### Season 1 – Episode 5 – Dr. Heather Baltzer

**Transcript** 

### **CHRISTIAN COTÉ:**

This is behind the breakthrough the podcast all about groundbreaking medical research and the people behind it at Toronto's university health network, Canada's largest research and teaching hospital.

I'm your host, Christian cote, and joining us on the podcast today, Dr. Heather Baltzer, a hand and wrist surgeon at Toronto Western Hospital, where she's also director of the hand program and an award-winning clinician investigator at UHN's Krembil research institute. Dr. Baltzer is pioneering research to improve the treatment and outcomes of patients who suffer hand trauma. Dr. Heather Baltzer, welcome to behind the breakthrough.

#### DR. HEATHER BALTZER:

Thank you, Christian. It's great to be here.

### **CHRISTIAN COTÉ:**

You joined UHN as a hand and wrist surgeon in 2015 and I understand from the outset about half your patients were people suffering hand trauma. What are these injuries and what's the scale ofthis injury in Canada?

### DR. HEATHER BALTZER:

So, these injuries are really sort of an umbrella type of diagnosis where you could have anything ranging from a simple injury involving the nail bed, which is the fingernail, to having an amputation of a finger or a hand. So, it's a pretty broad spectrum. But if you think about your hand and arm, the relevant anatomy, which is tendons, nerves, muscles, everything is quite superficial. So, it doesn't take much in terms of acut to your hand or your arm to actually injure something that's very important from a structure perspective. So, it can be anything from a broken bone, to a cut tendon, to a cut nerve, or a combination of any of those things and it really leads to a functional deficit for the hand and upper extremity.

### CHRISTIAN COTÉ:

What else is known about this patient population? What is in the research that you discerned when you first started in this practice?

### DR. HEATHER BALTZER:

So, when I first started in this practice, i was surprised when i looked back in my own practice and realized that handtrauma comprised such a large proportion of the patients that I was

Taking care of. During my training, i sort of developed an interest in health economics and you know, got me thinking about if someone can't usetheir hand, how does that affect their economic situation and how does that affect the economic situation of the region if people are out of work,et cetera?

So, that was something that I was sort of determined to start looking into and it kind of led to a bigger question of what is the actual enormity of this problem? And I don't think anyone has sort of clarified that in Canada. No one had really looked into the epidemiology of hand trauma in Canada and the sort of, longer term implications of this type of diagnosis.

### CHRISTIAN COTÉ:

And the epidemiology of the problem, can you explain whatthat means?

#### DR. HEATHER BALTZER:

so, that means understanding the number of people that are affected by this type of injury, what that population looks like from a demographic perspective in terms of the mix of men and women, agemix, what their socioeconomic status is, and how this changes over time. **CHRISTIAN COTÉ:** 

Not knowing the epidemiology, how does that affect careand treatment?

### DR. HEATHER BALTZER:

I think that not knowing the epidemiology doesn't allow health care policymakers to understand how they need to allocateresources. So, if something is a very common problem, which we've discovered that this is, then it's hard to allocate the appropriate resources. And so, in working with population level data in Ontario, what we actually identified is that these type of injuries are the most common reason that someone would present to the emergency department.

### CHRISTIAN COTÉ:

Really

### DR. HEATHER BALTZER:

It is a pretty important thing to know and recognize.

### **CHRISTIAN COTÉ:**

This gap in knowledge then, I understand, became the inspiration for your research. So, maybe give us an overview of what youset out to do, what you set out to understand?

### DR. HEATHER BALTZER:

so, going back to my interest in health economics, what I wanted to understand was you know, what are the long-term costsassociated with this. So, cost to the health care system and eventually cost to patients. But when looking in the literature and seeing what other people had studied, there had been some study in different countries. So, in a population level in the United States, in one area of the United States, the researchers have looked at the acute care costs

Associated with hand trauma. And then in another study in the Netherlands, something similar was done.

However, nothing sort of on a population level for an entire region, so like Ontario, where you're looking at all patients because everyone is sort of in a universally insured health care system, but also looking at how these costs play out over time. Because once you're familiar with someone who has had a hand trauma, particularly a more severe hand trauma, you're aware that these patients are complex, and they are undergoing treatment for a number of years.

So, they may have their initial injury, but subsequent to that, they likely will need further surgeries, they need ongoing therapy, and then there can be other implications from the injury, including mental health diagnoses that sort of come up over the course of their treatment. Because you can imagine if you had a very severe injury to your hand, that could be something that is quite traumatic for you in the long term.

### CHRISTIAN COTÉ:

And as you are investigating the economic implications of this hand trauma, this took you into, I guess, a deeper dive into the profile of the patient itself, correct?

#### DR. HEATHER BALTZER:

Correct. Yeah. So, what we learned is that first of all,it was a very large cohort of patients that were presenting to the emergency department.

### CHRISTIAN COTÉ:

What are we talking about, do you know?

### DR. HEATHER BALTZER:

Over the course of a 10 year period, it was about twopoint one million people or episodes of hand trauma.

### CHRISTIAN COTÉ:

Wow!

#### DR. HEATHER BALTZER:

So, it's a very common issue. I would consider it a public health issue that is sort of under recognized. And when we looked at the demographics of these patients, it's really a male dominant type oftrauma. So about sixty five percent of the patients were male and males tend to be younger when they had their hand traumas, whereas females tended to be older when they had their hand traumas.

So, the other thing we did was we looked at the trajectory of the volumesof these types of injuries over the course of a 10 year period and found that overall hand trauma is pretty stable in the province of Ontario. But by gender, when we broke it down in men, it appeared to be going down slightly. But in women, the trajectory appeared to be going up slightly,

Indicating that for whatever reason, there are more women that are sustaining hand trauma now than there were approximately 10 years ago.

#### CHRISTIAN COTÉ:

I'm curious what this said to you in terms of, you know, formales it was younger males. I'm assuming that would be because of the workplace.

### DR. HEATHER BALTZER:

Yes, I believe so. In fact, when we were able to look at the amount of employment by industry, specifically manufacturing, whereyou would see more hand traumas, there was a direct correlation or a significant correlation between the number of individuals employed in Ontario by manufacturing jobs and those sustaining hand trauma when stratified by sex.

So, in men that was correlated, but in women that was not correlated. But I think what's happening is a very different situation among the women is that we are seeing a rise in our aging population in Ontario. And so that is sort of showing through in the older female category, because this is the demographic of women that are having a higher incidence of hand trauma compared to younger women.

### **CHRISTIAN COTÉ:**

In terms of the results that your research started touncover, was there anything that surprised you?

#### DR. HEATHER BALTZER:

Well, I think just the sheer volume of hand traumas. I wasn't really expecting that, and that this would be the most common reason for a patient to present to the emergency department. That was quite surprising. I think some of the other things that were surprising to me were the strong association with lower socioeconomic status. So, patients that lived in areas that were associated with a lower income quintiles had a higher incidence. In more rural areas, the incidence of handtrauma was significantly higher. So, I thought that was quite interesting.

### CHRISTIAN COTÉ:

And one statistic in particular, I understand that stoodout for you is that twenty five percent of this population who have suffered hand trauma suffer a second hand or wrist injury?

### DR. HEATHER BALTZER:

Yes. So that was also a surprising finding. A quarter of these episodes were actually repeated episodes. So, that's a really important thing for us to understand going forward, and how can we prevent these types of injuries in patients and sort of understanding what's associated with having a repeated hand trauma so that we can identify those patients at the outset when they have their index episode and try and prevent it from happening in the future.

So, when we looked into that, we found that males were more likely to have repeated hand traumas, as were people that had associated mental health and addiction needs prior to their hand trauma. And of note, that was another thing that was quite interesting and surprising, that about 20 percent of these episodes occurred in patients that had prior access to mental health and addiction services within the health care system in Canada and that's about twice what you would expect as sort of a baselinenumber of patients.

In a survey of Canadians, they were asked to report symptoms that wereconsistent with mental health and addiction diagnosis, and about 10 percent of adults reported these symptoms. So, what we're seeing in this hand trauma population is that they're really a unique population that have higher mental health and addiction needs.

## **CHRISTIAN COTÉ:**

What's your, i mean, i know this is very early, but you've uncovered a lot of data. What's your sense of what might be behind thator do you have a sense yet?

#### DR. HEATHER BALTZER:

Well, in the trauma literature in general, what we know is that patients that have mental health and addiction needs are at higher risk for sustaining injuries, whether these are self-inflicted or whether these are not self-inflicted injuries. And you can even just imagine whether this is something associated with a depressive disorder, you may be more distracted and just in carrying out your work or driving your car, you may have an injury because you're thinking about something else and not focused on what's happening at that time. So, there is an association that's known in the general trauma literature between mental health and addiction issues and trauma and I think that the same isjust showing through in the hand trauma population.

### **CHRISTIAN COTÉ:**

So, given, all this research and it's so unique, how do you start to put into practice or how do you start to impact delivery of care?

### DR. HEATHER BALTZER:

So, I think that we're able to impact delivery of care in a couple of ways. As I noted before, there was a very high volume of patients presenting to the emergency department with a hand trauma. Andso, when we think about this in the context of hallway medicine and our overcrowded emergency departments, which is such an issue in Ontario, this is something that could be tackled. If this is one of the more common reasons that patients are going to the emergency department, then how can we get those patients out of the emergency department in a more rapid way.

And so, we're actually starting to implement this at UHN, where we have arapid access hand trauma clinic that is in the works right now. And what that means is that these patients, when they present to triage with theirhand injury, if it's a certain type of injury, the patient will have whateverminor things they need to have happen, like an x-ray or a dressing put on, and then they're sent to our decanting clinic. So, we're trying to decant these patients out of the emergency department to free up space for other patients.

This also means that these patients get more expedited care, meaning theyget their hand issue treated right away as opposed to getting a referral sent to the hand clinic, getting appointments set up later down the road, a week or two later, they're getting their care right away. So, it's better for the emergency department by offloading the emergency department, but it's also better in terms of patient access to care and presumably outcomes.

The other thing to think about, too, is that if you're decanting patients from the emergency department and normally they would be in the emergency department for three to four hours. And then you think of thesheer volume of patients, in Ontario alone, when I look at this data, it was about 13 hundred hours of emergency department care per day in Ontario.

So if you can reduce that significantly, then that can have an impact on allother patients who need to access the emergency department just by creating a flow rather than having patients held up because they're waiting to have a procedure, et cetera. If you can make this sort of rapid access clinic something that takes off across the province, then you could really free up space in the emergency department.

### CHRISTIAN COTÉ:

So that's interesting. If this is an innovation, a rapid accesshand trauma clinic, how do you get this elevated to standard of care across, say, the system or across the country?

### DR. HEATHER BALTZER:

Well, what we're planning to do once this is implemented is to study a couple of things. So, we want to study the pointsof contact with the health care system that a patient would have in this journey with a new decanting clinic. But then also look at the amount of time that they're spending in the hospital and the number of times they have to come back to the hospital. And we're not doing this in sort of a randomized fashion. So, we aren't going to have a group of patients that just have the usual care and then the group of patients that have this rapid access, we're putting all patients through the rapid access. So, whatwe'll do is we'll go back and compare it to historical data, looking at what had happened with our patients prior to this.

And, I know that it will show that patient care is expedited. But i think also thinking about this from a pandemic standpoint, it's important to think about the amount of time that patients are spending in the hospital, and their contact with health care workers, and the potential for reciprocal transmission of a virus or some kind of illness like covid-19. So those are just a few ways that we're going to follow outcomes for these patients. We're also going to ask patients to complete standardized questionnaires about their satisfaction with the care that they received.

### **CHRISTIAN COTÉ:**

I know you also, as a result of the research, this has led youinto another stream to apply in terms of a pilot program to do with a psychologist and pain management team, can you talk to us about that?

### DR. HEATHER BALTZER:

Yeah, sure. So, we're really lucky to have a very strong pain program at UHN, as well as an investment in a psychology group. And with this interdisciplinary care, they're very interested in seeing patients that may benefit from either post trauma or pre-surgery,if they're a patient that's having a scheduled surgery, evaluation and treatment for pain coping mechanisms and helping them to deal with thetrauma that they've been through.

And so, this is something that is in a pilot phase right now. But i think would really have the potential, considering the fact that we know that about 20 percent of our hand trauma patients have mental health and addiction needs prior to their injury, that this could be something that would be put in place and would be a service that would be readily available to the hand program and be of great value.

### **CHRISTIAN COTÉ:**

Where else could you take this in terms of trying to impactcare, in terms of leveraging your research?

#### DR. HEATHER BALTZER:

One thing we haven't really talked about is the cost of care associated with these patients. And when we looked at the costs, the direct health care costs or the cost that came directly from the patients hand trauma, you know, the majority of this happens within the first year. But in a subset of patients, what we found is that this cost continues on over the course of at least three years after their hand injury. So, what we know is that there is likely a group of patients, what we like to call high cost health care users.

So, these are patients that they're a small proportion of the whole patient group that they use a disproportionately larger amount of health care resources. And so, the next step for this type of research willbe to look into who those patients are and how their costs are different. And what are the risk factors for having higher costs, and is there some

Way that we can change the way they receive care. For example, like a targeted program for these patients so that they may have, first of all, a better health care experience and have less costly health care experienceas well to overall save money for the health care system.

And this is important, you know, if it were 10 or 11 patients, that wouldn'tbe something that's so important. But when you think about this, the enormity of this problem, it can translate into something that is very costly. So, we'd like to reduce costs for those high cost users.

### CHRISTIAN COTÉ:

Do we know if it's just a longer rehab time for these patients or do we know yet what those extra costs are?

### DR. HEATHER BALTZER:

I haven't taken that deep a dive into what the additional costs are, but I presume that it's the fact that these are more complex patients that require more surgeries over the course of their rehabilitation. They need more interactions with rehabilitation. So, this isjust a longer process for them.

### **CHRISTIAN COTÉ:**

I'm wondering also, is there an opportunity for your research to be taken into the workplace to help with say learning andeducation to improve safety?

### DR. HEATHER BALTZER:

There could be potential. It's sort of hard to say with the data that we have access to because we don't know exactly where the patient data that we're looking at, we can't sort of tie that to...

### CHRISTIAN COTÉ:

To workplace injury.

#### DR. HEATHER BALTZER:

Workplace injuries. And it is something that is documented. But I don't know the reliability of that data point, so it'shard for me to say for certain that this is something that would translate into your workplace.

I think, though, like I mentioned earlier, the fact that we're seeing a decreasing trend in injuries among men and this correlated with the number of people working in the manufacturing industry, maybe indicates that there are a lot of injuries that are arising from the workplace. But because of the changing landscape of manufacturing in Ontario, we're seeing potentially less in certain patient groups.

### CHRISTIAN COTÉ:

You're listening to behind the breakthrough, podcast allabout groundbreaking medical

research and the people behind it at Toronto's university health network, Canada's largest research and teaching hospital. I'm your host, Christian Coté. We're speaking with dr. Heather Baltzer, hand and wrist surgeon and award-winning clinicianinvestigator at UHN's Krembil research institute.

Dr. Baltzer is a pioneer in the research of hand and wrist injury, and her work is supported in part by the Toronto General Western Hospital Foundation. Heather, you were born and raised in clementsvale, Nova Scotia, which is a small community near digby on the bay of fundy. You describe it as having a main street and a baptist church. So, tell us how you gravitated from this tiny village in Nova Scotia to a career in surgery and pioneering medical research?

#### DR. HEATHER BALTZER:

so, yes, I grew up in a very small town in rural nova scotia, surrounded by nature. And I spent a lot of time as a small child basically playing in the woods and looking for fossils and just being fascinated by the natural world around me and I had some mentors growing up. My godfather was a science teacher, so it was pretty commonfor us to do things like look at the stars at night and go for fossil walksand those sorts of things. So, I was sort of drawn to science from a very young age.

And as I went through high school, these were the areas where I felt I excelled and the topics resonated with me. And so I went on to study molecular biology and genetics at the University of Guelph. I went to Guelph because I knew it had a very strong science program having a veterinary medicine college, but I wasn't quite ready to take the step togoing to Toronto from this tiny little town where i had grown up so Guelph to me was a big city when I moved to Ontario.

And then from there I went to the University of Toronto for my medical training and my residency. And so that's how I ended up in the field as a plastic surgeon. And then ultimately, I did my fellowship at mayo clinic in Rochester, Minnesota, focusing on hand, wrist and microsurgery, and thencame back to UHN. And now I'm here.

### CHRISTIAN COTÉ:

And I noticed in preparing for this interview, a few years ago, you and some colleagues at Toronto Western created, or recreated aphoto inspired by a New Yorker magazine cover, which was a drawing of four female surgeons. What was the significance of this for you?

### DR. HEATHER BALTZER:

With that New Yorker magazine, I think it wasn't evennecessarily intending to have this global outreach that it ended up having from female surgeons. I think it was one surgeon that had the idea that she wanted to take a picture of her and her team in a similar fashion to that photo and it just really took off on social media. And so, I feel like

We were just doing our part by calling out and saying, yeah, we're here too,we're here in Toronto.

And that was one part, just being part of this sort of global response to that image in the New Yorker magazine. But then part of it, too, were the other two women in the photo with me. One was my fellow and the otherwas a resident going through our training program at that point in time. And they're both individuals who I consider myself a mentor to. So, it wasjust nice to have that captured with us all being in the or that day.

### **CHRISTIAN COTÉ:**

I understand when you joined it and you were the only female surgeon on your group. What was that or what's the experiencebeen like for you?

#### DR. HEATHER BALTZER:

Yeah. So, when I started at UHN there were, I believe, four or five male surgeons who were quite a bit more senior to me. And itwas a little bit of a shock to the system starting in that role, because when I'd gone through my training, so in medical school, half of my class were females and then in residency, half of my cohort of residents were females. And the same is true for the other years of residence in my training program.

So, it was always really quite equal with respect to the gender balance. So, starting off in a situation where you are the only female and quite a bit junior to the people around you, it is something that is it was intimidating at the time and it can be a little bit isolating. And you know, there were some times just in the in the hospital, where you do realize that there is that very clear gender bias.

However, at the same time, I had a number of senior surgeons that werevery supportive and really wanted to ensure that I had a place at the table, that I was given opportunities to move forward in leadership capacities and in my research endeavors. And so, I felt like I was really supported at the same time. And, you know, it ended up being an environment that fostered me to excel, now that I'm in a leadership position and have a successful research program.

## **CHRISTIAN COTÉ:**

And as a leader, you obviously built into that as you're a role model. Do you believe in that adage that you have to see it to believe in terms of young women entering the profession?

#### DR. HEATHER BALTZER:

I think it's really important for women to be in leadership roles, and that is something that we need to see more of, particularly in the surgical field. I would say, by and large, it is a maledominated profession with mostly males in leadership roles. And so, women definitely need to be represented more equitably in those

Positions. And that allows the females that are going through training toknow that these opportunities exist for them and they will strive for them.

### CHRISTIAN COTÉ:

What's your approach then to mentorship in your lab and inthe or?

#### DR. HEATHER BALTZER:

I think for that I'd have to reflect on what my mentors have done for me. And you know, I think a mentor is someone that is there to give advice on what is happening at that given time for a trainee or a mentee and how they can move forward with their career and advance with their career.

So, it's good because you can provide that advice through the lens of somebody who's already gone through some of those challenges and maysee opportunities that the mentee doesn't necessarily see or isn't awareof. And I think it's really important to always have your finger on the pulse of different opportunities that are available for your mentee so you can fire those out to them and say, hey, have you thought about this?Or I saw this and it made me think of you. And I think you just sort of always have to have your mentees on your radar and make sure that you're looking out for their best interests and, and trying to create opportunities for them.

#### CHRISTIAN COTÉ:

I'm curious about the blend of your clinical and researchwork. Does your interaction with patients inform your research at all?

### DR. HEATHER BALTZER:

Absolutely. I think you know my observations and anecdotal interactions with patients thinking about the mental health piece is what sort of informed me to build that into the research that I was doing in the population level. And I think also just seeing the trajectory of the patients that would be under my care for a prolonged period of time after they'd had their injury made me realize that this isn'tsomething that patients get over quickly. It is something that goes on for a long period of time. And for some patients, it leads to chronic impairment. So certainly, my patient interactions have led to the questions that I've asked.

### CHRISTIAN COTÉ:

And your research really is unique. I mean, it's pioneeringnew ground. Are there ever times for you when you experience doubts?

### DR. HEATHER BALTZER:

I don't know if I would say doubts, maybe I would callthem doubts. But I think you know, when something hasn't really been examined and its a population, that doesn't seem to be of interest despite the fact that it is such a common occurrence, I thought, well, maybe this isn't something that is appealing to the general population and perhaps

It's not. But when you talk to people about what you do. So, when I, talk to people about this research. Everyone has a story about injuring their handor how their brother injured his hand, and it's something that you really see is widespread.

And I think because of that it's very valuable. So I think once I got into this and it became more of a focus for me, I realized that it is of great value and particularly uncovering the fact that it is such a public health issue that needs to be brought to light. That was something that made me continue on down this path rather than changing my focus on to some other type of research question.

### **CHRISTIAN COTÉ:**

Your approach to roadblocks or failure when you're doingresearch, how do you navigate those challenges?

### DR. HEATHER BALTZER:

well, in research, I guess the things that i would think of as failures are when you, you do an experiment or you ask a question and it doesn't yield something exciting like you were hoping it would yield. So, it can cause you to go back and either re-evaluate the question or maybe look at what you found at a different way and try andfind a different story out of that. But it forces you to be creative, but it also is a learning opportunity.

So, for example, another type of failure that you can have in research is not having a paper accepted or not getting a grant. And so, from that, you have very smart people that are looking at your work and being very critical about your work. And you can gain a lot of insight from what feedback you're getting and try and make your research better and your work better. And so, I think failure, even though it can be hard to swallowand often we try to avoid it, it is ultimately presenting you with an opportunity to become better.

### **CHRISTIAN COTÉ:**

That's a great point. I think probably part of the issue iswe're just not really taught how to deal with failure.

### DR. HEATHER BALTZER:

Yeah, no, I think that that's very true. And i think for me, it's something that obviously i try to avoid failure and learning how to look at it with the glass half full perspective. But i mean, it's there. It iswhat it is. And you have to keep moving forward.

### **CHRISTIAN COTÉ:**

So, does serendipity play a part in medical research at all?

### DR. HEATHER BALTZER:

Well, I think absolutely. I think sometimes you'll uncover something that you weren't expecting to uncover, or you'll encounter another researcher who maybe could add something or

Augment something in your research program that you hadn't reallythought about and it can take things in a different direction.

For example, I was at a conference about a year ago when we used to go to conferences and sit next to people, and I sat next to an engineer who was just getting into the realm of prosthetic design. And I've always been interested in prosthetic design because I deal with a lot of patients that have amputations of their digits or their hand. And so, I started talking toher about a simple prosthetic design for a thumb prosthetic, because imagine losing your thumb how that would impact your hand function.

And so, we've just started to work on our first grant together to developsomething like that for a sensate thumb.

### CHRISTIAN COTÉ:

Just through that chance meeting.

### DR. HEATHER BALTZER:

Exactly. So, I definitely think that it exists.

### **CHRISTIAN COTÉ:**

What drives you, heather? What makes you think you can improve things?

### DR. HEATHER BALTZER:

I think that it's just I care about this patient population so much and I see that there are some inequities and I see that there is great need for change and there is a lot of room for improvement. And I think that the research that I'm doing is starting to show that. And i feel like just getting this message out there and really advocating for this patient population who maybe doesn't have a voice but needs a voice isa very important thing.

### CHRISTIAN COTÉ:

What's next for you?

### DR. HEATHER BALTZER:

In terms of the hand trauma research pertaining to population health research, I think I'm going to take a deeper dive into themental health component of things and look at the needs of these patients and understand which patients are more at risk for requiring mental health and addiction services. One of the things we found is that it's actually doubles. So, 18 percent of patients prior to their hand traumarequired access to mental health and addiction services. And then after they had their hand trauma, thirty four percent required that service.

It's a pretty big need, so really understanding who those patients are and how we can mobilize that service and make it accessible to them for one, and then the other part is looking at the high cost patients and understanding who those patients are, and how we could develop a targeted pathway that may improve their experience with the health care

system and potentially save costs.

And then the other part is this prosthetic thumb that I'm very excitedabout. But that's a bit of a pipe dream at this point in time.

### **CHRISTIAN COTÉ:**

You have to dream. Dr. Heather Baltzer, hand and wrist surgeon and award-winning clinician investigator, at UHN's Krembil research institute, thank you for sharing your work and insights with usand continued success.

#### DR. HEATHER BALTZER:

Great. Thanks for having me, Christian. This has been really great to talk to you. **CHRISTIAN COTÉ:** 

Dr. Baltzer's research is made possible in part thanks togenerous donor support. If you'd like to contribute to this groundbreaking medical research. Please go to www.tgwhf, that's tgwhf.ca/podcast.

For more on the podcast, go to our website. Www.behindthebreakthrough.ca and let us know what you think. We'd love to hear from you. That's a wrap for this edition of behind the breakthrough, the podcast all about groundbreaking medical research and the people behind it at the university health network in Toronto, Canada's largest research and teaching hospital. I'm your host, Christian Ccote. Thanks for listening.