I got an MBA first, then went to medical school, first, then went to medical school, became an internal medicine physician, became an internal medicine physician, and then joined the Cleveland Clinic and then joined the Cleveland Clinic after I finished my residency in a after I finished my residency in a position that allowed me to tap into all position that allowed me to tap into all my background. So, I I I practiced about my background. So, I I I practiced about nine months outpatient, three months nine months outpatient, three months inpatient while teaching and and helping inpatient while teaching and and helping out with residents and medical student out with residents and medical student education, but also got really deeply education, but also got really deeply involved in informatics. Epic had just involved in informatics. Epic had just gone in at Cleveland Clinic. I helped gone in at Cleveland Clinic. I helped them to optimize it, implement it, and them to optimize it, implement it, and also find ways that we could use data also find ways that we could use data and the technology to help improve and the technology to help improve outcomes, whether they were clinical uh outcomes, whether they were clinical uh operational or financial outcomes. And operational or financial outcomes. And that kicked off a career of informatics that kicked off a career of informatics and data and analytics, moving to and data and analytics, moving to different institutions around the different institutions around the country. And um you know, I done all country. And um you know, I done all kinds of data analytics and optimization kinds of data analytics and optimization and a lot of work on AI. So that's sort and a lot of work on AI. So that's sort of the the the quick aspect of my of the the the quick aspect of my background.

background. background. >> Awesome. That's a great amazing >> Awesome. That's a great amazing experience. Uh Harvey, my another bestie experience. Uh Harvey, my another bestie is not here. He asked always this is not here. He asked always this question. Why? What drives you today to question. Why? What drives you today to continue doing it in terms of where do continue doing it in terms of where do you see the vision of the technology you see the vision of the technology helping you personally, humanity in helping you personally, humanity in general? And what is one thing that that general? And what is one thing that that basically when you wake up in the basically when you wake up in the morning excites you?

morning excites you? >> Yeah. So a great question. I mean I I've >> Yeah. So a great question. I mean I I've um I love being able to help people. I um I love being able to help people. I love being able to drive outcomes. And love being able to drive outcomes. And for me being a you know somebody who for me being a you know somebody who loves technology, I love using loves technology, I love using technology as a tool to help in that technology as a tool to help in that process. And that's what excites me process. And that's what excites me about it. But I I'll tell you that I and about it. But I I'll tell you that I and this kind of goes back into your AI and this kind of goes back into your AI and the potential for an AI doctor. One of the potential for an AI doctor. One of the things that I've observed is and as the things that I've observed is and as much as I love the technology and I I much as I love the technology and I I you know the the work that's being done you know the the work that's being done in AI is great,

but I also think that in AI is great, but I also think that the relationship that providers have the relationship that providers have with patients helps to drive outcomes with patients helps to drive outcomes and helps to improve outcomes. And what and helps to improve outcomes. And what I'm always very curious when I I read I'm always very curious when I I read all of these articles that say that AI all of these articles that say that AI is going to replace doctors and there'll is going to replace doctors and there'll be a you know all of that. I I I still be a you know all of that. I I I still believe that fundamentally believe that fundamentally a that medicine involves a relationship.

a that medicine involves a relationship. And I realize that that that may seem a And I realize that that that may seem a little old school because there's a lot little old school because there's a lot of people out there who just want to of people out there who just want to call up any doctor they can and get them call up any doctor they can and get them on a video chat, you know, a video or a on a video chat, you know, a video or a chat and and try to to figure out how to chat and and try to to figure out how to improve their health. But that may not improve their health. But that may not be appropriate in a lot of cases. And be appropriate in a lot of cases. And that instant satisfaction, instant that instant satisfaction, instant gratification that people want from that gratification that people want from that may not be the best for driving may not be the best for driving long-term outcomes, particularly with long-term outcomes, particularly with chronic care, particularly with an aging chronic care, particularly with an aging co population and a lot of elderly. I co population and a lot of elderly. I think that relationship helps in many think that relationship helps in many ways. And I can give lots of examples ways. And I can give lots of examples that are clinically examples that had that are clinically examples that had nothing to do with technology that had nothing to do with technology that had to deal with my understanding and to deal with my understanding and knowledge of the patient and their knowledge of the patient and their families to help in the process of families to help in the process of delivering and optimizing care. I don't delivering and optimizing care. I don't think AI is going to replace that. Where think AI is going to replace that. Where I see AI helping is in all of that I see AI helping is in all of that administrative work that goes on behind administrative work that goes on behind the scenes for being a physician for the scenes for being a physician for helping to identify conditions for helping to identify conditions for creating treatment options. That's where creating treatment options. That's where I think AI is going to help in an I think AI is going to help in an augmented way not in a replacing way.

augmented way not in a replacing way. >> Alan, I love your philosophy. I have >> Alan, I love your philosophy. I have been in the pediatrics world. I was in been in the pediatrics world.

Personal Background and Motivation

I was in clinical practice for 15 years and there clinical practice for 15 years and there is a lot of gaining trust not just the is a lot of gaining trust not just the parents but also the child and I I can't parents but also the child and I I can't imagine a pediatric situation where the imagine a pediatric situation where the AI is replacing the the pediatrician AI is replacing the the pediatrician because there's so many things that come because there's so many things that come up that are more behavioral and I know up that are more behavioral and I know AI has this vast data base of knowledge AI has this vast data base of knowledge and and you know physicians do too. We and and you know physicians do too. We have to sometimes supplement our have to sometimes supplement our knowledge with other resources. But knowledge with other resources. But there's something about that there's something about that relationship and that bond. And when relationship and that bond. And when your families trust you, they're more your families trust you, they're more willing to take the steps towards better willing to take the steps towards better health. And it's a partnership. I've health. And it's a partnership. I've always told my patients, it's a always told my patients, it's a partnership, you know, and it's a partnership, you know, and it's a discussion and it's back and forth. And discussion and it's back and forth. And um I and I love the philosophy of let's um I and I love the philosophy of let's let AI help us find the joy in medicine.

let AI help us find the joy in medicine. like let's help, you know, let's get rid like let's help, you know, let's get rid of some of the administrative work that of some of the administrative work that bogs us down, preventing those bogs us down, preventing those relationships from being what they used relationships from being what they used to be in the past and what they could to be in the past and what they could be. Let's get back to that. Let's focus be. Let's get back to that. Let's focus on the relationship between the doctor on the relationship between the doctor and the patient. Let's let the AI help and the patient. Let's let the AI help us get there.

us get there. >> Yeah. And I I totally agree with you and >> Yeah. And I I totally agree with you and you know, it's so interesting. I was you know, it's so interesting. I was leading to listening to a podcast for leading to listening to a podcast for the day and and this futurist was the day and and this futurist was talking about how, you know, as opposed talking about how, you know, as opposed to having a in-person appointment a to having a in-person appointment a couple times a year, you're going to be couple times a year, you're going to be checking in with your doctor and they're checking in with your doctor and they're going to be responding to you through going to be responding to you through text and small video chats. And I I text and small video chats. And I I think about that and I go, "Well, is think about that and I go, "Well, is that a good thing to have that much that a good thing to have that much contact with your doctor for everything contact with your doctor for everything that's going on? I mean, your physician that's going on? I mean, your physician can't handle that, right? And are we can't handle that, right? And are we creating Yeah.

creating Yeah. >> I mean, are we creating the worried? >> I mean, are we creating the worried? Well, are we by by having that kind of Well, are we by by having that kind of like, oh, I need to talk to my doctor like, oh, I need to talk to my doctor now because my my toe hurt for like a now because my my toe hurt for like a second, right? I mean, that kind of of second, right? I mean, that kind of of of work or that kind of interaction may of work or that kind of interaction may create more burden on an already overly create more burden on an already overly burdened health care system. It may not burdened health care system. It may not be be where we want to be. And let's be be where we want to be. And let's face it, what are we trying to achieve face it, what are we trying to achieve with all of this? We are trying to with all of this? We are trying to improve our outcomes and we're trying to improve our outcomes and we're trying to lower our costs and so far as I've had lower our costs and so far as I've had this debate with other people love the this debate with other people love the promise of AI but where does AI work in promise of AI but where does AI work in that entire and those two objectives can that entire and those two objectives can can we show that AI has truly improved can we show that AI has truly improved outcomes at a large scale and has it outcomes at a large scale and has it reduced cost and right now I think the reduced cost and right now I think the jury is out on both of those and I I'd jury is out on both of those and I I'd love to hear the comments from the love to hear the comments from the people here.

people here. I'm going to um start with Ed. Um I'm going to um start with Ed.

Why AI Should Augment, Not Replace, Doctors

Um Ed, first of all um again very grateful Ed, first of all um again very grateful that you're always here and love it that that you're always here and love it that um um um um all of this and thank you uh for um all of this and thank you uh for sharing Allan's uh short videos for work sharing Allan's uh short videos for work five life balance. Uh I would don't five life balance. Uh I would don't throw it to my wife because I I don't throw it to my wife because I I don't believe in that anymore. Um, so Ed here believe in that anymore. Um, so Ed here here's the thing, right? AI versus no AI here's the thing, right? AI versus no AI and all of that, but you're you're let's and all of that, but you're you're let's say a president of a board healthcare say a president of a board healthcare system and now your job is to tell system and now your job is to tell people that in 2030 people that in 2030 we are going to go ahead and potentially we are going to go ahead and potentially have this again outcomes comes or not.

have this again outcomes comes or not. At the end of the day, if you put on At the end of the day, if you put on your investor hat, the question is, am I your investor hat, the question is, am I going to be able to provide the same going to be able to provide the same care that I need 50 providers? And care that I need 50 providers? And that's another big freaking physician that's another big freaking physician extenders plus physicians and now AI extenders plus physicians and now AI physicians to now going to 25 providers physicians to now going to 25 providers and having 50 AI physicians.

and having 50 AI physicians. How do you see that discussion? And it How do you see that discussion? And it may not happen. The jury is out today, may not happen. The jury is out today, but I tell you right now, I promise you but I tell you right now, I promise you right now, I have the models ready to go right now, I have the models ready to go today because I'm stuck with the stupid today because I'm stuck with the stupid FDA. We discussed this last time. We're FDA. We discussed this last time. We're going to FDA breakthrough device going to FDA breakthrough device designations and everything. I I don't see any future that I my work

should be see any future that I my work should be replaced 80% of the time by any no replaced 80% of the time by any no questions asked, no nothing. Uh so in questions asked, no nothing. Uh so in that in that context first of all give that in that context first of all give your opinion and then more importantly your opinion and then more importantly what questions you have for Alan.

what questions you have for Alan. >> Well yeah then and that video is really >> Well yeah then and that video is really great and we're not going to be talking great and we're not going to be talking about it today. Uh but about it today. Uh but >> thank you because sometimes my wife >> thank you because sometimes my wife looks at my [laughter] podcasts.

looks at my [laughter] podcasts. >> It it's Alan made a profound personal >> It it's Alan made a profound personal professional decision uh that I really professional decision uh that I really admire and u I'll just leave it there as admire and u I'll just leave it there as a teaser. Um so go check out the video.

a teaser. Um so go check out the video. It's only eight minutes long. It's very It's only eight minutes long. It's very concise. Uh it's really good. It's uh concise. Uh it's really good. It's uh you know, it's something that I think you know, it's something that I think we've all thought about. A few of us had we've all thought about. A few of us had the um the confidence or um whatever uh the um the confidence or um whatever uh the gumption to actually make make the the gumption to actually make make the change and and he did. So kudos uh to change and and he did. So kudos uh to Allan. That's really great leadership on Allan. That's really great leadership on the personal professional side. So the personal professional side. So anyways, um yeah, you know, we've had anyways, um yeah, you know, we've had this ongoing conversation a year ago this ongoing conversation a year ago when I first came out and I think when I first came out and I think publicly and started talking about how publicly and started talking about how just as Uber disintermediated just as Uber disintermediated ride share um transportation, so will AI ride share um transportation, so will AI disintermediate traditional PCP. And I disintermediate traditional PCP. And I think we're watching it unfold and now think we're watching it unfold and now more and more people like at first the more and more people like at first the physicians especially because I'm not a physicians especially because I'm not a physician, you know, were kind of angry physician, you know, were kind of angry and upset with me and denying and and and upset with me and denying and and today now everyone seems to be talking today now everyone seems to be talking about it. and I'm at UGM. Uh this is the about it. and I'm at UGM. Uh this is the epic user group and last night so every epic user group and last night so every night you know I bring a lot of people night you know I bring a lot of people together and last night for some reason together and last night for some reason was really heavy on CMIOS. It was really was really heavy on CMIOS. It was really interesting. You know, I um we cap it to interesting. You know, I um we cap it to about 25 people and probably 15 of the about 25 people and probably 15 of the 25 were CMIOS from around the country 25 were CMIOS from around the country and I think pretty and even the CMO from and I think pretty and even the CMO from Epic was here and um I think everyone Epic was here and um I think everyone now is like yeah uh just like you all as now is like yeah uh just like you all as physicians are talking about yeah is physicians are talking about yeah is definitely going to is here and is going definitely going to is here and is going to be very helpful and but your question to be very helpful and but your question is like to what extent and you know I've is like to what extent and you know I've been sort of on the radical edge that been sort of on the radical edge that that I think you know and I think it's that I think you know and I think it's going to be great actually a very going to be great actually a very positive thing for primary care positive thing for primary care clinicians who today do more chore than clinicians who today do more chore than core uh a lot of their work is core uh a lot of their work is administrative administrative administrative and AI can help them so if there if and AI can help them so if there if there's a panel like I can speak to it there's a panel like I can speak to it in terms of panel size if like a typical in terms of panel size if like a typical PCP and it depends on where they're PCP and it depends on where they're working or being independent but let's working or being independent but let's just say it's 2500 patients I think it just say it's 2500 patients I think it could easily be 10,000 patients and just could easily be 10,000 patients and just like we brought in you know physician like we brought in you know physician extenders you know whether it's a MA or extenders you know whether it's a MA or LPN or RN or DNP or NP. Um, I think LPN or RN or DNP or NP. Um, I think we're going to have the AI right we're going to have the AI right equivalent to take on those tasks that equivalent to take on those tasks that don't require people super smart like don't require people super smart like you all. uh so well trained and smart you all. uh so well trained and smart and then they can focus and like Isa was and then they can focus and like Isa was saying on the on the kind of like the saying on the on the kind of like the empathetic side and and on the personal empathetic side and and on the

personal side and for those people that going side and for those people that going through stuff and and need that touch through stuff and and need that touch but for a lot of primary care we all but for a lot of primary care we all know you don't you don't need a touch know you don't you don't need a touch and you don't want to be touched and and you don't want to be touched and there's all sorts of stat right almost there's all sorts of stat right almost every day I can't even keep up with it every day I can't even keep up with it right it's hard to keep up with but right it's hard to keep up with but almost every day there's a new study out almost every day there's a new study out or new paper and and someone's just or new paper and and someone's just talking about how uh especially the talking about how uh especially the newer generations They don't they don't newer generations They don't they don't want to come in. They they they just want to come in. They they they just want convenience and they don't want want convenience and they don't want that long-term Marcus Welby that long-term Marcus Welby relationship. I had it with uh you know, relationship. I had it with uh you know, it was funny. One of the CMIs here last it was funny. One of the CMIs here last night and I'll finish with this. U one night and I'll finish with this. U one of the one of the uh clinical experts uh of the one of the uh clinical experts uh that was here last night uh he's he's uh that was here last night uh he's he's uh kind of runs the Apple what they call kind of runs the Apple what they call they don't officially call it the Apple they don't officially call it the Apple hospital, but that's what it is as part hospital, but that's what it is as part of Emory. And uh his dad was my PCP and of Emory. And uh his dad was my PCP and he was the PCP for all my kids, you he was the PCP for all my kids, you know, as we were growing up in Cleveland know, as we were growing up in Cleveland when I did my uh tenure at University when I did my uh tenure at University Hospitals. And uh and I love that. It's Hospitals. And uh and I love that. It's like everyone's going, my wife's going like everyone's going, my wife's going to Dr. Kano. Uh we're all going to Dr.

to Dr. Kano. Uh we're all going to Dr. Kano and we had this relationship and he Kano and we had this relationship and he knew my family and we we we replicated knew my family and we we we replicated the same model at Texas. But that my the same model at Texas. But that my kids, they don't want that. They're not kids, they don't want that. They're not interested in that. They just want interested in that. They just want >> I just need this this. So long- winded >> I just need this this. So long- winded answer, but I wanted to give some color answer, but I wanted to give some color to your to your question. I think we are to your to your question. I think we are definitely moving, absolutely moving.

definitely moving, absolutely moving. You know, you've heard me say it before, You know, you've heard me say it before, and I'm probably update these and I'm probably update these percentages at some point soon, and that percentages at some point soon, and that 65% of patients, because there'll always 65% of patients, because there'll always be 35% that love the traditional way. Uh be 35% that love the traditional way. Uh 65% of patients will receive 85% of 65% of patients will receive 85% of their primary care through AI agents.

their primary care through AI agents. Well, you I think the question that Well, you I think the question that anybody, any career could ask themselves anybody, any career could ask themselves is not is AI coming? Is AI going to take is not is AI coming? Is AI going to take over some of our roles? It's more like over some of our roles? It's more like what do we as humans have to offer?

what do we as humans have to offer? >> Yeah. >> Yeah. >> Yeah. >> That unique to us, right? And so I think >> That unique to us, right? And so I think about it from my clinical experience.

about it from my clinical experience. And yes, AI can come in and do 80% of And yes, AI can come in and do 80% of the tasks maybe that I can do. But can the tasks maybe that I can do. But can an AI have that empathy where parent to an AI have that empathy where parent to parent can look, you know, that family parent can look, you know, that family in the eye and say, I know how it feels in the eye and say, I know how it feels to have a sick kid and this is what I to have a sick kid and this is what I would do having a kid myself. And having would do having a kid myself. And having been in that situation, you know, those been in that situation, you know, those are the things that are so uniquely are the things that are so uniquely human that I think the question is more human that I think the question is more like what can humans do that AI can't like what can humans do that AI can't do? not is AI coming there is going to do? not is AI coming there is going to be an AI physician but what's the most be an AI physician but what's the most appropriate role for that AI physician appropriate role for that AI physician and what's the most appropriate role for and what's the most appropriate role for the human physician and I think it's not the human physician and I think it's not so much resisting the the you know so much resisting the the you know

advancement of the technology it's just advancement of the technology it's just how are we unique and how is the AI how are we unique and how is the AI unique unique unique >> yeah so let me toss in a couple things >> yeah so let me toss in a couple things first of all Ed you are dating yourself first of all Ed you are dating yourself by talking about Marcus Welby MD by talking about Marcus Welby MD [clears throat] [clears throat] [clears throat] and I and I I I actually I say that and I and I I I actually I say that because I I remember Marcus Welby and because I I remember Marcus Welby and Um, I had a a business school professor Um, I had a a business school professor who talked about Marcus Welby and I who talked about Marcus Welby and I think it's important because you look at think it's important because you look at Marcus Welby. A lot of um, people grew Marcus Welby. A lot of um, people grew up with Marcus Welby, Dr. Welby and and up with Marcus Welby, Dr. Welby and and there were several things that were there were several things that were important about Marcus Welby. He had as important about Marcus Welby. He had as much time as he wanted with every single much time as he wanted with every single patient, right? Virtually all the patient, right? Virtually all the patients got better and then they never patients got better and then they never talked about healing, right? So, right.

talked about healing, right? So, right. And so we like a lot of the people in And so we like a lot of the people in the United States grew up with with Dr.

the United States grew up with with Dr. Welby out there with those three factors Welby out there with those three factors in there and it affects our in there and it affects our consciousness and how we have consciousness and how we have expectations about our health care expectations about our health care system. So you know I think about you system.

Primary Care, Workflow, and the Future of Care Delivery

So you know I think about you know that that stat you know 65% of know that that stat you know 65% of people will will have 85% of their work people will will have 85% of their work being done or hair care healthcare being done or hair care healthcare delivered by an AI. I think the the way delivered by an AI. I think the the way I look at it is that AI will be involved I look at it is that AI will be involved in there and I I think you know going in there and I I think you know going back to you said some of the stuff that back to you said some of the stuff that goes on that that providers need to work goes on that that providers need to work on and spend time on right whether it's on and spend time on right whether it's the documentation aspect it's all the the documentation aspect it's all the billing aspect it's that all the portal billing aspect it's that all the portal and inbox messaging that goes on I think and inbox messaging that goes on I think a lot of that work can be augmented a lot of that work can be augmented through AI and removed through AI the through AI and removed through AI the the fighting of insurance denials the the fighting of insurance denials the prior authorizations, filling out forms, prior authorizations, filling out forms, that kind of work and AI should be able that kind of work and AI should be able to take over. And and to me, virtually to take over. And and to me, virtually every single provider that I know of every single provider that I know of will embrace that because I think we all will embrace that because I think we all want to get less, you know, of that want to get less, you know, of that paperwork involved. We want to be able paperwork involved. We want to be able to to make sure that we can render care to to make sure that we can render care as quickly as we can under the right as quickly as we can under the right circumstances. We'll embrace those kinds circumstances. We'll embrace those kinds of things. But I then I start thinking of things. But I then I start thinking about the other aspects of AI. I mean, about the other aspects of AI. I mean, we everybody's got, you know, a we everybody's got, you know, a smartwatch, a wearable. Um, that whole smartwatch, a wearable. Um, that whole notion of being able to check in and notion of being able to check in and watch patients in some way to monitor watch patients in some way to monitor them for problems they may not have or them for problems they may not have or to monitor the problems they've got. And to monitor the problems they've got. And I think that those are opportunities I think that those are opportunities that you can or that you have right now that you can or that you have right now with the AI that the hard part is trying with the AI that the hard part is trying to figure out who do you monitor, how do to figure out who do you monitor, how do you monitor them? I mean, if somebody you monitor them? I mean, if somebody comes up and I, you know, the first comes up and I, you know, the first wearable was, of course, the Fitbit and wearable was, of course, the Fitbit and everybody's like, "Oh, you're going to everybody's like, "Oh, you're going to be using Fitbit data." I keep thinking be using Fitbit data." I keep thinking to myself, I, you know, when I was at to myself, I, you know, when I was at the Cleveland Clinic, I had 2,300 the Cleveland Clinic, I had 2,300 patients in my panel. I didn't have any patients in my panel. I didn't have any any kind of tool that said, "This any kind of tool that said, "This

patient has stopped walking for the last patient has stopped walking for the last week. Should I check in on that week. Should I check in on that patient?" There's no tool out there that patient?" There's no tool out there that said this patient has up their their said this patient has up their their their walking, and I should call them their walking, and I should call them and congratulate them. There's no tool and congratulate them. There's no tool out there. And you know, the question out there. And you know, the question always becomes, how could AI help out to always becomes, how could AI help out to find those patients that either need find those patients that either need help, need encouragement, need our care help, need encouragement, need our care team to be involved? And let's think team to be involved? And let's think about all of those wearables and about all of those wearables and intelligence that's out there. What do intelligence that's out there. What do we do? That's where I think AI can we do? That's where I think AI can augment the work of that care team and augment the work of that care team and the panels that we've got.

the panels that we've got. >> So, so love that. uh basically uh the >> So, so love that. uh basically uh the terminology itself that the roles and terminology itself that the roles and responsibilities are going to change in responsibilities are going to change in the age of AI. Going back to the taxi the age of AI. Going back to the taxi example, I mean the yellow caps example, I mean the yellow caps basically got out their own app and then basically got out their own app and then basically became Uber plus the yellow basically became Uber plus the yellow cap. So quote code they are essentially cap. So quote code they are essentially a little better than Uber because you a little better than Uber because you can use them as traditional yellow cabs can use them as traditional yellow cabs and then also use them as you know Uber and then also use them as you know Uber as well. So what we are seeing right now as well. So what we are seeing right now is is exactly what Isa said is Hey is is exactly what Isa said is Hey Harvey, that's our Harvey, that's our >> Hey guys.

>> Hey guys. >> Hey guys. >> Hey guys. >> Blessie, where are you? T uh are you in >> Blessie, where are you? T uh are you in the hallway? the hallway?

>> I'm in Austin, Texas. I stepped out from >> I'm in Austin, Texas. I stepped out from a board meeting. I we we're going to a board meeting. I we we're going to start again. So I figured I'd come in start again. So I figured I'd come in and hang out with you guys. Good to see and hang out with you guys. Good to see everybody.

everybody. everybody. >> Awesome. Good to see you. I'm assuming >> Awesome. Good to see you. I'm assuming you already know Allan. you already know Allan.

>> Yes. Yes. [laughter] >> Yes. Yes. [laughter] So all the all all of you guys know each So all the all all of you guys know each other. So we were actually having a other. So we were actually having a discussion about uh AI physician discussion about uh AI physician replacement and there's a new study by replacement and there's a new study by Venote Neil Kosla who's Venote Kosla's Venote Neil Kosla who's Venote Kosla's son and they're betting big on AI son and they're betting big on AI physician uh of course uh in muddle way physician uh of course uh in muddle way about you know what they're saying about you know what they're saying they're saying what we all know actually they're saying what we all know actually anyways so that that's where the work anyways so that that's where the work definition and the work protocol changes definition and the work protocol changes and that's actually has always been and and that's actually has always been and what Allan says is that my relationship what Allan says is that my relationship with technology right was through a with technology right was through a ventilator through an IV infusion pump ventilator through an IV infusion pump through a you know breath you know through a you know breath you know breathtaking machines which was inhouse breathtaking machines which was inhouse as an ICU physician and now my role with as an ICU physician and now my role with technology is also changing with the technology is also changing with the relationship with a Fitbit or an Apple relationship with a Fitbit or an Apple Watch by the way feel free to uh you Watch by the way feel free to uh you know sponsor this podcast [laughter] know sponsor this podcast [laughter] what I'm saying is that that is exactly what I'm saying is that that is exactly you're right so not only our roles are you're right so not only our roles are changing our relationships of technology changing our relationships of technology are changing and I completely 100% agree are changing and I completely 100% agree with Isha Allen and Ed, but again um as with Isha Allen and Ed, but again um as Ed suggested I'm going to put that again Ed suggested I'm going to put that again 65% of people will get 85% of the health 65% of people will get 85% of the health care from agents and uh let's put a care from agents and uh let's put a timeline on it. So Alan, uh I first of timeline on it. So Alan, uh I first of all I I actually think that that 65% of all I I

actually think that that 65% of people is going to be more u especially people is going to be more u especially as you know Utah number one actually has as you know Utah number one actually has allowed medication refills through AF.

allowed medication refills through AF. So that's insane, right? I mean, if you So that's insane, right? I mean, if you really thought that, okay, really thought that, okay, empathy is one part, but you know, empathy is one part, but you know, pediatrics is one thing, obserics is one pediatrics is one thing, obserics is one thing, but you know, regular, you know, thing, but you know, regular, you know, Gen Z do not want to even see a Gen Z do not want to even see a physician and just want to, you know, physician and just want to, you know, chat with chat with someone and get chat with chat with someone and get their prescription. Now we're their prescription. Now we're looking at this. So, so number one, uh, looking at this. So, so number one, uh, what do you think is the timeline going what do you think is the timeline going to be? because uh we are seeing like to be? because uh we are seeing like officially state level legislation that officially state level legislation that is allowing AI to prescribe although is allowing AI to prescribe although it's renewal and it's very limited but it's renewal and it's very limited but at the end of the day it is a at the end of the day it is a prescription prescription prescription authority given to a computer as authority given to a computer as compared to me which is you know again compared to me which is you know again I'm not a drug dealer I I just want to I'm not a drug dealer I I just want to clarify that because I'm not a prescript clarify that because I'm not a prescript prescription pest dispenser you know but prescription pest dispenser you know but you understand what I'm trying to say you understand what I'm trying to say that's where the problem comes in from a that's where the problem comes in from a physician perspective I'm just uh saying physician perspective I'm just uh saying out loud in terms of how people perceive out loud in terms of how people perceive these things as well. So I'm going to these things as well. So I'm going to start with Allan. This is the prediction start with Allan. This is the prediction and I think it is actually a safer and I think it is actually a safer prediction. I think it's going to be prediction. I think it's going to be more aggressive. But having said that uh more aggressive. But having said that uh timeline and do you do you agree timeline and do you do you agree disagree? Do you think this should be disagree? Do you think this should be more aggressive a little bit more uh more aggressive a little bit more uh less aggressive?

less aggressive? >> So I I the answer is complicated. Um, in >> So I I the answer is complicated. Um, in a lot of states, a lot of states had a lot of states, a lot of states had laws about being able to do refills and laws about being able to do refills and other types of medical decisions. And a other types of medical decisions. And a a decision to refill a medication is a a decision to refill a medication is a medical decision where somebody's medical decision where somebody's deciding to represcribe. It's not just deciding to represcribe. It's not just refill. It's I'm going to prescribe a refill. It's I'm going to prescribe a medication and continuing it along. That medication and continuing it along. That is a medical decision. And so there are is a medical decision. And so there are a number of states out there when it a number of states out there when it comes to refill protocols that have laws comes to refill protocols that have laws and um and um monitoring in place. And I happen to monitoring in place. And I happen to know that having dealt with this whole know that having dealt with this whole notion of doing refill protocols through notion of doing refill protocols through um through MAS through medical um through MAS through medical assistance. I I know of one system that assistance. I I know of one system that had a refill protocol that said from a had a refill protocol that said from a medical assistant point of view that you medical assistant point of view that you were allowed to refill any medication as were allowed to refill any medication as long as it wasn't uh antibiotics and long as it wasn't uh antibiotics and pain medications. And I can tell you pain medications. And I can tell you when they finally did an analysis of it, when they finally did an analysis of it, 25% of the refills were pain medications 25% of the refills were pain medications and antibiotics, exactly what they were and antibiotics, exactly what they were trying to avoid. So, I I worry because trying to avoid. So, I I worry because there are there's a number of of of there are there's a number of of of different um medical boards out there different um medical boards out there that have um actually taken away that have um actually taken away prescription authority from providers prescription authority from providers who have done stuff like they'll leave who have done stuff like they'll leave on vacation and they'll sign a bunch of on vacation and they'll sign a bunch of of prescription pads and give them to of prescription pads and give them to their their staff to just refill, right?

their their staff to just refill, right? And that's the kind of thing that you're And that's the kind of thing that you're thinking an AI is going to do this, thinking an AI is going to do this, right? At the same time, I'm I'm less right? At the same time, I'm I'm less concerned about an AI because if you can concerned about an AI because if you can

create certain protocols, you know, the create certain protocols, you know, the patient has decently controlled blood patient has decently controlled blood pressure, they want their blood pressure pressure, they want their blood pressure meds refilled, and their electrolytes meds refilled, and their electrolytes are fine. I think about those protocols are fine. I think about those protocols that are out there that an AI can help that are out there that an AI can help make that decision. I think there's make that decision. I think there's great opportunity to, you know, to put great opportunity to, you know, to put those forth and in an AI, but there are those forth and in an AI, but there are a lot of legal loopholes or legal uh a lot of legal loopholes or legal uh challenges out there. Utah is unique challenges out there.

AI Prescribing, Liability, and Regulatory Limits

Utah is unique because of their their their the way because of their their their the way that their laws are constructed to allow that their laws are constructed to allow this to happen. It's going to take this to happen. It's going to take several years for the other several years for the other organizations, other states to um to organizations, other states to um to come in, you know, to come on board.

come in, you know, to come on board. >> So, is somebody's medical license >> So, is somebody's medical license attached to the prescription though attached to the prescription though because that's where it gets very tricky because that's where it gets very tricky to me. You know, yes, protocols to me. You know, yes, protocols >> generally work, but sometimes they >> generally work, but sometimes they don't. Every once in a while something, don't. Every once in a while something, you know, there can be an error. So then you know, there can be an error. So then what what's the liability? What's the what what's the liability? What's the responsibility? Who owns that? Who responsibility? Who owns that? Who takes?

takes? takes? >> It's called uh scapegoat in the loop. So >> It's called uh scapegoat in the loop. So the doctor is a scapegoat the doctor is a scapegoat >> and that's the on the line for it. Who >> and that's the on the line for it. Who doesn't even know?

doesn't even know? >> Oh yeah, it's the doctor that has the >> Oh yeah, it's the doctor that has the license and we have five minute license and we have five minute milliseconds to make that decision. So milliseconds to make that decision. So are we really making that decision? So are we really making that decision? So that's why I jokingly say it's the scape that's why I jokingly say it's the scape go scapegoat in the loop.

go scapegoat in the loop. >> Here's my shoulder. Why don't you put a >> Here's my shoulder. Why don't you put a gun over here and fire someone? So that gun over here and fire someone? So that that's really the the the goal over here that's really the the the goal over here is uh essentially Alan, you missed it.

is uh essentially Alan, you missed it. 2029 by Ed. What do you think uh uh with 2029 by Ed. What do you think uh uh with that prediction? 2029 is two years away.

that prediction? 2029 is two years away. Three years away. You think sooner or Three years away. You think sooner or later? later? later? >> I think that's probably a good estimate.

>> I think that's probably a good estimate. Let's see what comes out of the Utah Let's see what comes out of the Utah pilot of all this and see how other, you pilot of all this and see how other, you know, other states respond. But I think know, other states respond. But I think it's coming. Now, that's different it's coming. Now, that's different though. A refill protocol is vastly though. A refill protocol is vastly different than prescribing a brand new different than prescribing a brand new medication for a problem, right? And medication for a problem, right? And that's the whole notion of having like that's the whole notion of having like an autonomous AI. You know, it's one an autonomous AI. You know, it's one thing to, you know, call up an AI and thing to, you know, call up an AI and say, "I've got a snotty nose. You know, say, "I've got a snotty nose. You know, I think it's a science effect to give me I think it's a science effect to give me antibiotics." versus, you know, I've got antibiotics." versus, you know, I've got bl brand new hypertension. Um, you know, bl brand new hypertension. Um, you know, I need meds. Give it to me. Right. And I I need meds. Give it to me. Right. And I think there's a lot that's riding on think there's a lot that's riding on this entire process that we move this entire process that we move forward. A lot of lot of details to work forward.

A lot of lot of details to work out.

out. out. >> Harvey, I know you are um looking at the >> Harvey, I know you are um looking at the international picture on top of the international picture on top of the local picture. Uh what are your thoughts local picture. Uh what are your thoughts on this prediction and the timeline?

on this prediction and the timeline? I think uh progressive countries like I think uh progressive countries like Singapore, the UAE, nations like that Singapore, the UAE, nations like that for sure in the next five years. Uh US for sure in the next five years. Uh US uh I'm still waiting for that case uh I'm still waiting for that case that's going to hit in the next 12 that's going to hit in the next 12 months where not using AI is going to months where not using AI is going to cause liability and that's going to send cause liability and that's going to send a ripple effect throughout all the a ripple effect throughout all the hospital systems and then at that point hospital systems and then at that point maybe it uh will be right.

maybe it uh will be right. So that's very interesting. Like US So that's very interesting. Like US really needs a push through legally really needs a push through legally speaking to actually get innovation even speaking to actually get innovation even done. That's really odd.

done. That's really odd. >> Well, think about it. That's how right >> Well, think about it. That's how right there's usually some some big legal case there's usually some some big legal case that changes the culture and that changes the culture and revolutionizes and disrupts. Uh people revolutionizes and disrupts. Uh people don't want to let go of power. And then don't want to let go of power. And then the other part of this is age, right? Uh the other part of this is age, right? Uh certain individuals, not to stereotype, certain individuals, not to stereotype, will accept AI and some others won't.

will accept AI and some others won't. And when the other population's in And when the other population's in power, then they're going to make some power, then they're going to make some changes and radical changes.

changes and radical changes. >> But here here's the counterargument >> But here here's the counterargument there, right? What happens if you there, right? What happens if you disagree with the AI, right? And you're disagree with the AI, right? And you're correct or the AI is wrong. I I I happen correct or the AI is wrong. I I I happen to know of some systems out there, by to know of some systems out there, by the way, that have tried AI to help the way, that have tried AI to help predict sepsis. And I literally know of predict sepsis. And I literally know of a case where, you know, the AI didn't a case where, you know, the AI didn't show the patient was septic, but the show the patient was septic, but the patient was clearly septic. It was patient was clearly septic. It was absolutely there. The AI just misfired.

absolutely there. The AI just misfired. And we I I actually know of the case And we I I actually know of the case where literally providers were like, where literally providers were like, well, the AI didn't tell me it was well, the AI didn't tell me it was sepsis. So, at what point do we defer sepsis. So, at what point do we defer all our decision-making to an AI rather all our decision- making to an AI rather than having good clinical judgment? And than having good clinical judgment? And I think there's there's going to have to I think there's there's going to have to be some aspect of, you know, give and be some aspect of, you know, give and take as we figure this out.

take as we figure this out. >> Well, the big picture there is >> Well, the big picture there is education. You and I are older. We've education. You and I are older. We've have our clinical gestalt. We know we have our clinical gestalt. We know we can call on AI. Uh but the can call on AI. Uh but the younger population, unfortunately, it younger population, unfortunately, it sounds so real. They think it's the gold sounds so real. They think it's the gold standard and they don't have that standard and they don't have that clinical result and they don't know what clinical result and they don't know what they don't know and they don't have the they don't know and they don't have the gray hairs that we do that have given us gray hairs that we do that have given us that experience that can trump the AI.

that experience that can trump the AI. With that said, as the AI gets uh better With that said, as the AI gets uh better and you and I are inputting it and and you and I are inputting it and putting our clinical gestalt and putting our clinical gestalt and helping, then we'll be better. But I helping, then we'll be better. But I think the main goal here is

that we need think the main goal here is that we need to teach our younger population and know to teach our younger population and know when to use it and when not to use it.

when to use it and when not to use it. >> Agree. You know, it's actually >> Agree. You know, it's actually interesting that I think you made fun of interesting that I think you made fun of my gray hair. I like to say that my gray my gray hair. I like to say that my gray hair came from, you know, that I wasn't hair came from, you know, that I wasn't have I didn't have any gray hair until I have I didn't have any gray hair until I got married and had a daughter and and got married and had a daughter and and so it's all their fault, right? So, so it's all their fault, right? So, [laughter] just want to let you know, [laughter] just want to let you know, >> well, I'm catching up, man. It's all >> well, I'm catching up, man. It's all here.

here. here. >> We're going to open up another can of >> We're going to open up another can of worms, which brings us to that question worms, which brings us to that question that Isa said. Isa said, and I that Isa said. Isa said, and I completely agree with the pediatric, but completely agree with the pediatric, but let's just flip uh the script. Here's let's just flip uh the script. Here's Harvey. Uh, Harvey. Uh, he's only 25 because of, you know, AI he's only 25 because of, you know, AI helping him become [laughter] helping him become [laughter] more smart, more sexy, everything. You more smart, more sexy, everything. You know, you have no idea like he literally know, you have no idea like he literally one of these days we're going to have a one of these days we're going to have a podcast just on Harvey that how he uses podcast just on Harvey that how he uses AI to improve his personal health. Uh AI to improve his personal health.

Empathy, Human Connection, and Multimodal Care

Uh and of course I'm uh with you know we're and of course I'm uh with you know we're going to bring Siman Ed's wife one day going to bring Siman Ed's wife one day to talk about peptides their future and to talk about peptides their future and then how AI is going to be involved in then how AI is going to be involved in uh not pharmaceutical but neutrauticals uh not pharmaceutical but neutrauticals which is again a big sort of uh uh which is again a big sort of uh uh importance but Isa brought up a very importance but Isa brought up a very important point about empathy and that's important point about empathy and that's exactly by the way Ed my younger brother exactly by the way Ed my younger brother is 18 years younger than me I sent him is 18 years younger than me I sent him the study and he said yeah Chad GPD is the study and he said yeah Chad GPD is better at this ch is better at this you better at this ch is better at this you guys suck And it really hurts me inside.

guys suck And it really hurts me inside. But that's it. I mean, the the guy who But that's it. I mean, the the guy who was Gen Z is like, and my dad is calling was Gen Z is like, and my dad is calling me, oh, can you send a nurse me, oh, can you send a nurse practitioner at home because I need face practitioner at home because I need face to face time and can you make sure that to face time and can you make sure that this stupid, you know, phone tree this stupid, you know, phone tree doesn't uh so he's frustrated. Again, I doesn't uh so he's frustrated. Again, I completely agree Ed what you're saying completely agree Ed what you're saying inside my own family, I'm seeing that, inside my own family, I'm seeing that, you know, three generations moving this you know, three generations moving this forward. But Isaiah, one of the things forward. But Isaiah, one of the things that we have noticed is through chatbot, that we have noticed is through chatbot, we can fake empathy much better.

we can fake empathy much better. And let's just be honest. I mean, I wish And let's just be honest. I mean, I wish I had the clip. There's a favorite show I had the clip. There's a favorite show called Mentalist. I don't know if you called Mentalist. I don't know if you love it, but anyways, they they one of love it, but anyways, they they one of the things that he said, Patrick, was the things that he said, Patrick, was that he this woman does not have that that he this woman does not have that eerie distant feeling of a physician.

eerie distant feeling of a physician. Actually, it was noted that physicians Actually, it was noted that physicians are technically more distant as compared are technically more distant as compared to empathy. And as a matter of to empathy. And as a matter of fact, there's been studies that you know there's been studies that you know physicians are lack lack of time just physicians are lack lack of time just that's very simple. I mean I have have that's very simple. I mean I have have to see 30 patients a day is just to see 30 patients a day is just impossible. But more importantly impossible. But more importantly uh empathy can be faked through chat uh empathy can be

faked through chat bots much better. And just think about bots much better. And just think about how the video is going at some point in how the video is going at some point in time video based AI avatars are going to time video based AI avatars are going to be doing that. But anyways so step one be doing that. But anyways so step one how what do you think that future would how what do you think that future would look like when you have a you know look like when you have a you know avatar of Dr. mannering uh as avatar of Dr. mannering uh as essentially uh coaching uh thousand essentially uh coaching uh thousand patients a day as compared to 10 that patients a day as compared to 10 that you can get to. That's number one you can get to. That's number one question and number two of course Ed's question and number two of course Ed's >> uh Isa can you hear me?

>> uh Isa can you hear me? >> Well so that's not real empathy though >> Well so that's not real empathy though >> you know it's like >> you know it's like So So So the smart thing is we are so bogged down the smart thing is we are so bogged down with administrative stuff but I love with administrative stuff but I love Allen's philosophy of why don't we take Allen's philosophy of why don't we take the administrative stuff away by AI or the administrative stuff away by AI or like get rid of some of that work so like get rid of some of that work so then we can have that true empathy then we can have that true empathy because I I think on some level we feel because I I think on some level we feel it deep down like when you have a sick it deep down like when you have a sick kid a really sick kid you want somebody kid a really sick kid you want somebody to look you in the eye who understands to look you in the eye who understands how you feel like you know and a and a how you feel like you know and a and a and a chatbot can certainly and a chatbot can certainly create recreate that to some degree, but create recreate that to some degree, but they cannot connect in the same way. I they cannot connect in the same way. I don't believe they can connect in the don't believe they can connect in the same way. They can get close and for same way. They can get close and for maybe 95% of things they can get close, maybe 95% of things they can get close, but then there's that that human but then there's that that human connection that does come from shared connection that does come from shared experience that an AI can mimic very experience that an AI can mimic very well, but it's not genuine. And so I I well, but it's not genuine. And so I I think to say that we can completely think to say that we can completely replace the genuine empathy, I don't replace the genuine empathy, I don't know if that's possible. I mean, I I know if that's possible. I mean, I I think the quality of it goes down. And I think the quality of it goes down. And I get the convenience. I also love get the convenience. I also love convenience. [laughter] And I get why convenience. [laughter] And I get why this generation, it's we we're in an this generation, it's we we're in an instant gratification culture. We want instant gratification culture. We want our care when we want it. We, you know, our care when we want it. We, you know, we want it in our homes. We don't want we want it in our homes. We don't want to have to leave the house. We don't to have to leave the house. We don't want to have to interact with too many want to have to interact with too many people. We just want it when we want it.

people. We just want it when we want it. We want it on demand. and and I get We want it on demand. and and I get that, but there's got to be a way where that, but there's got to be a way where we can, you know, meet in the middle we can, you know, meet in the middle where, you know, consumers or patients where, you know, consumers or patients can get that convenience aspect, AI can can get that convenience aspect, AI can help us get there, but there's also some help us get there, but there's also some human connection that no matter how good human connection that no matter how good the the the bots get, it will never be the the the bots get, it will never be genuine. You know, a robot will never genuine. You know, a robot will never actually know what having a sick actually know what having a sick >> usually. I'm going to challenge that one >> usually. I'm going to challenge that one real quick and just real quick and just >> I knew you was going to challenge it. By >> I knew you was going to challenge it. By the way, just to let you know, we live the way, just to let you know, we live in the real world. Harvey lives in the in the real world. Harvey lives in the >> And here's why. My favorite phrase, >> And here's why. My favorite phrase, guys, is we don't know what we don't guys, is we don't know what we don't know. Until someone calls us out and know. Until someone calls us out and say, "Dude, you're freaking uh horrible.

say, "Dude, you're freaking uh horrible. Your bedside manners." You're like, Your bedside manners." You're like, "Really? I think I'm amazing, but here's "Really? I think I'm amazing, but here's where I think the ambient scribe can where I think the ambient scribe can really help us physicians." And I'll really help us physicians." And I'll throw myself in there uh just to be throw myself in there uh just to be humble and and the honest truth of humble and and the honest truth of growing the AI can hear our inflection growing the AI can hear our inflection in our voice can extract over 100 in our voice can extract over 100 emotions in our voice can give us I I emotions in our voice can give us I I created a prototype just to test this created a prototype just to test this theory and I was able to uh get

theory and I was able to uh get permission and all that get recordings permission and all that get recordings and then give feedback to different and then give feedback to different physicians that were considered really physicians that were considered really good bedside manners and they guess what good bedside manners and they guess what they got even better because they they they got even better because they they didn't know that certain the nouns that didn't know that certain the nouns that were using verbs and their pitch and were using verbs and their pitch and voice was so different and now they're voice was so different and now they're doing better. And so my point is yes, uh doing better. And so my point is yes, uh it can teach empathy because the human it can teach empathy because the human is going to be that human in the loop.

is going to be that human in the loop. And then the last part I want to say is And then the last part I want to say is by having this you're able to have a a by having this you're able to have a a subjective third party. If I'm biased subjective third party. If I'm biased and I don't like Jana and I want to and I don't like Jana and I want to always give them bad reports, here's in always give them bad reports, here's in theory a an AI that can go be like, "No, theory a an AI that can go be like, "No, this is how I grade everybody the same.

this is how I grade everybody the same. So, So, So, >> well, I just have one counter. So, >> well, I just have one counter. So, >> go ahead. >> go ahead.

>> How many times during my day in clinic >> How many times during my day in clinic would I hear, "What would you do for would I hear, "What would you do for your kid?" your kid?" >> And an AI can be really good at >> And an AI can be really good at answering that question, but everybody answering that question, but everybody knows the AI doesn't really know what it knows the AI doesn't really know what it feels like to have a kid. So, but but feels like to have a kid. So, but but that's just my pediatric experience, that's just my pediatric experience, right? There's plenty of situations right? There's plenty of situations where that doesn't apply. And there's where that doesn't apply. And there's plenty of doctors who don't make the plenty of doctors who don't make the connection with their patients and that, connection with their patients and that, you know, and that's sad to me. But you know, and that's sad to me. But throughout, you know, my clinical throughout, you know, my clinical career, so many times would I have to career, so many times would I have to kind of get to that level with my kind of get to that level with my patient. And I think, you know, an AI patient. And I think, you know, an AI could answer that question, but it could answer that question, but it wouldn't be a real answer.

wouldn't be a real answer. >> Yeah. Yeah. I'm going to agree with with >> Yeah. Yeah. I'm going to agree with with each on this. I mean, I I think that the each on this. I mean, I I think that the chat bots, the AIS can simulate the chat bots, the AIS can simulate the empathy. They can simulate patience, empathy. They can simulate patience, right? and and let's face it, they they right? and and let's face it, they they can do all the program you want and and can do all the program you want and and seem like they are a very patient seem like they are a very patient caregiver. And I think that goes back to caregiver. And I think that goes back to you look at the amount of work that you look at the amount of work that providers have you know whether it's you providers have you know whether it's you know you're seeing 30 patients in a know you're seeing 30 patients in a neurology you know clinic which is crazy neurology you know clinic which is crazy right or you're seeing you know 30 right or you're seeing you know 30 patients in a pediatric clinic it's a patients in a pediatric clinic it's a huge amount of work and the the amount huge amount of work and the the amount of effort that all of us from a you know of effort that all of us from a you know from a physician point of view have to from a physician point of view have to deal with the information is deal with the information is overwhelming you know forget all of the overwhelming you know forget all of the administrative stuff you've got to do administrative stuff you've got to do you're just trying to make decisions and you're just trying to make decisions and whether you can find the right whether you can find the right information inside the EHR or you know information inside the EHR or you know find the right test or you know you're find the right test or you know you're having that conversation with a patient having that conversation with a patient and they leave out something crucial.

and they leave out something crucial. The amount of energy that you have is The amount of energy that you have is limited throughout the course of the day limited throughout the course of the day and there are lots of studies that show and there are lots of studies that show that by the end of the day you're that by the end of the day you're fatigued.

fatigued. fatigued. You're fatigued and when you're fatigued You're fatigued and when you're fatigued you make the wrong decision. And there you make the wrong decision. And there are studies that show that providers are are studies that show that providers are more likely to give antibiotics out more likely to give antibiotics out incorrectly at the end of the day. That incorrectly at the end of the day.

AI Tools for Documentation and Revenue Cycle

That they are less likely to advocate for they are less likely to advocate for screening tests at the end of the day. screening tests at the end of the day.

They're also less effective in getting They're also less effective in getting patients to go to the screening tests at patients to go to the screening tests at the end of the day. It's the fatigue the end of the day. It's the fatigue that sets in. And when you're fatigued, that sets in. And when you're fatigued, it's really hard to be empathetic. It is it's really hard to be empathetic. It is really hard to find the energy within really hard to find the energy within yourself to in some way, shape, or form yourself to in some way, shape, or form help the patient in the right way. and help the patient in the right way. and and and that fatigue is what we need to and and that fatigue is what we need to to combat with all of the tools that we to combat with all of the tools that we have available to us, whether it's EHR have available to us, whether it's EHR optimization, an AI tool to help, you optimization, an AI tool to help, you know, take care of some of this know, take care of some of this administrative work that's out there. We administrative work that's out there. We need to combat fatigue so that providers need to combat fatigue so that providers can in a very, you know, much better way can in a very, you know, much better way than they can today. be empathetic right than they can today. be empathetic right up front, spend the right amount of time up front, spend the right amount of time with patients, create the kind of with patients, create the kind of relationship that they need, and then relationship that they need, and then also streamline the care. And I think also streamline the care. And I think that's where the AI tools are coming.

that's where the AI tools are coming. Uh I I'm going to push back, but before Uh I I'm going to push back, but before I do, uh let me just ask Ed, uh on on I do, uh let me just ask Ed, uh on on the matrix of Harvey versus the humanity the matrix of Harvey versus the humanity of Isa and Allen. Just kidding. a of Isa and Allen. Just kidding. a >> If if I had a sick kid, I'd go to Issha.

>> If if I had a sick kid, I'd go to Issha. But uh But uh >> how do you know I'm not an AI digital >> how do you know I'm not an AI digital twin? twin?

twin? >> You could that's going to be [laughter] >> You could that's going to be [laughter] that's going to be the big reveal at the that's going to be the big reveal at the end of the year. Don't spoil it. Isa's end of the year. Don't spoil it. Isa's >> we are doing real human watermarking >> we are doing real human watermarking now. [laughter] now. [laughter] I think I think >> confirm >> confirm >> confirm >> you know my that >> you know my that >> my argument has has been that you need >> my argument has has been that you need to be multimodal to be multimodal this is like this is how I speak to this is like this is how I speak to hospitals u I can't talk about a solo hospitals u I can't talk about a solo practitioner but even then probably you practitioner but even then probably you have to be multimodal I think you don't have to be multimodal I think you don't have to be but I think the wise choice have to be but I think the wise choice if you want to serve a diverse if you want to serve a diverse population be multimodal so hey this is population be multimodal so hey this is my AI you know I do use a lot of AI and my AI you know I do use a lot of AI and like that's why I say 65% of patients like that's why I say 65% of patients because it always be the traditional because it always be the traditional patients and there's some, you know, patients and there's some, you know, outliers, right? Young people that want outliers, right? Young people that want that that high touch. They don't want to that that high touch. They don't want to deal with a machine, right? You get a deal with a machine, right? You get a lot of that feedback, too, right? At lot of that feedback, too, right? At some recent speeches at the, you know, some recent speeches at the, you know, graduations, right? They're people are graduations, right? They're people are kind of booing these new college kind of booing these new college graduates like, "Ah, AI, boo boo." So, graduates like, "Ah, AI, boo boo." So, there's always going to be space for there's always going to be space for everyone. And so, that's why I think you everyone. And so, that's why I think you need to be multimodal. So, it's like, need to be multimodal. So, it's like, "Hey, you want to do just virtual care "Hey, you want to do just virtual care like te traditional tele medicine, RPM, like te traditional tele medicine, RPM, all

that kind of stuff? We've got it.

all that kind of stuff? We've got it. Come to us. Oh, you want to do you don't Come to us. Oh, you want to do you don't want to interact with anyone and you want to interact with anyone and you just want to use AI? No problem. We got just want to use AI? No problem. We got it. Oh, you want to come in and like, it. Oh, you want to come in and like, you know, talk longer, talk more. You you know, talk longer, talk more. You got it. Because now as a clinician, I'm got it. Because now as a clinician, I'm freed up because a lot of my patients freed up because a lot of my patients have chosen AI. Uh and so I'm using my have chosen AI. Uh and so I'm using my AI physician extenders. I just think you AI physician extenders. I just think you should be multimodal. So that that's and should be multimodal. So that that's and I'm trying to get like Simon with her I'm trying to get like Simon with her practice. C practice. C >> can I can I actually uh trademark that >> can I can I actually uh trademark that AI physician extenders?

AI physician extenders? That's a very good one. [laughter] That's a very good one. [laughter] >> We'll put it in the notes. So, uh, we >> We'll put it in the notes. So, uh, we trade.

>> So, um, well, uh, I'm going to answer >> So, um, well, uh, I'm going to answer this and I'm going to tell you exactly. this and I'm going to tell you exactly.

So, first of all, you're right, Alan and So, first of all, you're right, Alan and Isa. U, one of the things that we did on Isa. U, one of the things that we did on Save Live AI, of course, we have the Save Live AI, of course, we have the documentation and EHR integrations with documentation and EHR integrations with multiple sources, EHR chat and multiple sources, EHR chat and everything. You know it's massive in everything.

Avatars, Digital Twins, and the Next Wave of AI

You know it's massive in terms of you know not just creating terms of you know not just creating documentation for clinical because we documentation for clinical because we believe in clinical radiological and believe in clinical radiological and pathology should come in but we don't pathology should come in but we don't have the current capacity which we are have the current capacity which we are building one and radio view AI is building one and radio view AI is essentially the same but we actually did essentially the same but we actually did exactly what you're saying we actually exactly what you're saying we actually move from documentation to dollars and move from documentation to dollars and essentially improving the dollar amount essentially improving the dollar amount that you get through automated that you get through automated completely connected RCM which is AI completely connected RCM which is AI based it goes through the whole process based it goes through the whole process of denial classification draft approval of denial classification draft approval everything clinical documentation review everything clinical documentation review AI grounded medical coding prior AI grounded medical coding prior authorization eligibility this whole authorization eligibility this whole module is fully now done go guys check module is fully now done go guys check it out but I agree with you that the the it out but I agree with you that the the the the problems that you're talking the the problems that you're talking about the front office the back office about the front office the back office the RCM everything goes out and uh save the RCM everything goes out and uh save life AI now has a fully blown RCM module life AI now has a fully blown RCM module which is uh you know going to take away which is uh you know going to take away uh the whole thing not just the freaking uh the whole thing not just the freaking docu documentation part but also docu documentation part but also connecting it through and increasing connecting it through and increasing overall your uh potential claims as overall your uh potential claims as well. But uh here's the thing. Um the well. But uh here's the thing. Um the there there's a YouTube channel by the there there's a YouTube channel by the way if you look fol it's called AI way if you look fol it's called AI engineer and there was yesterday there engineer and there was yesterday there was a talk about uh avatars and how was a talk about uh avatars and how they're improving avatars in terms of they're improving avatars in terms of movement the facial expressions and movement the facial expressions and everything and they went into everything and they went into essentially micro expression up to the essentially micro expression up to the level of microp expressions because some level of microp expressions because some of these things you don't understand of these things you don't understand like this is my nuance I like to do my like this is my nuance I like to do my hands like this Ed likes to put a cap on hands like this Ed likes to put a cap on Harvey is like you know and you has your Harvey is like you know and you has your own mannerisms so as uh Allan has own mannerisms so as uh Allan has something and

they are looking into this something and they are looking into this and then um just remember in three years and then um just remember in three years what the video AI has achieved. It's what the video AI has achieved. It's insane overall.

insane overall. We I don't know people keep saying that We I don't know people keep saying that the first video of you know uh what was the first video of you know uh what was that actor eating spaghetti and they that actor eating spaghetti and they actually make that a standard every year actually make that a standard every year they post uh with different models. Seed they post uh with different models. Seed dance 2.5 is now fully open source. I dance 2.5 is now fully open source. I don't even have to go to Google as well.

don't even have to go to Google as well. So my thought is that that the is So my thought is that that the is going so fast so much better. I mean going so fast so much better. I mean they released qu 3.8 827B they released qu 3.8 827B which is better than meta all of this.

which is better than meta all of this. So, and I'm using it on my own computer. So, and I'm using it on my own computer. It just my my thought is that I agree It just my my thought is that I agree that uh there is currently the word AI that uh there is currently the word AI swap more oper operationally correct.

swap more oper operationally correct. But my feeling is it's going to be But my feeling is it's going to be harder and harder for me to distinguish harder and harder for me to distinguish between fake empathy and real empathy.

between fake empathy and real empathy. And I I first of all I completely agree And I I first of all I completely agree that there you are 100% correct. I don't that there you are 100% correct. I don't think so they get better than me. There think so they get better than me. There is a difference between real empathy if is a difference between real empathy if someone cares or not. Right. Let's just someone cares or not. Right. Let's just be honest. That's fact of life. But my be honest. That's fact of life. But my insane problem over here is that that insane problem over here is that that we're looking at a breakneck speed of we're looking at a breakneck speed of things that are, you know, for lack of a things that are, you know, for lack of a better word, uh, I'm losing, you know, better word, uh, I'm losing, you know, the fight every day with AI u because the fight every day with AI u because it's doing much more work. My all my it's doing much more work. My all my developers, I had to fire 50 60% of the developers, I had to fire 50 60% of the company. I fired three more people for company. I fired three more people for God's sakes. What what I'm trying to God's sakes. What what I'm trying to figure out is like really my burn rate figure out is like really my burn rate that started $50,000 a month is now you that started $50,000 a month is now you know less than $24,000 a month. We are know less than $24,000 a month. We are closing our uh you know second round. Uh closing our uh you know second round. Uh but what I'm saying is that things are but what I'm saying is that things are progressing so fast that and I told you progressing so fast that and I told you it's very very few times that I get it's very very few times that I get nervous about this because I mean nervous about this because I mean learning is my superpower as I keep learning is my superpower as I keep saying but this is getting bad. So going saying but this is getting bad. So going back to now you're reiterating the back to now you're reiterating the question Alan the speed of innovation in question Alan the speed of innovation in video can that really mimic or maybe video can that really mimic or maybe even surpass which by the way we know even surpass which by the way we know that right like radiology that right like radiology there are places we have surpassed human there are places we have surpassed human even clinical documentations clinical even clinical documentations clinical decision support AI surpassed humans decision support AI surpassed humans [laughter] [laughter] [laughter] if you see ever that Harvey's and if you see ever that Harvey's and essentially my world of matrix is going essentially my world of matrix is going to surp pass uh quote unquote human to surp pass uh quote unquote human anyone can or Allan is thinking and anyone can or Allan is thinking and that's he's fatigued right now and that's he's fatigued right now and that's another thing that I want to tell that's another thing that I want to tell everyone that he can get fatigued and my everyone that he can get fatigued and my big picture I see this as a uh there's big picture I see this as a uh there's different classifications if you're different classifications if you're going to your doctor for med refill and going to your doctor for med refill and it's your normal high blood pressure and it's your normal high blood pressure and you're like I don't really care I just you're like I don't really care I just want the prescription. In fact, I don't want the prescription. In fact, I don't even want to see my doctor. I just want even want to see my doctor. I just want my prescription. You're [clears throat] my prescription. You're [clears throat] more likely to say, "Hey, the bot's more likely to say, "Hey, the bot's fine. I don't mind." Now, if it's a fine. I don't mind." Now, if it's a diagnosis of cancer, life-

threatening, diagnosis of cancer, life-threatening, something life-changing, you don't want something life-changing, you don't want a robot ever to say you that. My a robot ever to say you that. My argument is you want to have the right argument is you want to have the right physician, the right tools, the right physician, the right tools, the right physician to know when it's AI physician to know when it's AI versus right AI, and to be able to find versus right AI, and to be able to find the latest therapies, to be able to go the latest therapies, to be able to go to my patient within 30 minutes and say, to my patient within 30 minutes and say, "You know what? based on genet genetics "You know what? based on genet genetics that I just drew, I know that this is that I just drew, I know that this is the best protocol for your particular the best protocol for your particular body type. Whereas someone that has 30 body type. Whereas someone that has 30 years of experience in oncology that years of experience in oncology that doesn't have access to that type of doesn't have access to that type of technology, I don't think is the better technology, I don't think is the better doctor in that particular case. And so doctor in that particular case. And so my whole argument it's human plus AI and my whole argument it's human plus AI and not just any human, the right doctor not just any human, the right doctor that understands how to use these tools that understands how to use these tools and then combines them to make them that and then combines them to make them that amazing physician.

amazing physician. >> Yeah, that's there. And I think it all >> Yeah, that's there. And I think it all it comes down to again like what is the it comes down to again like what is the uniquely human aspect like what what can uniquely human aspect like what what can humans do that's unique and that's what humans do that's unique and that's what we need to kind of build up in ourselves we need to kind of build up in ourselves because that's important that's an because that's important that's an important thing and it's kind of sad to important thing and it's kind of sad to me to think about a world where like me to think about a world where like people can't distinguish between human people can't distinguish between human empathy and AI empathy and it also empathy and AI empathy and it also brings up the transparency aspect of it.

brings up the transparency aspect of it. You know, it's like we we have to be You know, it's like we we have to be transparent about when we're using AI.

transparent about when we're using AI. But are we going to start forgetting But are we going to start forgetting which one is the human and which one is which one is the human and which one is not? I mean, that's these are all very not? I mean, that's these are all very real questions.

real questions. >> Yeah. Ed is smiling and he has Oh, >> Yeah. Ed is smiling and he has Oh, sorry. Go ahead. sorry. Go ahead. >> No, no. I mean, I this whole notion of, >> No, no. I mean, I this whole notion of, you know, real real empathy versus fake.

you know, real real empathy versus fake. We've been discussing this for 60 years. We've been discussing this for 60 years. There was a you know an MIT uh physician There was a you know an MIT uh physician or or lab that they created something or or lab that they created something called Eliza out there and it was a you called Eliza out there and it was a you know if you can look it up and it was a know if you can look it up and it was a green cathode ray tube and people green cathode ray tube and people thought that it was a true psychiatrist thought that it was a true psychiatrist psychoanalyst I mean they thought they psychoanalyst I mean they thought they was empathetic because of the way it was empathetic because of the way it worked. So, we've been discussing worked. So, we've been discussing whether or not it's real empathy versus whether or not it's real empathy versus fake empathy for a long period of time.

fake empathy for a long period of time. And I it's hard for me to know whether And I it's hard for me to know whether or not there's ever going to be a true or not there's ever going to be a true like, you know, relationship that you'll like, you know, relationship that you'll have with an AI that can teach you have with an AI that can teach you something. I I still it still comes down something. I I still it still comes down to me, you know, what are we trying to to me, you know, what are we trying to solve? What are we going to improve solve? What are we going to improve outcomes? Are we going to reduce costs?

outcomes? Are we going to reduce costs? And I'm still waiting for the data And I'm still waiting for the data behind it. But I, you know, I keep behind it. But I, you know, I keep thinking about the fact that forget the thinking about the

fact that forget the empathy, right? I I can tell you that empathy, right? I I can tell you that the conversations that I've had with the conversations that I've had with patients have yielded better outcomes patients have yielded better outcomes that yeah, I mean, I'm all for the that yeah, I mean, I'm all for the refill protocols, but sometimes, you refill protocols, but sometimes, you know, having that conversation and know, having that conversation and there's a catch out there. There's there's a catch out there. There's something that they say that, you know, something that they say that, you know, I I hate to say it, my spidey sense was I I hate to say it, my spidey sense was tingling in there and I go, "All right, tingling in there and I go, "All right, there's something else going on." and there's something else going on." and that something else has yielded better that something else has yielded better outcomes. I I mean just in that outcomes. I I mean just in that knowledge in that that ability to knowledge in that that ability to interpret and you sure you could interpret and you sure you could probably teach an AI and the AI could probably teach an AI and the AI could interpret voice and do all these things interpret voice and do all these things but you're talking about spending an but you're talking about spending an incredible amount of time and effort to incredible amount of time and effort to train AIs to do something when you got train AIs to do something when you got people that can do it already. And I and people that can do it already. And I and so I'm not certain we're ever going to so I'm not certain we're ever going to get there. And I'm not sure what what get there. And I'm not sure what what the cost is to develop these AIs. Let's the cost is to develop these AIs. Let's in in my mind, cool stuff. Let's get rid in in my mind, cool stuff. Let's get rid of all the administrative burden. Let's of all the administrative burden. Let's take care of the fatigue that providers take care of the fatigue that providers have in the health care system and allow have in the health care system and allow providers and, you know, their their providers and, you know, their their staff to develop better relationship staff to develop better relationship with patient. That's where I think we with patient. That's where I think we need to go.

need to go. >> I I love that. uh completely. I'm going >> I I love that. uh completely. I'm going to let Ed u close this today's um to let Ed u close this today's um podcast and then uh Alan we're going to podcast and then uh Alan we're going to bring you back uh reschedule it for a bring you back uh reschedule it for a complete discussion on just genetics. I complete discussion on just genetics. I need to learn from you on that. I would need to learn from you on that. I would love your mentorship on understanding love your mentorship on understanding how it impacts uh physician behavior, how it impacts uh physician behavior, patient behavior and everything. So here patient behavior and everything. So here I'll make sure we reschedu him I'll make sure we reschedu him [clears throat] and that's where [clears throat] and that's where epigenetics and Harvey's uh twin digital epigenetics and Harvey's uh twin digital twins with genetics come in because we twins with genetics come in because we need to one do one dedicated show on need to one do one dedicated show on digital twin as well. So Ed, uh, digital twin as well. So Ed, uh, first of all, are you real or is that first of all, are you real or is that your avatar? And that's your avatar? And that's [laughter] that's [laughter] that's so that's that's the crux of the so that's that's the crux of the question now, right? And um, question now, right? And um, let's let's let's hear your thoughts.

let's let's let's hear your thoughts. >> Well, what amazing Allan, thank you so >> Well, what amazing Allan, thank you so much for being with us. Yeah, we need to much for being with us. Yeah, we need to give Allan more uh more more time on the give Allan more uh more more time on the on the next episode because he he brings on the next episode because he he brings so much to the table. You know, going so much to the table. You know, going back to the whole empathy and I'm huge back to the whole empathy and I'm huge into empathy and I'm a huge people thing into empathy and I'm a huge people thing and I you know, I love Isa for all the and I you know, I love Isa for all the things that she said. I I also saw I things that she said. I I also saw I went to the medical school, the latest went to the medical school, the latest medical school, I think I've talked medical school, I think I've talked about this once before, is at ASU in about this once before, is at ASU in Phoenix and I was there a couple months Phoenix and I was there a couple months ago checking out their their lab or ago checking out their their lab or their innovation lab. This is where this their innovation lab. This is where this is our training room for the new docs is our training room for the new docs that are coming in the cohort. And we that are coming in the cohort. And we they showed us the I I forget what the they showed us the I I forget what the right words are, but it's when it's it's right words are, but it's when it's it's you think you're talking to a human, you think you're talking to a human, it's actually the clinician. It's not it's actually the clinician. It's not really human. So, we're talking about really human. So, we're talking about empathy. Okay. So, um but what it empathy. Okay. So, um but what it requires, right? If you're a human, you requires, right? If you're a human, you have to know so much. Like, can you know have to know so much. Like, can you know all this stuff? So, so we did this all this stuff? So, so we did this natural interaction and and we had this natural interaction and and we had this conversation with this patient and we're conversation with

this patient and we're trying to see like which is more trying to see like which is more empathetic. And I'll never forget it empathetic. And I'll never forget it because it was around the tight time of because it was around the tight time of the World Cup and there was a lot of the World Cup and there was a lot of conversation going on back and forth and conversation going on back and forth and and the p the patient said do and the p the patient said do um um um or the clinician said picked up a nuance or the clinician said picked up a nuance about her condition and how she couldn't about her condition and how she couldn't concentrate like look at a television concentrate like look at a television for more than like five minutes without for more than like five minutes without getting a headache type and and so the getting a headache type and and so the clinician is like yeah and I and I know clinician is like yeah and I and I know how much you love soccer because they how much you love soccer because they had that in history. I know how much you had that in history. I know how much you love soccer, so it must be really love soccer, so it must be really frustrating right now with the World Cup frustrating right now with the World Cup because she really can't watch it. And because she really can't watch it. And she's like, "Yeah, you know, would a she's like, "Yeah, you know, would a human have picked that up and remembered human have picked that up and remembered from their HMPP like a year ago that she from their HMPP like a year ago that she was soccer and all that kind of stuff was soccer and all that kind of stuff and now is the World Cup and that was and now is the World Cup and that was such an empathetic moment, but it was such an empathetic moment, but it was all a it was AI." So, yeah, it's a hard all a it was AI." So, yeah, it's a hard not to crack. That's why I say not to crack. That's why I say multimodal at least during the next the multimodal at least during the next the next five years. Uh I think multimodal next five years. Uh I think multimodal and then I get the feeling that it'll be and then I get the feeling that it'll be mostly AI. But you know back one last mostly AI. But you know back one last thing Jana really quick back to the Uber thing Jana really quick back to the Uber analogy and you talked about like Whimo analogy and you talked about like Whimo came out completely autonomous and as we came out completely autonomous and as we know a lot of accidents at first now know a lot of accidents at first now it's better than humans. U but and you it's better than humans. U but and you talked about how then yellow cabs like talked about how then yellow cabs like they could be the physicians they they could be the physicians they adopted and now they have their own like adopted and now they have their own like Uberlike app and you can still wave them Uberlike app and you can still wave them down and now it just came in Dallas and down and now it just came in Dallas and I experienced it in uh somewhere in I experienced it in uh somewhere in Florida. There's Uber like I forget what Florida. There's Uber like I forget what they're called, but it's a a brand a they're called, but it's a a brand a subbrand of Uber that's kind of like subbrand of Uber that's kind of like super personal.

super personal. >> These these people are super personal >> These these people are super personal people. I I forget what it's called. It people. I I forget what it's called. It just came in Dallas and uh it's the same just came in Dallas and uh it's the same price, but they've got they did some price, but they've got they did some sort of special deal with Uber and I sort of special deal with Uber and I think it's going to be the same thing.

think it's going to be the same thing. There's going to be entrepreneurial There's going to be entrepreneurial clinicians or maybe health systems or, clinicians or maybe health systems or, you know, big group practices that are you know, big group practices that are going to adopt that kind of model. So going to adopt that kind of model. So it's like being super super empathetic, it's like being super super empathetic, super super personal but still you know super super personal but still you know delivering it in a way that that delivering it in a way that that customer wants.

customer wants. >> With that note as usual highly uh visous >> With that note as usual highly uh visous advice uh um unfortunately advice uh um unfortunately it's a neverending continuing education it's a neverending continuing education for physicians. This is just a new tool for physicians. This is just a new tool and we do need to by edge word become and we do need to by edge word become multimodal. Thank you so much. See you multimodal. Thank you so much. See you guys next week. We're gonna bring Allan guys next week. We're gonna bring Allan again. And again, very grateful, Alan, again. And again, very grateful, Alan, that you came. Thank you everyone.

that you came. Thank you everyone.