

Podcast Transcript

Risk Never Sleeps Episode 114 Dr Ed Lee

Ed Gaudet: Welcome to the Risk Never Sleeps Podcast, in which we learn about the people that are on the front lines, delivering and protecting patient care. I'm Ed Gaudet, the host of our program, and I am pleased to be joined today by Dr. Ed Lee, the Chair of Clinical Education and the Director of Clinical Informatics at the California North State University College of Medicine and the Chief Medical Officer at Nabla. That's a mouthful. Hopefully, I got that right. And a practicing perfect doctor of internal medicine.

Ed Lee: Correct. That's absolutely right. Thank you so much for having me.

Ed Gaudet: And it's so great to see you. I know we've worked together in a past life. It feels like years ago, but.

Ed Lee: Many moons ago.

Ed Gaudet: Yeah. Although I feel like I just talked to you last week, so it's good to see you again.

Ed Lee: Likewise. Thank you.

Ed Gaudet: So let's start off with telling our listeners a little bit about your current role and your organization.



Ed Lee: Yeah. And like you mentioned, I've got a couple of different organizations that I'm working with. Here, maybe I'll start with the role at the medical school. So as you said, I'm the chair of clinical education, director of clinical informatics. And so that role basically involves overseeing the clinical program of our medical school, so the third and fourth years, and making sure that the education that they're getting is a high-quality education, that they're getting all their needs in preparation for the real world out there after medical school. So that's a little about what I do at the college. For Nabla, I am the chief medical officer for Nabla. It's a leading ambient AI assistant in the marketplace. And what I like to say is, what we do is we allow clinicians to enjoy care again. And we do that by removing clerical burden of documenting within the EHR. And a one-liner explanation of this is around. So imagine you're a physician, I'm a patient. I come in to see you in the office, and what you do is you turn on Nabla at the beginning of the appointment. We have our visits, and then at the end, you hit generate note. And within seconds, the documentation is done. It's really that simple. So we're used by over 45,000 clinicians and have partnered with over 85 healthcare organizations and clinicians using Nabla, say, Over two hours of time a day means less time charting on nights and weekends, more time with their patients, more time in self-care for the clinician to take care of themselves. And that equates to, I think, better patient care, less clinician burnout. That's why I went into this role. And more specifically about what I do, like you said, I've been on the front lines of care for the past 20 years, primary care, internal medicine. I still see patients now, and so I really know firsthand what it means to be burdened by the administrative tasks. And I love medicine, I love technology, and I've always believed that with the right application of technology will lead to significant improvements of the practice of medicine. And so we want to help address all aspects of the quintuple aim. And here's the thing. Healthcare technologies that are used by clinicians, I think they need to have clinicians providing leadership, guidance, and expertise in building this technology. So at Nabla, I provide strategic leadership on product development, product roadmap, and I help foster our strategic partnerships across the industry.

Ed Gaudet: Yeah, that's a great intro. And that's the thing I remember about you. You were physician zero as it relates to the integration of technology and care delivery. You were an early adopter of technology as I remember, and it looks like you're still doing that, which is cool. Let's start with the college first.



Ed Gaudet (cont'd): I imagine that has changed dramatically over the last 20 years, especially with technology and the use of AI. So tell us more about the changes you've seen there and then maybe what the next five years holds for students.

Ed Lee: So you're absolutely right. The practice of medicine has changed over time, and especially with the addition of the EHR. That's, for us, nowadays, we take that sort of for granted. But EHRs came into prominence probably around 20 years ago and has just continued to develop since then. And so making sure that our students are facile with using and interacting with the EHR is foundational at this point. A lot of students are at the age where they're digital natives, and it's not that hard for them to necessarily pick up. I'm speaking in general terms, but ensuring that all our students are on an equal playing field by the time they complete their medical education, around that aspect, is very important. But also, especially since the pandemic, telehealth has been a significant part of the way we practice medicine nowadays as well. And so introducing that aspect of medicine, because it's not quite the same. When you see a patient face to face, when you can actually do an actual physical examination, that's different than seeing someone on the screen and being able to infer parts of the examination to read body language, listen to tone, and using just those aspects of the exam and coming up with your differential diagnosis and treatment plans based on that. That takes a little bit different skill as well. And of course, with the advent of digital technologies and including artificial intelligence, augmented intelligence, that's something that we need to ensure our students are very well understanding of so that they can hit residency and be out into practice with all the information and all that knowledge in hand, ready to go.

Ed Gaudet: Yeah, it's a nice segue into ambient listening that I just came out off of a conference in Las Vegas. I was at HLTH, and ambient listening and AI was everywhere. So talk about what's happening today from the state-of-the-art technology. And where do you think that's going in the next five years?

Ed Lee: It's just going to continue to accelerate. We've seen so much growth and progress over the short period of time of past year, past couple of years, more so than I've ever seen during my time in the healthcare industry. And in the next five years, things are just going to continue to, I think, increase at an exponential rate.



Ed Lee (cont'd): They're still going to be growing pains. They're still going to be the trough of disillusionment that a lot of us will see over this period of time. But with that said, with ambient and ambient assistance, things have just gone so quickly that it's, it almost feels like we skipped some of that because it's actually out there being used in practice, making a difference right now already. And maybe we had a, we did go through those typical stages, but maybe it happened so fast that we didn't realize that there's still so much that can be done. Because when you're talking to a patient, there is so much information that you can extract and the technology can hear that, understand that, and not only do the administrative aspects of where we are doing now, but also provide clinical decision support. Did you ask about that? Did you think about this? What about prescribing this or doing this test instead and having that truly as an assistant by your side so that you can make the best decisions for the patients and help with improvement of their care through the process?

Ed Gaudet: Yeah, it's a really good initial use case because it's fairly self-contained for the most part. Do you see in the next five years it becoming a true virtual assistant in the OR?

Ed Lee: I think yes, I do. I think in the OR, in the clinic, in the hospital, in the ED, all venues of care I think will have this type of technology that's assisting. And I think there can be a reluctance sometimes to change, in general, and rightly so, because we're talking about patient care, we're talking about people's lives, their health. And we do need to be careful. We need to make sure we're not introducing biases, we're doing things in an equitable way, that we're doing right by our patients. But at the same time, it's come to a point where we probably won't be able to provide as good of a care as we can otherwise provide unless we're using these types of tools in our clinical practice.

Ed Gaudet: Yeah, I can imagine if we get it right, you could have this concept of or agents, if you will, that become these task enablers that you're commanding through ambient listening to do certain things in the theater that you would otherwise have to have a physical person do. Right?



Ed Lee: Yeah. And there is really advanced technologies in the OR already. With the advent of robotic surgery, the surgeon isn't laying physical hands on the patient operating. They're operating a robot. And the amount of detail that you can operate in is exquisite. And the outcomes that you can get in minimally invasive surgeries using robots is extraordinary. And so combining additional types of technology to that type of technology, I think the sky's the limit there with that. It's really exciting.

Ed Gaudet: Yeah, it is pretty exciting. I can see it. Your passion is coming through and I'm getting excited. You're getting me really excited about this. All right, so as you look out over the next couple of years, what are some of your strategic priorities?

Ed Lee: Well, from the novel ambient side, I think one of the things that we need to do is make sure we pay exquisite attention to the needs of our current and prospective partners. What I see is that they're looking for something that is intuitive learned, easy to use, accurate in its output, customizable to fit their workflows, robust in features, and at a price that's affordable, right? And on top of that, they need partners who listen, who are responsive, and have the technology expertise to be able to innovate for the future. We're talking right now, as you said at the beginning, it's a relatively narrow scope, but as things progress, as the imagination of what we can conceptualize continues to build, I think we need to double down on all these aspects to be successful in the future, and take that feedback into consideration and build around what we're already doing in exceptional way, and bringing value to our partners it's really what it's all about. And so adding functionality around clinical documentation, smart nudges, I think that's all going to be happening within the next couple of years.

Ed Gaudet: And obviously making sure it's still trustworthy, ethically sound, and secure. And all of the things that we care about, obviously, from the sensor net side, and obviously, I know you care about as well.

Ed Lee: No. Absolutely, absolutely. I'm so glad you brought that up because Privacy and Security, the title of this podcast, Risk Never Sleeps. And that is entirely true. And so privacy security is really actually at the forefront of what we do as well.



Ed Lee (cont'd): Because if you imagine it's hard to imagine anything more sensitive than health information data. And to that end, we don't store any audio recordings, which I think is a unique differentiator for Nabla as compared to other vendors in this space here. And also our retention policies are minimal so that we mitigate as much risk as possible. And we only use data from our partners when there's explicit consent to do so. So we take privacy and security extremely seriously because we know that our partners do, and our patients and our clinicians do as well.

Ed Gaudet: And how about on the college side: what are the things you're looking at over the next 2 to 3 years?

Ed Lee: Yeah, we need to build for the future and have our, and I mentioned this a little bit earlier, but AI; a lot of medical schools don't necessarily have AI built into the curriculum at this point. And it's going to be such an important part of what we do and what we use. I think there's nothing that's going to replace that patient-physician relationship. Those relationships will always be there. But the tools that we use to enhance the care of the patients they're changing right now and building things like AI into the curriculum so they understand it, they know how to use it, they know how to innovate in the future and build upon what we're doing now, that's how we're going to be able to advance the practice of medicine in the future, which is to educate the current learners to build that foundation for them so that they can be facile with this in the future and then help take care of you and me as we get older and older, right? So there's something in it for us as well.

Ed Gaudet: Yeah. And give them the tools to proactively manage burnout, which the previous generations haven't had. They've had to deal with it in situ, right? There, as technology is coming in, they realize, Whoa, I'm spending way too much time doing this. And my health is suffering; my mental health, my physical health, my family relationships. Right? So.

Ed Lee: Absolutely true. And the burnout concern is such a big issue. And the work that we're doing here at Nabla and also making sure that our students understand that self-care not only cares for yourself but also helps enhance patient care. I mean, that is absolutely necessary. And, you know, clinician burnout, it's been a problem forever, but the pandemic really put a spotlight on it.



Ed Lee (cont'd): And rates of burnout significantly increased during the pandemic and have stayed pretty high even since then as well. And some data shows that 50% of physicians, even now, are still suffering from some level of burnout. So that comes across as loss in productivity, decrease in quality of care, the physical and emotional costs to the physicians and the clinicians themselves. And that equates, you had to put a number, but there are monetary costs associated with that too. And I think that's why this is so exciting. The advancements that we have now in AI and more specifically in generative AI; it's easy to see the enormous potential of these types of tools on the effect of what it's going to have on the burner process in general.

Ed Gaudet: Yeah. And you mentioned the pandemic, and it reminds me of the opening of Great Expectations; the best of times, the worst of times. We went through a pandemic. What were some of the learnings you took away from that?

Ed Lee: Oh gosh, there were so many. I think part of it was like it was, wow. If we focused our efforts, had a common goal, came together and aligned, so much can be accomplished in such a short period of time. Now, granted, the eight-hour workday didn't exist during that period of time. It was 12, 15, 18-hour work days just because the flurry of things was just, it was so frantic and things needed to be done yesterday. And that leads to part of what we're talking about here in terms of the burnout. It was basically just not sustainable to continue that level of effort. But with that said, the collaborative spirit that came about in terms of we've got this common goal, we're fighting against the pandemic, this virus that is basically attacking everyone, and it's affecting every aspect of healthcare and of life, let's come together. Let's talk about, let's put our differences aside. Let's talk about what we can do together to advance our mission as a whole.

Ed Gaudet: Yeah. And learnings in care delivery, learnings how to deal with equipment, PPE, right? So the incredible Herculean things that people did to get the right equipment in place was absolutely incredible. And yeah, just you're right. So many amazing learnings. Obviously. A terrible time. But out of it, hopefully, we learned something that we can take into our future lives. So as you step back and you think about your job and you do many jobs, I think I've counted three so far outside of healthcare, if it all stopped tomorrow and you could focus on a passion, what would it be?



Ed Lee: First and foremost, it's my family. I mean, family is just so important. I have my spouse and two kids. We love traveling together. Last year, we got to go to Iceland. Probably one of the most beautiful places on earth. If you haven't been highly recommended.

Ed Gaudet: It's on my list. How was it?

Ed Lee: Just amazing. Beautiful. Beautiful.

Ed Gaudet: What time of year did you go?

Ed Lee: We went during the summer, end of July, beginning of August. You can travel the entire country. There's this thing called Ring Road; you can drive all around dozens and dozens of waterfalls. Just beautiful scenery. So, and family and travel is certainly one aspect. When I need my alone time, I picked up long-distance running about 5 or 6 years ago and I'm currently in the throes of training for my fifth marathon, which is happening about a month from now. Gives me time to think or not to think. You just, you get in this groove and, you know.

Ed Gaudet: Shutting off the mind is good sometimes.

Ed Lee: You just shut off and you reconnect with yourself.

Ed Gaudet: Yeah.

Ed Lee: And it helps me reduce my stress, stay physically fit. So I think it's such a great activity. And you don't have to run marathons. You don't have to run long. Just anything. Just getting out there is, I think, something that I really enjoy doing.

Ed Gaudet: That's impressive. Which marathon are you running?



Ed Lee: It's called the California International Marathon. I've run the same marathon every year except for that pandemic year. And it starts in Folsom, which is outside of Sacramento, and it ends at the Capitol Building in Sacramento.

Ed Gaudet: Oh, very nice. Have you ever seen those 100-mile marathons or?

Ed Lee: I have; those ultra-marathons. Hats off to them. My running joke is that I don't even like to drive 100 miles, let alone run 100 miles. It's incredible what the human body can do and the mind can do for those athletes out there.

Ed Gaudet: Yeah. Talk about stamina and resilience. Crazy. All right, if you could go back in time, what would you tell your 20-year-old self?

Ed Lee: Wow. Honestly, I hope this is not a cop-out answer, but I honestly would not tell my 20-year-old self anything. And the reason.

Ed Gaudet: That's not a cop-out answer. That's actually the first time I've heard that answer. So that's.

Ed Lee: Oh, well, good. I'm glad. I'm glad. Because here's the thing. I feel like I've had many proud accomplishments. I feel like I've accomplished a lot since I was 20 years old, and I've had my fair share of mistakes. Each decision I made, all the experiences that I've had, it shaped me to become the person that I've become today, and it's led me to the place where I really couldn't ask for anything more. I've got an amazing, loving family, friends who I can call on, who can generally have my back. I have variety in my work that is fun, it's impactful, it's fulfilling, and by no means is my life perfect. But I might say it's ... perfect. How's that?

Ed Gaudet: I know I love it. It's the human patina, so it makes us all who we are, right? And if we were all perfect, then there'd be no diversity. So I love that. This is the Risk Never Sleeps Podcast. So I have to ask you this. What's the riskiest thing you've ever done? Dr Lee, what's the riskiest thing? So many things, I'm sure.



Ed Lee: So many things, I'm sure. Mild-mannered, Dr. Lee here. But well, I don't think I would say necessarily one specific event. And this, I think I would say a series of events here. And this goes back to some of the physical fitness stuff that I was talking about earlier. And I've done a few dozen obstacle course races over the past 8 or 9 years. And if you've ever seen or heard about these races where you're like running the hills in tough terrain and you tackle obstacles.

Ed Gaudet: Tough mudder? Is that like a, it's like the Tough Mudder.

Ed Lee: Similar yeah. Yeah. You scale eight-foot walls. You crawl under barbed wire. You climb 20-foot ropes. You carry 100 lbs cement balls. You flip over 400-pound tires. And you do this over distances of anywhere like a 5K, 10K, half marathon. They even have marathon links and it's fun to get out there. It gives me a good excuse to stay physically fit. Great for the mind, body, and spirit. And you know, the risk comes in because there's a lot that can happen on the course out there. I've had my fair share of scrapes and bruises. I had a rope burn on my hand after I fell off a rope. It wasn't pretty. I've seen people fall off monkey bars and break bones. And speaking of the Tough Mudder, there was an event that happened earlier this year where there was an outbreak of skin infections that came out of people that ran that race. And aside from the physical risk that you take, there's the ego risk, an ego hit that you can take when you fail an obstacle and have to do 30 burpees as the penalty. So there's multiple risks involved there.

Ed Gaudet: Oh, interesting. Interesting. Rest assured, listeners, I only know about the Tough Mudder because I've read about it. I haven't actually done it.

Ed Lee: You should get out there and. It's a lot of fun.

Ed Gaudet: Yeah, I break a bone signing my name and. All right, so you're on a desert island, and you can bring five records with you. What kind of music do you listen to?

Ed Lee: Oh, my gosh, this is embarrassing to say because I actually really like, I like Taylor Swift. Okay, I've said it.



Ed Gaudet: Okay. We're we're shutting down. No, I'm just kidding. Well, I have to admit it. I like her new stuff. It's really good. A couple of albums are really good.

Ed Lee: It's, I don't know. I mean, the music is catchy. I think the lyrics have meaning to it. I stay away with her affiliation with football and politics and things like that, but I just listen to the music and so it helps me relax.

Ed Gaudet: Nice. No, I won't see you at one of these shows, will I anytime soon?

Ed Lee: Oh, yeah, no. That would be great.

Ed Gaudet: You have to go do the sphere. If you've never done the sphere, you should definitely check it out. It's an amazing experience. Oh, you have?

Ed Lee: It's an amazing venue. I haven't been for a concert. It was a generic show that we saw there.

Ed Gaudet: Nice, nice. How about movies? What do you, what kind of movies would you take with you on your desert island?

Ed Lee: I like, probably my three top movies of all time: Back to the future; Top Gun; and Star Wars. I mean.

Ed Gaudet: Oh, those are great. I'm going to spend time on your island. Those are great.

Ed Lee: There you go. There you go. I mean, you might be able to tell that I grew up in the 80s from those movies there. But Back to the Future; I love the idea of the time travel mind, mind-bender kind of thing. And who doesn't love Deloreans? All the action, the great scenes. There's even a love story involved. And in the end, it is about resiliency and triumph. And Star Wars, of course. Classic Good versus Evil, Ultimate. And two of the main characters they're based on AI. Right? R2-D2 and C-3PO, machines, droids behaving like humans.



Ed Gaudet: We are, in fact, Back to the Future.

Ed Lee: There you go. There you go.

Ed Gaudet: Oh. It's great. Yeah, no. And Top Gun, what a great soundtrack. Talk about an 80s soundtrack. Fantastic soundtrack.

Ed Lee: Love the music. Love that music. Yeah.

Ed Gaudet: All right, last question. What advice do you have for recent grads that want to break into healthcare, maybe either on the clinical side or the IT side?

Ed Lee: Well, there's so much to learn. And I would say the medical field, in general, is a continuous learning field. And be prepared because there's always something new. There's always something that you haven't heard of. And that I think invokes a human aspect of, I think having a level of humility because you don't know everything. And so connecting with others, building relationships, and drawing from the wisdom of the colleagues around you, I think will set you off on a good path forward.

Ed Gaudet: Excellent, excellent. Sage advice. Thank you, Dr. Ed Lee, for joining us today. We appreciate your time. This is Ed Gaudet from the Risk Never Sleeps Podcast. And remember, if you're on the front lines protecting patient safety and delivering patient care to stay vigilant because Risk Never Sleeps.





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