AMS - CM - EP4 - Dr. Keith Thompson

Helen 0:00
I'm here with Dr. Keith Thompson. I have been really looking forward to this conversation. I think we first met when about a year ago?

Keith 0:07
I believe so yeah.

Helen 0:09
Was that a session that we had a workshop on Physician Burnout?

Keith 0:13
Yeah, Ontario, MD. That's right.

Helen 0:14
It was the first time I had encountered you and I, as I was thinking about spending time with you, on this podcast, I was thinking, gee, it was almost love at first sight, right? I was completely captured by your enthusiasm. You know, at a time when a lot of primary care physicians are struggling, and you seem to have some, what can I say - boundless energy, particularly for the topic of AI and supporting the deployment of AI in a constructive way in the healthcare system. And you over the last year seem to have been pretty captivated by the AMS focus on compassion and mandate.

Keith 0:51
Well, it was interesting. I didn't really know about the organization until Chandrasena introduced me to your book and reading through that. And that's really what connected me - I'm like, wow, there's this organization officially dedicated to understanding compassionate care and technology and how this is going to work and there are historical aspects to what you guys do. So yeah, I was enraptured as well. Yeah. So happy to be here.

Helen 1:15
Fantastic. So you're a family doctor based in London, Ontario, but you have a bunch of other roles. Correct? And why don't you tell our listeners a little bit about some of those roles? Because you have a research function as well as you're involved in it? I guess your neurologic start-up.

Keith 1:33
Well, not a start up now was one of them probably came aboard. They were well on their way. But yeah, a family doc by day in London, Ontario, and adjunct faculty through Department of Family Medicine. My research there is really focused on some of work of McWhinney. And some AI research coming down the pipe, hopefully, if the grant goes through Amanda Terry is hanging that up and involved in a number of other working groups, my role with Neurologics so it's a novel form of remote photoplethysmography. So it crazy as it sounds, (Helen) - you have to unpack that – (Keith) I have to unpack that - so that little device that we put on our finger, right, that captures a pulse wave at our finger. We're measuring multiple regions in the face 26 different regions. And so using AI and advanced machine learning, we're able to recognize those data patterns and blood flow in the face, reflected light comes in, and we can see those pulse waves underneath the skin. And so we can recognize over 100 different parameters with that. So yeah, it's the two worlds right, like, compassionate and technology in this, like, scan you for 30 seconds and determine your health risk. It's kind of a foot in two worlds. But that's what gets me excited. (Helen) So obviously, having sort of diversity in your work, life is kind of compelling for you. (Keith) Yeah, for sure. I mean, that's been an exposure to kind of the corporate side of technology and getting through FDA approvals and all that that entails and has given me some insight innovations and what's involved in getting startups going. But then back to my, my roots of family medicine. And yeah, what started is kind of an emotive email with colleagues kind of evolved out into this asynchronous document and discussions and sort of some ideas. Yeah, brought me here to what you guys are doing.

Helen 3:18
That's fantastic. Why don't we drill in a little bit on primary care to start? Yeah, you know, certainly is a challenging time for primary care practitioners. I would say physicians and nurse practitioners in the field and obviously a challenging time for patients who are increasingly struggling to have a family have a primary care practitioner working in their corner. How do you see the situation? And how is your work and your perch trying to make a difference?

Keith 3:47
Yeah, I mean, that's an excellent question. Certainly within our region, I'm in OHT West and easily one in five is probably unattached. And you get out

into the rural areas, even in southwestern Ontario, let alone Northern Ontario. It's devastating. I mean, people are waiting to the local emerge to get just a drug refill, can't get access to primary care. On top of that, you've got a profession, I think, that is feeling devalued, but maybe devalued in a sense that we've lost perspective of what it is that we're trying to do or what our purpose would be our mission statements, if you would, which is really what McWhinney spoke about. And so, you know, when you have limited resources, you've got excessive wait times, you're in a situation where it seems impossible to get the care that we would desire for our patients.

And so, adding in that layer of wanting to be compassionate and caring and not showing your frustration and anger, sometimes even with what the system is doing, makes it incredibly challenging: unhappy doctors, equal and unhappy nurses equal and unhappy patients. Right. And so part of what I have now I'll be totally transparent of my own journey has been by returning back, right to those roots of what it is to take care of our patients. Right? Has rescued me in many ways the interest in the technology is one part. But our hope would be in some of this work in understanding what our mission statements are those driving principles behind taking care of patients. Sylvia McSpadden, I think had said to me one time, "Keith, there's a difference between caring for patients and making patients feel cared for." And that really resonated with me. And I think if we can find the sweet spot on that if the technology enables us to have more efficiency within the system gives us back that currency of time, I think we can rescue people and ourselves and in this profession from the burnout, still a lot of challenges. It's not going to be easy, right? Because that efficiency, how do we spend that time one on one more time with an individual patient to understand and know them, or higher through-put, right, and there's tension within the system for that.

Helen 6:03
There's different models, of course, at primary care in the province, right. And some are designed, like community health centers, to spend more time with patients who are perhaps more vulnerable, have more complexity. And some are obviously designed to be maybe perhaps a little more transactional.

Keith 6:21
On the value of team-based care, and I've had limited experience with, but just we do a COPD program. And so a respiratory technologist comes into

my office spends that added time, does pulmonary function testing one - on - one education with the patient, the patients love it. It's almost compassion by proxy, right? Because they have the time that I don't, it's freed me up not to have to worry now there's some good population health going on, because she's going through my EMR and finding those patients that do have COPD and you know, could be improved in their care.

Helen 6:54
So this is interesting, because a lot of the discussion, you know, that's very current around primary care, obviously, more, right? We need more primary care practitioners, we need comprehensive primary care. And, you know, there's been a lot of promise and interest in digital scribes. But it sounds like the technology on the digital scribe friend may be necessary, but not sufficient in order to deliver the kind of primary care that you're imagining.

Keith 7:22
I would definitely agree with that. I think the sweet spot - and I go back to that round table that we first met, and I think was a Dr. Hodges that was there to talk about AI is kind of being AI scribing, the one immediate win. And I would see that just from my own practical sense of the release of burden of time to make notes and charting; where the other components of the administrative aspects and going through my inbox, like because I'm here today, and it's probably get home to like 75 items - my attention, right, man, if there's a way to ease that burden as well, it's going to be a really extremely useful means of applying the technology.

Helen 7:58
So we've talked about McWhinney, do you want to tell the listeners a little bit more about that, because we've had some correspondence about McWhinney. And even they're trying to sort of, I guess, revive - my word, some interest in his teachings.

Keith 9:42
So you know, back to what I said earlier, what started as an emotive email with my former staff man, actually Dr.Tom Freeman, and there are some amazing I would call them make McWhinney disciples, Bridget Ryan, Amanda Terry, Maura Stewart, and in my undergrad, it was assigned reading, right? Go through the McWhinney principles like oh, okay, this touchy-feely side of medicine, okay, whatever, fine, get it done. And in the height to COVID. And being in this crisis of detachment from our patients,

and kind of really longing for that personal aspect that reconnect, going back to make McWhinney, and so one of the areas I've been interested in exploring, he has nine principles that he outlines, and you would call them the mission statements. So for example, a family physician sees patients in their homes, a family physician sees his patients as a population at risk, family physician pays attention to the subjective aspects of medicine. So taking these nine principles, how would those look in terms of a digital expression or in terms of our interaction with technology, are we addressing those principles? So for example, seeing patients at home now, maybe a telemedicine encounter, right, maybe remote wearables, or maybe some yet other to-be-developed technology allows us to do point of care, but removing that humanistic and face to face touch, how far can we go and yet still remain relevant right to what the needs of the patient are?

Another interesting area, he talks about the taxonomy of visits, and so the reasons that patients might see us - limit of tolerance.
I can't stand the itch or the pain, I need relief limit of anxiety. Oh, no. That rash happened to be cancer when my brother had this and the Google search now is in chat GPT right. Hetero thetic - which are problems of living associated with a medical presentation. And then of course administrative and preventative care. So keeping those reasons for visits in mind, put that into the digital or the virtual context, right? Are we meeting that need, for example, and going back to recall one of my patients with terminal cancer, and she was suffering with problems with sleep. And what's clearly some anxiety spoke to the daughter lived in Toronto, mom was in London. I said, Look, this sounds like it's mostly some mental health concerns. Why don't I try and set up a video call with mom, it's hard for her to get into the office, the daughter was ecstatic. Wonderful, that'd be great. So I call my patient have the initial phone interview and proceed to kind of understand what's going on. And I said, Look, why don't we set up some calls you and I can do some video chats. She paused. She said, Oh, doctor, she said, I really want to come and *see* you. And she did. And the sequence of visits after that was this what to me felt like a scientific-irrelevant maneuver of palpating for lymph nodes and listening to her lungs. Right. But she needed that. Yeah. And that touched that aspect of being face-to-face with her. There's no price for that therapy, right. I mean, it gave her what she needed. And I was happy to sort of fill that role. But it was interesting, I thought, Oh, this meets the criteria, this is appropriate use of virtual care, saves on travel to the office, saves a daughter time, etc, etc. Wasn't what the patient needed, right? So long answer to what's McWhinney all about?

Right. And that kind of sticks in my mind, in that case of for her that limit of anxiety needs to be addressed with that hands-on stuff.

Helen 12:08
It's interesting, as you're talking, I'm thinking about, of course, being up kind of government policy, person by background, right. Thinking about, you know, what is the right balance of virtual and in person care, and how that policy discussion, obviously, it's one way in one direction during COVID, and has swung back. And I think, you know, it's a challenging area of, you know, compensation and incentives to get right. But if you couldn't embed some of those McWhinney principles into the policy, then it might help us sort out when and how to deliver virtual care better.

Keith 12:16
Absolutely. And I think this is what the group at Western is working on under Bridget Ryan, which you know, is one of your Fellows, right, that appropriate use of virtual care. So it's fascinating, it's kind of a foundational principle. It's not a scientific principle, per se. But here's some incredibly rich data, right, qualitative data. And I think that's, maybe as a system, we can't lose sight of that the quantitative data helps us understand where we need to put dollars in terms of population health and needs for the community and hospital budgets, etc. But the qualitative side is extremely important as well, at the end of the day, what the patient might need. You know, I was talking to your colleague Jocelyn earlier, I remember my wife when she had her surgery for her gallbladder, and this was 25 years ago. And that evening, a nurse came in and was able to give her a back rub with some cream. She had the time to do it, my wife commented, like, wow, you know, it's nice, right? And then there's Wow, it's a little slower tonight. We don't always do it. But it was an incredibly healing for her right to have that. And I'm sure helped her sleep easier that night.

Helen 13:19
That's great. Well, we're trying to at AMS a little plug here, but we're trying to obviously fund the work of Fellows that advance those kinds of experiences and bring them, I guess, to the line of sight of policymakers and leaders in the healthcare system.

Keith 13:35
You know, it's I think, McWhinney spoke of this as well, right, the struggle between the efficiency of the system the system needs, and I get it in terms

of limited resources and funding, high throughput, low physician touch, we're pushed towards that. But as physicians, as caregivers, as workers within the healthcare system, efficacy is what we drive for, right? And how to balance those is really going to be the challenge.

Helen 14:01
So at a time when we've talked about many physicians are burned out, some are turning away from the profession, some are stating their intention to turn away from the profession. You've got pretty boundless energy and enthusiasm. Where does that come from? And how does that happen? And do you have some advice for others who might be kind of looking for opportunities to renew their commitment to primary care and try and make the system better?

Keith 14:28
Well, keeping my caffeine level therapeutic most hours of the day as a first start, but aside from that, really, I would say a couple of things that, as I hinted at earlier, you know, part of this journey for me was going back to those principles of Why am I here? What is it that I'm trying to do? And I would caution colleagues, Be careful of the company that you keep, and I know these discussions have to take place. It's frustrating when you're trying to seek funding. There's no way can't get the needs for like the wait times for ENT or for psychiatrists and seen it's like up to a year and a half, two years. I got a note back in a patient the other day, and they said, Well, they're in crisis and go to emerge. Oh, man, you know, so frustrating. Yeah, but sometimes we get together as a group, and we start to emote, and we complain. And I find that I had to distance myself a little bit from that. And so looking at this as almost, I don't know that being involved in this work will be a solution. But I hope that it will be. But I know that by participating in this, and going back to those foundational roots is healing for me, that's helped me survive from burnout. And so I would encourage my colleagues right to do the same.

Helen 15:46
And you share that enthusiasm quite broadly. Right? I follow you on LinkedIn, and you're a pretty regular contributor. And so do you find what we'll talk? There's a whole bunch of questions in that, right. Yeah. I'm interested in your use of technology to get some messages out. But do you

find that you're able to engage some of the fast followers or some of the disaffected? Are you getting some nice responses from the work that you're doing? And that it's helpful to others? I can only imagine that it is, but I absolutely like to hear your view.

Keith 16:17
No, absolutely. And part of like, with the post I was joking in an exam was how do you do so many posts. So I'm sitting at lunch, I see an article in Globe and Mail and I just pop it up. And it takes me a few minutes, just add a commentary to it. But I said it's also iterative for me that is to repeat what I've learned. So believe it or not, some of the posts, it's almost educational. So this is what I've learned at this conference, I put it in and post and hopefully share that with others. And I've had a few folks say, Yeah, that's a really great post. I didn't know that article existed or organization like AMS, right? It's part of this. So just being able to expand and share what I learned what others learn, I think, incredibly important. And it's an opportunity for sure.

Helen 16:57
It's quite amazing, because some of us have leadership roles, because we've got a title in a job, right? Deputy Minister of Health, for example. And you have kind of seized the platform and established yourself as a leading thinker in primary care, without a big title, by just being you and being engaging.

Keith 17:21
You know, and listen, I accept that humbly to be thought of as a thought leader, I am a product of the people I have been around. Truthfully, I have just learned and others have shared. And so I'm not a leading thinker. I'm an instigator, if you would, right, and including those networks, and just being able to share what I learned right and be able to apply it clinically. I will say that has been fascinating, right? Yeah, yeah, absolutely. Yeah. It's changed what I do for sure.

Helen 17:52
That's great. So last week, you posted on LinkedIn that you were rereading our book, AMS Healthcare book, *Without Compassion, There is no Healthcare*. And you stated, “going through this book now a second time, it makes so much more sense knowing what it means to reconcile our new technologies with compassionate care.” Just interested in why you went

back to it, and what you learned and what you think it means for you. We've talked a little bit about that,but just sort of dig into your experience of reading it. And I'll tell you mine.

Keith 18:24
Yeah. So I mean, my first pass through it, I was kind of in the mindset of what was going on, McWhinney principles, and I think it took me a second read to see the alignment, right in just expressing the same thing in different ways. And I made a couple of notes that I thought stuck out to me, I think, Brian Hodges, right to the opening, the distance between us, he says amazing new technologies, enhance clinical care, but they're often interposed. In the physical space between health professionals and patients - this can interfere with the human connection. That first chapter, and that opening section just really resonated with me. I went through it that second time, and then even understanding What is compassion? Right, and what's the definition of that. And I credit Dr. Lori Denelle, she put me on to the article by Maliphant, I think was the author, and went through again, the themes and sub themes of compassion, and really what that means to both patients and providers. So that second read and going through that another time, I think was really insightful. I almost, oh, I know how to apply this now. I understand where you're trying to say, yeah.

Helen 19:33
Yeah, when I read the book, and I would commend it to our podcast listeners. But when I read the book, not being a healthcare practitioner, I thought about how do I lead with compassion, in the latter chapters about leading with compassion and organizations, and how do I create an environment where we can have compassionate relationships with each other, and thinking about how I could have done a better job during COVID in all the craziness that that was in the early days.

Keith 20:02
Ya no, it's honestly, I would say it's a must - read. And so yeah, welcome to put a plug in for that. Why I posted it for sure.

Helen 20:12
Thank you. So you have a pretty broad range of interests clearly from this conversation and again from following you. What got you so interested in technology in AI specifically? Was it the unique capabilities? Or was it something else that just sparked your interest?

Keith 20:30
So my early dive into technology was working with a colleague and setting up some virtual host calls to some patients at Participation House, and we really wanted to be able to bring the equipment and do the exam virtually. And so understanding an application for Telemedicine really is where we were going with that. We had some fascinating kind of early data, if you would, we understood the needs of the patient, the nurses, and the providers with the patients were excited that they wouldn't have to bring the patient to the office a $300 endeavour, by the way, could do it virtually ran against, you know, an obstruction was a fee code, ministry said No, can't do that virtually guys, got to be face to face. So then the you know, the next step was sort of well, what can we do by video, and there was this company, Neurologics, and we had originally thought we might be able to do some work incorporating that into a telemedicine platform. Clearly, though, it's not a recognized medical device, it was a ways away. And they're going through those trials right now as we speak, some clinical trials to get approval for that. But that's what introduced me to the technology. And then I was asked to board as their Chief Medical Officer about two years ago, and went on to get my certification for Medical Affairs. And that was a new round that I saw the bridging between the clinical applications, right of this technology, and really understanding clinical workflows. And so that's, I think, pulled me a little deeper into where is AI going to support us and future?

And so I'm clinician PI under a Amanda Terry, if the grant goes through, for looking at AI applications to reduce the burden and primary care, the principles of machine learning, and just again, for the technology that we use in our logics is fascinating. I mean, you say, scan you and get this. This is crazy. Like it's almost Arthur C. Clarke said, Right? When technology works, Well. It's magical, right? And so it's a great example of that. But at the end of the day, this will revolutionize what we do as clinicians, I think, you know, it was Dr. Dryers said It won't replace us. But those of us that don't use AI will likely be replaced. And I think that's true. There's going to be some challenges along the way and how it changes our roles as clinicians. And I think we still have to sort that out, perhaps, trust in this technology. And another area, right, that I think is fascinating as this evolves. But yeah, that you can see the clinical applications of what is this novel and almost, miraculous kind of technology. It's crazy, right? How fast it's evolving.

Helen 23:13
Yeah, it's moving really fast. And my sense is the people who doubted some of the advancements in technology, as recently as two years ago, I have been converts is just now how do we prepare? And I think the thing that keeps me up at night is thinking it is going to be revolutionary. And are we organized in a way from the boards of organizations to the C suite to the middle management to the frontline staff? Are we actually organized to optimize this. And that's what worries me and I would like to be a force for good and helping us prepare. But what are your thoughts on that?

Keith 23:52
That's a fascinating comment. You're interested in another spot, right is good. How is this going to play out within the hierarchical measures within societal structures related to power, and Ursula Franklin spoke about this, right? We get into this orthodox technology, one way of doing things, and yet we want to control it. So I mean, truthfully, as physicians we're fearful of this democratization of knowledge, and that suddenly what I would be the sole provider of is now out there free and easy for the patients to access. In fact, patients can probably now very quickly, learn more and understand more about their disease and differentials and the limited knowledge in my head as a family doc. So in controlling that, what the societal need, how is this going to play out? A colleague of mine who's an ophthalmology surgeon is interesting, in the interesting early days of LASIK. Now that procedure is so autonomous that in some states, optometrists can oversee a highly surgical procedure and even within their profession, there's that initial If you can't do that you're not a corneal specialist. You're a general ophthalmologist, even you shouldn't be doing meaning that right now we've de canted that skill to still a highly trained allied health professional and will we see this play out in some way? So maybe NPs, RNs, the circle of care, the ultimate purpose is the same, but there's going to perhaps be different people doing the procedure, the skill or the knowledge and doesn't we're going to have to accept that.

Helen 23:52
And as he pointed out a more knowledgeable and empowered patient at the center of it in their caregivers, right.

Keith 25:27

Absolutely. And then, you know, there's nothing wrong with that, like, long gone are the days of the parental attitude of I know best? I'm the doc, I'll tell you, right. I mean, an early in my career, which is 30 years ago, I was getting new patients come to me and you know, remember people just that come from another office, and you don't need a referral? Right, right now, like, really? Doesn't seem right to me.

Helen 25:53
Yeah, I think sometimes I think it'd be helpful to paint a clearer picture about what that future might look like. And I think in planning, there's often work on scenario planning, right? So that you can sort of start to imagine alternative futures and bring people along, and maybe de-threaten and de-risk some of these changes, because there's a lot of health care that needs to be provided in this province. And my personal view is there's no shortage of work. So we might do things together differently. But I think there's a role for everybody in the system.

Keith 26:25
Yeah, I remember watching in my early days, a video from Stanford and two physicians role playing how you could do a video assess for upper respiratory and a shoulder exam. And he went through this marvelous and it was wonderful, all played out. And I sat and I looked at it, and I thought, Okay, guys, now, let's suppose a patient doesn't have connectivity. Number one, maybe their hearing impaired, maybe they have some other disability or challenge. Maybe they don't speak English, right? What does that now look like? And is this a solution for folks in that scenario? So the patient persona, we sometimes overlooked. We have a simple and it you know, you love the demos for some of the technology, right? They just look marvelous, and like, backup a bit. Okay, McWhinney he's principal, we see patients at home with the patient doesn't have home? Right, right. How are these solutions going to work for folks in that in that realm?

Helen 27:16
Interesting. I'm going to switch gears a little bit and talk a bit more about you. Because how you kind of packages together, we've talked about some of your breadth of interests, but interested in your experience as a lifelong learner, I think that's an essential sort of leadership attribute is that you have to keep learning. But how have you personally approached the acquisition of new knowledge and skills throughout your career? Because clearly, you haven't stopped?

Keith 27:41
Yeah, I mean, part of it is mandated because of our CME credits. Right. We have it. That's right. Yeah. Right. But honestly, again, back to make it fun. Right, make it fun. And it's an opportunity to learn something new. Sometimes it's a challenge. And I think that's what has kept me pushing forward. And being able to kind of delve in, you know, there must be a solution. Right. Yeah. I mean, we just haven't looked hard enough here yet.

Helen 28:11
So you must be essentially curious. (Keith) I would say so. I would say so. Yeah. Absolutely. (Helen) And then you're also work as a researcher. And I noticed that you've done some work with WONCA - the World Congress on Family Medicine. Right. Right. So how is that enhanced? Your work and perspective? Because yeah, that's also broadening and takes you away from the clinical environment? Yeah. So again, you know, Wednesday is kind of my virtual days. We call it a research day. So I don't book any patients that day until the very last and my secretary every Tuesday afternoon. Are you free tomorrow? I'm like, Yeah, okay, but some people in here. So that has helped me manage time, right, I can slot in and research. I mean, I'm early career, truthfully, I couldn't calculate a P value if my life depended on it. But I know where to go for others that do and that are excited about this kind of thing. The work with WONCA is really just a means of translating what's going on. And it's been interesting because it's given a global perspective, right with my colleagues, again, all in primary care, who are also doing some incredible work. So we've got Dr. Nevus, or Chagall, she's with Imperial College UK, doing a validation survey, the Delphi method and looking at proper use of virtual care. And she's going to have I think over 100 countries involved looking at that survey, so there's a lot happening, right. And the problems in primary care are not unique to Canada, by the way, as I understand that it's global, and it's either limited resources limited to health care staff, very similar struggles and how do we prepare this is one thing WONCA is looking at now how do we prepare that next generation to use technologies, right, the skills the attitudes that they need to have

Helen
Do you see, this isn't about you? But do you see other jurisdictions that are doing better than than we might be doing in Canada? Are there any areas that I would sort of look to as leading?

Keith 30:12
I don't know that I can say yes or no to that. I think we're all in the early part of the weeds on this truthfully, right. And sorting out the regulatory the validation. Most of us do understand what some medical device or software is a medical device and the implications of that, and what's appropriate and clinical care, what's not the challenges that some of us are facing? And an example would be, you know, these Large Language models? And I don't think everyone understands that. That is, you know, there's bias within there's a language model, right? So it may give you an answer. And if it doesn't understand or doesn't think it has an answer, it'll make something up, it'll hallucinate. And that's a very dangerous situation in medicine, as you can imagine, yes, we'll probably move to curated AI. And there's some newer technologies, and I think, south of the border, we're seeing that that will solve that issue, perhaps of hallucination or bias, or will if the AI is responding based on very strict guidelines that has been programmed with, right?
And then lastly, just how those technologies change and how there's concept drift within them. So when does that algorithm or that AI solution become obsolete or needs to be reevaluated? And just as we have with pharmaceuticals, we get signals, right? When there's an error or problem? And what's that going to look like? So if you get the wrong answer and a diagnosis from Chat GPT or whatever, right? Is that going to be an alarm, that we're suddenly going to get a recall on an algorithm?

Helen 31:43
Rutherford, has their post market surveillance? Thank you. It's one way that people would describe it right? And what is it in the AI space?

Keith 31:51
What's that going to look like?

Helen 31:53
Yeah, well, I'm hoping we can unpack that at our conference in May.

Keith 31:55
I'm looking forward to that.

Helen 31:57

That'd be great. Yeah. So my last question is really about visible mentorship. And you've commented, again, in your, in your LinkedIn posts about the importance of being a mentor and how you approach it. What advice do you have for people taking on a mentorship role?

Keith 32:14
Be prepared to be generous of your time. And it can be asynchronous, I think sometimes we get pulled in to have set dedicated time, but in this world of virtual, you know, back and forth asynchronously is okay. But you know, remember, I would just say remember what it was like the first time you made a cold call, or you encountered a person senior to yourself to ask a favor what that felt like, and try and return that favor, right? Be prepared to give back where you can have your time. And I would encourage, I always say, don't be selfish with your network. I mean, I do get sometimes approached and it may not be something directly related to what I do, but I know someone else who is perhaps interested and willing to pass them forward or pass them over.

Helen 33:02
Yeah, I mean, like you really enjoy the mentorship opportunities. They're opportunities to be a mentor to others, because medical innovation, they will. They will take on some of the challenges that have eluded me in my career. It might be a bit selfish.

Keith 33:17
Yeah, no, it's got to happen. Absolutely.

Helen 33:20
Well, thank you for your time. It's a pleasure.

Keith 33:23
Thank you. Yeah, honoured to be here. I really appreciate the chat. That's great.