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Spark Podcast

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Dr. Teresa Chan (00:02):
Welcome to MacPFD Spark Podcast. This podcast is meant to inspire you to take the next step in your development journey as a faculty member. We're really excited to bring you all sorts of content, from inspiring you to teach or supervise differently, to leading and managing your team, to thinking about new creative ways or humanistic ways to actually do your work, and finally, to up your game in your scholarly practice. Are you excited yet? I certainly am. So sit back, listen and enjoy this latest episode of the MacPFD Spark Podcast.

[music]

Speaker 1 (00:45):
Hello and welcome to the 33rd episode of MacPFD Spark. Today, we will be listening to two discussions about improvement in two different ways. First, we will have the opportunity to listen to Dr. Barry Lumb discuss the implementation of a new electronic health record. Next, we will be hearing about program evaluation and the process of informed change with Dr. Michelle Howard. Please enjoy the episode.

[music]

Dr. Teresa Chan (01:15):
Hello everyone. This is Teresa Chan and I'm here with Dr. Barry Lumb. Barry, can you say hi to everyone?

Dr. Barry Lumb (01:20):
Hi, everybody.

Dr. Teresa Chan (01:21):
So thank you very much for coming to chat with me, Barry. The MacPFD Spark Podcast team is excited to have you here as a guest. You're kinda well-known around these parts as someone who works within Hamilton Health Sciences, you've held some senior leadership role within the hospital, but can you tell me a little bit more about the job that you've just picked up more recently?

Dr. Barry Lumb (01:38):
Yeah, so this actually started a couple of years ago now, almost three, when HHS decided that they finally needed to move out of the Dark Ages and establish a highly functional electronic health record. We spent the first year trying to decide whether we should be actually doing an upgrade of our MEDITECH environment or whether we should move into a new even more robust electronic health record. And so, we came to the point where it was very clear that an academic institution of the size and complexity of the HHS really was such that the only vendor that could pull this off was Epic. And so, we finally got to that point sort of towards September of last year and then signed a contract with Epic in December to really start the project.

Dr. Teresa Chan (02:25):
Well, that sounds very exciting. So tell me a little about why EHRs are super important for us in healthcare? Like, just take us back to the basics there.

Dr. Barry Lumb (02:34):
Let's just think about what life is like without an EHR and the crazy business of paper and trying to figure out how to actually go about your daily tasks. And for those of us who've been doing this for years and years, we kind of figured it out, but it's incredibly unsafe, inefficient, time-consuming and at the end of the day, the thing that bothers me the most is, you can't get the information you need to really understand your patient and to make the right decisions. And it's what we call the single source of truth, but it's massive. And so, if Mrs. Brown was seen in a clinic yesterday, and she shows up tonight in your ED, you're gonna say, "Well, what did Lumb say yesterday?" And she'll say, "Well, he started me on a yellow pill." It's just crazy, you just can't really provide the care that you want. So this option and opportunity to have a single source of truth to know what the allergies are, to know if there's a predetermined care path, and to be able to do that between institutions, it's just a massive shift in how we go about care, and then there's the whole safety issue, which we can talk about as we go along.

Dr. Teresa Chan (03:46):
What you're saying is that, like having access to electronic health records is really about transparency, and then communication. In many ways, it's about linking data so that patients can get the care they need without redundancy, without waste in terms of re-doing things. I do know that at the very least, the whole region has ClinicalConnect and being able to access this that someone has a CT and another hospital in nearby area or labs, that's been really beneficial. So we don't repeat or that we have a baseline, right? So to me, those are really important aspects of my day-to-day job.

Dr. Barry Lumb (04:19):
Yeah, and ClinicalConnect for us has really evolved. Now, I think most of what I would have said it was very challenging and pretty clunky, now I use it every day, so it's another source of information, especially while we build these interoperability options within our system. So, for example, if Mrs. Smith was in Niagara yesterday for her CT, and ends up here, that information is available, but it's all part of that opportunity that the patient's journey is known to anybody is involved in the circle of care, and of course, there's all about the primary care relationship as well.

Dr. Teresa Chan (04:53):
Yeah, fair enough. So, tell me about what this all means in terms of how we could do better in the future, if we're moving towards an era of EHRs? Like, what do you first see as being the big benefits of moving to a big enterprise solution like Epic?

Dr. Barry Lumb (05:08):
I would say, let's maybe talk about a couple of things, one is safety, and in particular, medication safety, and the opportunity to actually know that a patient is getting the medication when they got it, and for you to be able to find out what their medications are without trying to flip through five different pieces of paper and see if nurse John signed off on their anti-hypertensive at the right time. So there's a huge opportunity for improved patient safety just by point of care, medication verification and so on. So that... I think that for me, on a quality in-patient safety issue is massive, and I hate to think how many medication errors we make in a year, but it's a lot. And then there's the communication between practitioners and between institutions, then we start talking about innovation and quality and research opportunities.

Dr. Teresa Chan (06:02):
That's very interesting, right? Because I think that at the very least, we probably all want our... How can I put it? We probably all want our data so that we can be better practitioners, 'cause I think that that's one of the big avenues we can go down is to better understand our own practice patterns and analytics, but that's not an inherent feature of most EHRs. I think we're gonna need to do some innovation and scholarship above and beyond, right?

Dr. Barry Lumb (06:26):
What I have learned in the Epic world is that the data and the information that's available and will evolve and become actually useful is absolutely staggering. So, if you start talking about lab utilization, pharmacy utilization, DI utilization. Does Dr. Lumb wanna know how he lines up against his peers? Is he doing the right thing in one domain or another? It's actually staggeringly powerful. And the number of dashboards and so on that can be generated is truly remarkable. So once you go live the first week, we're not gonna benefit from this, but six months, a year, two years out, it's gonna provide an enormous opportunity to really do some careful analysis about utilization and so on.

Dr. Teresa Chan (07:15):
Yeah, so the idea of kinda thinking about choosing wisely and all those other campaigns they're would be more useful if you have feedback about whether or not you chose wisely so I think that makes a lot of sense.

Dr. Barry Lumb (07:26):
Yeah. So fascinating. [chuckle] I literally just came off a call because one of our goals with our Epic launch is to be able to say that will be a level three Choosing Wisely site within six months of Go-Live, and just exactly that, how do we build those opportunities into the electronic record as we go about the implementation process now? And so it's a real opportunity to say, "Okay, this is really important to us, and ED wants to implement the following two pieces of the choosing wisely suite. Let's take that on, and figure out how to build that now so that it is part of our workflows and we do actually meet those goals".

Dr. Teresa Chan (08:09):
And so what do you think, let's say flash forward to the future in a couple of years, what's my life gonna look like as an emerge doc at a site that is Epic enabled? What do you think will be changing? What are the big things? I walk on a shift and then... Am I gonna have access to different records? What is it gonna feel like?

Dr. Barry Lumb (08:28):
It's going to be a complete game-changer, and Epic likes to talk about how we're gonna do a central nervous system transplant of how we go about our patient care. So first of all, you won't use paper, you most certainly will be able to use a handheld device of some kind if you choose to, you'll be able to do your work there, you will be able to electronically request a consultation, you'll be able to electronically through secure chat message me and say, "Mrs. Brown is a patient of yours, she's here in the ED, have you got five minutes?" And you'll be able to actually find me.

Dr. Barry Lumb (09:03):
You'll be able to know what happened to their care somewhere else, you'll be able to order tests and build your own workflows that work for how you do your work, so I'll just maybe expand on that a little bit. We build the basic system and we teach the docs how to work in the basic system but the real power is after that, the opportunity for physician groups or individual practitioners to personalize their world in Epic or in the electronic health record. So if Teresa's favorite antibiotic for community-acquired pneumonia is X, you can put that into your personal portions or areas within the record and you can order that in 15 seconds or less, but that depends on the practitioner digging in and wanting to take advantage of the real personalization parts of it and to really make their workflow better. Sorry, I'm going on a little bit.

Dr. Teresa Chan (10:05):
No, that's okay. It's just interesting to think about the future. I'm just pondering what that looks like. And I love the idea of the mobile app, that's gonna be a game-changer, I think. Like being able to pull your phone and message someone or get out the charge... Bring an extra charger for my phone, I think.

Dr. Barry Lumb (10:20):
Yeah, and you'll be able to... Both phone and tablet. Epic only works for iPad, in terms of tablet, and we all watch television and you see these guys walking around with their tablets and how cool it is, but it's real and you can do all of that. And you will also literally be able to dictate on your tablet. So we'll have front-end voice recognition that Go-Live, it almost certainly will be nuance, and if you want to dictate a short note directly into the record, you will be able to do that in like three taps, And you will be taken to the spot in the record and it will be instantly transcribed onto the chart.

Dr. Teresa Chan (11:00):
I love the detail of even knowing how many taps is gonna be 'cause the clicks or the taps, that's gonna be... Everybody knows. If you make someone click too many times, everything falls apart, the world falls apart and so making sure that it's user-friendly and built for the purpose of what we're trying to do, I think that's gonna be a real game-changer. Because I think a big part of why people have been reticent to change over to HRS has been the inefficiencies. We read the big American studies about how doctors are dying of clicking and I think that we worry that's gonna be the future when we move to EHR.

Dr. Teresa Chan (11:33):
But I think a big part of their system that's different from ours is the multi peer component, right? And whereas the thing for us because of the single peer system. Some of the backend features that Epic is really about which is the billing component are mute because that's not really what we're gonna be using it for. So I think there's a difference for people who agree, I do know that the

literature from the US might not generalize to Canada. We'll need our own literature base so those of you who are super nerdy and wanna do more stuff... I'm talking to you on Shawn Mondoux, it might be interesting to see what the experience is in the Canadian system.

Dr. Barry Lumb (12:08):
Yeah, well Shawn's probably a good example of this 'cause he started in the chaos of HHS and now lives largely in the Epic world at Joe's. But this pajama time conversation that they talked about with Epic really is a US phenomenon, note sizes and efficiency and so on is actually real once you get out of that world.

Dr. Teresa Chan (12:28):
I think a big part of it truly is that it's gonna be a big difference, whereas the doctor's notes are being written right now, the nurse's notes are online right now in our system and unifying the source so that we have a place to see everyone else's notes, I think that'll be a game-changer as well. Eligible, that'd be a big plus.

Dr. Barry Lumb (12:45):
Oh, my goodness, for those of you who don't know, I spent a fair number of years doing physician leadership stuff and one of my biggest challenges would be a patient complaint and trying to figure out what was actually said in the record. It's just a massive issue.

Dr. Teresa Chan (13:01):
Yeah, totally. Alright, well, thank you very much for taking the time to speak with me about this. I think it's really exciting to think about what this looks like in the future, and maybe closer to... And maybe shortly after ruled out, we can get you back to talk about some of that and choosing wise stuff and how it might come to manifest.

Dr. Barry Lumb (13:18):
I really appreciate it. Maybe I'll just make a plea, if you don't mind for 10 seconds.

Dr. Teresa Chan (13:22):
Oh, go for it. Yeah, yeah.

Dr. Barry Lumb (13:23):
And many people will be sick of me saying this or hearing this for me, but my comment about committing to the system and taking the time to get properly trained and to personalize is absolutely essential, there's really good data that physician satisfaction two months post Go-Live is all dependent on the time they commit to training and personalization pre Go-Live, so please take the opportunity either to get involved in the work groups and to help us build the system, but when it comes time to training, we're gonna make you train, but take the opportunity to really make it your own.

Dr. Teresa Chan (14:00):
Yeah, I think so. I think, putting in your templates the way that you'd like to see things, think things through, making it easy, that'll be really important for the workflows. I would say for the residents, especially, I think some of them already have lived experiences over at Dove's. I actually went to all the dovetail training earlier on, just to get a better sense of just helping me work there since then, because I've got 17 other jobs, but I do think that it will be nice to have other groups that have been

through this before to look to them for some guidance, and leadership, and help as well, so looking forward to kind of helping foster that collaborative spirit across all the organizations as well in town, and then hopefully as our community sites come on board, if they're choosing to go with that bag or anything like that. Hopefully, we can pay it forward as well.

Dr. Barry Lumb (14:42):
Terrific, thank you.

Dr. Teresa Chan (14:43):
Alright, well, thank you.

Speaker 1 (14:46):
Wow, that was a really awesome first segment of the MacPFD Spark podcast, and now onto our second segment.

Dr. Teresa Chan (15:00):
Hello everyone, this is Theresa Chen and I'm here with one of our MacPFD team leads. Dr. Michelle Howard is one of our researchers here in the Department of Family Medicine, she is an Associate prof, and she's one of my colleagues in many ways. First she is the lead of our scholarly practice team, so she's been leading us through some development around the core scholarly pillar of, how do we make ourselves better at convictions and carve out that scholarly practice, 'cause we wanna make sure that you feel supported as listeners, and as participants in our community to engage in scholarship. And that's kind of one of the many things that Michelle does.

Dr. Teresa Chan (15:36):
She is also an award-winning and Grant magnet type researcher who has been doing some really amazing work within the department of family medicine, so she's a full-time researcher within that department and does a lot of really cool stuff with the Department of family medicine. She is also a colleague of mine in the health sciences education Master's program, where she is the head, I think... Or the coordinator, I guess, it's called, of the program evaluation course. Obviously, with all these things in mind, I wanted to bring Michelle in to have a conversation with me about program evaluation. What is it, and why is it important? So Michelle, can you say Hi to everyone?

Dr. Michelle Howard (16:14):
Hi, Teresa, thanks for bringing me onto this podcast.

Dr. Teresa Chan (16:17):
Well, thank you for taking the time to speak with me. So why don't I just kick it off with an easy low ball question, what is program evaluation?

Dr. Michelle Howard (16:24):
So there are some textbook definitions which I have on hand, if you want to refer to, but generally, we're trying to answer the question about our program, whatever that is. Does it work, and how does it work? So it's really about producing useful knowledge to answer questions that stakeholders have, kind of in the here and now, about how are we doing, and that program can be a health system sort of program initiative, education program. In our context, of course, we often talk about the health professions education programs. It's answering those questions of does it work, and how does it work? For whom does it work? And things like that.

Dr. Teresa Chan (17:00):
Excellent, so to me, that has the broad amount of application within all of health sciences, education, research, everything that we do. There's always programs that were running, whether it's a class, so program evaluations of an undergrad class that you run, all the way through to accreditation of a medical school, that's a program evaluation, to let's say, clinical pathway, that you've implemented that involves multiple stakeholders, and understanding whether that program you've just started actually works to serve the need of the population that you're trying to serve. Is that correct?

Dr. Michelle Howard (17:30):
All of those could be considered from a program evaluation lens. It can be very comprehensive, like you mentioned, like the entire faculty's program, or a very large program like the medical school, how do we evaluate how that's working, and it could be something smaller, like you said, as just a particular course. So it's really determined by the needs of the people doing the evaluation and what they need to know. Along the way, you tailor the methods and the outcomes, and the things that you'd like to measure, and the things that would define success according to those needs can apply to lots of different scopes of programs in terms of what you need to know, you need to find out.

Dr. Teresa Chan (18:06):
Yeah, I think of it as a very practical, I guess, some would say, pragmatic approach to just understanding the world, and it sounds like you usually have some sort of artifact or some sort of implementation, something at the core of it, that you're trying to understand whether or not it works. And I think that this overlap, so the other kinds of scholarship, in my mind, it overlaps with what some would consider quality improvement, science and scholarship. I think it probably can be seen by some as knowledge translation, if you're coming in from more of a bench research point of view.

Dr. Teresa Chan (18:35):
The idea of actually taking a drug all the way to market and implementing a whole program around the anticoagulation of a certain some set of individuals to make sure that they don't die of thrombosis with their disease. That could be a program you set up, and that does have some level of integration of the science around new drug, for instance, but it might actually be more about the whole system of care, and so I see shades of overlap with health services research and of course, obviously there's a lot of shades of overlap with medical education because we often do implement programs in educational circles, and even I would say more broadly, health sciences education, because you've got all the different programs and all the different schools and as well, residency programs or internships or fellowships. I mean we're running programs all the time as an educational institution.

Dr. Michelle Howard (19:27):
Yeah, you've touched on a lot of things there, so where to pick up? It's pragmatic for sure. That's kind of one of the defining features, and it's looking at how things work pragmatically in the real world 'cause that's where programs are being implemented, so it's always looking at the effects of something in that given social situation, whereas in... You also picked up on the idea of comparing to other types of scholarly activity like research, where you are trying to actually hold constant some of those noisy real world social issues and you're trying to narrow down to testing a hypothesis 'cause you're trying to actually come up with factual knowledge, add to a base of knowledge, does A work

better than B, work better than C, and then based on that very clean controlled experimental environment and question that gets answered, hypothesis accepted or rejected, then you go forward and then you might put something into a program in the future, because it's evidence-based from research.

Dr. Michelle Howard (20:19):
But the program evaluation is a little bit more real world messy, and you want that messy kind of because you are trying to see how it's going in your own context. So often, program evaluation is done in a very local way, kind of like quality improvement too, understanding how things work in a given context with a given social group and structures in the organization, whereas research, we kinda wanna do the opposite, we wanna have a very narrow sample of participants, but we want a big sample, but we want them very narrowly defined in terms of their characteristics, but in program evaluation, we want the whole range of variability of the real world and people and processes, and we want to understand often what the processes are that are leading to the successful outcomes. So that's something that's being often discovered in program evaluation and that can then inform the usefulness of the knowledge for those evaluating it and who might be changing the program.

Dr. Teresa Chan (21:12):
Yeah, I like that and the way that you're explaining it so totally resonates with me, right? Because depending on your vantage points around... Let's say, a new piece of knowledge, right? You could be some of the generous you knowledge by the act of a scholarship of discovery. So I will just, for you, describe a whole bunch of different kinds of scholarship, and one of the scholarship subtypes that he talks about is the scholarship of discovery, where you're trying to find something out new in the world, and that would be often, it can be quantitative, it can be qualitative, but we are trying to find something new in the world, not necessarily figuring out how it fits into the world yet. It's kind of like getting a man to the moon was not quite discovery, but there was a lot of science discovers needed to go along the way to get them there.

Dr. Teresa Chan (21:49):
And so the idea of, "Does this kind of rocket ship actually get through the atmosphere enough to get to space and create an orbit?" would be like an application of work that someone might do around zero G environments, right? And so the idea of... There's always has been this tension to me, in my mind, between those who are more pure scientists that discover work and then those who apply the work and then actually see if it actually plays out in the real world. But I think what I'm hearing from you is that when we deploy things into the real world, we also then have to almost engage in in a different way to see if actually it can be implemented with some level of fidelity with what was in our head. So let's say you have the most beautiful curricular design in the world, but as we all know, you give it to any set of students and learners, they will probably find all the vulnerabilities and exploit every single thing that you can do wrong. They will find a way to not understand this document or not quite get what you were meant in, in that trip, and then by deploying it into that real world setting, now you'll get a better sense of what doesn't work or what does work for different, for instance, subtypes or subgroups, is that correct?

Dr. Michelle Howard (22:54):
Great analogy of sending someone to the moon to, how all the different pieces of the science and the original knowledge discovery would go into putting together a complex process and implementing it in the real world. And I think of program evaluation kind of along the same lines that you were alluding to. I think it's more like an implementation science parallel to... It's like in health

services research, we know this phenomenon very well, that it takes years and years and years for good strong evidence to get into practice and actually changing people's behaviors and changing systems, just because of all the... The different factors that come into play in real world practice, and so there's a whole science for implementation of understanding what are the context, challenges, barriers, enablers that have to then be implemented and tailored to get that evidence into practice.

Dr. Michelle Howard (23:42):
Like you made the analogy of the students that will interpret things different ways, and program evaluation can also be thought of as more like the real world testing of evidence and practice. Education can be kind of thought of as the complex intervention analogy, I think from health services research, like the Medical Research Council in the UK have their framework to help researchers think about how to get this actual basic knowledge and science into practice. The iterations you would have to go through in trying out feasibility and adapting it to context, and so there's a whole science of that too, which I think is very analogous to program evaluation.

Dr. Teresa Chan (24:14):
Definitely overlaps. There's definite overlaps of what we consider in Canada are big CIHR granting agency calls at knowledge translation. They have the knowledge to actions framework, I guess, that is out there. Educators have other frameworks like the six steps of curriculum development that help you take knowledge that's out there and turn it into a curriculum, for instance. You'll also have frameworks like the one that you just mentioned from the UK, that really kind of focusing on something that we would consider implementation science, taking something that you've worked really hard at, discerning into the world and then translating it into creating something useful out of it that can benefit society. And I think it's really exciting when we start to see how all of these things coalesce, and the pattern that I see, honestly, is that we'd like to get out there and do stuff, but then we should probably be scholarly about whether or not it works. And I think that it's... That's at the core of it, the simplest thing I can think of when I have to explain to someone, what is program evaluation? It's literally, well, I gotta evaluate if the program works, and if so, how? And if not, how not?

[chuckle]

Dr. Teresa Chan (25:16):
It seems so simple, and yet, it's actually so methodologically rigorous, it requires so much work and care and design, just like any other form of scholarship, and it's not to be sloughed off as something that can be done off the side of your desk, but that it has its own disciplinary and important kinda frameworks and rigor that allows to kind of get you to give us a glimpse of what that all might look like.

Dr. Michelle Howard (25:40):
I agree, totally, that it certainly should be rigorous. And I guess that is the difference between a formal program evaluation versus just some kind of anecdotal information and hunches and things, that we can borrow a lot from the rigor of various research methods. You could use, depending on what's feasible in a given context, you can use experimental methods or, often, it's not possible to do randomized trials in education environments, although sometimes it may be, but there can be other ways of having comparative groups to compare exposure to a certain education program or way of doing things versus the usual way of doing things. And we can do measures before and after something's been changed or implemented, we can look at a series of time points. We can take all

those methods that come from the sciences and apply them to programs.

Dr. Teresa Chan (26:27):
Yeah. That's great. I think that most people who are listening will probably have been tortured with a program evaluation survey at some point, right?

Dr. Michelle Howard (26:33):
Right. [chuckle]

Dr. Teresa Chan (26:34):
Surveys are the dominant framework for how we sometimes gather information. But what you're telling me is that there's a lot of nuance and a lot more world out there to do a really great evaluation of something. And so off the top of my head, you can chime in, obviously, to add more, but surveys, yes. Everyone's done a core survey before, everyone's been given probably from last MacPFD, rate this session. It's like the Yelp. It's like the email that you probably don't open and don't submit an answer to, [chuckle] unless you had extreme to say.

Dr. Teresa Chan (27:05):
But it's like when you go ahead and ride an Uber, they ask you to rate it. That is a form of program evaluation for your Uber driver, and that is the simplest, I think to me, the simplest form of what you could do. I think then there are more complex program evaluations that are looking at maybe outcomes-based framework, and experience similar to something called Kirkpatrick, which I think is for industry where it's looking at different levels of outcomes. And more specifically, around education outcomes. Are there other frameworks that we could be exploring? And maybe we can talk about one or two of them so that people can get a flavor of it?

Dr. Michelle Howard (27:38):
Kirkpatrick's is a very well-known one for outcomes framework for training sorts of programs. Another one that we see in the literature is something called context, input, product... Process, product, CIPP, which takes into account more explicitly how the context might influence those latter pieces of how the program gets input or implemented and what products come out of it and what processes are used to get there. There's realist evaluation, method that comes from sociology that's been used in education, because it really takes into account some of the things we were talking about earlier about how different groups of people might respond and react, and how different organizations might do things. And it takes into account those relationships between those contextual pieces to the mechanism of learning, to the outcomes, then, that are produced. It makes that more explicit.

Dr. Teresa Chan (28:29):
I find the realist evaluation framework very fascinating, because it takes in the CMO framework. So let's go through that. C stands for, Michelle?

Dr. Michelle Howard (28:36):
Context.

Dr. Teresa Chan (28:36):
Okay. M stands for?

Dr. Michelle Howard (28:38):
Mechanism.

Dr. Teresa Chan (28:39):
And O stands for?

Dr. Michelle Howard (28:41):
Outcome.

Dr. Teresa Chan (28:41):
Okay. So the idea would be that the context is linked to kind of the situation in which you deploy the program and individuals who are in their context when they come into a program. There's mechanisms that the program actually has. For instance, you have a webinar or asynchronous chat or a podcast. And then you would actually run people through those things, and then you'd look at the outcomes that may have. So for instance, an example of a realist evaluation of, let's say, the program for faculty development, is that we have all of these different mechanisms that we use to reach people, but every faculty member comes in with their own context. And so some of them are like yourself and do research full-time and maybe are mainly at home right now, starving for maybe a little bit more connection.

Dr. Teresa Chan (29:22):
And so you might come into one of our webinars that's more interactive-based, and then you might have an outcome of meeting some new friends you didn't know before. And each of those things would then be linked. Whereas someone who's a busy mom of seven who doesn't have time to slow down might pop in one of our podcast episodes, like this one maybe, and listen while driving the kids around to all the activities that they still somehow are miraculously able to do during COVID. And then their outcome might be that they still got a bit of learning underneath all the yelling and screaming and the tug of war that's going on in the back seat of the car.

Dr. Teresa Chan (29:56):
And so that would be an example of a realist framework, which acknowledges that both you and this other fictional character that has 17 children, unfortunately, Maria von Trapp, let's call her, would co-exist in the same world, but actually don't live in the same world at all, but may interact with your program in various ways that would then yield different outcomes.

Dr. Michelle Howard (30:17):
Yeah. That's a great example. And the nice thing about this model, also, is it allows for the more emergent unexpected ways that mechanisms lead to outcomes. And I think that's often the way it's applied that sometimes there are... Probably more than sometimes, maybe more often than not there are really unexpected emergent things that come out of programs in those interactions between different different people and contexts. And so the mechanism might even be something that is newly discovered like, Oh, we didn't expect this outcome, or that this mechanism would trigger this outcome from the way we did things here. So that is another helpful way for such complex interventions like education...

Dr. Teresa Chan (30:55):
Or health services, right? So...

Dr. Michelle Howard (30:57):
Yeah.

Dr. Teresa Chan (30:57):
If you implement a program, let's say, that's new for a psychiatric program that's my next day psychiatric service to offload the emergency department and prevent return visits, but maybe the waiting room is set up in such a way that people just really get to know each other, and there's an unintended consequence that they become each other's social network. And then, actually, the wellness of the group actually gets better, because you had an unexpected friend that was also a need, and you connected, and this is how this program might actually have a side benefit, even though it wasn't the intended...

Dr. Teresa Chan (31:31):
A meeting with a social worker, a meeting with a multidisciplinary team, you might actually have a side side-effect, or unintended outcome that would be a surprise that you would have to then account for somehow in a more, let's say, positivist or quantitative way. But if you use a method like realist evaluation, you might be able to just find out through interviews and focus groups like, "Well, actually, the reason why I really like group is actually not the group, but rather, is that I get to see my friends that I've met, and we go out for outings and stuff like that now, and I have a social network that I didn't have before." And you're like, "Oh, that's not what we thought you were getting out of this." And if you just asked a survey, you would not get those response.

Dr. Michelle Howard (32:11):
Yeah. Exactly. 'Cause the survey would just be about, How did you like the group? Rate it from 1-7. [chuckle] Excellent to pour all those things and...

Dr. Teresa Chan (32:17):
Exactly.

Dr. Michelle Howard (32:18):
Often the survey doesn't really dig into those emergent kind of outcomes.

Dr. Teresa Chan (32:23):
Yeah, take it back to the Uber driver. I met an Uber driver who is a burgeoning chef one time, and I followed him on Instagram, and now I'm like, "I wanna go check out his restaurant when he launches it when COVID is over," and that would be an unintended consequence that the Uber driver app where I had to rate him [chuckle] on a scale. I gave him a five, right? He was sly, he gets five stars, but you can't measure that non-tangible... Well, he got an Instagram follower out of me, and then I got to a line to maybe someone who's gonna do really cool stuff on the food scene in Toronto in a little while, right? And so you can't figure that out without allowing maybe a different data collection technique. And so I would think that with the real industry, it's what you're using like what focus groups or interviews to kind of get to the bottom of things a little bit more qualitative in its state.

Dr. Michelle Howard (33:10):
Yeah, I think that's generally true from what... In my take of literatures so...

Dr. Teresa Chan (33:14):
Yeah, I think you can sometimes mix it with other things but it's a little bit more qualitative, it's a bit

more trying to find out the truth by gathering people's opinions and agreeing as well.

Dr. Michelle Howard (33:23):
The other one that's reached my mind is when you're talking about unintended consequences, like something called the logic model, and I've seen that, I don't know, I'm gonna be embarrassed, but I'm gonna put myself out there and just kinda say you can correct me, but from what I understand, the logic model is simply is like, "I created a program and I wanted to do this, and then I'm gonna look and see if they did it [chuckle] and measure whether something is an intended or unintended consequence of my program." Is that kind of loosely what it is?

Dr. Michelle Howard (33:48):
Yeah, it's kind of as the name implies, I guess, and it can be used in various ways too, but generally... Yeah, you're making explicit your theory, your underlying program, figuring out your logic, how you think that the program pieces are going to lead to those outcomes by mapping it all the way along. So what are you putting into the program, what are the outputs that you think are going to happen, outputs being kind of the intermediate things like number of teaching sessions, number of learning opportunities, those kinds of things that are actually what's going on in the mechanisms, so to speak, and then making an assumption because maybe you already have some theory underlying it or some previous experience that it's, that it's gonna produce these outcomes and we're gonna count these sort of outcomes and see if that actually plays out. So it tends to be something used a bit more when it's more clearly accepted what the theory and the process and everything along that chain of information is going to be, and often you can think about short-term, intermediate, long-term goals.

Dr. Michelle Howard (34:43):
So short-term might be test results, medium-term outcomes might be changes in practice of learners, say, for using the example of health professional education, and long-term outcomes might be changing the system or having a more compassionate system or something like that. Like, whatever is kind of the bigger umbrella, overarching goal of the whole initiative, and it's like the name implies, you lay out your logic in advance. But you can also do things to capture emergent outcomes and their solution, there's really nothing that would stop that but you just have to be as attuned to it and looking for it.

Dr. Teresa Chan (35:19):
Yeah, it's a little bit more arcane to kind of like double down on placing some safe bets as to, "This is the program I've got and I think these are the intended outcomes," and then you go and see if long-term, short-term, medium-term kind of outcomes might be able to achieve it, and then you might also then measure if there's an unintended consequence that pops up, you can describe it and try to figure out how often it's happening. Again, it's kind of a more of a mixed methodology, but probably more kind of on that quantitative side of things like, did going through this writing boot camp increase in number of publications that the veterinary faculty might achieve at the end of six months after the writing boot camp, for instance? Might be the kind of output.

Dr. Michelle Howard (35:57):
Also, it's a very attuned to processes and inputs too, so if you're looking at really wanting to understand the resource implications of how much it takes to get to the outcomes, I think it can be useful for that too, if that's a focus of the question.

Dr. Teresa Chan (36:10):
Alright, well, it sounds like there's a whole world in there for program evaluation, and so I'm so glad there are scientists like yourself who are dedicating a good part of your scholarship to doing this kind of work. If people wanted to read more, do you have any suggestions on where they could start and dive in a little bit deeper, let's say they wanted to carve out a niche, they do regularly implement programs in their clinical environment and or their educational environment, and they're like, "Huh, there seems like there's something that's more rigorous here that I could go into. I can go beyond a survey, I can go beyond just talking to people after the course and really be rigorous around it." How would someone go about that? What do you think?

Dr. Michelle Howard (36:49):
There's some good texts written. One that I have referred to is... Michael Patton has written texts on evaluation.

Dr. Teresa Chan (36:57):
I really enjoyed Ray Pelson and...

Dr. Michelle Howard (37:00):
Pelson and Tilley for the realist.

Dr. Teresa Chan (37:01):
They have several really, really high level books, but they have really good anecdotes, so reads well like a business textbook, so it's like, "Here's a concept, and then let me tell you three anecdotes where we use it this way," and so I thought it was really interesting, and they kind of explained how... They do actually have a presence in Canada and had studied some really interesting programs out West and inside of Fraser and things like that, so it was kind of interesting to see how they did all the work that they did.

Dr. Teresa Chan (37:27):
And I think a big part of it might be to start reading some of the literature to see how people do program evaluation. So just hitting Google Scholar [chuckle] to be honest, it just, in whatever domain you're interested in, it might be that you're like, "I'm interested in smoking cessation". Type in the word smoking cessation and program evaluation, and see if there are people who have done the work before, and you'll be surprised there's a lot of really cool kind of programs that are out there, and if you're an educator, there's lots of program evaluation research and scholarship that's out there as well. And so that's really, I think, to be honest, like a great place to start this as some of the papers that are out there that you could then learn how to mimic at some point in the work that you do.

Dr. Michelle Howard (38:05):
Certain papers came to mind, I guess, more as a Series or a Sweet or the AMEE, there's a AMEE, A-M-E-E publications that really address program evaluation from the medical education perspective, and if you don't wanna have to go through a whole textbook, you're not a textbook person and you like more of the shorter snappier papers, those are some of the foremost ones in the field, and Rachel Aloi comes to mind as in Canada is doing lots of program evaluation on curriculum, advanced learning...

Dr. Teresa Chan (38:35):

For sure. She's a center director kinda out west in Calgary and so she does a lot of... And she helped implement and then measure and understand how the Northern Ontario School of Medicine first founded and then was successful. Since then, she has moved on to the University of Calgary, but Rachel is definitely a force to be reckoned with and is quite thoughtful and exciting to read, so definitely would highly recommend her work.

Dr. Teresa Chan (38:57):
So we've got some stuff for the newbies, and for those of us who are beyond newbies, maybe you do implement programs, maybe you do have novel innovations that you deploy clinically, or educationally, or even in your research work, have these programs that you create and you then measure. Let's talk a little bit about the scholarship of all of this, because I think, again, you're the lead for the scholarly practice group in MacPFD, so what's your take on what you should do with this after you've evaluated your program?

Dr. Michelle Howard (39:27):
Good question. First thing, of course, academics always think of publishing and getting your data analyzed and getting things written and out there, that's one way of knowledge exchange.

Dr. Teresa Chan (39:36):
So let's present them at... Before you do that big work maybe. I know when I first got started, I presented at conferences and stuff. I know that right now it's a little bit harder with the pandemic, but I know that you can somewhat abstract to virtual conferences and maybe have a couple of minutes here and there to kinda share your work with the world.

Dr. Michelle Howard (39:53):
Conferences are great, not just in that you write a 250 word abstract to do a Power Point or whatever, but really the value is... We all know and probably are missing right now in our current circumstances, is just the people that will stick up their hand in that room at the end of your 10 minutes and ask you a really probing question. And then you think about, "Oh, that's a point I have to make in my next talk, or that wasn't clear, or I didn't convey that quite the right way, or this is something else to investigate, this is how the audience is going to react", and then those people that come up and tap you on the shoulder after, or you're walking through the posters and you see someone doing something very similar and you get new perspectives and meet up with new people, or... We're thinking the same way.

Dr. Teresa Chan (40:34):
Yeah, so that's a great idea, just walking around and see who else is doing cool stuff like you are, in your domain. Conferences, I think, are an avenue for that. And at some point, we will go back to being able to have networking conferences, but until then, virtual conferences. So it won't be a hand in the Zoom, it'll probably be a hand in the Zoom. And so I'll ask you a pointed question that might help you connect some dots and get people involved, so I think that's definitely one take on things. Now, in terms of the other perspectives then, you said something about publishing and I thought I'll cycle back to it. And so when you're publishing program evaluation work, are you publishing it as research or as program evaluation? Because I do know that the Tri Council policy statement actually explicitly says, "You don't need to... A course eval is a classic example or a survey at the end of a course, let's say, is not considered research." And so how do you go about navigating, is this research, is it not, kind of paradigm?

Dr. Michelle Howard (41:28):
Yeah, it's a great question and something to think about at the front end, well before you're even starting but yeah, everyone, I think, at the early stage of this idea that they're working on of evaluating something is asking like, "Okay, do we need research ethics approval, or do we need some other process? And really the question comes down to, like you said, the Tri Council's definition of research. Is it research or is it quality improvement or evaluation? Program evaluation type work.

Dr. Michelle Howard (41:54):
So you may not need full research ethics board approval if your intent is program evaluation, quality improvement in your local jurisdiction. So one should always check, of course, with their research ethics board and explain what they're planning to do and have that conversation and just make sure that they know which way to go with that, if a waiver is granted or not. Of course, always taking into consideration the proper ethical procedures of doing the inquiry, whatever way it is if it's research, or QI evaluation, still with thinking about confidentiality, and privacy, and voluntarism, and all those things, but you may not need a full research ethics approval to do some of this work.

Dr. Teresa Chan (42:35):
I try to encourage my trainees when they apprentice with me on program evaluation work, is that just because it's not considered research and governed by the same bureaucratic structure doesn't mean that you can't apply the same rigor to your thinking. The rigor to your writing when you're writing up or protocol, so you have a plan on what you're doing. And it doesn't mean that you can suddenly be abusive, dismissive, misogynistic, sexist, racist, all those things in what you're doing, because that's not the point of it, but rather you are beholden to checking your program to see if it works.

Dr. Teresa Chan (43:08):
And that program is gonna benefit from the knowledge that you're doing it, so your primary focus has to be to say, "Okay, I can publish as a side effect of this. But at the end of the day, I've got this program, I want to know if it works, and then I wanna see if I can make it better, or see if I should decide to cut it because it's not good enough, or see if we should re-allocate the resources differently to make it happen." And that's really where kind of, in my mind, program evaluation situates itself. Is that it's beholden to the program, not in the pursuit of new knowledge, but rather that to help you guide what you're gonna do with the program next.

Dr. Teresa Chan (43:38):
And it could be, is it on the chopping block? Or is it being funded more? Is it that you need three versions of it, so that you could run it three times a year? Or is it something that you should expand and let everyone know about, and that's where the scholarly part of it comes in? It's not research, but it's scholarly dissemination of this really great template for how you conquered a health issue or an education issue, so that other people can say, "Hey, that's a great idea that Michelle had and... Oh my gosh, I'd love to have that same implementation, maybe it was almost like adaptations in my local program, so that we could make it better. So we can improve the education or health of our clients in our jurisdiction."

Dr. Teresa Chan (44:23):
And so examples of this might be a really great reading program that gets spread across the country,

because one site shared it with everyone to say, "This is what we did for health literacy, and we've got all the templates and everything up there is disseminated in a scholarly way. We've written a paper about the outcomes of this and evaluated it, so you can see that when we deploy it, at least with these elements, it did seem to work". And then people go, "Hey, cool. I might try it in my city, I might try it in my country." And then these kind of great innovations then can spread and improve health care or education all around the world.

Dr. Michelle Howard (44:55):
Yeah, absolutely. To circle back to the beginning of our conversation about the real purpose of program evaluation is to inform your stakeholders, or if you are the stakeholder yourself, [chuckle] you're trying to learn if... Exactly those questions. What do we do with this information and what's useful to us in decision making right here and now? And sometimes there's a bigger lesson that can be shared with others, often there is.

Dr. Teresa Chan (45:19):
Alright, well, that's really cool. We've kinda covered a fairly complex topic in a fairly efficient kind of time. So thank you so much for your thoughtfulness and your generosity of time, and I'm really excited to learn some more stuff with you.

Dr. Michelle Howard (45:33):
Thank you, and it was great talking to you. And thank you for your time and for putting this topic on the radar.

Dr. Teresa Chan (45:38):
Bye everyone.

Dr. Michelle Howard (45:39):
Bye everyone.

[music]

Dt. Teresa Chan (45:43):
Thank you so much for tuning into the MacPFD Spark podcast. 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, so until next time, this is MacPFD Spark signing off.