AI In The Doctor's Office with Marvix.AI Co-Founder Rashie Jain Transcript

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Introduction and Sponsor Message

Welcome to the Art of medicine, the program that explores the arts, business and clinical aspects of the practice of medicine. I'm your host, Doctor Andrew Wilner.

Today, I'm pleased to welcome Rashi Jain. Rashi is an engineer and the founder of Marvel AI, an AI powered scribe designed for the complex discussions between patients and their neurologist.

In a minute, we're going to discuss the pros and cons of having an artificial intelligence program take notes during a patient encounter versus a human scribe versus the doctor doing it all him or herself.

But first, a word from our sponsor locum story.com. Locum story.com is a free, unbiased educational resource about locum tenants. It's not an agency. Locum story answers your questions on their website, podcast, webinars, videos and they even have a locums 101 crash course.

Learn about locums and get insights from real life physicians, CPAs and NPS at Locum story.com. And now to my guest welcome, Rashi Jain. Thanks. Thanks for having me here.

Yeah. Thank you. You know, I was recently at the American Academy Neurology meeting in San Diego in April, and, your company, ma VIX a I had a booth and I talked to a really personable young man who, insisted I, do a demo and, see, and so we made believe that he was a patient with, migraine.

And he must have done this before because he knew all the symptoms. And if I, you know. And so I treated him like he was a real patient. And in the background, ambient right in the background.

He had the AI recorder going. We must have gone on for probably about ten minutes to kind of get migraine. The, the history very, very important in migraine.

Not much define not physical exam.

Rashi Jain's Background and Marvel AI's Origin

It's all about the story. You know nausea vomiting photophobia photophobia the your parents have it. So we went through the whole thing and and we say okay, we're done physical exams.

Normal. Let's just skip that and then, press the button and the thing word around for a few seconds and then boom, you know, is is a giant report. So, I looked it over and, frankly, it was pretty good.

But, I did have some misgivings about it, and I'll share those, but first, let's talk about, you and, how you decided to follow this path to make something that, hopefully will, assist physicians in the constant battle of trying to be, efficient in a, challenging workplace.

Okay. So what's your background? Yeah. So, Doctor Miller, I'm an engineer by training, and now I've spent over a decade in healthcare. So this is my second startup.

Before founding Marvel, I founded, care management company for cancer patients called on ca.com. We ran that successfully for eight years. Got acquired by a hospital, and then, having been in healthcare for so long, having been a founder for so long, I decided to take the plunge again.

And this time, wanted to build Marvel because, both me and my co-founder, we felt that one of the most pertinent problems in healthcare today is just how do we reduce administrative burden for physicians and clinicians?

We're seeing a lot of time, being spent in documentation and, coding, and a lot of these administrative tasks, honestly, that have no place in patient care.

And the burnout is real. It's even more pronounced in specialties where the workflows are more complex, concerns are more, concerns are longer. So, we we're excited about, the advent of generative AI.

I think we're looking at a really interesting time in healthcare software, and we firmly believe that we're going to see a lot of these AI native applications, become mainstream and, in healthcare software and hopefully remove the admin out of these healthcare workflows.

And so, yeah, so that was our vision. That's why our journey started. And Sylvia and that young gentleman you're talking about, is actually my co-founder.

So yeah, so that's a little bit about us. And he was very, very helpful and knew the product, inside and out and kind of anticipated my questions. So I felt it was a very worthwhile session.

I'm glad I stopped at the booth. Okay. Now I'm a neurologist, of course, and that's why I was at the American Academy of Neurology meeting for maybe the 25th time, I think, over the years.

So why do why make a, I mean, neurologist are you know, there's only about 15,000 neurologists in the country, so it's not a big market. Why choose neurology to make this set?

I program. Yeah. So when we founded metrics, we were clear that we wanted to go after specialists because the workflows are more complex. The need is real and acute.

And neurology seemed like, a good vertical to get into. Because we noticed a couple of things, which were unique to neurology workflows.

Why Neurology Is a Hard AI Use Case

The first one is that, no neurologist has, standard, no requirement. It can vary depending on their super specialization. It can vary depending on the disease, scenarios that they're encountering.

For example, they may have a very different requirement for a dementia patient versus an epilepsy patient. And so on and so forth. The second thing that we noticed was that usually they have multi-user workflows.

So they would essentially be working with a team of medical assistance, nurse practitioners, API's and really collaborating on, a clinical node, which we felt was an unsolved problem.

You had a few tools that, physician could use, but essentially, they would just allow, some kind of recording one on one, which really didn't, adapt to their workflows.

And the third thing that we noticed was that, the complexity of the controls was real. There was a requirement to capture a medical terminology with high precision.

There was some contextual understanding that the AI needed to have. For example, the physician says with patient presents with weakness, weakness could mean many things in the context of neurology or subspecialty within neurology.

So long story short, we felt that this was a really complex problem to solve, not something that some of the standard AI assistants that exist in the market have sought for.

And we felt that this was a really good vertical to get into. If we can create a playbook here, if we can sort of get some early success here, there would be, an opportunity for us then to take this across other specialties, which may be less complex than neurology.

So that's how the whole journey started. Wow. So I was getting kind of, mentally fatigued, just listening to all of the challenges of trying to put this thing together.

Even as a neurologist, everything is very complicated. So it's interesting you chose sort of, you know, it's like climbing Mount Everest before you're going to do the little mountains.

It's like, well, let's just pick the hardest one and we'll do that one. So, good for you. You know, way back when, when all of a sudden there was sort of word processing and templates came out.

I was very excited about, using these. But as you point out, you know, with a neurology patient, it's very hard to anticipate which way this is going to go in your line of questioning may start out with, oh, yeah, I understand your arm is weak.

And then the person says, oh yeah, but then I had this terrible headache and then I couldn't walk. So you're not just talking about the arm anymore. You're.

And you may be thinking of a totally different, first you thought they had a stroke because their arm is weak, but now you're thinking that hemiplegia.

Migraine because their arm is weak, because it had happened ten times before. So very hard to fit all that into a template. I actually did create a, using when office came out a database because I'm an epileptic ologist and I had hundreds if not thousands of patients that I put on the, template.

You know, how old were you when it started? Anyone in the family history? A lot of questions I could do. Yes. No. Yes. No. Yes. No. When was your last MRI? Okay.

You know, 1995. What did it show? You know, with sort of bullet points. Because in those days, we had paper charts. Yeah. So just going through the chart to find the basic database, was very, very hard.

So that that did turn out to be a, time saver. More recently I've been kind of discouraged with I, you know, I mean my biggest I exposures with Siri. Right.

And you ask Siri a question, you know is a is it going to rain tomorrow. And they'll say, you know tomorrow is the 10th of May. And it's like, well, what I wanted to know is, you know, is it raining or not?

You know, just all kinds of nonsense to me. And then, you know, it misspells words and I will deliberately spell a fancy word one way and it, spells it and does it the other way.

And it's like, this is a total waste of time. So why is your product not a total waste of time? Oh, that's a that's a great question. Quite a loaded one, actually.

So the way I think about it is that, you know, you have if you're living in a really interesting time where, over the last couple of years, a lot of advancement has happened in the underlying technology, which, by which I mean large language models are, really superior today, and they can perform a lot of tasks that one couldn't even imagine as recent as three years ago.

AI Scribing vs Traditional Note-Taking

But I think a product that caters to the complexities of healthcare within that specialty care, urology care that we are solving for, requires, layers of layers of nuances built on top of this underlying technology, of large language models, the software needs to adapt to these complex workflows.

Have to, give you the ability to do, multiple NLM calls, have a combination of different, feature sets that come all come together to form that rich context in which you want to generate the output for the end user.

So that's, I think, a really hard engineering problem. It is not a one size fits all approach. So the product that you're creating is not some generic, let's say, meeting Summarizer standard AI copilot that you could potentially, use in maybe a standard meeting setting, but would fail miserably in a healthcare setting.

So we were very clear that this is going to be a vertical stack solution that is going to deeply integrate with workflows of the providers we're going to solve.

And of course, the underlying technology to the model technology today, I feel is a commodity will only get better. And that's not the game. We want to play.

We want to talk about the end user experience, which is also very, very complex problem to solve in the healthcare setting. That makes sense. Yeah. Many years ago, when Dragon first came out, you know, the early dictation software, I had broken my hand and I left to type and I couldn't type.

So I got Dragon and it took me like three hours to dictate one page because, you know, correct this, go back, correct this. And it would do all kinds of crazy stuff.

And over time Dragon is improved, to the point where but for medical use, which is what I was using, you need, you needed a special option, right? There was the medical version because that's got all the fancy, medical words.

And of course, radiologists use their radiology version now, I think with a pretty high degree of accuracy, you know, in part because usually what they say is more or less the same, you know, choice of, vocabulary like clinical correlation required, that's going to be there.

You know, it's probably a macro, right. And, but they tend to use the same, words. So I know you've really you've gone past the development stage. Your product is actually in use. Right.

And a number of physician neurologist offices. So we call this an ambient scribe. Right. It's just you just turn on I guess your phone is it is in an app in your phone.

Is that how it works? Your device agnostic. So, we provide apps and for an iPad, you can even use it on your laptop because we have a web app and all, across all devices, the app would sync instantaneously.

So you would actually start recording on your phone and then process the note on the web. It seamlessly, syncs across devices. So you just turn it on and then you have your patient encounter normally.

Is that right? Yes. So you turn it on, the app will immediately record, your conversation of the patient. You can forget about the device. You can forget about the app.

You can have a normal conversation. You can talk about, for example. I don't know, a football match that you saw last night. Doesn't matter. The AI is smart enough to pick up the clinically relevant information from that really unstructured conversation that you have with your patient and then, generate a finished clinical note in a template format, of your preference.

And it's, it's, it's designed to, pick up, medically relevant facts, from across the transcript. So you could be talking about, let's say, physical exam at the beginning of your counseled and maybe towards the end of your 90 minute long counsel, you may mention or not, some other aspect which is, which should tie into the physical exam.

So the AI is smart enough to pick up literally couple those important clinically relevant facts from different parts of the transcript and weave it into a structured note.

Well, that's pretty impressive. You know, I, I was initially thinking that I, I didn't like it because I like to take notes, my own notes, but that this device does not say I can't do that.

I can still take my own notes, but it's going to save me the trouble of putting them all together at the end. And I'm of

course, I'm sure it's editable.

If, something the AI says, isn't quite exactly what I wanted it, to say. You know, I had this discussion with somebody at the meeting, though. Is sometimes I don't really know what the bottom line is until I process it myself.

In other words, taking the notes and saying, well, this is a 29 year old woman with, headaches. And sometimes her arm gets numb and weak and her family history and it's like, oh, she has migraines. In other words, I don't figure it out.

So by sort of having this device figure it out for me or do all the processing, I don't want to miss that step. So, I'm just wondering, you know, I wouldn't want it to sort of steal my thought process, particularly for people in training.

Yeah. You know, I but it's a great seems like a great backup for people in training. But probably not the way to start out. Would you agree with that?

I would, so we so we work with a few groups of few academic hospitals where residents use our product, and it's really interesting how they use it. So they usually work in tandem with the attendings.

And for cohort of cases, they would use, the AI, they would use metrics, and then they would also do notes without, the AI, and then they would go back and learn from the notes, the, to actually train themselves in comprehensive notetaking creation, because I guess that's a very important part of the.

So in medical training. So, yeah, actually, it's it can actually also be used as a training tool for residents, to make sure you create comprehensive notes and you learn that skill early on.

Oh, that's very interesting. You know, sometimes I have a student who writes a very good note, and I'll tell the other students, hey, you know, look at George's note.

You know, that was a good job. But, you know, it's always sort of fraught with like, they I don't want them to think I'm, you know, favoritism, George.

But, you know, just so happens you did a good job. But I could say look at the I note. Yeah, it's it's a it's your most diligent student and it doesn't get tired.

It doesn't get tired.

How the Ambient Scribe Works

I oftentimes tell our, providers that think of it as a, the persona of this, AI is that of your most diligent, assistant who will perform with the same accuracy no matter what time of the day, even at 3 a.m.

in the night, they'll give the same output as we would at 10 a.m. in the morning. And they will never say to you. But, yeah, they are your assistant. They're not here to replace you.

They're here to, like, give you some free time, I guess. What about what has been the response? You know, there's, this, HIPAA thing and patient privacy.

How do patients accept having a computer listening in on their intimate personal details? Right. So, our software is obviously completely HIPAA compliant, stored on HIPAA compliant infrastructure.

Data is end to end encrypted. And these are, taken into consideration, put in place the strictest of security standards. So all that's obviously in place now with, with regards to the patient response, surprisingly, this has been positive.

So we always encourage our providers to, get the consent from the patients, do full disclosures that they they'll be

using an AI tool to help them write the notes.

But patients tend to like it broadly. And the reason is that, you know, there's no laptop in the room. Providers are actually able to focus more on patient care.

And so it overall improves the patient experience. So we've not really seen, honestly, any, any resistance to this from the patient community so far. Well, I'll just interject an anecdote.

Way back when I, when I used to see patients in private practice in my office, the epilepsy patients, I would sit there and we tell the story, and I'd review their chart and take their notes.

And, then I'd let them let them go, and then I would dictate a summary. And, and that could take 5 or 10 minutes, you know, to think about it and, you know, it sort of put it into words.

And I remember getting dragged into my, manager's office that patients were complaining that I didn't spend enough time with them. I was too quick because I had the information that I needed.

I had reviewed the chart ahead of time, which was time they didn't see. And then I was dictating after the visit, which was also time they didn't see.

So I had a I had a brilliant idea. I said, I know what I'm going to do. I'm going to dictate while they're still there. Oh, really? Okay. And to me, that sort of felt a little bit rude and that I was taking up their time to do sort of administrative work.

So I just started doing that. I had my little cassette, you know, dictator thing, a dictaphone, I don't think. I don't know if dictaphone is survived, but, dictaphone and I would dictate and I could usually dictate pretty quickly.

I mean, I can do a whole long. I kind of report in a few minutes, and every now and then it was like I would stop and ask the patient to clarify something.

So it was that two weeks ago or two months ago, I don't remember. And they would tell me and I could put it in and yeah, and universally, the patients were impressed that I had captured all of their details.

And I had really listened and put everything into a note. And that's not something I expected. As I say, I kind of resisted doing that, but because I was getting criticized for not putting patient time in when I really was, you know, putting the time into the patient, it just was time they didn't see.

I decided to do that. And and then I never stopped doing that. I always did it. And I found that dictating in front of the patient actually showed them that you had listened and that you had a plan.

And, it was a very effective tool that I never would have guessed. So I think that patients knowing that somebody or something in this case is actually taking notes.

Maybe that's a positive thing. Yeah, I agree, and I that's, that's, that's exactly been our experience as well. Then I have a question. One of my so it's like, well, I'd love to use this thing, but we use, Cerner, which requires you to very laboriously type everything into certain fields or it won't recognize what you said.

In the clinic, there's a billing program, and unless you put reviewers systems where review of systems supposed to go with things, you didn't do it. It is not very AI sophisticated.

So how can I use this device when everything has to get typed into Cerner? Right. So we offer integration with most EHRs. We are actually in the process of initiating integration with Sony as well.

So that's actually one of the areas we are still in the process of integrating with. But we are already integrated with Epic Athena for your dime, the usual suspects and and you, you point to a really important, I guess, a piece, piece

of the puzzle that needs to be sold for these technologies to be adopted in any meaningful way, which is that they need to seamlessly integrate with the EHRs.

And each integration essentially is, three things. And the first is that the AI, software has to have the ability to pull appointments for the day so the doctor can see all their encounters against which they want to do the recording.

Training, Patient Acceptance, and Privacy

The second is the ability to push the appointments. As I push the notes back into the ear. And the point that you alluded to, which is that the review systems need to go and review systems, HPI needs to go in is critical here.

So you need the ability to do section specific integration. And then the third feature that all of these AI office should have is the ability to pull historical data from the ear and create patient summaries, which then get plugged into the current encounter.

And this is critical for returning patients because, as you know, for specialties like neurology, a large part of any team's, time goes on. Just creating, these historical, reviewing these historical nodes and creating these summaries of returning patients.

A lot of times it's nurse practitioners or medical assistance who do that. It's very time consuming. And I can really augment the research by essentially digitizing the whole thing, pulling all the data automatically.

So these are like our three things. This is a three pronged approach. When we think about integration of the ears. And I think if you can achieve that then you've truly created an experience that saved significant amount of time without really creating any inertia, from the provider base in just adopting that application.

Right. So those challenges are why I pick something easy like neurology instead of something difficult, like an engineering. Are those, challenges those in three levels of integration?

Are those actually something you can accomplish? Yeah. These are, I wouldn't say the most difficult engineering problems, but these are definitely the most tedious.

And the reason is that, when you think about integration with any ecosystem, you're essentially, talking about integration with the new software every time, every HR would have their own proprietary APIs.

Some some of them would have, 8 or 7, efforts here. So these are like all different types of integration options. And it's not like you've created one playbook integrating with one hr.

Then you can replicate across. You have to build the whole integration, set up from scratch. So it's really laborious work. But I wouldn't categorize it as the most difficult engineering problem.

I think creating, custom clinical notes for an epileptic allergist and meeting their expectation is, is is a much harder engineering problem, honestly, to solve.

And this is, this is, I guess, something that you just have to do for yourself to get adopted. You know, in the old days when a patient was hospitalized for a week or ten days or three months, it was kind of a point of honor for the for the physician who is in charge of that hospitalization to write a detailed discharge summary of what had happened so that the doctor picking up outside in the clinic when the patient came would know, oh, you had this test and that test.

And they were thinking this, but they decided to do that. So now let's pick up the ball. And somehow that doesn't happen anymore. Patients are just discharged with some discharge diagnoses that may or may not be correct with the list of tests, but without the results.

And that is that somehow that satisfies the whatever the requirement is for discharge. Summary. The doctors are

very busy. They don't get paid any extra to do the discharge summary, apparently, which is probably the most important thing of the whole hospitalization.

So it doesn't get done. Yeah. And I was shocked when I saw this, transition because I used to spend a lot of time doing that. In fact, sometimes you you would just come on service.

In other words, you would take over responsibility of a patient who was going on that day. And then it was your job to do the discharge summary, and you had to review, like the whole three months of the patient's hospitalization and put it all together.

Now, what I'm getting at is it would be a great eye function if I could go through the hospital chart right. Everything's digital these days and summarize all of the tests and all the results and make some sense out of it and create a discharge summary.

Have you thought about that? Absolutely. And that is something we do. So we are creating summaries from historical data, that the patient patient has that's already present in the air now of course, the context in which it's getting used currently is that these summaries are then getting embedded in the, in the note that the doctor is creating.

But that note can very much be a short summary. And I think, you rightly pointed out that it's just I mean, the expectation from the physician to doing it is, I mean, not really.

The incentives aren't really aligned because why would the physician spend so much time doing it? They're already super busy. This is something that I can do.

And I would probably really excel at doing it because I'd be able to. It doesn't matter if you have 500 pages of report or 1000 pages of report, they can, with the same accuracy, with the same diligence, create summaries for you.

So this is a task slated for AI for sure. And we definitely think that this has, a lot more relevance in specialty care, where there could be many, many different reports and data points that need to be compiled together in the discharge summary.

Let's just talk for a minute about the practicalities. Let's suppose I say, okay, all right. Roshi, I want to use this thing. I've got patients scheduled tomorrow.

What do I have to do? Nothing. You just need to download the app. You, log in, and then you just start your recording. It's actionable that you don't need to do anything.

If you're integrated with your EHR. Will already put in your points of the day. So when you log in into your application, you will see that patient card.

EHR Integration and Discharge Summaries

You just click on it, you just started recording, and then once you're done, you click on process and then 30s or two minutes the matrix will generate your finished note.

I'll be already, create custom templates for you. So let's say you have different templates for epilepsy patients. Different for dementia patients. You can just select the relevant template from the app.

And then the new will get created in that format. And then one quick thing I'll add my mix just doesn't summarize, the conversation that you're having with your patient.

It also plugs in data that was never verbalized. But that needs to be there in the note. For example, your macros, that you would, in normal situation, put it in yourself or somebody in your team would do that for you to complete the node comprehensively.

Marwick does that automatically by inferring the context from the call. And plugs in the relevant macros for you. And so it creates a finished node and pletely finished node that doesn't need any post-processing.

Suppose I forget to ask some very important questions. For example, migraine. It's important to know is there photophobia in front of forehead. But I don't know I get distracted and I don't ask well, well my tricks prompt me to ask things on the template.

We don't do that yet. And that's because, a lot of times, so this is I would say this is, this is a point of contention, honestly, you have two camps really in the provider community.

And, there's one camp that thinks it's a really great idea for I to interject, and sort of prompt the physicians to sort of help them improve their, I guess the, the patient care experience that they're providing.

And then the second camp believes very strongly that I is here to just make my life easy and remove all the administrative burden for me. But it's crossing the line is, they get into the clinical recommendation stuff.

So we're treading, safely here. Having said that, we do have a differential diagnosis feature, in beta right now that interested users, can try where it would identify based on the data that was presented in the transcript, potential diagnosis.

And if something was missed, it would identify symptoms that were missed, and from that. So you could see that document and make up your mind if this recommendation is appropriate or if there are more, discussions on certain symptoms that need to be had with the patient to, to conclusively identify the diagnosis.

So we assessed that through this feature. But this is in beta. And this is not something that, we intend to make mainstream anytime soon. Well, I, I'd love to participate.

I got this great idea. So here you are. You do the interview, and I'm wearing a little earpiece, and I press the button to process. Then there's this little AI voice and it goes, hey, Doctor Willner, you forgot to ask about photophobia.

Photophobia? So I could just say to the patient, okay, just give me a moment. Oh, yeah. Tell me a little bit more. I mean, it could be like, a little, could be annoying, but a little helper voice there that, you know, it's going to get me from doing a 95% job to a 99% job, you know, getting it all done so I don't have to call the patient back or have another visit, or I say, gee, I should have asked them that, but they're gone now.

I'm not going to, you know, give them a call just to ask that simple question, and you just blow it off and wait till next time. It would be nice to have a, little, helper who can't. Wow.

This is pretty, actually more exciting than I anticipated. I did use a I yesterday, I had a, meeting by zoom just like this, and some AI assistant popped up, so I figured, well, I'll let it do whatever it does.

And it generated a summary of our meeting. I always take some notes, and the notes were pretty good, notes were pretty good. And I was like, you know, this it's definitely better than, nothing.

The tone of the notes wasn't the way I would have put it, but, I maybe could learn, you know, to take notes, my way. But I was impressed. It was a whole lot better than my experience with, Siri and that kind of, you know, the ones where, you know, they're you're talking on the telephone and they tell you, well, what is it you want to talk about?

And I'll say, you know, retirement. And they'll say, oh, okay. You want to talk about your bank account is like, no. And, you know, it's just a total waste of time.

That's annoying. All right. So let's see, do you pay per patient or per month or per year or per license or how does all that work. Yeah, it's per provider per month.

So we issue licenses for every provider and provider for us could mean, an MD, an AP medical assistant. Right. And and, and yeah, I mean, we have a bunch of different, plans to choose from, but essentially you could go for full integration where we would do an integration for you for free, and you just pay a little premium, for that service.

But, yeah, it's it's free, flexible. You can choose, how many providers you want to enroll, for this particular program and pay as you go. And once you have a when the provider could see ten patients that month or 1000 and the eye doesn't care.

Yeah, it doesn't matter. I mean, we we don't house pricing based on usage. We we just base it on the licensed neurologists tend not to, I would say exaggerating.

Don't see usually because each interaction takes quite a while. So neurologists they're not like dermatologists you know, see 4050 patients in a day. We don't we don't practice like that.

It doesn't work. Very important. So there is this phenomenon where I can confabulation, right. He can just make stuff up. And that does not seem to be a well understood problem.

Just. Yeah. What about your scribe? Is it making stuff up? So it's up. I have to, I mean, kudos to you that you said confabulation. You didn't say hallucinated because it's, it's a very interesting.

So it's a it's a misnomer. A lot of times people would talk about this problem, but they would say I hallucinating, when in fact it's actually confabulation.

So I appreciate you saying that word. But yeah, it's, it's, it's a complex problem because, I mean, confabulation typically happens because there's a leakage from the training data set.

You're trying to train the eye models to create, a really complex output.

Setup, Pricing, and AI Confabulation

And then, of course, sometimes you would, you would see that the training data set that was used, sort of becomes, the basis for the AI to sometimes read the output, especially it happens in situations where, the input quality is maybe ten.

It's there's not enough information for the AI to process. And so this is, this is, this is a rare problem, but it happens. And I think, again, if you're thinking about creating a perfect user experience, this, this optimization for confabulation, making the probability of that entire situation very, very rare, these are really hot technology problems that are really what solving, which we spend a lot of time solving for.

We've gotten to a point today where we we take pride in the fact that, we we are AI doesn't confabulation it it wasn't static. It started with a certain, percentage and we've seen it decline, every single month to a point where this is a non-existent problem for us.

But yeah, it's a very real problem for, for a lot of AI models out there. All right. Last question. How is this going to be better in ten years? Oh, I think the world is, changing very fast because of generative AI.

We are reimagining every piece of software in every industry and healthcare. I think unlike in the past, where healthcare industry was always a laggard when it came to adopting new software, the same healthcare was leading the cost because I think the problems are so much more acute in healthcare.

There's a real, real need for better, workflow solutions, that can completely remove administrative, burdens. So in ten years, I think you will see a lot more AI native applications across the care continuum.

Not just focused on documentation, but I solutions that can automate, your triaging experiences with patients and nurses. I that will completely automate patient intake pre charting some of that.

We already do. But I think that will become more mainstream. Automation of coding compliance claims management dispute resolution with insurance. So you can think of multiple use cases where we end up spending tons of time, and that is all going to get automated completely.

It'll I guess the software will become AI native in every which way. So and ambient AI is going to be really big because in healthcare, I feel that a lot of these conversations that happen between the patient and physician are between two physicians attending and the residents.

They have critical medical information that oftentimes gets lost because there's only so much you can manually document. But ambient AI is really, really powerful.

Imagine a tool that can capture every piece of unstructured information from the point the patient walked in, to the point the patient got discharged, and make sense of all of that and structure that in the most comprehensive clinical, documentation.

I think that would be really revolutionary from the perspective of just improving patient care as well. So I see that happening in a big way. But the key here is to build a solution that can optimize this across the care continuum.

It cannot be a joint solution. And that's essentially what we are trying to do as well. Okay. So it sounds like you're going to be really busy for the next ten years or so.

Is before we close. Is there anything you'd like to add? No, I mean, I, I would just say, thank you so much for this opportunity, and I really enjoyed my conversation with you.

It's it's so refreshing to speak with somebody who, where so many hearts, not just a physician. Also such a fantastic podcaster. I really appreciate the questions you asked me.

Got me into thinking a lot more about all the different things we have to do, so I appreciate that. Well, thanks very much for the compliment. And I certainly enjoyed our little discussion.

I'm looking forward to, new, new AI.

The Future of AI in Healthcare

And it looks like my own personal biases are evolving. So, that's exciting to. Yeah. Appreciate it. Thank you so much. Thanks for having me, rusty Jane, thanks for joining me on the Art of medicine.

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