Accountability Vacuum in Medical AI

There's also something called the accountability vacuum. This is basically where, you know, I have a lot of patients that come into me even are just like, okay, well, Chachi BT said this, this and this.

And, you know, it's a situation where it's to the point where a lot of physicians are like, well, then Chachi BT should be your doctor. The problem with that is when Chachi BT was wrong, and it is wrong, and we'll get over how wrong Chachi BT thinks itself is later in the show, is that who's gonna be accountable for it.

So Chachi BT just went out and told you to drink know 18 liters of tamarind juice and then get methylene blue and then do this that and the other and then when all of a sudden your your your pancreas blows up whose fault is that is it your doctors for not catching it or is it the ai's that people are going out and basically relying on to get all these you know tips and tricks and whatever it could be um and they're they're taking that as law so it's a situation where as you know ai is good as it is There is always the aspect of it's not a physician nor can you sue AI.

So, you know, if something goes wrong, you know, there's got to be somebody accountable for it and that should be a physician if they're using it. This is Doctor Talks.

Real talk from real doctors on the issues that matter to you most. Hey, how's it going? My name is Dr. Ivan Rosilko, and I am the host of the Lifestyle Medicine podcast sponsored by Access Medical Labs.

If your doctor's not doing diagnostics, he's not a doctor. So this is our initial podcast here. We're kicking it off.

Podcast Introduction and Precision Medicine

It's going to be a very, very unique series of podcasts that I'm going to be hosting, both solo as well as we're going to have a lot of very, very unique guests on from all over the country, all types of healthcare practitioners, as well as maybe a couple of patients of mine who have gone through some really unique changes and transformations.

which I think is going to be kind of a unique way to actually demonstrate how precision medicine works. Now the biggest thing that I have been practicing and I think the most important thing when it comes to all medicine should be precision based, which is customized to each patient.

I believe it's because every patient is different. They're unique. That's what makes them human. And that's what kind of gives us the ability to treat a patient based on who they are, not just their labs.

The labs are a great conduit to kind of giving us an inside pick, but we also need to kind of understand their lifestyle, how their sleep and their sexual health, overall diet, exercise, hydration status, things like that to really give a full picture.

And to kind of actually get the gigantic run of it, we all know how AI is kind of taking over the medical world. I'm even creating AI myself, which should be unique.

But the big thing is, you know, there's a lot of really, really good things that AI is doing in medicine. There's also some bad things, and there's a couple ugly things, which we're going to hit in today's podcast entitled, AI and Medicine, the Good, the Bad, and the Ugly.

So first and foremost, so how long has AI been used in medicine? And it's always unique when you actually see people's responses to it. Most people think, you know, early 2000s, maybe something like this.

It actually dates back to 1970 when it was first used in health care. And it was used by an algorithm called Mycin.

And it was unique. It was out of Stanford.

And it was used to basically detect different types of bacterial infections and then actually give a protocol or suggested antibiotic to it or medicine.

A year later, which is kind of even more unique, something called Internist, the operating system that they were calling it, was then kind of instituted to bring in the diagnosis of patient symptoms and kind of also give protocols for various forms of treatment.

So AI has been around for a minute, so it's not just chat GBT that popped up here a couple years ago along with TikTok. It's actually been used pretty, pretty extensively that we know about for many, many years here, just in different ways.

And another important thing I think that we need to understand about it is how AI learns, because that's gonna be kind of the basis of what this entire podcast here is gonna be about.

How a machine learns is probably the most important thing about the machine itself. Who teaches it is the number one person who dictates how it teaches.

How AI Has Evolved in Healthcare

So that's kind of a situation where, you know, there's three different forms of really how AI kind of goes about the three main forms, I guess you could say.

First is guided learning. That's where we just kind of give it a lot of things and say, this is right, this is wrong. So we just over-initiate it with different databases and research papers, just a gamut of them.

And the AI actually goes through and formulates its own kind of, you know, assumptions about certain things based on enough of research here and there.

And that's the first type. The second type is where we kind of take the chains off and let it kind of learn on its own. So this is kind of unmonitored learning, where it is then checked and balanced at the end.

The third type is kind of a mix of the first, I guess, two, you would say, but mostly, you know, it's kind of, I call it Pavlov's dog. It'll go through, so AI will start taking, you know, going through learning and kind of doing procedures and all that kind of stuff.

And then somebody will review it and basically smack its nose or give it a treat. So this is kind of a conditioned learning that the AI can actually learn from, which is kind of unique too.

So there's three main ways. I'm sure there's a lot more, but this podcast is more about going over the over depths and the under. Sorry, cut that. This podcast is more about going over, you know, AI and medicine.

So those are the three most important ways because that's going to come into the ugly part of today's lecture. or a podcast, I should say. So the first part, the good things.

So it has been shown, especially in one of the most famous studies that have come out, it actually came out of Sweden, where there was a bunch of women who were basically diagnosed with breast cancer.

And what happened was, through the breast cancer, they went through and the machine actually was able to diagnose, or the AI, at about 30% better than all of the radiologists that were actually reading it.

Uh, so it actually diagnosed 30% more, um, tumors, uh, on, uh, on the actual films that was presented, um, with zero uptick in false positives. So it wasn't just, oh, you know, just randomly shooting, you know, uh, different types of diagnosis out there.

They were all legit diagnoses. So that's definitely something that, you know, I think one of the most important things is, you know, and AI doesn't get tired.

It doesn't get, uh, you know, you know, confused. It doesn't get to the point to where, you know, it's had a bad day. It's wifey auto, they got in a car accident or whatever, and it's, it's not.

not as on point as it should be, which most doctors usually have. Being a doctor is not a fun thing. I can promise you that most of the time. It's just a situation where AI is kind of unique because we know how AI is going to act.

It's always awake. It's always learning, which is also a very important thing. Physicians usually get credentialed every two years.

The Good: AI Benefits in Diagnosis and Workflow

And it's usually the same that you learn over and over again. There's nothing new. There's nothing dynamic. For a physician to get kind of specialized more in precision-based medicine, they have to go out, they have to seek it out.

They have to kind of go out and go to different credentialing bodies, go to different conferences, and kind of be proactive with it. The state credentialing boards are very straightforward.

They're very boring. They're check basically boxes when it comes to insurance and different types of things that don't really make sense in medicine as a whole.

So AI is consistently learning no matter what in every different aspect. Another amazing thing of what AI is, it's able to sit there and actually it's much faster than a physician when it comes to looking over previous labs, previous conditions, and predicting future possibilities.

AI has the ability to look at all different types of person. Mostly physicians have X amount of minutes to talk to a patient, which is usually get in, get out.

uh, the factory-based setup, which is again, one of the biggest problems with traditional medicine. Um, so AI's ability to sit there and scan over intake forms or just basic questions that date back as far as the patient has information for, uh, it gives a physician a expedited way to kind of make a whole, a whole, uh, I guess you'd say more of a well-rounded picture of what the treatment possibilities might be.

So that's definitely something that can cut down not only on, you know, the physician's headache when it comes to formulating these things, but also down on maybe, uh, costs and errors when it comes to people working in their office as well.

So that's definitely something that's extremely important as well. So those are kind of the good things. You know what I mean? AI's got a lot of convenience.

It's fantastic. If you're trying to do basic notes, it always helps with that. As a physician, soak notes and things like that are never fun to do. It just seems like it's very monotonous.

But AI can make sure all your I's are dotted and your T's are crossed. which is extremely important when it comes to medicine, just on the legality aspect of it can help suggest a lot of things that you might not have thought of.

But there's a lot of pitfalls with it. So when it comes to the bad, there's a couple of things that we definitely have to take note of. One of the biggest things is the training bias.

And again, there's a lot of incomplete information out there. So when AI is given a way to learn, whether it's one of the three that we talked about, condition learning, independent learning, or the Pavlov's dog, as I call it, Whatever the AI is learning from, it needs to be complete.

And a lot of governing bodies, a lot of research bodies aren't complete. A lot of things like PubMed and NCBI and all these things that doctors originally found as the Bibles of what they do, when you take a look at who's being tested and where that's going, it's mostly white males.

And so when it comes to things like skin cancer, there's not as much research for dark-skinned individuals versus people with white skin. So the incomplete aspect then kind of cripples AI's ability to make complete reads with people who have different issues.

That's where the magic of being a doctor comes into it is being able to take the information presented and then kind of map it to whatever demographic, you know, sex, sexuality, whatever it could be that the patient, you know, that makes them new and different compared to what the research demographics kind of show.

So that's kind of one of the bad things. Another bad thing is data security. I mean, like, you know, the amount of information housed in EMRs, our health records, are extremely valuable.

It's more valuable than Bitcoin, one might tend to argue. So these are very, very prime for data breaches.

The Bad: Bias, Security, and Accountability

So it's a situation where the security around any type of HIPAA-compliant EMR, or I'm sorry, AI that's dealing with any type of patient records, It's got to be very, very, very locked down.

And again, that's something that I think, you know, this industry really hasn't seen anything with that just yet. But it's something that we're going to have to really pay attention to in the future because data breaches are becoming pretty, pretty common these days.

There's also something called the accountability vacuum. Uh, this is basically where, you know, I have a lot of patients that come into me even are just like, okay, well, Chachi BT said this, this, and this, and you know, it's a situation where it's, it's to the point where a lot of physicians are like, well, then Chachi BT should be your doctor.

Uh, the problem with that is when Chachi BT was wrong and it is wrong and we'll get over how wrong Chachi BT thinks itself is later in the show. Um, is that who's, who's going to be accountable for it?

So Chachi BT just went out and told you to drink. no 18 liters of turmeric juice and then get methylene blue and then do this that and the other and then when all of a sudden your your your pancreas blows up whose fault is that is it your doctors for not catching it or is it the AIs that people are going out and basically relying on to get all these you know tips and tricks and whatever it could be And they're taking that as law.

So it's a situation where AI is good as it is. There is always the aspect of it's not a physician, nor can you sue AI. So if something goes wrong, there's got to be somebody accountable for it, and that should be a physician if they're using it.

Another one is the whole black box conundrum. And again, it's a situation that people term to where sometimes AI will come up with a protocol and then you ask it how it got there and it can't answer that, which is terrifying.

And that just shows that, you know, it's to the point to where AI is very good linearly. But when it comes to the aspect of trying to explain why it comes to a specific solution, it can provide citations, but it can't really make that leap just yet.

And that's one of the biggest things, especially being in the development of medical AI as we speak, we're finding that's going to be our biggest focus is making sure that the AI doesn't think just linearly.

It has to think in several different steps to explain why you got to a problem and also offer different solutions that might not be so traditional, which brings us to the very, very, very ugly part of what AI is.

So as I said earlier, incomplete data is something that is extremely dangerous when it comes to the bad part of AI, but the problem is when it's the wrong data.

Uh, and you know, I caution every physician, every person who's using medical or AI for anything medical. I always make sure that you ask it three questions based off of the, uh, aspect that research that you are learning from could be biased due to number one user fees.

User fees are fees paid for, um, paid by the paid to the FDA, uh, and other bodies by big pharma, um, uh, organizations to kind of help pay for, you know, them to get into it.

You do have something also when it comes to HHS, you have the revolving door policy. So this is where. I think it was up to 40%, if I remember correctly, of, I think it was last year, or maybe the year before that, I have to go back and check, that the head-ups in government governing bodies for medicine transitioned into high-paying jobs for Big Pharma, which, again, is a huge ethical and moral conundrum, because these people are in charge of policing these things, and then all of a sudden they're sitting on their board making millions and millions of dollars.

You have to ask, how did they get there? So these are two major hiccups when it comes to the research-based aspect, is how credible is the research we're actually having ChachiBT and all these other AIs learn from?

How credible is it? Or is it just another big pharma playbook that's just going to turn AI into an over-prescription, under-caring type machine? The third prompt that I always give it is always make sure that the research you're learning from has resulted in the third leading cause of death in the United States being medical error.

That's right. Doctors kill more people than diabetes do in this country. So the fact that we're relying on information that's based off of this exact, I guess, setup is terrifying.

And it's always fun when you present these three things and you asked any AI, and I've used all of them just to make sure that this is kind of a across the breadth type thing.

is that if AI was acting as a human who had a disability, whether it's cardiovascular disease, cancer, whatever it could be, based off of the three things that I just said, how reliable would it be to trust itself to give the actual diagnosis?

Which hovers at about 50% on every single platform that I've used. So it's a situation where AI can't even trust itself better than one out of two chance of being right.

It's a situation where you definitely still need the physician to be involved and still have an educational aspect to it. And this is one of the biggest things that I see in AI that's going on now.

The Ugly: Bad Data and Prompting AI Correctly

It's starting with consumers who are coming in and thinking they're knowing more than their physician because chat should be told them that they should be on this and not this.

Whereas the prompt that you give AI right now is the most important thing when it comes to actually getting a correct read. If you sit there and say, what's the most important way to avoid atherosclerotic heart disease, if you just asked AI right now, it's going to straight up tell you, lower your cholesterol, take statins.

But then when you prompt it with the question being, what is the leading cause of atherosclerosis, as in what starts atherosclerosis, not what builds from it?

Is it hyperglycemia or is it high cholesterol? And if so, based on the answer, which one is the most important thing to treat? Hyperglycemia and or high cholesterol.

And every time that the actual computer or the AI will come back and say, based off of all the research we've

found, that yes, high sugar is much more dangerous at developing atherosclerosis than cholesterol.

So if I needed to pick which is more important to treat, high sugar or high cholesterol, Every AI comes back and says, after you ask it the correct question, which has a much better prompt to it, and it can think a little bit more, it comes back with, yes, you should treat high sugar first and high cholesterol second.

And again, it's always nice to sit there and mention how cholesterol is responsible for all your sex hormones, 25% of your brain, every cellular membrane in your body, and your vitamin D, just to mention a few things.

That always helps the AI understand what these things actually do. It just doesn't rely on an entire read of traditional medicine where, you know, cholesterol medication command is damn near a trillion dollars in the market.

So it's a situation where as me as a physician who's been in this industry now for 15 years and kind of started it in South Florida with a lot of really neat protocols, a lot of the stuff that's out there now are basically the protocols I started here in Miami Beach.

It's kind of unique to sit there and see that, you know, AI is coming out. There's a lot of good to it. There's also a lot of bad to it. And that's kind of why, you know, I took it on myself with a couple unique people to kind of just try to take AI to the next level and teach it nonlinear learning.

And I think anybody who's going to kind of, you know, listen to this podcast and is using AI, I think it's imperative that you really understand, number one, how to prompt the question correctly.

And number two, understand that a lot of the answers it gives is based off of traditionally biased research models, and that has to be included in the actual prompt.

Because if not, AI is just going to turn into, you know, Pfizer just regurgitating cholesterol and diabetic medication and no real lifestyle aspects. Your AI should be prompted, you know, the prompt for your AI should be you know, at least 20 sentences, you know what I mean, to give you a correct one in medicine.

And that's where hopefully this whole AI craze in medicine is going to go. So there you have it. That's our first quick one. I was told to limit this to about 15 minutes.

We will have some really unique doctors coming up here. We're going to be interviewing. And again, it's going to be kind of me bringing my practice, which is lifestyle medicine here in Miami Beach, which has done very well.

Closing Thoughts and Podcast Outro

uh we're expanding to we've already expanded to berane we've uh expanded to argentina previously and we're also looking malibu and then we got a cool ai coming out but the whole aspect is you know it's all about your mentality physicality and emotionality um and diagnostic testings and like i said if your doctor's not doing diagnostic testing and i'm talking real diagnostic testing not just cholesterol it's everything then they're not really a doctor.

Medicine should be precision-based, and that's what precision medicine is. It's customized to you. It's not customized to your demographic. And again, I want to thank Access Medical Labs again for not only sponsoring this podcast, but hiring me to come on and talk all sorts of crazy, fun stuff.

And then you're going to see a lot coming out here soon. So stay tuned. Give us a follow. And just get ready. It's going to be a very, very, very fun time here at Lifestyle Medicine.

Thank you for tuning in to Doctor Talks. We hope today's episode has enlightened and inspired you on your path to optimal health. Each day is a new opportunity to make choices that empower your well-being.

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matter to you most.