The Transformer: the UW Medicine Podcast
Episode 7: Telehealth: Moving Knowledge, not People

[Musical opening]

Josh Kerns: On a recent morning, Dr. Edith Cheng is the picture of concentration as she closely examines the monitors surrounding her in a small office inside the University of Washington Medical Center.

Edith: So, right now I'm in our command center room, our telemedicine room, and what we have up on the computer is the patient's electronic medical record so I can see her vital signs during the course of her pregnancy and then on a different screen, we have real-time ongoing imaging of her ultrasound that is currently happening in Yakima . And so I look at the ultrasound real-time and if there are things that I want further clarification on in terms of imaging, I can just call over to Yakima to our stenographer and I can say, hey can you redo this view, or I want to see this a little bit differently, so it's virtual but it's real-time.

Josh: Dr. Cheng, the medical director of the Maternal and Infant Care Center, likes what she's seeing. And moments later, she'll deliver the good news to the young mother-to-be from hundreds of miles away.

Edith: I'm really happy with the way they're growing. You know they're at the 87th and 79th percentile so they really are growing super well. So I think that we're really happy with that.

Patient: Yeah, I feel way better than my last pregnancy, I can tell you that right now.

Josh: This is telehealth, the UW Medicine way.

[Musical intro]

Josh: And welcome to another edition of The Transformer: the UW Medicine Care Transformation podcast. I'm your host Josh Kerns. In this edition…

Opening soundbite: We really view telehealth as a tool, a tool that we can connect with patients much more easily and more conveniently for them. So that's why it's so important that it be employed throughout the whole UW Medicine system.

Josh: UW Medicine has pioneered a variety of telehealth and telemedicine programs that have become critical components of our care delivery system. These programs use emerging technologies to improve patient health outcomes and advance provider education. And in this edition we'll introduce you to some of the leaders of the UW Medicine telehealth initiatives and learn more about the many ways telehealth is helping transform UW Medicine, and improving patient access, convenience and satisfaction, while at the same time, reducing costs.

[Musical break]

Josh: And welcome everybody. It's great to have you here. First of all, let's just go around the table, introduce yourselves and briefly what you do. And we'll start with you, Dr. Scott.

John: Hi everyone, my name's Dr. John Scott. I'm an infectious disease doctor. I practice primarily at Harborview but I also see patients in an inpatient setting on the solid organ

transplant service here at UW Medical Center and I am the medical director for digital health at UW Medicine.

Josh: And Dr. Compton, how about you?

Nick: My name's Nick Compton. I'm a dermatologist at the University of Washington. I see patients primarily at Roosevelt and also do inpatient consults on the UW Medicine wards here. About a third of my job is doing dermatology eConsults.

Josh: And Dr. Cheng.

Edith: My name is Edith Cheng and I am a maternal fetal medicine specialist, so that means that I'm a high-risk baby obstetrician.

Josh: And then we'll go with you, Dr. Chew.

Lisa: Yeah, my name is Lisa Chew. I'm a general internist and I practice at Harborview Medical Center. I'm a primary care physician there. I'm also the associate medical director for ambulatory services at Harborview.

Josh: And finally, the non M.D. in the room, still equally important.

Leah: My name is Leah Rosengaus. I'm the interim director for telehealth here at UW Medicine. I oversee operations, strategy and growth of our telehealth programs across the health system.

Josh: So, Dr. Scott, why telehealth? Why is there such an emphasis on this in healthcare now? What is the benefit?

John: Well, I think we're seeing a lot of demands in the healthcare system right now. Rising costs, physician shortages, physician burnout. And telemedicine can deliver on the promise of providing the right care at the right place with the right provider. We really view telehealth as a tool that we can connect with patients much more easily and more conveniently for them. So that's why it's so important that it be employed throughout the whole UW Medicine system.

Josh: When we look at the overall mission of UW Medicine, how does telehealth fit into the mission to improve the health of the public overall?

John: You know as you said, the mission of UW Medicine is to improve the health of the public and that means people who are coming through our doors and it means people who are throughout the WWAMI region. So, telehealth can be used for patients that we're seeing today, it can be for patients who maybe we've never seen but have a critical need and previously they wouldn't have access to our expertise, so we're really trying to leverage technology and some of the innovations we've had in the last couple of years to reach those people who previously weren't reached. It's also a major focus of trying to right some of the health inequities. We know that's a major reason why we see some of the different health outcomes across our city or across our state. And so we're hoping to look at ways that telemedicine can be used to right some of these healthcare inequities.

Edith: In the practice of obstetrics and gynecology, where we know that there is definitely health inequity among our women and prenatal care, our reach using telehealth, I think, is really tremendous.

Josh: Let's define a little better what telehealth looks like here at UW Medicine because there are multiple specialties, sub specialties, we have variety of providers. I don't know, Leah, if that's something you want to give us an overview.

Leah: Here at UW Medicine, we currently have over 19 different telehealth programs within our project portfolio. Those span over 20 different specialties,our whole WWAMI region, all of our five states service area. And in the last year alone, we completed over 18,000 telehealth consults, both provider-to-provider and provider-to-patient. So the program has really grown. There's kind of four key areas that we work in or four different modalities of telehealth that are commonly used. The first is live video visit. We call that synchronous telemedicine. That's using medical devices and communication technology to deliver healthcare remotely. The second are asynchronous exchanges or sometimes you'll hear those referred to as store-and-forward. Those would be consults between providers, or patients and providers, where data is stored and sent for that specialty consult. We also do remote patient monitoring, so those would be use cases where health data is collected and transmitted electronically to be analyzed and used by a provider to inform the patient's care. And the fourth, that I think is very unique to UW Medicine as an academic medical center, is our use of telehealth and telemedicine to engage in provider education. So we do a lot of remote case reviews, things that help develop the workforce out in the community, especially in rural and urban underserved areas.

Josh: Dr. Chew, do you find that your patients need some coaching, guidance, cajoling, to accept telehealth as a vehicle for their care, or what kind of reception do you find when you're dealing with patients?

Lisa: I think that telehealth actually is very well received by patients. I think it allows care to be more easily accessible. And I think it allows it to be more convenient for the patient. I do think there's some variability in terms of uptake. Some patients are very tech-savvy and able to pick up their technology quite easy. There are some patients who still need maybe some coaching in terms of how to use that technology appropriately.

Josh: Do you see an older patient and say, you know, we're gonna have to handhold them through this, versus a 20-something or am I just being totally discriminatory?

Lisa: I try not to stereotype. I think there are some older patients who are actually very tech-savvy. And then there's some young patients that maybe might need a little more help. So I don't try to judge that based on age.

Josh: Good, see, I was. [laughter]

Leah: Josh, I would say I think sometimes we see a difference in the type of technology that folks are using a little bit based on age and so you know these are broad generalizations but if you think about the kind of 40 and under population…very high utilization of smartphones, but over you know, 60, 65, there's actually a lot of folks who use things like iPads. You know they're bigger, they're easy to use, and those are excellent devices on which to conduct video visits or use for other healthcare services. So, I think it's just ensuring that we are tailoring our telehealth solution to the population that we're trying to serve.

Josh: Well, let's talk a little bit more specifically about the components of your telehealth services, Dr. Scott, because there are a number of areas here.

John: Sure, you know, I'm gonna kick it off by describing how I got involved in telehealth over 10 years ago and that was through a program called Project ECHO, so ECHO stands for Extension for Community Health Outcomes. And when Dean Ramsey came to see it, he described it as Morning Report on steroids. So it's really taking advantage of a lot of ways that we were trained in medical school, where we had actual patients that we're presenting to our colleagues and to our attending physicians and it occurs by televideo at the same time every week and we tackle a particular problem. So, I started out on the Hepatitis C, but we now have 10 programs and tackle other problems, like tuberculosis, HIV, geriatrics. So it's really, we're trying to tackle common complex conditions. And what happens over time is you create a learning community. So the training that's going on isn't always just from the University of Washington area but sometimes the real pearls come from the other participants and they're teaching each other because they really know what it's like to practice in that context of an underserved community or a rural community. So we've had thousands of patients who've been presented through the years. We offer CME credit, often these are over the noon hours so people don't have to be pulled from seeing patients. Sometimes we compare what people are eating for lunch. But I just have to say, it's really fun if you haven't seen it. It's open to everyone, so if you're a UW Medicine physician and you have particular interests in some of the things that I mentioned, you can join, you can present your own patients to your colleagues here at UW and you will get a written response. And hopefully this will be an addition to your practice.

Josh: Well, and I would think that would make your practice so much more effective and so much better, just because realistically you mentioned CME, but we know how difficult it is to get to that thing at 4:30 at Harborview, right or whatever, go to Grand Rounds at 6:30 in the morning on a Friday. Tough to get everybody together in a physical space, this is a way to work around that.

John: Yeah. Definitely. Yeah. And so the didactic that we do weekly, we'd like describe them as snacks. They're not like the big 50 minute teaching sessions we're used to doing for medical students. So it's not such a big deal to prepare for that as an educator. And other things you can be really quick and turning around new findings. So I'm going to give a talk in a week on a paper that was presented just recently at the HIV conference. So, literally, two weeks after it was presented to the whole nation, these people in rural parts of the Northwest are hearing about this. So I think that's great that we're really shortening the educational turnaround for key findings.

Josh: And Project ECHO gets rave reviews from clinicians who use it extensively with great success. Dr. Paula Brentlinger is one of those. She's a family medicine and infectious disease specialist who's worked all over the globe, and among her various practices now, Brentlinger oversees Hepatitis C treatment for one of the regional Healthpoint medical centers.

Paula: We have very complex patients. Many of them might not have been treated had we not been in this relationship with the UW ECHO program. It's really remarkable.

Josh: And Brentlinger also extensively participates in weekly teleconferences that bring together UW Medicine specialists with clinicians from across the western United States to

dramatically increase learnings and speed delivery of the latest treatments to their patients.

Paula: I think the providers and the patients benefit from this interchange equally. And it's really been very effective for us.

[Musical break]

Josh: Let's talk about then, eConsults, how does that work?

Lisa: So, eConsults are basically an asynchronous modality of telehealth and I became involved in eConsults back in July of 2016. I was really interested in sort of the referral process, I work primarily in ambulatory care, about how fragmented that process is. And the eConsults model, it was really a way to address and improve that communication between primary care providers and specialty providers. How it works is that as a primary care provider, if I have a specific clinical question around a specific patient, I can send that question through the electronic health record that goes to a pre-identified specialist. That specialist can review the question, review the medical record, because it's all within our electronic health record and then provide recommendations back to the primary care provider and then that primary care provider would carry out those recommendations and advantages of that is that the patient actually stays in their primary care medical home. They don't have to make another trip to the visit. And I really see eConsults as a way of really addressing that Quadruple Aim. It improves the patient experience at a lot. It's much more convenient for patients. They don't have to take time off from work or find childcare to go to another visit. It also improves quality. You get rapid access to specialty input within three business days. It provides care at a lower cost. You don't really have to build a clinic to provide that. This is all really built within the electronic health record. And I think it actually contributes to provider satisfaction. I know John mentioned, in sort of Project ECHO, building that community of providers. And so I think eConsults actually builds and strengthen relationships between primary care providers and specialty providers.

Josh: I just find it so fascinating as you're developing all of this, I always think of telemedicine in the context of provider and patient. But how much work you're doing provider-to-provider and how broadly that expands everybody's knowledge, expertise, and then obviously, that eventually gets to the patient, but that at the top level, you're as much about serving your professional community as you are direct patient.

John: We like to say we're moving knowledge, not people. So, we're really helping our colleagues in primary care to work at the maximum of their training. And having worked in a community health center myself, I now know that it's fun. You have these little areas of interest where maybe you don't want to do a full fellowship but you want to kind of take a deeper dive. So I think that really satisfies a lot of people's professional needs in that area.

Josh: So, let me flip that, doctor, and that is now as a specialist, how eConsults serves you.

Nick: I love it. When I was at the V.A. for four years before I came over to the University in 2015, I was doing tele-dermatology there and really got the bug. It is a lot of fun. It's fun to reach out to see, to help patients that I may or may not see and it's very challenging just looking at pictures. So when I came over to the University in 2015, I knew that this was something that I wanted to do. And, luckily, Dr. Scott was kind of getting the wheels going for eConsults and I was able to kind of jump onto that wagon and take off. For me, it

provides a nice break in my day. Instead of having to see patients every 15 or 20 minutes and having the next one there and feeling kind of rushed, I can do these consults on my own time and be really relaxed about it and a lot of time looking at them, reviewing the chart. It feels good to hear back from many of the primary care providers each day that I'll send just a message back to says thanks. Thanks for the information or that was really helpful. It feels like I'm doing something good, for not only the patient, but also for the providers that are sending information back. It's also very fun to see that providers send back consults, not the same concept, but consults later that have a little more refined idea differential in their notes. So I do think that it provides some education for the primary care providers and just like teaching a medical student or a dermatology resident, it's fun to see that knowledge grow in people around you.

Josh: As an extension of that, I'm gonna use as an example, golf. I'm a very avid golfer and there's been a huge evolution in the use of similar technology where now I can send my swing to my coach who can be across the country and he can diagram, he can offer suggestions, things like that. Is there a way beyond the written word in your advice to your primary care doctor you're consulting, do you see a time when you can circle on the screen, diagram, look at this, check that, so that it's beyond just simply text?

Nick: Yeah, in fact I do that. Not uncommonly for patients who have something that I'd like them to biopsy, I'll commonly put a circle around the image, annotate the image where I think would be a good place to biopsy.

John: I think we're gonna see a lot more of this kind of technology with more digital tools coming online, is this kind of like augmented reality and being there in real-time and kind of guiding people on their exam, getting them in procedures. So I think that's something that's gonna be really exciting. We'll see more or more of that being applied.

Lisa: I just wanted to add that I think as we kind of rolled out the eConsult program, I think one of the most impactful interventions was actually having the specialist go to the primary care clinics. And so, Dr. Compton, when we rolled out dermatology, he went to every single primary care clinic across UW Medicine and it was an opportunity for him to meet the primary care providers, for them to meet him, and figure out he's such a nice guy and really talked to them about how best to take a picture. What's a reasonable eConsult. And then he got a sense of what primary care providers can actually do. Can they do biopsies? What kind of biopsies can they do. And I think that interchange really set a nice groundwork for the eConsults moving forward.

Josh: And then how much evolution has there been? And that from that initial meeting, for example, and then as you start working together, have you seen the platform, the way that you are engaging, evolving, growing, based on your knowledge and experience?

Lisa: I think for dermatology, that's our busiest eConsult specialty. I think over 150 eConsults a month.

Josh: Wow.

Lisa: I think having that face to face interaction makes primary care providers less intimidated to ordering derm eConsult. They know that they have a face to the name. He's friendly. He won't get mad if I sent a dumb eConsult question and I think that really breaks down barriers and I think that's really helped with the uptake.

Nick: In my experience with dermatology eConsults, we've had lots of, I would say, success stories, particularly in patients who we've identified a suspicious lesion and been able to get them either into our clinic to get a biopsy or to get them biopsied by their primary care provider. A lot of the clinics that we do telederm consults with or eConsults with do their own biopsies. In general, I would say for eConsult in dermatology, I use it mainly as a triage tool and I would say probably 15 percent, maybe 20 percent of the patients do we actually need to see in clinics, so most of these patients are able to be to be cared for in their primary care clinic, which I just think is really helpful for the patients.

Josh: Well now, let's talk about the patient side because obviously a number of applications there. Tre the virtual care clinic, it's available to patients 24/7. Talk a little bit about that.

John: Yes, so the virtual care clinic is available to the public and all our ACN patients who are on the PEBB contract. And we've had that live and operational since 2015 and it's really geared for patients who have what we call low acuity urgent care type problems. So a good example would be urinary tract infection, a rash, cough, things like that, and it would be the kind of situation where the patients might go to the emergency department, they might go to urgent care, but they can do this from the comfort of their home, from work. If you're doing this as a member of the public, it's $35 and if you're on the ACN PEBB employee contract, it's offered no charge, it's free.

Josh: And do you see a lot of traction with patients, do patients use this?

John: Yeah they love it. So our numbers again are increasing every month, every year. And the best part of my job is reading the comments like, so glad you offer this, a real life saver, you know I avoided two hours sitting in a germy emergency department somewhere. So that's really fun to see how much the patients enjoy this and appreciate this.

Josh: Well I would assume you can get to patients much quicker

John: That's right yeah. Our average time from the call being received to seeing a provider is under 10 minutes. And we have virtual practice guidelines for like the top 20 conditions, so this is all vetted through independent committee and it's based on a lot of the national review, national committees that look at these conditions. So if there's something that's kind of little bit off the track then we do divert these patients to an actual in-person visit. So not everyone's gonna qualify for this but we really just try to do our best to see people and how their problem definitively managed by the virtual clinic.

Josh: And then what are teleconsults?

Edith: An example would be, a concrete example would be what we have in Yakima. So we actually have an office in Yakima. We have a clinic in Yakima. And our patient will actually come into that clinic and then we will be here in Seattle.

Patient: Hello?

Edith: Hey, can you see me?

Patient: Yes.

Edith: And so the consultation will occur that way through videoconferencing with the patient.

Edith: So I hear that you're running, you think you're running some low pressures.

Patient: Last Wednesday, I didn't feel good when I was at work. I felt like my legs felt like tingle.

Edith: Ok.

Patient: Yeah. My blood pressure was like 80 over 60.

Edith: So you're taking 12 and a half in the morning?

Patient: Yes.

Edith: Half a pill, right?

Patient: Right.

Edith: And then you're taking a full pill at night?

Patient: Yeah, at 8:00. I take it at 8 and 8.

Edith: OK. Let's experiment, let's take half a pill at night also.

Patient: OK.

Edith: Part of the reason that patients come into our clinic in Yakima is that because they're OB patients, often we have to do an ultrasound of the baby and so we do the ultrasound there. It's read virtually real-time with us in consult room and then we can just turn on the video and then we are face to face with our patient. We go over their ultrasound, give them reassurance, particularly if their baby has you know a complex heart defect. And we're following that baby out in Yakima until you know that mom is ready to come over to Seattle to deliver.

Edith: What do you think about what you have? I guess we had to tell you what they were. [laughter]

Patient: Actually, that's what I was hoping for. I was like, it'd be nice for a boy and a girl.

Edith: Well you got em.

Patient: Yes.

Edith: Yeah, and there's no doubt that it's a boy and there's no doubt it's a girl.

Patient: Yeah.

Edith: They scan really nicely. [laughter] Congratulations.

Josh: And then do you have, is there a P.A., an RN, somebody who is taking BP, things like that?

Edith: Yes. Everybody feels so satisfied because we know that we're doing good for our community and it makes us feel good. We have success stories every single day. I mean, last Monday, one of my physicians was actually in Olympia doing a teleconsult for a patient in Yakima whose baby was not growing well. The monitoring at that time of the consult indicated the baby was in trouble. He was able to call the physician, tell her nurse to get the mom over to labor and delivery. The baby was delivered right that afternoon. So we have a baby. I mean, what more can you ask for in terms of all the successes of telehealth? We were able to follow this at-risk baby in Yakima rather than having her drive over on a weekly basis to monitor. I really just can't emphasize enough how much joy it brings all of us to be able to do this.

Josh: Dr. Scott, I take it, it's the stories like that that make this, I would hope, a fairly easy sell to clinicians, especially perhaps more senior clinicians who might have very strong feelings about whatever their area of practice and the way they've practiced medicine for X number of years. I mean I see the joy that was just expressed in the recounting of that. How can I not get on board this program and want to be a part of that.

John: Hopefully folks are encouraged and know that we've set up a lot of the guardrails to make sure that this is done in a safe way, that you know we will guide you along the way and how to document for this. We'll teach you how to use the technology. So we're really here to support you. And it gives me great satisfaction here, you know, that my colleagues are finding new joy in their practice. That's the best part of my job.

Josh: And then the other side of the coin. Are there challenges? What are maybe some of the objections, concern or obstacles, or are there none, as you continue to engage more and more of your community?

John: Yeah, I think there are a couple. The first one that comes up quite a bit is the challenge around reimbursement. And first we just want to make sure the listeners know that there's been quite a bit of advancement in that area. We've had several state laws that have passed, even some changes on the level of Medicare that have loosened a lot of the restrictions. We're still not all the way there but for the most part you can get reimbursed for live face-to-face visits that Dr. Cheng and others are doing. And there also were some really nice rulings from Medicare on the eConsult front. So we're moving to get that operationalized and folks can get reimbursed for eConsult as well. So I think that there are fewer concerns than there used to be but we're still working on a couple other issues and that reimbursement front. The second issue is just workflow in general. Whenever you're working with technology, especially people who may not be as savvy, there sometimes can be hiccups on that. And so there does need to be backup methods, whether a phone call or, you know, training when you're seeing them in person, to make sure that the technology is working for them. But in general, the technology is really improved. It's gotten a lot cheaper. It's secure. It's HIPPA compliant. So I want folks to know that it's much, much better than it was even five years ago when I was doing this, the ECHO. We were using a half million dollar server for example. Now we pay like one one-hundredth the cost for a much better service.

Josh: When it comes to then the financial piece of this and what this does for the organization and trying to help control costs, I would think this is a tremendous benefit and

only continues to become more so as you evolve it, as you refine it and, as you said, you no longer need a massive server in order to provide these services.

John: Right. So the costs are definitely coming down with technology. But as we start to look to a world where more and more of our contracts are value-based care, that's really where I think we're going to see the sweet spot for telemedicine. So you can just decide whether it's appropriate for a patient to come in in-person or whether you can do it by televideo. So we're looking forward to that day.

Josh: And then let's talk about some more successes, achievements to date. Obviously, you need to have metrics, you need to be able to document where we have been, where we are going. What does that look like?

John: We have a dashboard for telehealth services where we track things like Leah had highlighted, like the number of visits. We also track patient satisfaction. So for example, our virtual clinic, we've now been doing for three years and we have over 90 percent patient satisfaction on that. I know at the Yakima MFM clinic, it's also been around 100%. Is that right?

Edith: Yes.

John: So that that's very important but then, increasingly, we're looking at how does this help meet our financial goals. So, many of the projects we're working with in the last year or so have been clinical programs that have been identified as strategic for the FIT initiative. And so we're coming alongside them and helping to develop their strategy and their digital strategy. And hopefully we get them back in the black too.

Josh: And you continue expanding to a variety of new partners specialties. I was interested in, for example, psychiatry into the jails. Who knew?

John: Yeah. So psychiatry is probably the number one use case for telemedicine. And there are a variety of ways that our colleagues in psychiatry are delivering their services via telemedicine. They are part of eConsult. They also have a program where there have PhD- level psychologists in primary care clinics and they are on the frontline and they have any kind of questions they can ask psychiatrist and then we also have like face-to-face visits, both outpatient and inpatient. So, one example of the latter, is Capital Medical Center, part of our strategic alliance, and they did not have a psychiatrist on staff but they had patients who had acute mental health issues and were really not safe to be released. So the law says you need to have a psychiatrist see them within 72 hours, a single bed certification. So we were able to come alongside them and we now have a service where our psychiatrist can see patients at Capital Medical Center Monday through Friday and help keep those patients in their hospital, in their community. I like to tell people we're just in the top inning of a nine inning game. Top of the first inning. So there's a lot more we can be doing. So we hope to see many more people using telemedicine in the coming years.

Josh: Well as we go around, then look into your crystal balls each of you. Where do we go from here?

Edith: I see in the future some virtual surgical intervention because you may have a surgeon out somewhere in the night doing a C-section and runs into a complication. And I think virtually bringing that into whoever is on call, let’s say, in labor and delivery and kind of, you know, as Dr. Compton said, say looking at, hey, this is what you need to do, this is

what you should do. And helping out will be tremendously potentially life-saving. So I see that moving forward in our field.

Nick: I think in dermatology, I'd like to, hopefully, we'll see an expansion of internal eConsults, but more so, an expansion of eConsults outside our system really to get those patients that need to travel from a long ways away. Dermatology is another specialty that is really limited in its geographic scope and so reaching out to WWAMI region, reaching out to patients who may not have insurance, community health clinics and really getting out to those patients. I think I'd like to see also follow up with patients, using more virtual follow up rather than bringing them back to clinic all the time just to check and see how their rash is doing after starting some treatment. I think that's where I see it going.

Josh: And then, Dr. Chew.

Lisa: I think the eConsult program has a lot of potential. I see in the future expanding to other specialties. Being a primary care provider, I'm a little bit greedy, so I would like to see eConsult for specialties like addiction, pain management, just really where there's a lot of areas of focus. I also think there's opportunities to think about expanding the use of eConsults more broadly. Currently, we are only providing eConsults for primary care providers. But is there an opportunity to expand that to allow specialists to eConsult other specialties as well as apply eConsult to other settings, like post acute care where patients who are discharged from the hospital, they're in skilled nursing facilities, they have mobility issues and it's very difficult for them to come in for a clinical appointment. Can we use eConsult or some other telehealth modality to kind of make it much more easier for people.

Josh: Lastly, Dr. Scott, I want to ask you one of the common narratives around any emerging technology, disruptive technology, is that the robots are going to replace the humans. Any fear about positions being replaced ultimately or positions eliminated as a result of where we are going with all of this?

John: Yeah. So this is where I get this question a lot.

Josh: I'm not original, I'm nothing if not derivative.

John: Yeah, it could be the robots or it could be artificial intelligence. And it's definitely an area that I'm keeping a close eye on. If you read some interviews with some of the forward thinkers, they really think it's going to free us up to do the things we really love. So one of the biggest complaints I hear from my colleagues is the amount of time we're spending on the EMR but there are there are emerging technologies using natural language processing, artificial intelligence, that can really lessen that burden of data entry. Another example is in radiology. I've heard some radiologists are concerned about AI taking over. I don't think it's ever going to be that way. But it may mean that the radiologist is going to go to the bedside and actually examine the patient and have much more of the context of the image than previously we'd seen. So just like a lot of our airplanes that we're flying are being flown by algorithms and robots and things like that, there are still pilots there. So I think it's going to free us up to really mine the details and to refocus our attention on the patients and really to bond much better than we are right now. That's my hope that with the new technologies that we can get back to being more of a human, more of a carer and do more doctoring.

[Musical break]

Edith: I don’t have my schedule right now but have them look at when I'm supposed to be in Yakima next.”

Patient: Cool. I can always go visit over there on a Friday; I wouldn’t mind taking a little road trip.”

Edith: Well, I'm happy. I miss you too. I know that we see each other on telemedicine but you know giving you a big hug is totally fine with me.” [laughter]

[Musical break]

Josh: Dr. John Scott is the medical director for digital health at UW Medicine. Dr. Nick Compton is medical director at the UW Medical Center Roosevelt Dermatology Clinic. Dr. Edith Cheng is medical director for the maternal and infant care center. Dr. Lisa Chew is a primary care physician and associate medical director for ambulatory services at Harborview. And Leah Rosengaus is the interim director for telehealth here at UW Medicine. And next time on The Transformer, we’ll revisit our work and programmatic progress around healthcare equity which Dr. Ramsey’s identified as a strategic priority for the organization. We’ll also explore how implicit bias and microaggressions factor into disparities in care and our own work environment. I'm Josh Kerns. Thanks so much for listening and we'll talk to you again soon on the next episode of The Transformer.

[Musical outro]