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Spark Podcast

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Interviewer: Dr. Anjali Kundi
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Ruth Chen (00:02):
Welcome to the MacPFD Sparkle podcast. This is Ruth Chen, and in the Sparkle sub-series we'll bring you shorter segments released in-between our longer Spark episodes. We'll have new and exciting interviews with professionals from across the world helping you to achieve your personal and professional goals as a healthcare educator, researcher, leader, or practitioner at any stage of your career. Sit back, listen and enjoy this episode of The MacPFD Sparkle podcast. Today Anjali Kundi discusses quality improvement research and patient safety with Ekta Khemani. Dr. Khemani reflects on her journey in quality improvement and her work in closing the gaps in patient safety with younger practitioners.

Dr. Anjali Kundi (00:57):
Thank you everyone for tuning in to this episode of the Spark podcast. A little bit of faculty development in your life, and I am your host today, Anjali Kundi. I am the Regional Coordinator for Faculty Development at the Niagara Regional Campus. I am thrilled to have as my guest this episode Dr. Ekta Khemani, who is an anaesthesiologist at Niagara Health and Hamilton Health Sciences. She has quite a bit of training, doing her MSC, MD, and residency in anaesthesia and pain management at the University of Toronto. She further specialized in quality improvement and patient safety and is an Associate Editor for BMJ Open Quality. She's been working part-time as a quality improvement specialist. She mentors students, and she has developed the first fellowship program for medical residents in quality improvement and patient safety in Canada. We are so so happy to have her here as the current assistant research director at Niagara Health. She also chairs a CPD course in QI and patient safety through McMaster. Thank you so much for joining me.

Dr. Ekta Khemani (02:00)
Thank you for having me.

Dr. Anjali Kundi (02:01)
It is such a pleasure to meet you. One of the things that really drove me to seek you out as a guest on this podcast, and where I really wanted to hear your thoughts was about a lot of your research involving medical students and learners. We're gonna get to that in a bit, but one thing I'd like to start with, hearing just a little bit about your academic journey and what led to finishing med school and residency, and then deciding to incorporate research into your career?

Dr. Ekta Khemani (02:30):
Research has always been an important part and as my thesis supervisor once said, "Research is like this fire in your belly. It never quite goes away and it subsides, but then it comes back with a vengeance," [laughter] and that's...

Dr. Anjali Kundi (02:45):
That sounds uncomfortable.

Dr. Ekta Khemani (02:46):
No, it is the best way, right? And that's where I found my niche actually in quality improvement research. Because what happens is, you go through the motions of going through your training and before you know it, it's finished, and you're like, "Oh my goodness, how did this time just pass?" And then you start to go into practice and you see that there's so many areas that you learned through your lectures and your training. Into evidence-based medicine that this is the standard we should be coming up to, and here's where we are. [chuckle] And trying to find the gap and trying to meet that, and all that is, is through research by asking questions saying, "Okay, how do we get to this, and what do we need to do? And who do we engage?" And I started off in the academic world working at Western University, and then with my husband's job, etcetera, I went into community hospitals and then found my home in Niagara and Hamilton, and what I found really interesting is no matter where I went, we were all asking the same questions.

Dr. Ekta Khemani (03:46):
How do we improve patient safety? How do we get better? How do we get our department to get to the CAS standards or the standards that we're looking for at our department? And these are all research questions, so I found myself constantly coming back, testing hypotheses, coming up with strategies, and along the way, always including students just because I feel like they have so much potential. They're so keen, and they have what I'm noticing, especially with the McMaster students, is they have a really varying background. For example, I'm working with a medical student, and she used to work for Pepsi, and she actually is familiar with doing business models, and I'm like, "Please teach me these things." And with another medical student has a Master's in Epidemiology, so we have some really great resources, particularly in our students, so I really feel like it's an opportunity for us to learn from them and for them to learn from us.

Dr. Anjali Kundi (04:39):
Amazing, I can absolutely imagine that the skill set from such a diverse background just amplifies or really brings to light what you are capable of doing in your research question. Initially, when you started to incorporate medical learners into your research, what did that look like?

Dr. Ekta Khemani (04:58):
There's a lot of value in finding out what the medical students are interested in, similar to the rest of the McMaster curriculum with problem-based learning and the flip classroom. You tell me what anaesthesia are you interested in, and sometimes when you're not really focused, you don't really know too much about a field, it's hard to really know what you're interested in, but there's sometimes there's a bunch of students who are like, "Well, I'm really interested in the opioid crisis. I see that's a really big deal in the news," and then I'll say, "Okay, well, actually that's a really big deal for our department as well, so let's try and see where we can go with that." And other times where a student is like, "Well, I'm really interested in anaesthesia, but I don't... And I wanna do research, but I don't know where to begin," then I say, "Okay, well, here's a bunch of issues that our department is

facing, and I think this can all be turned into research projects, so what speaks to you?" And everybody has likes and dislikes, so I think it's really important to understand from the learner's point of view what they're interested in, because then with that, you'll always get that engagement.

Dr. Anjali Kundi (05:58):
Gotcha, yeah, that makes sense. You find something you like to do, they say, and you'll never work a day in your life, right?

Dr. Ekta Khemani (06:04):
Exactly.

Dr. Anjali Kundi (06:04):
Find out what you enjoy, it's not going to be hard at all. What would you say to faculty or what's your advice to folks who are hesitant or don't feel comfortable, maybe both stepping into research or adding a QI project into their practice, into their... I think what you're saying is very real. Folks, all the time have this question of like, "I should be seeing diabetic patients every three months, but I'm actually not in practice." And there's this discrepancy. How would you encourage, the average practitioner in bringing some of those QI principles into every day... Or maybe formally moving into a research project?

Dr. Ekta Khemani (06:45):
Well, I think that's such a great question because that's what we're working on right now. And what I say to faculty, when they're interested in research, and they did maybe a project in medical school, but they don't really have the time or the resource to really do it. And it's just like, "Well, if you're faced with this clinical challenge, chances are somebody else has the exact same question and exact same concerns as you do." And so I think it's, number one, I think, recognizing that the question that they're asking is valid and important, and people will wanna read about this. And I remember that very distinctly, when I went to a conference a few years ago. And this person wanted to present something about epidural catheters being left into patients for an extended period of time. And he was like, "Oh, I don't really feel like doing any work on this. And I don't really feel like doing research on this." And he just let it go to the wayside because life happens, as it does for all of us.

Dr. Ekta Khemani (07:47):
And then every year or so, he would hear about other people having the same issue and saying like, "Hey, what did you guys do for this? What did you guys do for that? And how did you manage this?" So he eventually decided to write it all up, what he encountered in his clinical practice, just to see if it would be of some value. And out of all the publications he's ever done, I think he published 100 papers, that was the one that got the most likes, and the most traction to it, had the most citations, most retweets. And it was because, it was a problem he was facing in his everyday life. And so that's what I try and encourage with faculty as well, that if you have this need to understand why your diabetic patients are not being followed up every three months, then chances are everybody else is wondering the same.

Dr. Ekta Khemani (08:36):
And if you just have that idea, and you come to myself, or Dr. Chambers, or Amanda Bell, we can hook you up. [chuckle] We can say, "Okay, this is your question. Here's how you can get some support. Here's how you can get resources. Here's how you can get a Learn It. Here's how you can get a grant." I think, for example, one of the physicians from West Lincoln, he had this question on

depression, and he got a $30,000 grant to answer this question. Really, the resources are there, and we're here to help at NRC to help you go from question to publication. And that's where I feel like the real value is for people who are interested.

Dr. Anjali Kundi (09:17):
I'm glad to hear you lay it out like that because I don't know, locally if a lot of our faculty are even aware of that. So that's amazing. It's a full service.

Dr. Ekta Khemani (09:25):
Absolutely. We're a full service. You come to us with your question, and we will make it happen. Not everything's gonna be published in JAMA, but for sure, it will get traction and it will be presented. And it will most importantly, help you change your clinical practice and help your colleagues out too.

Dr. Anjali Kundi (09:43):
That's awesome to hear. What might you advise someone who's leery on incorporating medical students or learners in their research project? If I'm a first timer, and I'm thinking, "Okay, now I've got this question, and I'm willing to bring it, and I've got the supports in place, but oh, gosh, I'm not sure if I wanna to have a medical student involved." How can we shift that?

Dr. Ekta Khemani (10:03):
I think there's a number of ways. One of the things that I found was that, there seems to be a gap in training. We have a lot of students who understand QI, understand research methods. And we have faculty who are interested in maybe bringing on less students, but they don't really know where they fit or how they fit. Sometimes you can do a full-on course on understanding QI and how to incorporate medical students, or sometimes you can just do a one-off course. For example, we have quality improvement journal clubs. We have evidence based medicine primers, and those are meant for faculty and students. And sometimes by being in these cohorts of both faculty and students being together, you see where the medical student is in their questioning, in their research ideas, in how they approach problem solving. And you say, "Ha, you know what, actually, this person might be an asset to my project." And you see that you do actually have a lot of similarities in terms of trying to problem-solve.

Dr. Ekta Khemani (11:06):
And in particular, I find that the McMaster students are really strong with this because they are used to so much independent study and problem-based learning, etcetera. That they really know how to take a question, for example, how do I do a blood pressure and really, take it really far. [chuckle] And I think it's just a matter of being exposed to what students are capable of. And I think by joining faculty rounds, by joining quality improvement rounds, by joining research rounds, that's where you get your introduction. If you're just weighting your toes in there and seeing, take on a medical student. And then from that, if you do find that there's a medical student that you're interested in working with, or you think, "Okay, well, this has been really helpful. Let me try and get one in," then you can reach out to myself or Amanda, or yourself and say, "Hey, can I get a medical student? And if so, how do I go about that?" And we'd be happy to help you with that, too.

Dr. Anjali Kundi (12:00):
It's something that we don't necessarily as a community physician, or as a practicing physician, in mid- or to late-stage career, if you haven't had that experience, it can be a little bit just uncertain. And I think knowing the steps and knowing the process can really help. That's definitely reassuring.

From a personal note, have you had any expected or unexpected benefits to incorporating medical learners? You alluded to this one individual who's got a business background shedding some light on your perspectives. Just in past research projects, have there been other surprises where you thought, "Oh, wow, this is amazing." That this was an unseen asset.

Dr. Ekta Khemani (12:38):
Absolutely. To just give like a recent example of that. One of the things that we're struggling with clinically, is with the pandemic. And I think pandemic has brought out so many research opportunities. [chuckle] Because we've all have to shift how we do our everyday practice. And every single shift we do in our everyday practice is a potential research project, in my opinion.

Dr. Ekta Khemani (13:00):
For example, we now have to send for anaesthesia a lot of patients home at the same day that they have their procedure. And we have these OSA patients that the literature says, "You really need to watch them because their oxygen levels will drop, and there's a safety risk." And it's like, "Well, what are you gonna do with these patients, and how are we gonna manage these?" And so I was tasked to find the answer [chuckle] by my chief. Just figure this out, Ekta. And I'm like, "Okay."

Dr. Anjali Kundi (13:28):
We'll take five. Come back to us with an answer.

Dr. Ekta Khemani (13:31):
Exactly. And I was just so overwhelmed with so much of my clinical work and so much of my non-academic work, and like I've mentioned to you before, my toddler, [chuckle] which is my other full-time job in itself. I had this medical student who's like, "I haven't really done much research, but I'm really interested. Can you help me in this?" And I just said, "Okay, can you look at this? I really don't have time." And I said, "Let's touch base. Why don't you review some of the literature." And I said, "Go on to PubMed, try and find some things, and ultimately you have to make a flow chart about how we're gonna discharge this patient." And within one month's time, she came back to me, and we checked in at two weeks, and she'd done a full literature search. And she said, "So what's the next step?" And I said, "Okay, well, now we need to make this clinically relevant, and I want you to come up with a flowchart on how we can discharge these patients, what decision making is."

Dr. Ekta Khemani (14:23):
And she said, "Okay." So I said, [chuckle] "Google 'flowchart,' and you'll see what happens. And you can come to me if you have any questions." And she did, and she came up with this great flowchart. And I presented it to my chief and I said, "Look at what my medical student did." And he's like, "This is fantastic." And now it's getting buy-in by our whole department and the surgical group, and there's maybe minor changes, change the arrow here and there, or change the small things. But this was done by a CC3 [laughter] medical student. And I think that's really valuable. And I think my point of this is, they can really help take the load off of you and answer some of these clinical questions that you have and coming up with these diagrams. The world is their oyster, and they're really savvy at this stuff. They can just Google things, and they can figure it out very quickly.

Dr. Anjali Kundi (15:12):
That's a great point. And I think it really kind of stems back to what you said earlier, "We are utilizing a pool of people who have a lot of experience in self-directed learning and problem-based education." And it's wonderful to see that correlation or that crossover of skillsets, being able to say,

"Yes, I've asked a question, like you said, how do you measure blood pressure?" But you can also ask a question that doesn't have an accepted answer, and that can be an impetus for more learning.

Dr. Ekta Khemani (15:39):
Exactly. And there's benefits for them, too. I don't want them to think that these medical students are enslaved to us. [chuckle] But they come back and they're like, "This was such a great experience for me. I was able to submit an abstract, I can put this on my CV." And for us, it was great because we are maybe not necessarily concerned about our CVs anymore, but we actually have this flow diagram about how to manage our patients. I think both sides get the benefits to it.

Dr. Anjali Kundi (16:06):
Definitely. And in hopes, you've also planted the seed for growth of future research interest in that student.

Dr. Ekta Khemani (16:13):
Exactly.

Dr. Anjali Kundi (16:13):
I think that is also another big win. You mentioned the pandemic, of course, and we can't... We don't live under a rock, that's going to affect everything. Tell me how has the pandemic, other than increasing the number of questions or maybe the plethora of research options, how else has COVID-19 and its resulting effects changed the way you do research?

Dr. Ekta Khemani (16:36):
Well, I think in some ways, that's actually a little bit more accessible. Because in a lot of ways, if I wanted to reach a community physician, I would have to drive 45 minutes in the snow, and go to their little office and then probably get lost along the way and call my husband for help. But through Zoom, and through all these virtual ways, I'm able to actually reach out to a lot more community physicians, and in a shorter period of time. I don't have that same travel time. I can have my morning with a bunch of West Lincoln community physicians, and then the afternoon Niagara Hall, Niagara on the lake, or Welling, etcetera. And I can get a lot of things done and trying to help people because of the virtual world.

Dr. Ekta Khemani (17:19):
I think it has helped in that way. I also think that having a little bit of a clinical slowdown has given clinicians a time to pause and reflect on how things can be done better. And any time you're asking that question about how can things be better or safer, etcetera. Like I said, you're going back to a research question, a QI project. And it's really opened up the doors to people and said, "Okay, you know what? We need to start to re-evaluate how we do things, and here's who we can connect with virtually to help us." For example, I'm doing presentations on how to improve clinics in Italy. And I have never been... Well, I haven't been to Italy in a long time, but it's just because of the virtual world, I'm able to help support them. If I can do that to people that I've never met in Italy and those language barriers, I can certainly help the people who are in community clinics within the Niagara region.

Dr. Anjali Kundi (18:15):
Amazing. I think that's true for a lot of folks in a lot of different realms, that this collaboration and accessibility is so much more. We can meet virtually, and we can work with folks across the room

and across the country, so that's pretty awesome. What's next? What's on your agenda in terms of future project? Where do you wanna see your research trajectory go in the next few years?

Dr. Ekta Khemani (18:41):
Well, I think that there's so many opportunities within Niagara region to do outreach. Working with Niagara Public Health, working with the REACH program, working with indigenous health communities that we have. And I really wanna see how Niagara campus can go and flood this way in multiple directions and really reach out to all the small communities and all the sometimes under-valued communities or communities where there's not a lot of attention or resources, but desperately need our help. I think that's next for myself and Dr. Chambers. And I think also motivating more and more community physicians that they can do this, that this isn't hard. It's not as bad as you think it is. For example, I remember when I was hired as a consultant for Humber River Hospital, their whole idea was that they wanted to turn their community hospital into a more academic community hospital, and they said, "Ekta, I just want you to get as many abstracts out there, so we know that Humber has it's name in research." And I said, "Okay." Basically, what I did is I went from floor to floor of the hospital and I said, "Hey, have you guys been changing anything in the last year?" [chuckle]

Ruth Chen (19:55):
And they're like, "Oh, yeah, actually we changed our this, and we changed this, and we've done this for hand washing, etcetera, etcetera." And I was like, "Oh, would you be interested in working with me, and I can help you write it up?" And within four months, we submitted 30 abstracts to an international QI conference, and people got to present their work, and they got to hear from other people. And I think it was really very satisfying for me and also satisfying to them that the work that they had did really had a strong effect and value to bring to the academic world. In a similar sense, that's what's next for me in the Niagara region. Showing people who are working really hard every single day that their work is valued, and it can be presented and will get attention because it is work that is meaningful to other clinicians. And that's essentially, to me, what research is about.

Dr. Anjali Kundi (20:48):
That is so inspiring. Thank you for saying it. I think that's a message we need to hear more often, and it's also something we need to hear right now when many, many folks are not feeling the warmth and the love and the appreciation and the value. I'm also really fascinated by this thought that any change is a potential project, any change is a reason for measurement. And I love that you even entered the hospital setting maybe retrospectively and said, Hey, did you make a change six months ago? Did you make a change yesterday?" I think a lot of us in community, in practice, think, "Oh, this is something I have to plan first and then do." Can you tell me a little bit more about that different perspective of looking retrospectively and saying, "Hey, yeah, I did do this. Now where would I go from there?"

Dr. Ekta Khemani (21:35):
Yeah, absolutely. For example, one of the projects I've worked on was from an obstetric point of view where again, I just was searching around [chuckle] for project ideas, and I asked about changes, and they said, "Well, you've got these pumps in, and right now we're having lots of people that have to get trained up on getting these new pumps and using these new pumps." And I said, "Okay, well, why did you get the new pumps?" "Oh, because there was a number of safety issues, and people were getting their wrong doses." Oh, okay. [chuckle] And then, "How long ago did this happen?" "Oh, this happened about six months ago, when we got 10 reports in one day." And all of a sudden,

you start to see that you're actually in your intervention stage of your project. And you responded to an issue that was happening at your department locally, and then it was just minor tweaking.

Dr. Ekta Khemani (22:27):
Okay. Well, what is the data that you have? What are the incident reports? And they said, "Oh well, it's just a few incident reports," but if you have 10 incident reports in a month that's pretty significant, right? And you don't need to have... I think sometimes research gets this bad rap that you need to have these high-powered trials, and you need to have blinded studies, and not really. You do need that for a particular type of research, but by looking at everyday observations, I want people to understand that there's value in that, too. That you do not need these sample size of hundreds of people. You just need to say that this was a concern for your department, and this is how you changed things, and this is what your changes led to. And that's a full-on research project from start to finish.

Dr. Anjali Kundi (23:12):
It really does open a new angle on thinking about research and maybe lighting that fire in another member.

Ruth Chen (23:19):
Yeah. [chuckle] Absolutely. Absolutely. And there are also courses to help with that. One of the courses that I chair is the QI and Patient Safety, a CPD course. And basically what it is, is, majority are faculty who have always had an interest in QI or patient safety, or maybe they were told... One person when we were doing introductions was like, "Well, I was told I should take this course because QI is becoming a big deal." [chuckle] And I was like, "I love the honesty," right? And the fact is... And then a few weeks later I checked in on this faculty member. I said, "Are you still interested in taking this course? If not, we can refund your money. I really want people to be there because they want to." And he said, "Oh, no, I learned so much, and I'm really great." We can give you the tools, and we can give you the training. We just wanna know that you're interested, and all the rest can be sorted out.

Dr. Anjali Kundi (24:10):
Amazing. Well, I gotta tell you, your energy and enthusiasm and positivity about this topic is absolutely infectious, so it's so nice to hear it straight from the horse's mouth, so to speak. Because I think for a lot of us, this is dry stuff, and you've definitely thrown a different angle onto it.

Dr. Ekta Khemani (24:27):
Thank you. And please feel free to reach out to myself, Dr. Chambers, Amanda Bell, yourself, right? We have this community. We're happy to help, and we will search you out, [chuckle] but it's a lot easier if you come find us. [chuckle]

Dr. Anjali Kundi (24:41):
One of the nice things about the NHS, Niagara Health System and McMaster regional campus partnership is that we're poised for growth. The roots are in the ground now, and we are established and up and running and it's time to continue my analogy to branch out. And I really think that that can be with a lot of the passion that you're bringing to this. I'm thankful for that. That wraps up the formal questions that I had. I wanted to somehow bring in your interest in theming parties or coming up with a scheme to... But I couldn't find a relevant way to work it in. An effort to incorporate some lighter notes, tell me about how you apply QI principles to party planning?

Dr. Ekta Khemani (25:27):
Ah-ha! I never really been asked that question. [chuckle] But I think QI is a lot of planning and getting buy-in. And for me, when it comes to party planning, there's a lot of thought that goes into it. My daughter's birthday is in May, but I already have her theme, and I'm already finding things when they're on sale. [chuckle] She's turning two, so the theme is Tutu Cute. [chuckle] I'm finding tutus on Amazon when they're $5, etcetera. And being opportunistic, which is what QI is. When you find a good sale [chuckle] and then the big part of it is also the buy-in part. The buy-in is talking to my husband who wants to do a truck party or just wants to just leave it alone until May or May 19th, when her birthday is May 20th. [chuckle] For that, there is a little bit of convincing there, well, we only have this little small amount of time. [chuckle]

Dr. Ekta Khemani (26:22):
When we can actually do these things, and then she's not gonna wanna hang out with us anymore and wanna hang out with her friends at the mall. I think it is about engaging others and getting people interested and getting them on board with your ideas, and then letting it happen. I remember when I was doing the OSCE sessions, because one of my other roles is being a clinical skills supporter, which I think you had that same role.

Dr. Anjali Kundi (26:42): Yes, I did.

[laughter]

Dr. Ekta Khemani (26:44):
I really like that role too, and so when we were doing our OSCEs during the pandemic, I had a theme for them, too. And the theme for them was "We're Just Gonna Chill." [chuckle] And were just gonna go into this OSCE like we're not in a pandemic. There's nothing to worry about. We're doing our every day work. So I'm always incorporating QI and incorporating themes into everything, because I really feel like it helps set the tone of things. And it helps you information gather. I'm embarrassed to tell you how many websites I looked at for tutus for my daughter. [chuckle]

Dr. Anjali Kundi (27:19):
No shame there. You know what I like, what I'm hearing is being organized, having a plan, and then letting things stem from that plan. I think those are principles that help us succeed in almost any venture, and it's exciting to see how... I'm gonna go one step further and say, planning an OSCE is a lot like planning a party.

Dr. Ekta Khemani (27:41):
Yes.

Dr. Anjali Kundi (27:41):
There's moving parts, there's components, there's people who need certain items, things have to move in a certain way, and you can put all those into place, but there's a natural element about it which just has to happen as well. So you have to build in that factor as well. I actually think, even though it was a rather awkward question, that's such an elegant answer that you've given, and I do not judge your, even one minute, spending time looking for tutus. I totally applaud it.

Dr. Ekta Khemani (28:09):
Thank you. [chuckle]

Dr. Anjali Kundi (28:10):
Okay, I am going to say a formal thank you to Ekta Khemani for chatting with me today. It's been a pleasure, absolute pleasure to hear about your thoughts on research and incorporating medical students in research and giving folks like me, the average community physician, the push to maybe ask a question, to maybe look back and look for change and think about QI in my everyday.

Dr. Ekta Khemani (28:35):
Absolutely, but let's just get one thing straight, you're not at all average. [laughter] You are not average. And no one is average working, right now. Let's give ourselves some credit and feel free to reach out at any time. And thank you again for having me.

Dr. Anjali Kundi (28:48):
That is fair, none of us are average and yes, to my colleagues, to my listeners, to my friends who are out there, keep your chin up, and thank you so much for listening to this episode of Spark.

[music]

Ruth Chen (29:01):
Thank you so much for tuning into the MacPFD Spark podcasts. Just so you know, this podcast has been brought to you by the McMaster Faculty of Health Sciences and specifically the Office of Continuing Professional Development and the Program for Faculty Development. If you're interested in finding out more about what we can offer for faculty development, check out our website at www.macpfd.ca, that's W-W-W dot M-A-C-P-F-D dot C-A. Many of our events are actually web events that are free. Finally, I'd like to thank our sound engineer, Mr. Nick Hoskin, who has been an amazing asset to our team. Thanks so much, Nick, for all that you do. And also thank you to Scott Holmes for supplying us the music that you've been listening to. Alright, until next time, this is MacPFD Spark, signing off.