

TRxending Episode 2: Minor Ailments and Contraception Services (MACS) and Pharmacy Education

[00:00:00] **Justin (Host):** From the Faculty of Pharmaceutical Sciences at UBC, welcome to TRxending, A podcast dedicated to exploring trending topics across all areas of pharmaceutical sciences, including research, practice, education, and community. Our episodes are recorded on the traditional, ancestral and unseated territory of the Musqueam people.

We encourage you wherever you're listening to also take a moment to consider the land you are on. The history, the original caretakers, and your relationship to it. In June, 2023, BC pharmacists saw one of the largest changes in their scope of practice in decades with the introduction of minor ailments and contraception service prescribing, also known as MACS.

Now BC residents can seek treatment for 21 minor ailments and contraception directly from pharmacists. The program aims to make it easier and faster for residents to get the medication they need while simultaneously leveraging the skills and expertise that pharmacists are already trained and equipped with in BC Today I'm joined by Gilly Lau and Jon Grosshuesch, two educators in the Faculty of Pharmaceutical Sciences at UBC.

To dive deeper into the topic of MACS. And focus on this expanding scope of practice within pharmacy. We also explore how MACS has changed pharmacy education and training both for students and working pharmacists.

[00:01:23] **Gilly:** I'm Gilly I'm a course coordinator in the Office of Experiential Education here at the faculty.

And so I coordinate the year one practicum course as well as the inter practicum for International Pharmacy graduates which is part of the CP three program or the Canadian Pharmacy Practice Program. I would say those are two of my main roles. And then my other role is in the integration activities team in the entry to practice pharm d program where I run tutorials and lab sessions for our students in year one.

[00:01:48] **Jon:** Perfect. Thank you for joining. Hi, I'm Jon Grosshuesch. I'm an assistant professor of teaching at the faculty of Pharmaceutical Sciences, and I teach primarily in the entry to practice pharm D program. I teach pharmacy practice skills. To year two students as well as the administration of injections course.

[00:02:07] **Justin (Host):** Great, thank you. So I guess we will dive right into it now. This episode is focused on MACS minor ailment and contraception service. For those of us who don't know, can you explain what MACS is and its role in pharmacy?

[00:02:20] **Gilly:** Sure. I think there's kind of two terms that I kind of use sometimes.

So there's MACS and there's also like PP MACS. Mm-hmm. So MACS is, as you described, and that's technically it's the government funded service for BC pharmacists to provide to our clientele here in BC. And then there's PP MACS, which is the scope of practice that we have.

I think both terms are used pretty interchangeably. And in practice people refer to generally the same thing when they're using both terms. But MACS is fine. Okay. But yeah, so MACS is really the opportunity for pharmacists now in BC to prescribe. Medications prescription medications for our clients for any minor ailments that they might have.

So if a client comes in for example, they have a urinary tract infection they have acne or they have like a minor headache then we are able to prescribe some medication for them to help manage their symptoms. And so that's. The new scope that we didn't have before, prior to June 1st, 2023.

And so now we have the opportunity to provide that extra service using the knowledge and skills that pharmacists do have.

[00:03:18] **Justin (Host):** Great. Great. So this is very much like expanding role of service for pharmacists. We know in BC and across Canada, there's a pressure on primary care providers at the moment.

There's a doctor shortage. It was a kind of a idea to like. Expand services to take that pressure down a little bit?

[00:03:34] **Gilly:** Yeah, I think so. The pharmacists are very accessible to the public. And patient clients and we're always coming to pharmacists looking for advice seeking medications, recommendations for what they can manage over the counter, for example.

And now this is just the extra thing now that we know for certain conditions that may be a bit more routine or not as. Serious in nature. Then the client our community in BC can now go to our pharmacist to receive care in a timely manner rather than trying to go to a walk-in clinic that might get filled up within half an hour opening.

Or trying to make an appointment with their family a primary care provider when maybe that might take, a few days or maybe a week to get in for that appointment. So it enables more timely care from pharmacists who have the knowledge and skills and. They can, get that prescription and potentially even fill it at the same pharmacy on that sort of one walk-in or appointment that they make at the pharmacy.

[00:04:27] **Justin (Host):** Yeah, it makes sense to me. Yeah, we all know the pain of waiting for your walk-in clinic or your primary care provider who might not have an appointment for a long time. Yeah, so that basically covers the patient side, why it's important to them, but as a profession, as a.

Pharmacists, why would this be important to me? I

[00:04:43] **Jon:** think that, one of the things when you look at any expand scope of practice activity that is particularly appealing for a professional in healthcare is being able to utilize your knowledge, your skills, your ability and this is one of those avenues to really have that opportunity to apply your clinical skills that you have perhaps developed elsewhere.

Or you're interested in developing further. And that's the type of thing that an activity like pharmacists prescribing for minor ailments really does provide in addition to what was discussed earlier by Gilly for the patient side of things and providing that relative immediate access to a healthcare provider that is able to prescribe for some of those conditions.

[00:05:28] **Justin (Host):** Yeah, it makes sense. Have you found. Like anecdotally amongst pharmacists? 'cause you're both pharmacists. It to be like really beneficial in their interactions with patients. Or just any other general comments that they've experienced. I dunno.

[00:05:41] **Gilly:** Yeah, I think there are situations that happen commonly in practice where maybe one of your patients or clients comes in and they are looking for something to help for the medical condition.

But, before when we couldn't. Prescribe medication. As pharmacists, we either had to, turn them to go back to the doctor to get a prescription, which, as we discussed, might take some time or might be challenging or maybe recommend over the counter products that is not as effective.

But it's, something that they. That patient can use immediately. And I think this really enhances that sort of care that a pharmacy can provide and right and expands the scopes that, the scope of services that pharmacists provide to patients. Because now we can prescribe the more, most effective medication for that condition as well as, recommend any non-formal, non-drug or non-pharmacological measures that the patient can do in the meantime and.

If needed, we can still make the referral, but now we have an extra tool in a toolbox to be able to provide, better care for our patients. So I think it's a win for all, for the patient, for pharmacists. And it alleviates the stress on the healthcare system as well.

[00:06:42] **Justin (Host):** Right.

And it sounds like a more efficient model too. And it gets rid of. A lot of the back and forth it sounds like, between a pharmacist and a primary care provider.

[00:06:50] **Gilly:** Yeah, definitely. Yeah, 'cause the patients often coming in or they're following the pharmacist looking for advice because they are having challenges, getting to a primary care provider.

And so if we can be able to. Assess that patient and provide that best recommendation, including if it is a prescription medication all in one transaction, and if the patient wants to fill that prescription at the pharmacy, provide that service as well, then it really creates a seamless encounter and service for the, from the patient as well as from the pharmacist perspective.

[00:07:15] **Justin (Host):** Right, yeah, it's very interesting actually. You mentioned this started in 2023, the MACS program, right? I'm just wondering. Is this something that all pharmacists can provide? And if not, are there certain steps they can take to provide Mac services or do they start from like the very get go, or how does that work?

[00:07:33] **Gilly:** Yeah. EE every pharmacist can prescribe, provide the service but they have to meet some steps first, right? And the main requirement is that the pharmacist needs to complete some a mandatory module provided from the College of Pharmacists bc. And so once they complete that then they would have met the requirements to then, be able to provide MACS or minor ailments in contraception services to the public. I see. But it does depend on the pharmacy. I think, depending on the individual pharmacy's model maybe they may not take walk-in appointments or some, are okay with that. Some I would say, I think based on statistics, most pharmacies offer, there's a.

Few that maybe choose not to for whatever reason, maybe doesn't work with their setting. But certainly in the majority of phar, the vast majority of pharmacies in BC I think the statistic was like 90% or something like that. They've all, every, that number of pharmacies in BC have provided some minor ailments prescribing for the public.

So there's a pretty strong uptake, I'd say for. Oh, that's great.

[00:08:26] **Justin (Host):** That's great. Yeah. So I'm wondering as pharmacists. Have you speaking with other pharmacists or anecdotally from patients, how has the uptake been or awareness been of the MACS program from like a public perspective?

[00:08:41] **Jon:** I would say, from what I understand quite good in general, that there's awareness that is out there.

There's. A lot of advertising in pharmacies and also online, through some of the various agencies associated with it, letting people know that this service is available to them. And also touching on some of the conditions that are eligible for minor prescribing. In terms of the uptake, I think that, the year overview from June.

When it started in 2023 until may in 2024 was quite positive as well. Now, naturally skewed towards, a number of conditions that were being prescribed for predominantly and whether that reflects the actual incidents of 'em or the pharmacist's own comfort level with those early on, and we might see a trend in.

Coming years on that. I'm not sure. I wouldn't hazard a guess, but I'd say generally positive for both of those things in terms of uptake and awareness.

[00:09:46] **Justin (Host):** No.

[00:09:46] **Gilly:** Great. Great. And I, I think there's also like other healthcare providers are helping to drive some awareness as well. Yeah.

For example, I've heard at some like urgent primary care centers that if they see a client coming in for. Something that is fits within the minor ailments program. They've actually redirected those patients or clients to the local pharmacy to get a, to be assessed instead. And so then that way they can triage and focus on patients who really can't get, that service from the pharmacy.

And so they can then prioritize their patient clientele, but also bring awareness and then redirect them to pharmacists. Pharmacists who can provide that service where appropriate.

[00:10:21] **Justin (Host):** It makes sense. Makes sense? So you're both work for the faculty very much involved in pharmacist education.

How has this New MACS program changed this education within the scope of pharmacies? I guess both from a undergrad student level or if you're a practicing pharmacist new to the MACS program. How does that. Fit in.

[00:10:41] **Gilly:** Yeah. We certainly introduced the concept to students, especially in year one, when they kinda learn some of these foundational things in the program.

Yeah. And so we bring more awareness about to students. We we build cases within that minor ailments concept. Certainly when the students go onto the rotation and complete their practicums they will then be able to participate in the modern Ailments services when they are taking that course.

And so the students are being exposed to modern ailments services throughout the program. But in a way the. The skill involved with providing minor ailments is the same foundational skillset that all pharmacists have. And so it's, having information, doing your information gathering, and then completing your assessment of the patient, making a recommendation.

And then, monitoring follow up. That's pharmaceutical care process that we talk a lot about with our students. And so it's really the same foundation except. Depending on the context. Now, if it's for this condition, now we have the ability to recommend a

diff, maybe additional medications that weren't previously not available because we didn't have the scope of practice to do so in a way it has changed, I think, education, but the way it also hasn't because. Again, same skillset, just with slight tweaks and now a slightly different context.

[00:11:48] **Justin (Host):** So it sounds like in the original curriculum, pharmacists were already equipped with kind of the skills to deliver this, but now it's been packaged in a way that they can actually deliver it.

[00:11:57] **Gilly:** Yeah,

[00:11:57] **Justin (Host):** that makes sense.

[00:11:58] **Gilly:** Yeah, and I think with some more exposure and, building, cases around minor illness, we can help to give our students more confidence when they, approach the service in practice. But certainly I think the. The skillset set is foundational to all pharmacists.

And so it's something that these have to apply within this sort of slightly different context.

[00:12:14] **Justin (Host):** That's very interesting. So you mentioned there were 21 minor ailments and the contraception side as well, correct? Do you see this kind of service expanding beyond those ailments in the future, or is that something you can't predict?

[00:12:26] **Gilly:** I think it's hard to say. I, from what I recall, I remember in Ontario they were, look, they had, they launched their minor ailments program a little bit earlier than us, and then since then they actually further expanded their minor ailments offering for pharmacists, and so I think it's definitely possible that we will see something, maybe further expansion here in bc.

And I think as long as there's a need from our clientele, I think that's something the, probably the government and the regulators will probably continue to look at.

[00:12:50] **Justin (Host):** It's probably like a wait and see approach. Is that right?

[00:12:52] **Jon:** Yeah, I'd imagine that there's always room to expand on a program like this.

The door's always open, so to speak. Where you're looking at the, a value of com component of a program like this. And you're looking at the things that we mentioned earlier in terms of uptake and, what is being. Diagnosed and what's being prescribed and what are some of the potential areas that this could be expanded into in terms of some of the conditions that would fit the definition for a minor ailment.

And that's really where you might focus on, future changes to this program. And also looking at what's. In it right now in terms of how's it being utilized? Could it be more efficient? Because I know that's something that was mentioned earlier is how it really has improved access and really some of the efficiencies that are now possible due to minor EMS prescribing here in bc.

[00:13:52] **Justin (Host):** I guess it informs a lot like by introducing this new service and informs a lot about future services and extrapolating that out to maybe not. Only along the same lines as MACS, but expanding the same model, to other forms of practice, if that makes sense.

[00:14:07] **Jon:** I, yeah, I think that makes total sense because, whenever they're looking at expanded scope of practice activities they're only as good as.

They are in terms of both the implementation and the uptake from the people who are using these services. And if there's no interest in using them that's certainly going to be something that might hinder future Grosshueschsshueschwth. Conversely, if there are a lot of people who are using these services and they're interested in expansion of 'em or even different services that are unrelated to it because they're seeing some of the potential.

With pharmacists in these roles due to their relative accessibility to some of the other healthcare providers that are out there then that's certainly something that will warrant a closer look. And that's also considering the fact that different jurisdictions have different scopes of practices like Gilly mentioned, right?

Between, the provinces and being able to look at some of the successes they might have had or some of the things that. Perhaps didn't work as well if there are any of those in their models. That makes sense. Yeah. Very

[00:15:14] **Justin (Host):** interesting. So I was wondering if you could expand on your involvement in MACS education within the faculty.

[00:15:21] **Gilly:** Yeah. For me 'cause I mainly teach in the year one year one curriculum. Yep. And I have two I run two tutorials for for the students. There's a third one, which is run by a different faculty member. But yeah, I have one in like term one and a second one in term two. To focus on different aspects of minor ailments prescribing, there's different cases.

So again, just to kinda get students comfortable with applying their pharmaceutical care skills in this sort of context of prescribing for minor ailments and then practicing some of the documentation skills that they have to complete as part of any government funded service. So we try to, create that exposure for our students.

[00:15:53] **Justin (Host):** Great. Great.

[00:15:54] **Gilly:** And Jon, how about yourself?

[00:15:55] **Jon:** I think a large part of it due to working with second year students having had that foundational knowledge and the exposure in first year of the program. Yeah, we're looking to provide them with opportunities that are, authentic to practice and giving them the chance to really apply some of what they have learned in these settings.

Whether it's with simulated patient encounters or completing documentation based off of a patient workup the types of things that they might be doing if they were out in practice themselves right now.

Right,

[00:16:30] **Justin (Host):** so I understand the two of you are also involved in MACS workshop targeted at current.

Pharmacists or primary care providers, could you explain more on what these workshops are?

[00:16:40] **Jon:** So the workshop that Gillian and I are leading at the Update 2025 conference is really focused on MACS and getting people more comfortable with integrating this into their day-to-day practice. And what that will look like is different for everyone.

And so what we've really tried to do is. Design a workshop that has something for everyone who's attending. And that means you'll be able to walk away with some new insights if this is something that you're already doing in your day-to-day work, or if this is something that you've never tried before, but you're very interested in incorporating into your day to day.

We wanted to make sure that it was accessible to anybody who was there. And a couple of things that we are doing are really looking at, some of the different conditions that are there, making sure that we've selected ones that are, more common to practice such as urinary tract infections, because those tend to make up a lot of the prescriptions that are going out.

While also. Giving some new considerations for that. Maybe an atypical patient presentation, some of the considerations that would happen where you aren't so sure how to proceed, and making sure that you're considering all of the options and not just focusing on the prescribing element because it's important.

To recognize that prescribing is really just one part of this scope of practice. Yeah. And it's very much intended to fill in some of those gaps that are out there in the current healthcare system while increasing the likelihood of there being a continuity of care as well, and not having somebody really just.

Disappear into one of the gaps that might exist there, where they leave from your pharmacy whether it is or isn't with a prescription. But if they require a follow up or monitoring or referral ensuring that is in place.

[00:18:38] **Justin (Host):** Yeah. It sounds like with the expanding scope of practice, there's also expanding gaps to be filled as well, so it's sounds very valuable.

You mentioned this is being offered at the update 2025 conference. Can you speak to that and just in case there's any healthcare providers listening who might be interested in attending?

[00:18:55] **Jon:** Definitely. So the update 2025 conference is a multi-day continuing. I. Professional development program, and it's designed for pharmacy professionals and really all healthcare providers who wish to update their knowledge and skills.

Now, the conference itself, it's run by UBCP size, continuing pharmacy professional development perhaps better known as CPPD. And this year the event actually spans two days. So the first day is going to be Saturday, April 26th, and it consists of several virtual sessions that are led by experts in their field, whereas the second day.

Which take place on Sunday, April 27th consists of the in-person MACS workshop that Gillian and I are running. Registrants can sign up for one or both of the days, but the Sunday in-person workshop is gonna be limited to 50 people. With any extra registrants being put on a wait list, I believe that registration is now open.

So you can visit the PPD website@pharmside.ubc.ca slash. CPPD to learn more and register. Perfect. Thank you.

[00:20:01] **Justin (Host):** Yeah, it sounds like a valuable workshop. Yeah. If you're a pharmacist out there or healthcare provider, please attend or try to before the wait list is full.

[00:20:08] **Gilly:** Yeah. I do hope that we'll have a good uptake and that we, Jon and I are applying to create.

A really meaningful workshop for all types of pharmacists that, that are interested in, increase, improving their skills or or being able to even engage with others on how they would approach different cases. And yeah, we hope all types of pharmacists will get something out of it, and so definitely hope that there's, people will consider signing up.

[00:20:29] **Justin (Host):** Yeah. I imagine it's useful because especially since this is such a new service any education, whether from you or from other sources would be like very invaluable. Moving the, this new scope of practice forward, thank you both for providing that as well. So adding to the MACS workshop, is there any other exciting new projects that you care to share with us?

[00:20:48] **Gilly:** Yeah I guess it's not technically like new but over the past year, in the past year the CPBD office has been getting various content experts to create online like self-paced modules that are focused on each sort of minor ailments.

So if I may do a little like plug for myself and my colleague Paul Chen we offered a one, these online self-paced course on oral ulcers or canker sores. And that's something that's available right now and available for free. And people can set up and go through the ACT course or other courses in the in the catalog of minor ailments courses.

Jon, did you author one as well?

[00:21:25] **Jon:** Yes I did. I authored a course on thread worms and pin worms. And I co-authored one on tobacco use disorder with Dr. Karen Dari. And as Gillie mentioned, those are all available for free on the CPPD website and they're all accredited learning modules. So you're able to peruse them based off of your interest and your particular needs, and to review some of the content that might help you with your own minor ailments and contraception prescribing.

[00:21:56] **Justin (Host):** Interesting. Interesting. So these are all like minor ailments broken up into specific modules, so you can pick and choose which one you're interested in taking. Is that correct?

[00:22:04] **Jon:** Yes, that's correct. And the credits are based on the, number of hours that they're estimated to complete.

But one of the nice thing. Is that they're very much self-directed. So you can spend relatively as, as much or as little time as you want with them. And if there's something specific that you're looking for and you want to focus on in particular there's nothing that is preventing you from doing so.

[00:22:28] **Gilly:** Yeah. Although you do only get your certificate once you complete it, but certainly, yeah. People are very busy and so if you have time to start for 20 minutes and then take, take a break and come back to it the next end of day, totally self-paced so you can do it whenever you have time.

[00:22:41] **Justin (Host):** Perfect. Yeah, it sounds like a great resource. If you're just getting into providing MACS or you just want some extra knowledge on those subjects. I guess moving on now we can talk about a little future prophesizing. So how do you think MACS might change the future of pharmacy practice or pharmacy education?

I.

[00:22:59] **Gilly:** Yeah, I think we're we are starting to see some of the changes that are coming from this expanded scope of practice. And for example, in Ontario, other provinces that had minor ailments a little bit earlier than us we've seen them, we've seen

pharmacists. Develop like pharmacy, like clinics where they're more focused on that patient assessment, so they might come in, it looks like a doctor's office and people are being assessed and then getting prescriptions for their minor ailments.

And so I, I we're. Starting to get some of that motion here in BC and starting to see some of these clinics come into place. And I think over time we'll start to see more and more of these clinics come through and, very excited to see how the pharmacy profession develops and excited to see the new roles that pharmacists take on as we embrace the scope of practice and start to become, more of a type of primary CareProvider, I'd say. Yeah.

[00:23:48] **Jon:** I think from the, pharmacy education perspective, a lot of what we're doing already is looking ahead to the future and what might be coming in the relatively near future or perhaps further down the line. And MACS and some of the other expanded scope of practice activities have.

Really presented us without opportunity to take what was theoretical. And say that now this is a practical application of knowledge. Because there is the opportunity to actually engage in these types of activities where it's not theoretical anymore. Yeah. And that's one of those things that you look at and you say what else could there be?

What other activities are? And if you look at pharmacists prescribing as a whole, where it's relatively restricted at this point in time. For minor elements in contraception, that's not the case across the nation. And one could imagine that as we talked about earlier, there could be an expansion of this program or there could be new programs that are designed and focused for providing some of these other services that are out there.

And the same is true when we look. Past prescribing, we think about a more recent change in our scope of practice. With respect to ordering an interpretation of laboratory tests and lab values.

[00:25:10] **Justin (Host):** It's like opening the door in a sense, exactly. Yeah. It's a very exciting future indeed.

Adding to that, I'm wondering if there's anything that excites you about the future of pharmacy or pharmacy education. And this could be MACS related or it can be. Something else.

[00:25:24] **Jon:** I think what excites me personally from the perspective of an educator is being able to see these opportunities really start to present themselves and to see some of our.

Current students and certainly our graduates down the line entering into these roles. And it's an exciting time, not just for us, but also for them, because many of them

have been entering into this profession with eyes to the future. And hoping that when they do graduate and get licensed, that these will be there for 'em and Right.

This is something where you can look at it and you can say absolutely. They will. At least be these, if not more, in terms of the opportunities that are there. And Gil really touched on one of the things that I know a number of them are excited about entering into some of these practices focused more on utilizing their clinical skills and their knowledge in, those types of settings than anywhere else. And at least for me, from the professional side of it, it's good to be able to see that pharmacists as a whole are, being recognized for some of the knowledge and the skills and the abilities that they have long had and this is something where. Many of the vocal proponents have been saying that, if given these opportunities we'll be able to really enact some of the change that might be needed to help with the current healthcare system and providing access to people throughout the province.

And that's one of the really really great things about this is it's not limited to any one area and it really comes down to. Just the want and the willingness to provide these services as Gil said earlier.

[00:27:18] **Justin (Host):** Yeah. Yeah. I guess I imagine that as a student I. You, you would always wanna look for something that kind of builds upon your profession in the future, right?

So this looks like MACS is leading down that line. Or even if it's not MACS, it's looks like the pharmacy profession is broadening its horizons in a way. So it's. Something exciting to look forward to.

[00:27:38] **Jon:** Definitely. It's never a bad thing to be in a profession that is experiencing Grosshueschsshueschwth.

In, in any form. And this is, a period of time where we're seeing substantial Grosshueschsshueschwth with respect to scope of practice and seeing some of these expanded scope activities out there. Yeah, exactly.

[00:27:56] **Justin (Host):** Gilly, do you have anything

[00:27:57] **Gilly:** to add to that? Yeah, I think for me I, I think back to like when I graduated from pharmacy and it was.

And what everyone was thinking about was like, where are you gonna work when you graduate? Is it community or is it hospital? And so it was, these sort of two main sort of sectors where pharmacists work and and that's, where they still work now. But, I think with the new scope of practice, we are now seeing more different types of settings for pharmacists to work at, like the pharmacists like clinics, which I think is just very exciting to see.

And it means that. More of our graduates will be able to really think about what kind of practice would they like to have, and hopefully, these new settings might offer the right mix of services and use of their clinical skills that they really enjoy working in.

So I think I'm excited to see these opportunities come up and to see where graduates look towards when they complete. Their studies here and start entering their practice. And for me, working in the experiential office I'm excited to work with my colleagues to find opportunities for students to work in these settings so that they can practice the skills and get more exposure to the different types of practice that pharmacists

[00:29:02] **Justin (Host):** have here.

And I imagine personally for both of you, 'cause you're both educators finding new, exciting programs or scope of practice to educate other pharmacists or students on as exciting in itself.

[00:29:14] **Gilly:** Yeah. I think being an educator is really rewarding. And being, being able to adapt our curriculum to create new learning content for, whether it's for pharmacists or for undergraduate students and to create.

Those sessions for them to learn more about the next new school practice to hopefully share some excitement about what's coming for pharmacists or what has recently happened for pharmacists is I think is really exciting for me. And so I really welcome the opportunity to be able to be involved with that over the past few years.

And I think very excited to see what. Comes in the future and we will continue to adapt and keep building our curriculum for our students and for the practice of pharmacy.

[00:29:56] **Justin (Host):** Yeah.

[00:29:56] **Gilly:** Yeah.

[00:29:57] **Justin (Host):** I think we can wrap it up there. Yeah. Thanks to both of you for joining. Really valuable to have your expertise and your time here.

And thank you to our listeners. If you're interested in this topic or other topics surrounding pharmacy and pharmacy practice, education, research. Please subscribe to TRxending on your favorite podcast platform, and you can join us next time as we explore new and exciting topics on what's trending in pharmaceutical sciences.