The Knowledge to Action Cycle: How Do I Apply it to My Work? – Session 1

This call is being recorded.

Marianne Farkas:

Today, sorry, I just got the announcement that we are recording the webinar for our archive. So, thank you very much. So, I think without, uh, delay, without further delay, I'd like to turn it over to Dr. Graham to introduce his topic and to tell you a little bit about how the sessions are going to run. And I remind you that these are two experiential sessions. This is part A and part B will be, um, in December. We'll say more about that at the end. But today's session is to set the stage, and the second session is really to apply the strategies. So over to you, Ian.

Ian Graham:

Thank you very much, uh, Marianne, and good afternoon, um, wherever you may be, and I'm having trouble. Uh, there we go. Um, and I'd like to, uh, acknowledge that I live and work on the ancestral and unseated territory of the Algonquin Nation, which is I'm in Ottawa, in the province of Ontario, and I honor the Algonquin elders and knowledge keepers past, present, and future. And I also acknowledge the harms and mis mistakes of the past and the present and dedicate myself to move forward in partnership with First Nations, uh, Inuit and mat, uh, communities in the spirit of reconciliation and collaboration. And if any of you would like to make, uh, land announcements, you can, uh, please put them in in the chat box. So, uh, we have some polls to help me get a better sense of you, the audience. But before we do that, I just wanted to list some of these disclosures, which are mainly, um, um, academic or intellectual in nature. So, uh, I've edited or written, uh, these books and there are royalties that come from them. Um, the one that's done the best is Knowledge Translation in Healthcare. And all of the royalties from that book go to students, uh, at the University of, uh, Toronto, who are doing knowledge translation. And I've been involved in developing a number of models and frameworks in the area of implementation, um, science and, and the Knowledge to Action framework, which fears prominently, uh, today is one of those. And I'm also a member of the Canadian Institutes of Health Research, so that's the n I h equivalent, the Advisory Board for the Institute of Gender. Um, and for six years I was the Vice President of Knowledge Translation at, at the Canadian Institutes of Health Research. And I currently hold, uh, foundation Grant, a seven-year grant that's been extended to 10 years because of covid focusing on integrated knowledge translation or research co-production, which we'll talk a little bit about. And I guess the one other thing that you probably should know about me is, uh, in 2012, the National Research Council was contracted by nr, um, to actually look at its granting process and products. And I was the only non, uh, American on that, uh, panel. So maybe if we could bring up the polls, please. Um, so we have a couple of questions to, to help me, uh, get a better sense of the audience so that I can tailor. So, the first one is whether you attended the previous seminar that I did on the knowledge to action cycle.

Marianne Farkas:

Amanda, can you just tell people how to do it?

Amanda Lowe:

Yes, there should be, um, a little popup, um, at the bottom that says polls, and you can just click your answer right there. Um, it seems like people are answering, so that's good.

Marianne Farkas:

Oh, the answers aren't showing up on screen, so that's why we didn't know. Oh, I have 'em right here.

Ian Graham:

Okay. Um, so most people and I, and I think probably you can show the responses, Amanda, if that's possible. Uh, so there's 29 people and 23, 20 20 out of 24 or 83% weren't at the, the first session that I gave. And so, not to worry, I go over the knowledge to action, uh, framework, so you haven't missed out on anything. And then the, the experiential part for this workshop, and the next one really was about if you had a project and as we're kind of going through the workshop, you could be thinking, um, about how what we're talking about applies. And so, I see that about 75% of you, uh, don't have a project specifically in mind, so that's okay too. We can work with that. Um, not a problem. And are there, is there another poll question? Let me see. Uh, here we go. Um, and so about half of the people in attendance, uh, are researchers, 40% are dissemination training and, uh, TA specialists, another quarter are people with lived experience, um, slightly over a quarter of service providers, 50% are grant PI. So, we've got a nice, uh, mix there. So, it's important when we stop for our moments of reflection and, and I ask you to think about things and, you know, uh, put your comments in the, the chat box or turn your camera on and, and speak and let us know kind of the perspective that you're, you're bringing with your, uh, comment. So, I'm not sure I can end the results. Can you do that, uh, Amanda, please?

Amanda Lowe:

Did that work? I think.

Ian Graham:

Yeah, I think, I think that did. Um, okay. So, this is what was planned, uh, that we'd start with a review of some of the concepts of integrated knowledge translation or research co-production, and we'll talk about the language, and you may be using different terms or familiar with different terms. So, we'll talk about the concept and then end of project or end of grant. Kt. And, and I know, uh, that in the US often the, the term dissemination and implementation are used. I know LER often uses knowledge translation, which we use in Canada a fair bit. I wanna quickly review the knowledge to action cycle and then think about how the, uh, knowledge to action cycle can actually, um, be used to think about end of project, uh, KT planning. Um, and so today is to set us up for part two, which in some ways I think is a, a little bit more exciting. Um, but we have to cover some basics before we can get to the more exciting kinds of things. And so today, this is the knowledge to action cycle, which I'll be telling you a little bit more about, for those of you who are less familiar. Um, but thinking about the, that step at the bottom or phase at the bottom around identifying the problem, what's the knowledge to deal with it? How big is the no do gap, adapting the knowledge and assessing the barriers. And then part two deals with the second,

um, part of the cycle. So, I'm gonna stop sharing for a minute so that we can just have a little discussion about, um, you've heard what I thought the objectives are, but what do you want to get out of, uh, today's session? So, feel free to turn your cameras on if you're comfortable doing that, but you don't need to feel that you do. You can put in comments in the chat box, or you can just turn your mics on. Um, so what would you like to get out of, of today's session?

[pause]

Don't be shy. So, I'm a sociologist by training, uh, Chicago School, which were qualitative. And so, um, when I was trained to do qualitative research, I'm sure some of you will, will, uh, connect with this that, you know, it's really awkward when you're doing interviews and, and the participants aren't talking. And so, um, I was trained to be very patient and not to be uncomfortable and wait, because eventually people would start to to talk. So, we do have a limited amount of time, but I'm sure there's somebody who could give us what they hope to get out of the session. Or Maryanne, can you tell me what's in the chats?

Marianne Farkas:

This, uh, well, one question is, could they get, could people get, um, a copy of the presentation? Yes. That was a new question.

Ian Graham:

Yeah, that’s easy to do.

Marianne Farkas:

Someone said, this is a new concept to me. I'm looking to see how this tracks with what I know of project management. Okay. Another person says, um, it's important to me that the work my team does is disseminate, is disseminated, and that information goes out beyond academia. I have ideas for how to do that, but I think there is more to learn. Um, and I'm just listening to see if any new strategies have been developed. I don't have a specific question. And, um, I'm hoping to learn more about the process since this is all new to me. Um, I am from Tanzania and my current idea, ooh, I just lost it. And sorry, the person from Tanzania, hang on. Uh, my current idea is to do research on, uh, women with disabilities and entrepreneurship, and he's looking to see how he can translate, uh, the results of that project more broadly. Those are the questions that are in the chat that I can see. The other thing that people could do would be to go to the bottom of your zoom screen, and, uh, you will see that there is in some people a more a reaction, uh, tab. And you can raise your hand if you want to speak by clicking on that reaction tab. Let me just see if I've got, hoping to learn more about and gain new skills for my team management. My interest is in expanding the re reach of research and knowledge. Also, what tools and strategies are effective in drawing in the end user to the research process, developing a better understanding of what occurs in each phase and how to apply it, how to implement research findings in everyday practice. There's usually a very long-time gap, which certainly we know. And I'm interested in understanding how learning and practice can be enhanced. Is this a concept? Oh, my goodness, my screen here is not good. Is this a concept like service learning? I'm always looking for more tools to work with clients. I'm a service provider and my clients are employment focused and mental health with mental health conditions. Um, I'm heading to Kenya tonight to work with a colleague who's doing disability, primary and secondary school for girls and boys with disabilities and projects to develop leadership, um, for

women with and without disabilities, and want to know how to be most effective.

Ian Graham:

Okay. So, uh, that's a tall list of, uh, least things that people wanna get out of, uh, the workshop. I think many, um, will be addressed in different ways. And, um, if you have questions, just put them in, in the box or raise your hand as Maryanne HA has said. So, context really important, why do we worry about knowledge translation? And, and this is specifically, uh, data from health, but it applies in all sectors. And it's this notion of we've got these health and wellness gaps, sometimes referred to as evidence practice gaps, where we have good research, um, and it's not being used. So, it's underuse. And in healthcare it's been estimated between 30 and 45% of patients don't get treatments of proven effectiveness. And this applies in the us it applies in Canada, it applies in Australia, it applies in, uh, the Netherlands, it applies, I said Australia. Um, so it's a, a universal issue. And it goes with, you know, it takes 17 years to get things into to practice. And then we have a different problem where up to a quarter of patients get things that we know don't work or aren't helpful or are actually harmful. So that's overuse. And so, with those ones, it's not about implementing things, we need to de implement them. And, uh, the bottom bullets come from Australia. A team in Australia that did a review and said about 60% of care is in keeping with the evidence or consensus-based guidelines. 30% of care is low waste, uh, is a form of waste or low value, so we could do without it and not have much harm. And 10% of patients are harmed by the care that they receive. And so, depending on your context, there are probably different statistics. But this notion of we have evidence from research that probably should be implemented, we're doing things that are not in keeping with the evidence that we should stop doing, and it, it doesn't happen. And so that problem is we have all this research, and we really should do something, um, with it, which is why the area of implementation, science and knowledge translation and dissemination and implementation becomes so important. And I like to think of knowledge translation as this bridge between discovery and impact. So, we can do all the greatest research there is. And if nobody, if it doesn't make any difference to anyone, we're never going to, uh, achieve any benefits or impacts from it. And of course, uh, much of our research is actually funded through taxpayer dollars, uh, which means that if those outputs are not getting to people and they're not using it, then is that the best use of taxpayers, uh, dollars. And so, when we start to think about the pathway to impact, and I'd also argue that impact is about equity, um, where everyone is benefiting from, from the research outputs. Then you've got knowledge translation or dissemination and implementation practice and the research of it. So, I, I mentioned there are terminology issues, it's all in a name. So, in the seventies people talked about knowledge transfer, and that kind of went out of vogue because it was one way, I have the knowledge you don't, and so I'm, all I need to do is transfer it to you. It's a communication problem. And then in the nineties, we, eighties, and nineties, it was, no, we need to think of this as a two-way street. So, it's not just the researchers transferring information to people or transferring people, transferring the information to people. It's about also hearing from those people going in the other direction. Uh, nursing in, it started in the seventies being focused on research use or utilization and the distinction between knowledge and research. So, there's different ways of knowing than science, or in addition to science, there's other ways of knowing. So, knowledge being broader, you know, in including, uh, wisdom, experiential knowledge, uh, all of that counts. It's not just empirical knowledge from research studies where research use was about specifically using findings from studies knowledge to action. And so, we actually use that. We call it the knowledge to

action cycle cuz people kind of get, we have knowledge, we want something to happen. It's kind of colloquial and, and a little bit intuitive. Um, then in different parts of the world in the US dissemination and implementation, is a prominent term implementation science kind of fits everywhere around the globe. Um, Canada started with, and it was the Canadian Institutes of Health Research. So, knowledge translation. Um, and as I mentioned, I think n idler also, uh, uses, uh, the term places in Australia use knowledge translation. And then, um, many places, our social science and Humanities research council in Canada prefer the term knowledge mobilization and C I H R is actually changing. So they, they, they, they're modernizing the language and so they're dropping knowledge translation and replacing it with knowledge mobilization. And as far as we can tell, it's exactly the same thing. It's just a, a language, uh, change. So often it's helpful to kind of, can we break down what do we mean by, you know, these concepts of knowledge translation or the pathways to impact? And the first one I've got listed here is research co-production or integrated knowledge translation. And I, I know those of you that are funded by NIDILRR, uh, that's the way, uh, research is to work. People with lived experience, uh, service providers, clinicians, managers, whoever are the people who would be benefiting and using the findings need to be part of the research process and doing research with them as opposed to on them. Um, and this will come up again later when we start thinking of the dissemination process. And I think one of the comments that someone had about how to better integrate, um, end users in the dissemination process, then there's the end of grant knowledge translation. So, what do we do? We have findings. Now what do we do with them? How do we get that out? Who do we get them out to? And the third way is actually implementation science. So, studying what are the most efficient ways to increase the uptake of research findings, uh, studying the determinants of decision making. So how influential is research in policymaking, for example, and how could we increase, uh, the importance of research in policymaking? So, all these first slides are really kind of setting us up for what's to come. And often when we think about dissemination of research findings, funders, in particular, automatically assume that all findings are really important and that researchers should go to extraordinary methods, uh, and means to actually implement them. But let's stop for a minute and think, are there any ethical issues when it comes to knowledge translation or dissemination and implementation? So again, I'll, I'll stop. And so, what I'm thinking here about, and, and I have a few bullets, but I I'd like to hear from you, um, maybe you don't think there are any potential ethical implications. The research that's being done is ethical. You get ethics board approval. So why would disseminating the findings potentially have ethical, um, or some people might be worried about the ethics of disseminating or implementing ethical findings. So, use the chat or turn, turn your camera on or raise your hand and, and chat. This, the intention is, this is kind of a workshoppy kind of thing. So, the digital divide, yes, absolutely. Um, so some people might actually, um, be able to get the findings easier if they have access, uh, to it and have computers and have broadband. For example, we know people in rural areas in Canada or disadvantaged. So, if you're dissemination strategy, um, involved, uh, computers and the internet, then they might be less likely to actually benefit. Anything else?

Marianne Farkas:

Let me just remind you that if you want to raise your hand, the place you do that is click on the word reactions, which should be at the bottom of your screen.

Ian Graham:

And maybe what I'll do is I'll go back, um, and put the question on. So here, um, what do you consider, and, uh, there we go, some of the key ethical considerations related to dissemination or knowledge translation or implementation, if we just kind of broadly thinking those categories. Yes. Uh, when working with some groups like indigenous groups, um, where that knowledge comes from and how it can be shared, uh, is really, I import very important considerations and who owns the data and the sharing of that data. Um, Jade, do you have your hand up?

Jade Metzger:

Yeah. I also wanted to, um, share that the privacy standards of IRBs has not in exactly, and always caught up to the privacy standards of the internet. And so, a lot of times we're like, oh, we've d uh, anonymized these people, but if they're particular enough, they're easily, they can be easily searched online.

Ian Graham:

Yep. Okay. So let me see. Um, so you could argue that it's actually an ethical imperative to act on all findings we need no matter it is, we need to get it out there. And so that's the other way around it, as opposed to a, a negative concern, well, I guess it is a negative concern, but seeing it in a positive light, like we need to do something. And so that's true. Um, I think we always want to do more good than harm by promoting the uptake of research findings. And so increasingly we need to think more about equity and diversity and inclusion and access and social justice, all of those kinds of considerations. So, are some people more privileged than others, uh, by the findings or by the strategies used to get the findings to people? Um, another potential, uh, concern is we have the findings, but are they ready for primetime? And maybe this is the first study, and it needs to be replicated. Um, maybe there were methodological issues with, with our studies that we couldn't foresee when we started them. And so, um, do we, are we really convinced, um, that they're mature enough that we should be doing something with them? We often forget that there's opportunity costs. So, if we're implementing, you know, the findings from my study, well, the findings from someone else's study may not be implemented because it costs something to implement. And so, there's a trade off, and if you're implementing, I work in clinical settings one guideline, it may mean that you don't have resources to implement a different guideline. And so that means those patient populations who are, who have the other guideline, or the other guideline would be relevant to them, are actually being disadvantaged, where the people who have the, the condition that my guideline was about are actually benefitting. So, we're creating potential inequities in the process and are the benefits of the uptake of the research findings equitably, um, distributed? And then we can also think of the KT strategies. So how are we gonna get the information? And so, this kind of goes to the digital divide. Um, are they aligned with the norms and values of that target audience? Um, or should they be, or could they be disruptive? So, a study a few years ago was around mammography and, uh, women who were new to Canada. And, um, the strategy was to reach out to them and mail them information about mammography screening. And it wasn't successful. They didn't, the rates of mammography screening didn't, uh, come up. And so, the, the team went to the community and spoke to some of the leaders in, in that particular community, and they said, um, you really need to focus the husband, focus on the husband, and so send the information to the husband, and the husband would be more likely to, to encourage their wives to do it. Um, and so that was presented as the culture of that particular, uh, group. And so, they actually did that. And it

actually did improve mammography screening. You could also argue that with new people to Canada, maybe the focus should have been more on the women and helping empower them with their health decisions, which could have been disruptive to the norms and values that they were bringing, um, with them, for example. So integrated knowledge translation or research production. And, uh, I know that many of you, all of you that are NIDILRR uh, grantees, uh, kind of work this way. Um, and so I'll, I'll just quickly summarize because I think when we think about research co-production, we may not always think about how we can maximize, um, the, the knowledge translation plan by engaging people with lived experience and other, um, knowledge users in developing the knowledge translation plan. And so, the reason why co-production or integrated KT came about was this notion that researchers, um, and those who use research findings are really different. They come from different communities. They have different cultures and languages and priorities and incentive systems and timelines, and that leads to research not actually meeting the needs of the knowledge users. And so, uh, I've just put in the definition of research co-production, a model of collaborative research that explicitly responds to the knowledge user needs in order to produce findings that are useful, usable, and used. And in Canada, we talk about integrated knowledge translation as a model of collaborative research where researchers work with knowledge users to identify a problem and are in a position to act on, on the findings. So very similar kinds of concepts. And again, similar to the knowledge translation terminology, depending on where you are and the, the fields that you're working in, it's sometimes referred to as collaborative, participatory action-oriented research, community-based research, engaged scholarship, knowledge production in the UK, co-production, co-creation we're seeing more co-design. But the notion of working with those people who had actually, uh, used the research findings, uh, Traian was a post-OC of mine who did this study where she wanted to know what the similarities and differences between several of these paradigms were. So integrated KT MO two, um, research co-production, participatory research. And what she found was they're much more similar than different. And so we, you know, probably don't need to spend a lot of time trying to distinguish, it's about true partnership rather than engagement. Uh, it's about an approach to research rather than a methodology. Um, some of the core values and principles are things like co-creation and reciprocity and trust and fostering relationships and collaboration, um, um, co-learning, active participation, democratization of knowledge, shared decision making in the generation and application of knowledge, all of the things that I'm sure many of you, uh, do in all of your projects. And so, it's about being solutions focused and really, uh, responding to that moniker of nothing about me without me. And my research program, our tagline is doing research with the people who use it. And then that brings you to, well, who are these knowledge or research users or beneficiaries? And so, you know, we need to start with the people with lived experience, patients and, and consumers and the, the public. Like why are we doing whatever it is that we're doing? But it can be policy and decision makers at the community level all the way through to the federal level and even internationally. It could be people from industry, it could be clinicians, it could be third, uh, sector service providers, health system managers, whole communities, when we're thinking of indigenous, uh, research. And so, uh, sometimes you, you see these categories of people as non-researchers, and I find that a little bit, uh, inappropriate. Uh, I'm, uh, not a clinician. I work in clinical settings. And so, I'm referred to as the non-clinician. Um, and in fact, I should be referred to as what I am, I'm a social scientist. And so, I think it's the same way. And, and you may have other terms for the concept of knowledge or research, uh, users, uh, but that distinction of we are different from researchers, and we need to be part of the research

process. And I like this particular continuum because of the, the changing shifting, uh, size of the balls. And so, if, if we think of the levels of, uh, engagement you and if these big balls are the researchers, so they can inform and educate, uh, you know, um, people with lived experience or managers or uh, service providers, they can gather information, they can have a discussion, which is more two-way and more like consulting. They can engage. And so, you know, more interactions. But then when you get to the level of partnering, everybody is, uh, has more, uh, of an equal role to play. And that doesn't mean that researchers may still, they, they often are the ones who hold the money from the grant. So, in that sense, they do have more power, but they don't need to act that way. They can share, uh, all of the decision making, um, with their partners. So, with the integrated KT and research co-production, I'm really thinking of, of this partnered level as the ideal. And then what makes you know, for integrated KT research? Well, uh, those knowledge users and the researchers need to be involved in shaping the question and deciding on the methodology and helping with data collection and selecting measures and interpreting and, and the study findings and crafting of the messages, which becomes important for the dissemination piece. Um, because it may be too late if the researchers have unilaterally analyzed the data and come up with the messages. And we'll talk a little bit more about that, uh, in a bit. Um, and then moving the research results into practice. And then even if you're working with a team of knowledge users, there may be others where the findings are generalizable or transferable to. And so, you need to think of how do we disseminate and facilitate the uptake? And it doesn't necessarily mean you have to do all of these, um, but it should be about making sure the knowledge user has an opportunity to participate in any phase of the research process, and that it's, they're enabled to do that. And so any, uh, accessibility issues are dealt with, whether they're relate to physical accessibility or participatory, uh, accessibility. And so, the theory is if researchers and knowledge users work together, we're gonna get research that's more useful, more usable, and ultimately more used because it's gonna be solution-based. Um, those end users are gonna have more confidence in the results knowing that the research was designed to address their issues. And there's a readiness by those knowledge users because they've said, this is what our problem is, this is our issue, now you've got findings, we are going to apply those. And so that 17-year gap is often about researchers come up with things and then need to convince those practitioners or people with lived experience that that thing that they came up with is actually beneficial to them. And of many times it is, of course. Um, but you can kind of leapfrog ahead a little bit if your research question is actually being driven by the end users because then they're ready to embrace those findings. And if that happens, you get that impact much quicker. You don't have to wait 17 years and you can demonstrate the health and social benefits that may arise. So now a little bit about the knowledge to action cycle. And I promise we will get into thinking about projects and how the knowledge to action cycle can apply. It's based on, uh, review of 13 planned action models or frameworks or theories. And so, these are designed by people to engineer a change and they say, this is what you need to do to bring about a change. And we analyzed 31 of them a theory analysis to come up with what were the common elements across the 31. And in fact, it's only 30 cuz one of them made no sense at all. And even when we contacted the authors, we couldn't make a whole lot of sense about it. So, um, we developed it because people were saying, well, how do you get change to happen? How do you get findings, um, to happen? So, implementation, knowledge, translation, big black box, don't know how it works. These models are designed to try to kind of open the box a little bit, um, provide a holistic view of the phenomenon by integrating concepts of knowledge creation and application. So, the two

pieces you need to, you know, develop the research findings and apply the research of findings. Um, the framework takes a systems perspective, so those who produce and use, um, the research is actually situated in a social system or multiple systems that are responsive and adaptive and often complex. Um, but it's not, not always in predictable ways. And the knowledge to action process is really very iterative and dynamic and complex. And those boundaries between knowledge creation and action are fluid and permeable and people move back and forth, um, between them. Um, essentially the framework falls under a social constructivist paradigm, which simply means that it privileges social interaction. Like this is how knowledge is created by how we interact, uh, with each other. Um, and that adaptation of research and thinking about the local context and the local evidence and the local culture, you need to pay attention to those things. If you want people to use the findings, that findings aren't magically objective that fall out of the sky and everyone goes, oh, wonderful manna from heaven, we can just implement it. Well, it really does depend on a lot of these other social factors that we sometimes, uh, forget to pay attention to. And the frameworks designed to be used by a broad, uh, range of audiences. And that at each phase of the cycle there are theories, educational, psychological, um, educational, I said that, uh, sorry, um, management theories, uh, that apply and, and can be used. So, from those 30 frameworks, these were the seven phases. And so, some of the models started with you have a problem and then you try to look for knowledge or evidence that would fix it. Others said, you start with knowledge that's come out and then you decide if you have a problem, but the key p and so that's why the two are in the same phase down here at the bottom. Um, but what becomes important is how big is the, the no do gap or the knowledge practice gap. So, what do we know from the literature and what are we doing? And if they're not aligned, do we need to do something about it? And so if the decision is yes, uh, there is good research out there that something would be, uh, a better way to do it, then we move to the next step, which is we need to adapt that innovation and that solution to make it work for us because, uh, it what was done in the study might be a slightly different context from us, or our pop population may be slightly different. And so how can we, without changing, uh, the nature of the evidence, contextualize it, align it with our context so that it actually fits for us. And then once we've done that and know what it is that that can be implemented, we need to think about, well what are the barriers in facilitators to people actually using that knowledge now? And once we know that we can pick, uh, knowledge translation or implementation strategies to address those barriers. And then we need to measure the uptake of whatever the knowledge was, the new practice, um, which is different from evaluating the outcomes. So, does it make a difference if people are actually using the evidence, making decisions based on the evidence? What's the impact of that? And then the last phase, although it has to do with being a two-dimensional figure was how do you sustain the change? And you actually at each of the phases before need to be building in thinking about what are gonna be the sustainability issues, even though we've listed it as sign the last element. So, in those 30 models, what was often not talked about was, where does the knowledge come from that you want to implement? And so, we put in what we call the knowledge creation funnel. And there were the individual studies really great, not very helpful on the most part cuz there may be dozens of studies and what do they mean? And they may be completely different from each other. So, first generation knowledge. So, we can try to make sense of that if we actually do knowledge synthesis. So, bring it together, um, and try to k get kind of a global understanding of what the evidence is saying. So, second generation knowledge, but ultimately for those end users, what they want are knowledge products and tools to help

them in their decision making. And so, guidelines or algorithms or decision aids, so we called it third generation knowledge. So, the things that you actually would be implementing. And now if you think of, if you have a project, uh, for example, um, where you're coming to the end of your project and thinking about how are we gonna do the end of grant dissemination? Well, that's often about the knowledge products and tools that you create that you want to use to get the information out there. And, uh, a publication would fall under a knowledge, uh, product, which we, you know, traditionally researchers traditionally think as the go-to for when we're disseminating things. So, when you put the framework together, the knowledge, uh, creation with the action phase, this is, um, what it looks like. And so, it's been, uh, very common. It's been cited, I think over 4,000 times, uh, people have looked at how it's actually been used. And it's been used to guide research projects. It's been used to guide implementation projects. It's been used in systematic reviews to divide up, uh, the literature into these boxes. Um, so quite versatile in terms of these are the things, the action phases that you need to think about probably when you want to bring about a change. So put that on hold for a minute. Now we're gonna switch gears and think of the end of grant or kt uh, uh, uh, process. And so, this taxonomy comes from Jonathan Lomas decades ago and, uh, Trish Greenhall. And so, there's essentially three categories that we can think of. So, diffusion let it happen. So, you publish something, you put it out there, it's all up to the people who would find it and read it and make use of it. And we know that that's not a really efficient way to get information to the right people dissemination help it happen. So, this is when you actually figure out what's the message for what audience and what's the best way to reach that audience. So, you're doing lots of tailoring. And then the, the third issue is implementation or application. So, what do you need to do to actually, um, make it happen? So Jade, I'm just noticing you have a, a question about feeling very, uh, feeling the process is linear. Can, do you wanna come on and talk about that?

Jade Metzger:

Sure. So, this process, I love it very like clear in its step by step, but if something, uh, but it feels like it's like this is the step you go to, this is the next step and very progressive in that way. And um, yeah.

Ian Graham:

Yes. So, it is presented that way cuz it's hard to, so if you think back to an earlier slide, it's iterative and dynamic. And so, in fact there is kind of a linearity, but you have to jump back and forth. So, when we actually use it with projects mm-hmm. <affirmative>, we find things out at the barrier stage. Like people have issues with the original research. And so, we, we must then go back and look at the research to find out, well, yeah, they're actually right. Maybe it's not as strong as we thought it was, but we didn't realize that when we started. So, you're quite right, the, the image and there are double-headed arrows that are attempting to get at that, but not very well. Okay. So, it's a very good point. Um, and it's more a graphical one than a real one. Mm-hmm. <affirmative>, but thank you for pointing that out. That's okay. Um, and, and part of it also is when you're explaining it, sometimes you have to do, break it into smaller steps that automatically make it appear linear.

Jade Metzger:

<laugh> mm-hmm. <affirmative>. Yeah. And, and sometimes it’s one of those things you have to know the steps before you know how to break the rules of those steps. So yeah. No,

that’s totally okay.

Ian Graham:

Yeah. But really sorry. Really good point.

Marianne Farkas:

There’s, there was another question, uh, a few minutes ago that I wanted to share with you, which, uh, came up for someone, which was, how do you work with end users who may be unfamiliar or, uh, with research or are distressful of researchers? You had talked about co-production and involving end users. And so, this person, um, just asked that question.

Ian Graham:

Yeah, that's a really good question. And we, and, uh, you're absolutely right. There are equity deserving groups that have, uh, long histories of problematic encounters, if I can say that in a diplomatic way with researchers and rightly so. And so, there is an issue of, um, so I would say th this is my kind of rule of thumb. So, the first is you need to start interact. If as a researcher, you need to start interacting very early on to start building those relationships. You can't go and say there's a project, uh, there's an application process and the grant needs to go in in two weeks, and I want you to sign onto the project. That's the absolute worst thing you can do. So, you need to take time, you need to start having conversations with the groups. You need to understand what their issues and what research questions they might be interested in if they're willing to talk to you. And they may not be, um, potentially for good reason. Um, you need to actually, at the stage of the research proposal, actually spend time together saying, okay, and, and I do this a lot. Um, if I come to you and say, okay, I I think you'd be a great partner for this project, this is what I'm starting to think. Does this make any sense to you? Are you at all interested in this idea? And it's okay if you're not. Um, or could it be changed to make it, uh, more useful or relevant to you? Um, or what are some of the things that you'd be really keen, like, we have this opportunity to apply for funding. How could we use this to maximize what would be helpful, you know, for you, your organization, or your group? So that's kind of the beginning of you. You need to deal with that trust issue. And you can't, you can't do it the way researchers in the past have just gone, you know, I've got this, we've got two weeks I've filled in the form, I've written the le your letter of support. All you need to do is sign it and everything is fine. And then in those discussions, those preliminary discussions, how do we want to work together? What are our values? What are the principles? Is this about mutual respect? Is this about figuring out how we can compensate you for your, your time and energy on the project? Um, is this about, um, mutual learning? We reciprocity, I want to learn, um, from you about the lived experience, for example. And maybe you want to learn more about research and become more familiar with different study designs and those kinds of things. So, can we make sure that we we're clear about this from the very beginning? So, I think those discussions and often having, um, if, if the, if the discussions are, are working well, actually saying, let's have a partnership agreement where we lay out what are our principles, how are we gonna work together, what are our expectations of each side? What are our obligations? What are we going to, uh, get out of this, uh, that would allow us to want to continue doing it.

Marianne Farkas:

Okay, thank you, Ian. There is a, uh, complimentary type question that goes along with this, which is, do you have suggestions about how to encourage researchers who don't believe in co-production to get, uh, to involve, uh, end users to buy into this kind of process?

Ian Graham:

So, I, I understand the question really well, and I hope I won't surprise you, um, by saying, I think we really need to be careful about, um, researchers who haven't bought into it. This is, they can do more harm than good <laugh>. Um, if, you know, a funder has a requirement and so they're going through the steps, but they don't really believe this is the way to, to do it. So, I actually discourage people that, um, aren't really embracing that partnered, uh, kind of philosophy and encouraged them more to, you know, look at the literature, see that there are benefits to working in this kind of way. I was in Australia and it was a basic scientist, and I had, I was writing a, a, a knowledge translation plan for a, a new research institute. And so, uh, collaboration and uh, co-production was a key component in this strategy. And I was worried that the basic scientists would, wouldn't, uh, take to it, um, because they didn't see the need to engage patients, for example, and, and other groups. And this scientist came and I was really worried. He was a prominent, uh, basic scientist and he had a discovery that netted, I don't know, a hundred million in royalties or something. And he said, you're not strong enough. It doesn't matter what kind of research people do, they need to actually start working with and understanding, uh, patients, the clinicians who treat them. Um, and it didn't change my science, but when I started going to the clinic and listening to the conversations and the issues that were there, I started thinking differently about my basic science. And that's what led to, you know, this great discovery. So, I, I think we need to bring people along. I'm not sure that it, it we should, uh, expect or hope that all researcher g researchers are going to work in partnership. I think there is also personality, uh, issues here. You need people who are good interacting with people and nod all of us, uh, have been blessed with, you know, personalities that allow us to do that. So, uh, I'm not dumping on on researchers, but I think we need to tread carefully and we need to build their capacity. And one way to do it is through trainees and I, I know in Canada we've had senior researchers tell trainees don't work in partnership. It takes too long. Wait till you do your postdoc. And then they tell 'em when they're doing their postdoc, don't work with partners. It takes too long to build trust in these relationships you need to get on with your career. And then when they're an early stage researcher, it's the same thing, wait until you have tenure and then by the time you have tenure, there's no way you're gonna go back and start working. Cuz it's hard work to have these kinds of relationships. So, we need to build into the academy, um, mentoring of trainees who want to work in partnerships and support them and create a safety net so that they can actually complete their PhDs or postdocs or whatever, but do it in a, in a positive way. So that was my rambling on on that.

Marianne Farkas:

Ian, can I stop you for one second? This might be a good opportunity to do this. Uh, we've talked about, uh, what you're describing as co-production is something that, as you already mentioned, NIDILRR, the National Institute on Independent Living and Rehabilitation Research, uh, has built into its selection criteria. So, you get points for hiring people with, with lived experience. You get points for talking to people before you even come up with your questions. Yeah. Et cetera. And, um, and I take your point that there is training that needs to happen in order for that point system to not just stand alone. But we have a quick poll if you would allow us to do that, just to find out how many of the folks we have here

today actually are NIDILRR grantees. Cuz it occurs to me this might, you know, may or may not be relevant. So, if you would just answer these two questions. Are you funded by NIDILLR at all in your organization? Yes, or no? And do you currently have a grant from NIDILRR? So, you may have been funded by NIDILRR before, but currently you are not. We're just curious to know how many people are in this category. So, if you could take a second to answer that, that would be really helpful.

Ian Graham:

And as you're doing that, uh, think about if you, if you've come with a project specifically in mind or a potential project, um, to what extent do you think the approach you'd be using, uh, might be more diffusion versus dissemination versus implementation? Because often we don't think about this ahead of time, and it does depend on what the findings are, but starting to kind of dissect our knowledge translation plan into these three, uh, broad categories can be really helpful.

Marianne Farkas:

Uh, thank you Ian and Amanda. I can't see if people answered this question or not.

Ian Graham:

Yeah, so 52 people, um, are funded by NIDILRR and 48 uh, percent are, uh, currently holding a NIDILRR grant. So, half the participants are, are NIDILRR affiliated grantees.

Marianne Farkas:

That's great. Okay. That just helps us know how familiar people are with some of this language. Uh, thank you. Go ahead.

Ian Graham:

Yeah, so I was gonna take a minute, but, um, I'm running outta time and I wanna get to what I think is the really good stuff. So just keep in mind like this distinction of let it happen, help it happen, make it happen. And what criteria do you think you need? So, with research grants, you only have so much money, so you can't do everything and you have to prioritize. And sometimes the findings do need to be implemented, but maybe it's not the researcher who who needs to make it happen. It's about getting it to policy makers, for example, who can then help make it happen. So, it's about thinking strategically of what's possible and what the goal is and who needs to be involved in the process. And when we're thinking of, of research, I think it becomes, and the dissemination becomes really important to me to think about judicious knowledge translation. So, it's like not everything necessarily needs to be implemented. So, it depends on the reliability, the validity, the strength of the evidence, the significance of the findings, and there's a judgment call. And we also need to think about the findings themselves can be ex affected by the extent to which sex and gender and intersectionality are have been incorporated into the results. And so sometimes we haven't thought about that, and so we haven't disaggregated by gender and there's big gender differences that are affecting the findings, but we don't see it because we're using the aggregated data. And so, I'm, uh, these slides are from the Institute for Gender at Health, at the Canadian Institutes of Health Research. So, gender being, you know, socially constructed and sex, uh, being biological. And this is just one example that is really interesting, right? So, when we think of basic science that's cell-based, 80% of the time it's

male cell lines. And then animal studies, 70% of the animals are male. And in human trials, about two-thirds of the participants are men. Yet women consume more healthcare than men and live longer. So, the research is actually more about males and men than women. And of course, it can be in some areas, um, the participants in studies may more likely be female or women. And so, the pers how they apply those findings to men may be relevant to consider in your implementation plan. And so, this slide was j just to make the point that if the original research hasn't actually taken equity, diversity, and inclusion into account, it may mean that some of the results, um, won't apply to everybody. And so that may have, uh, knowledge translation implications. And I'm gonna skip over this slide. You can go back when, when they're made available if you're interested in intersectionality and knowledge translation, uh, Dr. Sharon Strauss at St. Mike's Hospital in Toronto and the University of Toronto has a knowledge, uh, translation program. And they actually have, uh, uh, a whole area on intersectionality and knowledge translation. And I, you may have seen the, the flower. And so, the petals are different types of, um, intersectional, uh, characteristics and, and attributes that make up people's identity. And then what you see around the outside circle are all of the different kinds of discrimination and, uh, factors that, uh, create, uh, inequity, uh, among the population. And what's lucky is they actually have an intersectionality guide. So, if you're doing knowledge translation, how you can actually interpret, uh, things. So, a word of caution carefully considered the dissemination of single small studies and one's a poor methodological quality and where the strength of the evidence is low. But you may not have control over those things in your own study for whatever reason. And you need to balance it still may be the best evidence that's out there and should be, uh, disseminated and implemented. Often, we think that, uh, synthesis is the best, like basing our knowledge translation on synthesis. But again, maybe there's not enough studies to synthesize and so you have to go with the studies that are there. And so, the bottom line is not every finding needs extraordinary efforts. Uh, and you should be matching the scale and intensity of those efforts with the quality and significance of the findings. And so, this C I H R has a, a framework F for planning, uh, KT and a grant proposal. And often, uh, which was based on research that we did when I was at C H R, excuse me. We often forget to think about what's the goal. And there's typically two either increase awareness to educate, to enlighten, or to promote action. And so, if you're creating your knowledge translation plan and you haven't actually decided what's the goal, you're kind of shooting in the dark. And then we know the audience is really important to be clear about who it is because different audiences will need different strategies to reach them. And then those strategies, if you're doing infographics and videos, you need people who have expertise in those areas and you need to resource it appropriately. Well, this is when you're putting in the grant proposal and you'll notice what's missing is what's the message, what's the finding, which you don't get until you've done the study. And then you need to think, do your goals change cuz now you have the findings and they're not as great as you thought, or they're way better than you thought. And so, the goal may shift from just awareness to we need to inform policy now, which we weren't sure was going to be the case. We need to tailor the message to the audience. And then the same issues around strategies and expertise and resources. Okay, so how do we think about the knowledge to action cycle? And it's actually to create the knowledge products and tools and it's flipping and around the other way. So usually, we think about the action cycle to disseminate the knowledge products and tools. I'd like you to think about the phases of the action cycle in terms of creating, uh, those knowledge products and tools. So, um, I need to move pictures out of the way cuz I can't see my own slides, which isn't a good thing to do. Um, so let's consider how those

action phases can actually influence a a research team. Think about what they need to do when they're creating those knowledge products and tools. So, we have the identify the problem and the no do gap and the identify. So, it's slightly different. Now we need to think about, we need to identify the research that needs to be disseminated and implemented. And the problem is a slightly different problem. Who needs to know about what, uh, about the findings or what they need to do with the findings and the gap? We need to think about it slightly differently. It's, we need to determine how much effort and resources should go into dissemination versus implementation. For example, the concepts are kind of the same but not quite so involving. And this comes up to, to someone's point, we need to be thinking about at the stage where we're creating these products and tools. How do we engage our knowledge users? And they may have been on the research team, but we also argue, broaden it, get people who weren't on the research team, get them involved too. Cuz now you kind of have a sense of what's going on and we'd argue that you need to bring them in, not after you've done the analysis, bring them in at the analysis and interpretation phase cuz they may actually provide great richness to the interpretation of the findings that you didn't think about because they're bringing their perspective, uh, whatever that might be. Uh, consider the findings in light of the global literature. So, we kind of typically do that, try to get a sense of who are those potential audiences or intended users, um, what might those messages be, right? Take advantage of those knowledge users to help identify the key findings and, and audiences from their perspective. Um, what are the criteria for determining whether the findings should be disseminated, like help it happen versus how you are gonna know when you have those findings with your team that we need to move it into high gear and we need to be working on how do we influence implementation, um, of these findings. And so, I had a break and I only have 20 minutes, so I'm gonna skip over, uh, this, but I want you to think about this. And at the end there's, I have a little table, um, that I, I think, um, Maryanne can share with you if you're actually working it through. But these criteria become really important. And so, when we think about, you know, should we disseminate the findings, you could argue it's an ethical imperative. You get funding from, you know, a charity or a, a government organization, regardless of what the findings are, you should disseminate them. But then you've got, well, they need to be open access. Do you have money for the for the fees? What resources do you have? It'd be great if you could make an infographic, but it's gonna cost to do that. So, you have to make those kinds of decisions. Um, researchers, we get tenure and promotion, uh, based on publications. So, we may think we have to do this, whether it's really from a knowledge user perspective that useful to have a publication. Uh, maybe they think, uh, using social media would reach their audience way better than an academic publication that no one would ever read, for example. But the researcher says, I need the publication to get promoted. When we think about what criteria you should use as a team to decide, okay, do we go to that higher level of implementation? So, does the strength and significance of the findings justify implementing? And sometimes it doesn't, and that's okay. Are the findings sufficiently reliable and valid and transferable or generalizable to be implemented? Has the research sufficiently included sex and gender and intersectionality considerations so that, you know, um, whatever those characteristics are, are they being addressed in the research? And you know that who, who might best be targeted with those findings? Will the implementations of the findings lead to greater equity or inequity for some, are the trade-offs worth it? And you might justify, you might say, yes, that group is a deserving group, uh, an inequity deserving group, and they will benefit a lot more than a majority group. And we are okay with that. Um, so then when we think about identifying the problem, do the findings still

address the meaningful and important knowledge, user problems and issues? Maybe things have changed in the meantime, in the 10 years that you've been doing the research, uh, nobody thinks it's as big a deal as it was when they started. Who gets to decide, right? Whose opinions matter? And this is where engaging those knowledge users and broadening it beyond people on the team who's not at the table, helping to decide whether the f how useful these findings might be and what the messages ought to be, and what do you do if there's conflicting input? So, we brought a, a group of nurses together. We did a trial of bandaging and showed them the results. So, two kinds of bandaging. They had equal effectiveness. And so, we said, what, what are the messages? What are you seeing? And they said, it depends. And so, the, the bedside nurses said, can you tell us when we should use one bandage over another? And the manager said, we don't care about that. We wanna know which ones cheaper. And so, there were actually two different messages from the same study findings. And in our case, we, we presented both of those in the paper and did an economic analysis to show the implications for the, the managers. And this is a, I really love this quote, to result in an action, the knowledge being translated needs to be relevant, appropriate, applicable, timely, and reasonable, um, to the needs of the intended users. And we should always research teams and knowledge users be thinking of these things when we're coming up with the products and tools that we're wanting to disseminate and get implemented. Um, so the gap, so what are the potential benefits of the knowledge translation or the dissemination and implementation? Do they outweigh the harms? And we always need to be thinking about it's implementing is not necessarily neutral, right? Some benefit, some don't. Um, potentially we need to consider it. How should the planning proceed? How much effort should go into dissemination versus implementation? Who should be responsible for what aspect of, of the plan? And always remember, think about your goals. What are you trying to achieve? And so, if we then move to the adapt, uh, phase of the knowledge to action cycle, it's really about confirming the audiences that you're wanting to reach, tailoring those messages, contextualizing the findings, and then developing those tools and products that are actually gonna help, uh, do all of those things. And this slide is to remind you. And so, categories of stakeholders, and I know the term is, is losing favor in Canada, and I think in the US as well, because of its connotations to, uh, colonial times and indigenous groups not being comfortable with stakeholders. Um, but I'm not sure that we have a better term at the moment, uh, to replace it. So, but I just acknowledge, and if you're working with indigenous groups, it's don't use the term stakeholders. They much prefer partners. Um, but those audiences, so who are, who are the decision makers who would use the research findings? So, knowledge users who are impacted, but they're not making the decisions. And so sometimes the health system are the knowledge users, they make the decision, but it impacts patients. But the patients weren't involved in making the decision necessarily. And then the third category are people who are neither using the, the research knowledge to make decisions or impacted, but they are interested in what's happened. And so, when you're thinking of your plan, are all three categories relevant or is only the knowledge users relevant? Who are the appropriate people? And then this is another acronym, uh, a mnemonic. Um, so who's, what's the action? What's the actor? What's the context? What's the target? What's the time? And so, this is more about behavior change. And so, depending on what your findings are, if it's really about, you know, uh, service providers changing the, the way they work with clients, for example, you can actually use this to say this is exactly what needs to be done, which makes it much clearer for those service providers to know what you're expecting of them. So, at this stage of adaptation, you need to revise the goals and finalize them. And so, you

know, maybe what you thought was gonna be increasing awareness has now shift to we need to influence, uh, policy, for example. And then the other thing to consider is, uh, you know, support knowledge users on the team or bring new ones to help craft the messages for the relevant audiences. Clarify the act if, if it's a behavior that's the, the point of reference, and then finalize those goals. And then the last thing today, and I am mindful, and I'll finish on time, Marianne, is now that we actually have what it is that needs to be disseminated or implemented that knowledge and we know who it, which audience and what exactly it is, we need to think about, well, what are gonna be the barriers or facilitators to that actually happening, right? What's gonna get in the way of people using those research findings in their decision making? And so again, it comes back to engage the knowledge users and others to identify what might be those barriers. And it might be something about the message or the findings. It might be something about the potential adopters, like, we're not gonna do this. It's gonna be unlikely that we do this cuz we don't get remunerated for it. So, it's not that we don't agree with the message, it's w we don't have time and we're not paid for it, so we're not going to do it. Is there's something about the setting or context that mitigates or works against, uh, using those, uh, findings. So sometimes we might have policies, uh, in Canada at a provincial level. So, I guess at a state level that actually runs counter to what might be happening at a municipal level. And so how the findings kind of get caught between the two areas and knowing that as you're developing your tools and products to disseminate can be really important. So, we think of this as an action map. So those stakeholders or audiences really being strategic. So, are they research users? Are they people who are, who, who would be impact by, impacted by the decisions based on the research? Other interested people write out what's the goal? And they may be different goals. So, for the research users, it's about influencing practice. For those who are impacted, it's about increasing their awareness for the interested parties, it's to enlighten them that this is going on, for example. Then you need to be really clear. So, whatever the goal is, is it about diffusion dissemination or implementation? And what's the specific message? So, the diffusion message is just, you know, this is what we did, this is what we found kind of vague. Um, the dissemination message is, you know, for this kind of service provider, they should be doing X, Y, and Z. The implementation message might be organizations need to change their accounting system and bring in new IT and do all these kinds of things. So being really specific. And then if you go to the last column, well, what might be barriers or supports related to each of those messages that it would be good to know about so that you can build that into your dissemination and communication strategy. So hopefully I haven't bored you completely to death. Um, and I see that we, we still have about 30 people, so, uh, a few people have come and gone. So, uh, that's good, uh, that many of you are still here and that you'll come back for session two. And, um, Maryanne will send that table, this table out to you. And so, for those of you who are actually kind of wanting to work through the process with a specific project, you can actually go ahead and start filling this in and then, uh, reflect on it when we, we come back together in in December. Um, but all of you, I'd like you to, to leave you with, you know, thinking about the criteria, how would you make a decision about when something should be disseminated versus implemented? And those concerns are issues around, um, judicious knowledge translation. How do we know that the findings are ready for primetime? And, um, not prematurely promoting something, but at the same time, not waiting too long saying, oh, we need, you know, six more studies before we can act. And there's always a judgment call there. To what extent, uh, should the efforts focus on diffusion versus dissemination versus implementation? How would you make decisions of which category the things that you're

thinking of would fall under? And if the decision is to co-produce the KT plan, who needs to be involved? Who are those research users, advocacy groups, others, people with lived experience that, uh, are on the team, but those who you could bring o onto the team or consult with at the stage of starting to analyze and craft the messages. Um, what will the engagement partnership look like? What are the roles? What are the activities? How will you ensure that the principles that you've decided on, on how we want to work together in collaboration will actually happen? And so, uh, we do have a few minutes for Q and A's. And so, I just wanted to say, so part two will focus on the latter half of the knowledge to action cycle and how those phases, uh, should be thought of in terms of producing your knowledge, products, and tools. And then, uh, the one last thing, so these are kind of what I'm drawing on today. So, this, on the left is the C I H R planning guide. Uh, there's a chapter in this book that came out, uh, in June, uh, which is co-produced dissemination. So, walking through the process of dissemination, but putting the lens on how do you do this, uh, with knowledge users and research users. And the action map comes from our book on knowledge translation and nursing in healthcare. And thank you very much for your patience and attention, and I think we can, uh, take questions or complaints or whatever you'd like in the last few minutes of the session.

Marianne Farkas:

Yes. Uh, Ian, this is, um, a question that is in the chat. What is the end of doing literature reviews before focusing on findings? This person seem to understand you to say that you have to do a literature review before you focus on the findings. What's the point?

Ian Graham:

No. So yeah, sorry for, for, uh, not being clear, that wasn't what I meant. It was when you have the findings. So, there's two things that the piece around systematic review is when you're thinking of disseminating, it's always good if the evidence that you're uh, disseminating or implementing is part of a systematic review. So, someone has looked at all the evidence and put it together because we know that just by chance the results from one study might be negative and the results from three others might be positive. And so, if you only looked at the negative study, you'd say don't do it. But if you looked at the positive studies, do it, synthesis allows you to take that all into account and say, overall based on five studies, the balance of the evidence is this works, and we should do it. So that was the point about synthesis. When you get to the dissemination plan, what I was meaning and didn't say clearly was you have your findings, you should look at the literature to see are you in line with the literature? Are you coming up with something contradictory? So those end users in the, in the real world, when they see your findings saying, you know, do x if they know the literature and they say, yeah, but your study is completely opposite to every other study I've read, why should we believe it? And so, if you know that ahead of time, you can actually say, and we know that our findings are different from all of the other studies and this is why they're, our findings are different and they're legitimate and reliable and you can trust us even though we go run against what's in the literature.

Marianne Farkas:

Okay? So, um, if you have follow up questions, some people might have questions and they can't think of it on the spot, you know, please do send it to us. Uh, Amanda will give you, uh, an email to send it to. The second session as Ian mentioned, will be December the 12th.

So, it's about three and a half weeks. And what we would really like you to do in order to be able to take greatest advantage of session two is to start thinking about some of those questions that he posed in preparation about a specific project that you would would like to develop some, uh, knowledge translation activities, regardless of which kind of knowledge translation activity it is. So, I'm encouraging you to, um, answer the questions and come prepared for in the December 12th, uh, session to use your thoughts and your application to a particular project to clarify and get the greatest advantage out of what will be presented in session two. So, session two is part two of this particular series. Uh, Amanda has sent in the chat, uh, where to send the questions if you look in your chat box as well as how to register for session two because of the system we have, the one registration doesn't seem to cover both sessions, so please do register for session two. And, um, Ian, is it okay with you if we send the slides in PDF form that were presented today, just this half to the people who are participating?

Ian Graham:

Yeah, absolutely. And feel free to take that table at the end the action map and, and put it into a Word document that people can edit.

Marianne Farkas:

Great. All right, so as we wrap this up, let me just check and see, is there any burning question that you want to ask before we close today's session? Yes, no. All right. Remember, if something comes to mind, send your question along to the address in the chat box and do try to start thinking about one of your projects or your grants that you want to use, um, as material in session two along with the questions and your opinions. So I want to remind you as a final thought that this is a course in the KT Academy series of courses. We have both exposure courses, which are one hour long, and these courses, which we call experiential courses that are about three hours long. So watch for announcements for future courses, and we look forward to seeing all of you on December the 12th from one to two. And at this point, I would like to thank Dr. Graham for his wonderful presentation and to thank the audience for your interaction. Oh, good afternoon and goodbye to everyone.

Ian Graham:

Thank you.

Marianne Farkas:

Goodbye.