4sight Health Roundup Podcast
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When Will AI Adoption by Providers Meet AI Acceptance by Patients?

David Burda:
Welcome to the 4sight Health Roundup podcast, 4sight Health's podcast series for healthcare revolutionaries. Outcomes matter, customers count, and value rules. Hello, again, everyone. This is Dave Burda, news editor at 4sight Health. This is a special edition of the Roundup. We're going to be talking about the adoption of artificial intelligence in healthcare with Dave Johnson, founder and CEO of 4sight Health, and our special guest, Dr. Robert Pearl, the former CEO of the Permanente Medical Group. Dr. Pearl teaches at both the Stanford University School of Medicine and the Stanford Graduate School of Business. That's an interesting combo. Dr. Pearl also published a book last year entitled ChatGPT, MD: How AI-Empowered Patients & Doctors Can Take Back Control of American Medicine. Dr. Pearl, welcome to the 4sight Health Roundup podcast.

Dr. Robert Pearl:
It's a pleasure to be here, and I want to make sure listeners know that all the profits from ChatGPT go to Doctors Without Borders. It's a great organization that we all should support.

Burda:
Yep. I agree with you 100%. Now, the idea for this special episode came from a column I wrote for 4sight Health way back in March. The premise of the article was this, the more healthcare providers adopt AI, the more consumers oppose AI in healthcare. In other words, as adoption of AI gets closer to reality for patients, the more they fear it, right or wrong. Dr. Pearl responded to the column very professionally and very politely, thank you. It's not always the case when people react to stuff Dave and I write. You ended your note with this comment, quote, "I suspect what you are seeing is more about human nature and cognitive biases than facts. Humans are more afraid of technology than they are of people, even when the risks are less," close quote. And that's what prompted the idea for today's show. Dr. Pearl, guests always go first on the Roundup, so I'm gonna ask you the first question and then ask Dave to respond. How would you assess the trust healthcare providers, like hospitals and doctors are putting into AI solutions? Are we halfway there, are we all the way there, or are we somewhere in between? What do you think?

Pearl:
Dave, I'd like to point out that almost all of the artificial intelligence used in hospitals and FDA approved is what's called narrow AI. This is used for billing and claims and data entry. It is not what we're talking about when we look at the future of artificial intelligence. Now, we really should be talking about generative AI tools. That's ChatGPT, Gemini, Claude, DeepSeek. As you know, I publish a monthly musings on healthcare with 70,000 readers. And the last issue, I asked whether any of the readers had used generative AI tools. And remarkably, 75% of the clinicians said that they had, with 78% of them saying that it was useful for clinical decision-making and only 2% indicating inaccurate or unhelpful. When I surveyed the readership a year ago, the positive responses were half as many. You know, this technology is doubling in power each year, and that means that five years from now, it's gonna be 32 times more powerful. Already the CEOs of OpenAI and Google and Claude, OpenAI and Google and Anthropic have said that the artificial generative intelligence, AGI, will be here in less than five years. That means that this technology will be as reliable, accurate, and empathetic as a human clinician and we are not

ready for... If anyone has any doubt about the future. I was speaking to medical students at Stanford and I said, "How many of you are already using this in your clinical rotations, in your clinical work?" Every hand went up in the room.

Burda:
(laughs) That's great. Thanks, Dr. Pearl. Dave, what's your reaction to what Dr. Pearl said? What do you see in the market that would suggest that providers trust in AI solutions is growing?

Johnson:
I think we're gonna be in violent agreement. Robbie and I usually are. I will say I had my own recent experience, with just being blown away by GenAI. Our column a couple weeks ago on how the clinical lab can add to value was republished, uh, by a group that... Or we republished it. It was by a group that, I had written a really great piece. In fact, Robbie you commented on that piece. I wrote an intro for it, and like always, Michelle, our editor, uh, did the first draft. I usually edit pretty heavily. In this case, it came back and I didn't change a word. So the next day on our team call, I said, "Michelle, are you suddenly channeling your inner DJ or did you do something different?" She goes, "No, no, I did something different. I fed the article into, uh, ChatGPT along with our website," which has got a ton of my commentary in there, and its ability to replicate my writing voice was spectacular. I mean, yeah, kinda still stunned by it, but what a great time saver, you know, going forward. So I think we are really dealing with revolutionary technology, in... And I'll get to providers here in a second, but in 2005, Nobel winning economist, Richard Lipsey, published a book on general purpose technologies. These are technologies that fundamentally change the way we live; money, the printing press, electrification, internal combustion engine, and so on. And in 2005, he and his co-authors, uh, listed 24 of these general purpose technologies. We have two going on right now. Artificial intelligence and synthetic biology, and interestingly, each depends on the other. There's no way we could get the clinical advances we're seeing, like curing sickle cell anemia without the massive computing power, machine learning, and pattern recognition that comes with AI. At the same time, our understanding of how the human brain functions or improving understanding of how the human brain functions is informing AI design, you know, think deep neural networks. Well, two GPTs (laughs) at the same time is a lot to take in. Tom Friedman wrote a book in 2017 called Thank You for Being Late, Thriving in an Age of Accelerations. And in that book, he interviewed Astro Teller, who's in charge of Moonshots at Google, isn't that a great job title? And, he's also the grandson of Edward Teller, the inventor of the hydrogen bomb. And as Friedman relates, Astro goes up to a whiteboard and has the pace of innovation in an upward sloping line and the ability of human beings to adapt to innovation in a very low slope, straight line, uh, and crossing over right now. And he made the statement for the first time in human history, innovation is occurring at a rate greater than the natural ability of human beings to adapt, which is, is quite a concept. And their solutions were two, lifelong learning and better governance, both of which are really important. But when Paul and I were writing our book, the Coming Healthcare Revolution, we added, I think, an even more important one, which we're calling human machine collaboration. The machines are here, we can't outrun a car. Why would we think we can outcompute computers? And we are seeing, I think, the dawning of the recognition, among clinicians that the machines are as good or often better than human beings are at diagnostics.

And that's where I worry, Robbie, about clinicians and all the years they put into preparing how we train doctors, most of which is based on memorization, or how we select doctors based on memorizing skills and then how they practice, which is still a model rooted in the early 1900s. So how we overcome kind of the natural resistance of physicians to new ways of doing things because human beings aren't great at it. But, at some point, and maybe it's the younger doctors that are going to show the way as you indicate,

Burda:
So it's time to drop the Flexner report. Wasn't that the root of how we teach medicine? Yeah, Dr. Pearl, any, any thoughts on what Dave said?

Pearl:
Oh, I love everything that David was talking about. A couple of ideas though, one is, you know, the CT scan has made physical exam, I don't wanna say unimpor- yeah, unimportant or completely outdated, but certainly minimized that as the focus of how clinicians make diagnosis. And I think that that's what he's talking about. This is the linkage between a skilled clinician and a generative AI tool. Uh, the story about Michelle I think is a great one. It just brings into focus how fast this exponential growth happens. You know, the human mind can't comprehend exponential growth. We think very literally that things will get better and better and better. And instead, every time it doubles, the leap forward gets twice as great in terms of magnitude. When I wrote ChatGPT, I had to type everything in place. Now there's multimodal language, voice, images. At the time, the technology was 18 months in arrear, today it's up-to-date. These changes are amazing and we still wanna look at what exists today. We have to pick our eyes up, I think, and see what will be here in three to five years. And as Dave implied, we are not ready. The medical school curriculums are not incorporating it. I think many clinicians are still in denial, but as the survey is showing, it's starting to grow, and I predict that within five years, it simply will become the standard in medical practice.

Burda:
Okay, let's flip the script to consumers. Dave, you get to go first this time. How would you assess the trust healthcare consumers are putting into AI solutions?Again, are we halfway there? Are we all the way there? Are we somewhere in between? What do you think?

Johnson:
Oh, we're probably about a third of the way there, and let me dig into it a little bit. My favorite Jimmy Buffett song is called Fruitcakes. And the genesis of it is the cosmic baker took us out of the oven a little bit too early, which is why we're s- all, all as crazy as we are. The technical field studying this phenomenon are behavioral psychology and behavioral economics. We can't help it. We're all just riddled with bias. And, that's probably been one of the major insights, academic insights, broadly speaking in, in the last 20 years or so. Thanks to Daniel Kahneman, among others. And you know, an example of this is, I know couples today that won't fly on the same airplane together because they're worried about dying in a plane crash, but they ride together in a car all the time, when, you know, your chances of dying in a car crash together are orders of magnitude higher than in an airplane. But that's the bias, the emotions, uh, ruling our decision

making rather than the facts. The flip side of this; I was talking to Mike Chernew, the economist from Harvard who runs MedPAC, and we were discussing why males of a certain age, and we're all of a certain age, disproportionately choose surgery over radiation when they have early stage prostate cancer, even though radiation has the same benefits, without anywhere near as many of the side effects. And Mike's point was he thought it was robots, that the fact these physicians, these surgeons are talking about what they can do with robots, that we actually have a bias in favor of robots (laughs) doing surgical procedures when the evidence would suggest maybe that's not the best alternative. So the bias can work both ways. But when you go back now broadly to consumers and consumerism and, and trust, uh, we've got a huge signal noise issue, just generally as we adapt to these new digital technologies. People are constantly trying to, to fool us, um, at the same time. And Robbie, you mentioned Anthropic, and the AI voice-enabled technology. And I'll add Transcarent to the list. I mean, the effectiveness of these platforms is just amazing. I heard a demo last week from Anthropic of a nurse responding to medical questions, pausing, empathetic, really engaging the person. Yes, these models are just getting better and better all the time, to the point where even when people know they're talking to a machine, they say after the fact, they're preferring it. Transcarent, which has made a big investment in AI, in support of its digital benefits platform, all health and care in one site, now says that its AI tool can answer 95% of the questions, HR questions regarding benefits that come in. Same questions come all the time and, and do it very effectively in five languages, 24/7. So I think Robbie's right. The, pace of improvement is just, almost mind-bending and we as human beings don't respond well to exponential growth. We're much more comfortable with incremental growth, which is why disruption is such a hard concept for many people to wrap their heads around. How will we know when we're all the way there? I think we'll know we're all the way there when consumers don't notice the AI anymore at all. They just are asking a question, getting an answer, getting a diagnosis, whatever. And I think we're very close to that.

Burda:
Yeah, thanks, Dave. Dr. Pearl, what's your reaction to what Dave said? What do you see in the market that would suggest that consumers trust in AI solutions is growing too?

Pearl:
Let me first respond to what Dave said, and again, I think he is seeing it very accurately. If we can get a little technical, a large language model, we're talking now about ChatGPT or Go- or Google's Gemini or Anthropic's Claude, these have to be created by taking a massive amount of data. Everything on the internet, every textbook, every piece of information, and entering it into place, so this is very expensive. We're talking about hundreds of hundreds of millions of dollars. If you look at what just happened though, out of China with the release of DeepSeek.

Burda:
Hmm.

Pearl:
DeepSeek was built by with a process called distillation. It started with some large language models and then it gave it millions of questions to create a very focused model. It didn't need it

to paint like a Rembrandt or write a song like Drake and the Weekend, it could focus on specifically medical applications. The next generation, I predict, is going to take the information coming out of advice centers, coming out of telemedicine visits, everything that is a conversation, and now train it, take the model and train it on that, having distilled the information of the large language system, and now it's gonna learn not from a few people, but from hundreds of thousands of interactions. And it will be as good not just as the average person, but as the best. That…

Burda:
Hmm.

Pearl:
... day is when we have to understand and at that moment, Dave's absolutely right, that people are going to prefer this because it will be more accurate and more reliable and more empathetic. So I see that day coming. I agree, we're sort of in this transition, it reminds me of what I've read about the introduction of the ATM. People are afraid to put the money in there. Would it get eaten up? Would it get lost? No, now people use it without thinking twice. You know, I mentioned my monthly musing survey, and there I also asked consumers about it, and 77% strange to me said that they had used it and actually found it helpful, with 0% finding it inaccurate or confusing. And I think back to a different podcast I was on maybe two, three months ago, and the host said that she had never used a generative AI tool for a medical question. But she said off-air when we finished recording, "My husband fell a few months ago, his arm was over his head, he slid down about a hundred feet. You're a skier, you're a doctor, what's going on?" And I said, "I think I know exactly what he has, but do me a favor. You said you've never used generative AI for a medical question. Why don't you put his information into the system and see what it tells you?" Five days later, she calls me back and she says, "Thank you. It told me that he probably had a rotator cuff tear. It told me he needed an MRI to establish the diagnosis, and it said that I should see an orthopedic surgeon because he almost definitely needed a procedure done. And we saw the doctor, he says probably a rotator cuff tear."

Burda:
(laughs)

Pearl:
"He ordered an MRI and he did the procedure. We didn't have to ask him what's a rotator cuff, we already knew. We didn't have to ask him why an MRI, we already knew and he said that if he had waited three more months, he probably could not have reattached the tendon because the muscle would have contracted." This is expertise, and I think it's important for listeners to understand if they had gone... If she, if they, if she had gone to Google and put in the information, it would have said, here are a hundred different diagnoses of shoulder pain. Here are a hundred different reasons why an arm doesn't work as well as the opposite side. It might have told me to go see an orthopedic surgeon, but it told everyone that. This is the expertise.

Burda:

Yeah.

Pearl:
From my perspective, this is the first tool designed to provide expertise to the patient in all of medical history that I can think of. And we have to understand, this will no longer be doctors telling patients what to do. It's going to be, as David mentioned, a partnership between the doctor and the patient.

Johnson:
Interesting.

Burda:
Yeah. Well, I did have an ATM eat my check once. That's true. But I didn't stop using ATMs, I switched banks. So... Dave, any rebuttal to what Dr. Pearl said, or reaction?

Pearl:
(laughs)

Johnson:
I'm almost wondering what an ATM is anymore. I hardly ever use cash anymore and-

Burda:
Right, right, true.

Johnson:
... certainly never go to a bank in person. So I think that's a very good metaphor for where we're heading in healthcare. And Robbie, I just thought your example was fantastic. How personalized and precise it was in real time, solving real jobs to be done, right? Both health and healthcare, that was healthcare.

Pearl:
So, Dave, Dave, Dave, Dave- ... I can't resist commenting that, you know, you talk about the ATM not knowing what it is. You know, I tell my students at the graduate school of business that the most common way that clinicians communicate today essential information is the fax machine, an 1834 invention. They do say to me often, what is a fax machine?

Johnson:
(laughs)

Burda:
There you go. Yeah, that's the benchmark. (laughs) That's great. Well, thanks, Dave and thanks, Dr. Pearl. Now, let's end thisspecial edition of the Roundup with this question. When do you think the acceptance of AI by providers and the acceptance of AI by consumers will converge? You know, a year from now, five years from now, never? Dave, you go first. What do you think?

Johnson:
Well, probably not in a year, but within five years. I think within five years we'll all have a bot on our shoulders, helping us navigate a more complex, fast-paced world, but with less stress because the machines are reducing our, our cognitive burden. Helping us to consistently make better decisions in real time. And I think that'll be both on the clinician side and on the consumer side. My real questions (laughs) relating to this are how healthcare incumbents and the current ways in which we pay for and administer care will adapt to this because it will be much more efficient, much more lower cost, much more decentralized than the way we deliver healthcare today. And also, and this is important, better balanced between health and healthcare. Now, having said all that, there's still a long way to go. The machines have to improve their effectiveness. We human beings also have to, you know, get ready for human-machine collaboration. Need to build trust. We need to keep bad actors at bay. And I'll end with one of my favorite quotes, it's from Thomas Edison. "Vision without execution is hallucination." That's a very appropriate term (laughs) for when talking about AI, because hallucinations are one of the, kinda, features, malfunctions of generative AI. But interestingly, I used to hear about hallucinations all the time a year ago, and you know? I very rarely hear the term or even the problem anymore, which means that AI is getting the job done. So my guess is, Robbie's right, and he and I are in violent agreement that the pace at which these new artificial intelligence and the synthetic biology tools or general purpose technologies are improving is gonna fundamentally change life as we know it. And some will adapt better than others to this reality. But if you're in the healthcare profession, it's time to play offense, not defense, and get with the program because the machines are coming.

Burda:
Got it. Dave, thank you. Dr. Pearl, you get the last word. When do you think the acceptance of AI by providers and by consumers will converge? Are we here? Will it be a year from now, five years from now, or never?

Pearl:
Dave and I have exactly the same number. I think within five years, it's going to be here. But I'll put a little caveat in place that the limiting factor will not be the clinician or the patient. It's going to be the regulators. And the regulators are gonna have to evolve into a (laughs) more modern methodology for evaluating these technologies. You know, I want to go back to the problem. If medicine were perfect today, we wouldn't even be talking about generative AI. We have to start with the problems. Chronic disease, we control it about 60% of the time. We need to get to 90% and do it in a way that is cost-effective. According to the CDC, that would reduce heart attacks, strokes, cancers or kidney failures by 30 to 50%. Generative AI tool connected to wearable monitors can do that. We need to be able to provide advice, not 8:00 to 6:00, five days a week, but 24 by seven in the patient's home, generative AI will be able to do that. We need to eliminate the 400,000 misdiagnoses that kill Americans every year and another 400,000 that leave them disabled. Generative AI will allow that to happen. And I think that Dave's absolutely correct that we need to shift the reimbursement system to embrace this full technology because the current pay for volume does not reward avoidance of heart attack, only it's reversal, or inadequately

rewards prevention of a heart attack. Only it's reversal. We need to move to some type of pay for value capitation, call it what you want. We have to be able to understand the power of this technology to improve quality, to improve access at the lower cost. Without any question in my mind, Dave, that five years from now, the combination of the dedicated clinicians combined with an empowered patient and generative AI will be many, many times better than any of the three can do today or could do alone in the future.

Johnson:
Amen to that. Let me just double click on, on what Robbie just said on-

Burda:
Yeah, of course.

Johnson:
... payment and prevention. My new favorite term just came out of the CMMI statement of principles from the Trump administration. And that term is evidence-based protection or... I'm sorry. Evidence-based prevention. And just think about how different life would be, healthcare would be, human productivity and happiness in the country would be if we actually practice evidence-based prevention and the machines are gonna help us do that. They'll give us real-time prompts that will help us make better decisions, better lifestyle choices in real time, and start to achieve some of the goals that you were talking about, Robbie, in terms of reducing chronic disease and the horrific, uh, death statistics that accompany them.

Pearl:
And we have to evolve how we think about prevention from simply avoiding, let us say, diabetes in the first place, which is an important thing to do, particularly with lifestyle-

Johnson:
Yeah.

Pearl:
... medicine, but also to avoid its complications, which are the heart attacks and the kidney failures by continuously monitoring and not waiting four months for a return visit to the office, but be able to intervene after one month, let's say with a telemedicine visit, or a-

Johnson:
Yeah.

Pearl:
…picture message and now we can not only prevent it, hopefully in a lot of individuals who today otherwise or have diabetes, but also prevent its outcomes from, creating high cost, high risk, life-threatening, and often death ensuing complications.

Burda:

Yeah. The future is here, right? Whether or not we embrace it. So, great conversation. Dr. Pearl and thank you for joining us today and that is all time we have. If you'd like to learn more about the topics we discussed on today's show, please visit our website at 4sighthealth.com. You also can subscribe to the Roundup on Spotify, Apple Podcasts, YouTube, or wherever you listen to your favorite podcasts. Don't miss another segment of the best 20 minutes in healthcare. Thanks for listening, I'm Dave Burda for 4sight Health.