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"Tom is engaging with all of the patients you aren't seeing today-that's the actual power," says Jean-Claude Saghbini from Lumeris

Dr. McDonough:

Welcome to *The Convergence* on ReachMD, where innovators and physicians explore the technology transforming medicine. I'm Dr. Brian McDonough, and today's guest, Jean-Claude Saghbini from Lumeris, has built something that sounds too good to be true: an Al agent that actually reduces physician burnout. It's called Tom, and it's designed to be your Al team member. It's handling routine tasks, flagging what needs attention, and letting doctors focus on being doctors.

Jean-Claude, welcome.

Mr. Saghbini:

Thank you very much. Thanks for having me.

Dr. McDonough:

Let's start with the problem you're solving. What's the two billion hour gap in primary care, and why is it so important to address?

Mr. Saghbini:

It's an alarming and sizable problem. A hundred million Americans are without primary care. If we were to provide evidence-based care to them through human hours, the cost of that would be two billion hours at about a trillion dollars of spend. We don't have the hours, we don't have the resources, and the spend would be too high. In short, what we have is a classic supply-demand imbalance. The demand by far exceeds the available supply. What we are doing is bringing agentic AI with Tom to rebalance that supply-demand equation.

Dr. McDonough:

Now, you're a CTO who's worked at Wolters Kluwer and Cardinal Health, so obviously, you have a deep healthcare tech experience. What made you focus on this problem specifically?

Mr. Saghbini:

I've had an interesting career in healthcare. It started in 2005. I thought it was going to be easy. The common thread of that was two things: solutions that have a positive impact on health and outcomes and a reduction in costs. And the thread started in supply chain, OR workflows, and procedural workflows.

And as I kept learning more and more, the idea of providing evidence-based medicine and supporting physicians in that journey became more appealing to me. So the time I spent at Wolters Kluwer with UpToDate was certainly a huge component given the clinical decision support impact that UpToDate has, and then more recently, the past five years at Lumeris partnering with health systems to truly impact at the n of one patient and getting that evidence-based care to that patient. So, it's been an interesting, long journey, and I'm super excited now because I'm seeing the impact being ever more strong.

Dr. McDonough:

Well, Al tools have been promised for years. This moment seems different. What's changed that makes something like Tom feasible now? Why is this happening now rather than five years from now?

Mr. Saghbini:

You're right. All has been around for a very long time. It had what we call several Al winters where Al gets a lot of attention, then dies off, and then attention dies off. And from a technical point of view, they were like compute considerations. And the cost of computations was extremely high.





From a clinical point of view, what AI was doing for many years was surfacing one more thing that physicians did not pay attention to and giving them one more task to do. And while that's admirable, if we go back to the point I made earlier about the supply-demand equation, the problem is that you can surface even more demand. The supply wasn't there.

And with the arrival of agentic AI, it finally gave us this set of tools where now we can take action. We can use generative AI capabilities to not only surface gaps and alerts but actually take the action. And it's by taking the action, we're providing the supply. And that's why it's now. It's super exciting that we are able to do it.

Dr. McDonough:

I want to talk a little bit about what Tom actually does. And this really is right up my alley as a primary care physician. I have a scenario. I'm in the office. It's Tuesday morning. What does Tom actually do for me that's different from my current workflow? And believe me, our listeners, many of them have a current workflow that's probably a lot like mine. What does Tom do?

Mr. Saghbini:

Really good question. Maybe you'll find it a weird answer because I'm going answer it with what's happening outside of your office, and then I'll get to the office. So when you walk into your practice on a Tuesday morning, in the background, Tom is engaging with all of the patients that you are not seeing today. That's the actual power. Tom is engaging with many patients in between visits and you're able to, as a physician, impact the totality of the patients that you are responsible for, not just the 20 that you are seeing today.

So what Tom is doing is calling four patients to schedule them for colonoscopies; nudging 12 patients on getting a flu shot and sending them to the nearest pharmacy, and providing education to four of them who are wondering whether they should get a flu shot or not; reaching out to 17 diabetic patients to check on their blood sugar level; calling five patients who were in the office a few days ago who you prescribed a new medication for to check if they picked up the new medication and how things are going with them; calling one of the patients who just got discharged from the hospital yesterday, checking in on them, and scheduling them for a visit with you in a few days to make sure they see you post discharge; and calling the 20 patients who will show up tomorrow, reminding them of the visit, checking in, and doing a pre-visit, and summarizing that to you. So now all of that is happening to all the patients that you are not seeing.

Dr. McDonough:

Yeah, that's a full day's work for us and our entire staff. Doing everything you just talked about—the metrics, the reminders, the appointments, and the follow up—all of those things can take an inordinate amount of time and resources.

Mr. Saghbini:

Yeah. And now, going back to your core question, which is I walk into my practice, what am I experiencing? One is, you're seeing your patients and then you are getting workflow alerts on some patient to whom you have given a new medication, who picked it up, started taking it, and it's giving them stomach pain and they're considering what to do. Do they keep taking it or not? And you are nudged on that now versus three months from now when you see them and you realize they stopped taking their medication during the visit.

Tom is expressing to you as a physician in your EHR workflow that, "Hey, this patient that you are seeing now expressed to Tom that they have these two or three topics they want to bring up to you," and you're aware of what they want to talk about. You're getting a summarization of their pre-visit check-in and how they're doing. You're also being nudged by Tom on some recommendations based on the totality of their medical record and things they have expressed to Tom in conversation to say, "Hey, I recommend that you look at X, Y, and Z, physician."

Dr. McDonough:

So, when we do, let's say, a chart prep in traditional medicine, you come in as my patient, and I prep the chart and get a sense of what you're here for and why. This is also done for you, and there's more—there's suggestions and there's ideas, so when you read this, you're reading a fully formed commentary. When you walk in, it's like somebody's prepped you totally.

Mr. Saghbini:

Exactly. You're walking in and their blood sugar level looks like this over the past two months. They're doing okay. They also want to talk to you about ankle pain that they started experiencing a couple of weeks back. And they want to bring that up in their regular visit.

Dr. McDonough

And if I'm getting this right, Tom's already gotten a lot of that information from Tom was doing prior to the visit? It might have been through the portal and it might have been phone calls, but it's just gathering all that information from the chart and the conversations.

Mr. Saghbini:

Exactly. That's that long tirade I went through.





Dr. McDonough:

Right. But that comes to you, and right off the bat, people who see patients are saving an incredible amount of time, and it's allowing you to focus with your patient on issues you really want to focus on as well.

Mr. Saghbini:

Exactly.

Dr. McDonough:

And then there's documentation, and how about clinical decision support?

Mr. Saghbini:

In terms of clinical decision support, to the extent that Tom detects things in the patient's medical record combined with things that Tom has gathered in between visits through all the multiple interactions, Tom can express to you recommendations in clinical decision support. Tom doesn't take the action but can express to you, as we call it, "best clinical advice." It can express advice to the primary care physician as well as the evidence supporting the advice, either from the record or from medical literature.

One more thing I want to bring up—it's a key point of Tom—is that now I described all this to you and you say, "Well, how does access expand? That's great, it reduces my burden. But how did access change?" The idea is that when I finished this visit and knowing that you as a patient have interacted with Tom over the past three months, and I have a good summary of how you've been doing over the past three months, maybe my next visit with you can be in five months, not three months from now.

Knowing that Tom is engaging with you, and to the extent that you actually need to be seen way sooner than that, Tom will alert me. So it gives me this sort of sense of comfort as a physician that in between visits used to be a desert of information. Right now, I have tons of information. I don't necessarily need to look at it, but Tom is engaging and collecting that information and to the extent that something urgent is popping up, Tom will alert me, and maybe I need to see you sooner.

Dr. McDonough:

And this also would help for people who often are lost to follow up. You have a tickler file making sure they do this test or that you see it, and it might be a sticky note in your chart, but basically, it doesn't happen. And then you see somebody later on and you find out they haven't been taking their medicine, they haven't been doing this, they haven't been doing that, and now nothing happened and you lost four months

So in addition to the patients you're seeing, would you also have updates on patients you're not seeing through Tom if they don't have appointments? How's that work at this point?

Mr. Saghbini:

Yes, you would have information about the totality of your patient panel—the patients that are showing up regularly or don't show up. As long as they are in your patient panel as a primary care physician, Tom manages that panel for you on your behalf.

Dr. McDonough:

And as far as after the visit, we're talking about some of the things that happened, but also it looks like a lot of the care coordination issues and referrals are also supported by Tom.

Mr. Saghbini:

Yes, exactly. So post-visit, Tom picks up that information that just happened in your visit because of the connectivity into the EHR. And then Tom manages a series of things after that. Let's take two examples: a medication example and a referral example. On the medication example, Tom realizes that you were put on a new medication and ensures that you did pick up the medication, that it's working for you, and that everything is okay. Tom also picks up on the fact that you have a referral to a specialist. Tom connects with you on that, ensures that you do go through your referral and that you do stay within the network because that matters for care continuity, explains to you why that referral matters, and reminds you of that specialist visit.

When that specialist visit is coming up and they resend that information back to your primary care physician, often what we see is that you as a primary care physician do a referral and you don't know what happened downstream. And nothing sends you information back and tells you, "Did it go okay? Is it scheduled? Hey, it's not scheduled, by the way. Just FYI, the patient has not done anything about it yet." So Tom closes the loop back into the primary care team so that you continue having full visibility as a primary care physician to the totality of the care of your patients.

Dr. McDonough:

So, Jean-Claude, if I have a diabetic patient due for a hemoglobin A1c, what does Tom do that our team currently does manually?





Mr. Saghbini:

Tom can call the patient, text the patient, recall the patient, and try them again. If the patient says, "Call me back later," it can explain to them why they need it, explain what it is, send them educational videos on what it means to take an HbA1c, schedule them and or transfer them to whatever your landing point is to schedule them. So Tom can take on the totality of that action. Given that Tom is infinitely scalable, Tom can adjust to the patient's preferences and or availability versus being limited by your staff. Once they run out of time, whatever gaps were not closed would remain unclosed.

Dr. McDonough:

So you call Tom agentic Al. Most doctors, at this point in our careers, we hear Al, and we think of chatbots and diagnostic aids. What's different about this kind of agent?

Mr. Saghbini:

Agentic AI means that the agent can accomplish an end-to-end task autonomously. It's different than you using AI to support you in things you want to do because you have an objective, you ask AI something, you ask Gemini a question, Gemini gives you an answer, and then you go about your way. These are chat bot experiences. An agentic experience is the HbA1c we just talked about now. The objective is to reach out to you, explain to you, and schedule you, and Tom takes on the totality of that experience in one shot. And that's what we are excited about.

Dr. McDonough:

How can I trust that Tom isn't making mistakes that I don't catch? If it's running wild or something like that, how do I know?

Mr. Saghbini:

These are the right questions to ask about all AI. I think these are important questions to always ask, but not only to ask—to put governance and structure around it. The way we approach it is, one, through a very robust governance framework whenever we put any sort of AI capability out there. And two is although Tom can and is designed to do more than what it does, we have put very strong guardrails, and we test very intensely against these guardrails around not diagnosing, not treating. So Tom is guardrailed against doing that. And then we validate that through extreme heavy duty testing that then goes to our governance structure. That then validates that all these things have happened before we are launching any component into the market.

Dr. McDonough:

For those just tuning in, you're listening to *The Convergence* on ReachMD. I'm Dr. Brian McDonough, and I'm speaking with Jean-Claude Saghbini of Lumeris. We're talking about Tom agentic Al.

And I know you've been working with large language models and test cases—in using them and referring to them, can you walk us through how you built Tom to be safe for clinical use?

Mr. Saghbini:

It goes back to the point I mentioned about governance. And when we now think about quality, it used to be we thought about quality as software quality in healthcare technology. And now, we have this clinical quality. But we also acknowledge there's a non-deterministic set of outputs that come of large language models. The way to validate these models—they're non-deterministic by nature—is to do extreme testing of use cases. And this is what we put in place with the attempt of breaking it.

So we have teams and individuals whose sole purpose is to actually break the system.

And early on, a couple of years ago, it was easy to break it because we had not thought about all the components. And now we are actually at a point where we are extremely confident of what we are putting out there, yet those teams are continuously building test cases to break it.

We also have test cases on not just on clinically breaking it, but on from a HIPAA point of view, are you breaking it and divulging information that Al shouldn't divulge? So we have a series of criteria that we try to break the system against with intense test cases to do that.

Dr. McDonough:

It's fascinating. So you're really in there trying to outsmart it, break it, and do every possible thing you can do it. One of the things in our world that's been big for decades now is HIPAA and clinical standards. Is Tom compliant? Have you built Tom to be compliant with these things?

Mr. Saghbini:

100 percent HIPAA compliant. We had been working on primary care transformation with different technologies. This is an add-on





technology to our core platform for about 15 years. So our technology stack has been and continues to be HIPAA compliant in one of the most robust fashions. And what we have done is as we added generative AI capabilities to our technology stack, we grandfathered that under our full compliance security umbrella. And as such, we've managed it with the same rigor that we've always done it with.

Dr. McDonough:

In a previous life, in my clinical role as a Chief Health Informatics officer, we worked with all these different computer systems, and it was always tough to have workflows and one EHR talking to another. How does Tom actually integrate? Because obviously, you're going to be dealing with hospitals and practices and others that use many different systems. We're not all using one. So how does it integrate, and is this something that you have to customize for every health system, or is it something that would work across the board?

Mr. Saghbini:

An ethos that we have is that we have to integrate into the EHR workflow if we want to get physicians' attention for all the reasons that you've probably experienced. Getting physicians out of their workflow is a "no-no." So the answer is then yes—we integrate with the EHRs.

It's two-way integration. So one is we integrate with the EHRs in the most basic form, which is getting information from the EHR so that everything Tom does is contextual to the patients. And then the second form is that as we are expressing insights and all the things we talked about earlier, we are integrating in a non-interruptive way in EHR workflows.

Dr. McDonough:

So when you're doing that, without getting too technical, you have to work with the different companies. You work with them and try to get the bugs out, so to speak.

Mr. Saghbini:

Exactly. Yeah. We use non-custom standard integration methodologies, and we integrate with them.

Dr. McDonough:

Now, one of the things that I found toughest was the human element. Going back to the days of CPOE, asking physicians to get on board and then training and doing different things and spending the time—change management is really tough. It may be one of the toughest things in this area because a lot of us as docs just don't want change. We want to get used to what we're doing and change. Change in the electronic health world has always seemed like it meant more work over many years. Pajama time was doing charts when you never even used to bring a chart home. All of those promises that were there were met with extra work. How can you get physicians to trust this, and how do you bring them on board?

Mr. Saghbini:

That is, rightly so, a good problem to mention because ultimately, if Tom is a primary care team member, then by definition, not only do you have to gain the trust of the patients, but you have to gain the trust of the primary care physicians because Tom is their team member. So the way we do that is two things in change management: make it easy and trustworthy. And you have to hit both. Make it easy is, anything that's expressed is in the workflow, and anything outside of my workflow is happening behind the scenes by Tom managing my patients and certainly not flooding me with tasks to do.

So Tom takes off work versus giving me work to do from a trust point of view. There is no "turn it on and everything goes live" right at the end of the day. We call it the onboarding—what will Tom be able to do on your behalf? And typically, health systems and physicians start with the simplest of things that Tom can do—primarily gaps in care closure—and then evolve into more advanced chronic condition management. And so the trust is gained by the early things: the reminders, the scheduling, the pre-visit check-ins, the closing gaps in care, et cetera. And then the evolution happens into more advanced condition management.

Dr. McDonough:

The cynic in me would say, after many years of "go-lives" and working, I've always asked companies across the board, "Can you do this?" And the answer is, "Yeah, we can do that." And then I later would find out, "Well, it'll cost this much to do that, and if we do that, it's going to be this much work." So we've seen a lot of AI tools that sound promising but don't work in the real world. What's your deployment looking like right now? What's different here?

Mr. Saghbini:

What's different is, for one, it's a newer generation of AI that can do work versus surface gaps, which is foundational. But the second part, which we are extremely proud of, is it's relatively easy to create agent AI components. The tools are very powerful. You can actually create point solutions and standalone services in a relatively fast way. The tough part becomes, how do you connect them all





together into an experience that is highly orchestrated, that is plugged into the underlying data and insights derived on populations?

And because we grew up in that world of data aggregation, our platform aggregates data from claims, EHR, social determinants of health, you name it. So we grew up bottoms up, if you will, understanding data, aggregating data, normalizing it, deriving insights, computing and insights.

And now, as we are building these agent services, we are plugging them into a very mature platform. And that's what we are excited about. It's all expressed in things that are conversational and text-based, et cetera. But when you double click and drill to see what's under the surface, you see a very mature platform that has been supporting health systems for years.

Dr. McDonough:

Yeah, we were always immersed with all that discrete data and it couldn't be reflected through the conversation and from other things. And I know you're in the real world testing this and looking at it. My understanding is Tom's deployed at some Lumeris health system partners. So what are you seeing? Is it working? Are doctors using it? And what's the experience now as far as the real-world application?

Mr. Saghbini:

As I mentioned, Tom is a platform. So end-to-end, you have literal bytes coming in on one side with data ingestion capabilities, and all the way on the other side are EHR integrations, conversational capabilities, and different components deployed in different places. The examples I'm excited about those are the ones that are patient facing—when you have an 89-year-old person who not only is having a conversation with AI, but is actually excited about the novelty of having a conversation with AI. And when you have people sharing very intimate details about their healthcare conditions with AI because they are trusting the fact that this is provided to them by their providers, and the fact that the output of that conversation is something that's going to be additive to their provider team to be able to provide them with better care.

We've all also had the occasional, "I don't want to talk to AI." Just going to put it out there. And that's okay. I think we're at the beginning of this journey, and everybody's getting exposed to and excited about AI, so that's helping a lot. And we actually intentionally asked some patients to interview them after some of their experiences to get firsthand knowledge from them—how was it engaging with AI? And one that I recall is a patient who said, "What I'm excited about is that often, when I go to my physician, I forget what I want to talk about. The fact that the summary of this conversation will be expressed to my primary care physician is extremely important to me because I'm not worried about forgetting what I'm going to talk about."

So, again, when you're launching solutions of this scale, this is the risk—will humans and patients engage with AI? And the answer is yes.

Dr. McDonough:

We're talking about, obviously a lot of the good stuff, and there is a lot of good stuff to unpack. But from an honest standpoint, where does Tom fail? What can it do yet that you wish it could do or you're frustrated it's not doing?

Mr. Saghbini:

A good question. Expanding, for example, our multi-language support—the technologies are there for that. The question is, how do you test that at scale? The majority of people in the country, like our team members, et cetera, speak one, two, or maybe three languages as you expand into many languages. For example, you asked me this question that's top of mind for me—how to test a multitude of languages with the same rigor that you are testing English, for example.

Dr. McDonough:

So you're modeling it with the English language, but what if you go to Spanish or Mandarin or whatever and you don't know if you might run into other issues?

Mr. Saghbini:

Exactly. Developing it is easy, actually. It's more, how do you test it at scale with languages where you don't have enough people in your enterprise who speak that language?

Dr. McDonough:

The other thing we get with Al—and I think across the board, people are concerned in every job—they're going, "Am I going to be out of a job?" Because Tom's automating tasks that nurses, MAs, care coordinators, and other people are doing. Will it impact team members roles? Will it people lose their jobs? Are they going to have to change their focus? What do you envision?

Mr. Saghbini:

It's a good question. This is a common question. And I think first, it's the hundred million Americans who are not getting access to care. I





don't see at all a risk to jobs. To a certain extent, maybe jobs become more exciting and satisfying because people start practicing at top of the license.

But given that the supply-demand imbalance is so high, this is not about reducing operational expenses or replacing human providers. This is how to use that that scarce, highly skilled supply of human providers to support a much larger patient population that today does not have access to proper care.

Dr. McDonough:

And probably also what we saw when we introduced EHR to hospitals and systems, some were better at helping people find new roles in that healthcare environment. And because their other role might have been eliminated too, they kind of got ahead of it. And I think the better organization said, "Hey, your role in 12 months will probably be gone once we go live. Would you be interested in this or that?" Providing other opportunities for those who want to end the necessary training. So I think you're right, especially with the workplace shortage right now, this could be helpful. And again, improving access is what we're all about.

The other issue is—and again, I worked with a large health system that had a lot of resources—but even with a lot of resources, we're talking hundreds of millions of dollars across hospitals and money taken from care, in a sense, to get those tools in there. Since COVID, a lot of these healthcare systems don't necessarily have the resources, and they're working on one and two percent margins. How do you get them to do the investment for something they may not see the results for till several years down the road? Do you see that as a barrier?

Mr. Saghbini:

Given the type of technology that this is, which is ultimately engaging and driving connectivity into patients, we see the financial results of these investments show up much sooner than other technologies that have a long runway until you get ROI. So, in a way, in this instance, the ROI materializes much faster than in historical technology that I've been involved in myself as well. I've been in health tech for 20 years now. And some of those technologies you deploy, and then you'll have a five-year roadmap of when ROI will show up, et cetera. Here, it materializes much faster. Probably, it is also because the urgency of the problem is there. It's a problem that's waiting to be solved versus uncovering an opportunity to go tackle.

Dr. McDonough:

Yeah, I see two roads that will help this. One is, I think anybody out there taking care of patients now realizes we need to expand care to those who are underserved and not getting served. And the other thing I think is this will be much better received because it's starting to show—in fact, it is showing what a lot of us were hoping when we were going through the drudgery of going from paper to computers. It was a lot of drudgery without much return. And now we're starting to get it. So I think you're going to see that.

Plus, hopefully younger physicians and others in healthcare also are much more aware and this is part of their lives, which gets me to a question from a note I jotted down about democratizing access. Will you be able to get this out and around so that it'll be able to be used in big healthcare centers, small ones, and practices?

Mr. Saghbini:

To the point you just made, a big chunk of lack of access is happening in rural America. And we actually just announced the creation of the Collaborative for Healthy Rural America—CHRA—with a series of partners, including Teladoc and Unite Us. And through these integrations with the various partners, just like he works for the health system, Tom is able to work in in a region where populations are living in rural settings that are geographically disconnected from large health systems and from access. And Tom is able to provide them access through this this CHRA partnership.

Dr. McDonough:

And you announced a partnership with MIT's Computational Biology Lab. What is all that about, and where's Tom going?

Mr. Saghbini

So this is all next gen R&D. So we're excited about what we have, but technology is evolving extremely rapidly. So through the partnership with MIT, and also our partnership with Google we announced a few months back, we're excited because we are able to and want to continue being future-looking and remain in sync with the art of the possible. We want to be developing with the art of the possible.

So we have our delivery teams that are building the product, delivering the product, implementing the product, et cetera, and our advanced R&D teams who are continuously looking at, what is the art of the possible? And how do I build to that? And then they'll take those capabilities and then put them on our roadmap once we see that they are functioning.

Dr. McDonough:





If I'm a primary care doctor listening, what should I be preparing for? What will be different in my practice in three to five years with your vision?

Mr. Saghbini:

It's simple. You're going to have one additional primary care team member that you can delegate tasks to that can act on your behalf, will continuously learn, and is infinitely scalable.

Dr. McDonough:

Pretty good. But I want to ask you this question too. What are three things primary care providers need to know about how AI tools like Tom could impact their practice?

Mr. Saghbini:

Top three: providers need to remain in control and at the center of the primary care delivery model. That's number one. Number two is Tom and other AI tools are here to scale them to deliver more care to their patients and provide access to a broader set of patients. And then my third point is that the tools will continue to evolve. And now is the time to start and not just ride the wave, but if you start early, you can shape the wave.

Dr. McDonough:

Interesting you say that. I think it's true that you can get involved early. So for physicians listening who want to stay ahead—maybe they never heard the term agentic AI until we were throwing it around in this interview—what should they be learning, or what should they be reading or following? What do you think would help them?

Mr. Saghbini:

I think you should be doing it. This is a highly experiential space. And the best way to learn it and understand its capability is by actually implementing something at your practice.

Dr. McDonough:

Jean-Claude Saghbini, I want to thank you for helping us understand not just what Tom does, but also what agentic AI means for the future of primary care. I really appreciate it, and thank you for taking the time to join us. It's been great.

Mr. Saghbini:

Absolutely, and thank you for having me. This was an exciting conversation.

Dr. McDonough:

You've been listening to *The Convergence* on ReachMD, where innovators and physicians explore the technology transforming medicine. To hear more about other technological advances shaping the future of healthcare, visit *The Convergence* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening, and we'll see you next time.