Christine Kowalski: I’d like to thank everyone for joining our Implementation Research Group Cyber Seminar today. My name is Christine Kowalski and I am an Implementation Scientist and the Director of the Implementation Research Group.

The IRG is a learning collaborative that we've set up for sharing best practices and lessons learned in implementation science; and as a field, we're always working together to advance the field. We currently have over 500 members, and this session today is part of our catalog of monthly events. If you just happened upon this session and you're interested and would like to join our collaborative, you can email us at irg@va.gov.

And I would like to thank our presenters for their work in preparing for the session today we're so pleased to have Dr. Borsika Rabin and Dr. Russ Glasgow presenting. Dr. Rabin is an Associate Professor at the UC San Diego School of Public Health and the Co-Director of the UC San Diego Dissemination and Implementation Science Center, and the San Diego CFAR Implementation Science Hub. She's also an implementation science expert and on a large number of NIH and VA grants, including the Quadruple Aim QUERI Program.

Dr. Glasgow is the Director of the Dissemination and Implementation Science Program of ACCORDS, and a Research Professor in the Department of Family Medicine at the University of Colorado School of Medicine. And from 2010 to 2014, he was the Deputy Director for Implementation Science in the Division of Cancer Control and Population Science at the National Cancer Institute. Dr. Glasgow is one of the original developers of the RE-AIM, PRISM, and dynamic sustainability frameworks, and he is a co-investigator on the Eastern Colorado Quadruple Aim QUERI.

Now, as for the topic today, adaptations can seem overwhelming at times to us; but we're in good hands, our presenters are experts in this area. They're going to be describing iterative and pragmatic approaches to document and evaluate adaptations in the real-world community and clinical settings; and they're going to present a methodology using the [RE-AIM] to help plan for adaptations before implementation, and also make adaptations mid-course.

So, thank you all again so much for joining. Please enjoy the session; and now, I will turn things over to Dr. Rabin and Dr. Glasgow.

Borsika Rabin: Thank you so much Christine and Maria for preparing us for this session. I am very excited to be here; thank you for the opportunity. And all of you who are participating, we very much look forward to hearing your experiences, trying to guide and evaluate adaptations in your own work. To initiate that discussion, Dr. Glasgow and I are going to present a little bit of our own work in this area and share with you some of our current learnings and thinking in this realm; and hoping, again, to hear from you about additional ways that we could approach these issues.

This slide will allow you to contact us easier, provide you with some web links to some of the websites where we maintain some resources, and then also our email addresses; it also serves as a reminder that the work that we are presenting today is based on collaborations and work with colleagues, ongoing and past, and hopefully, future. And so, you can see a list of collaborators and colleagues listed down there; not comprehensive by any means, but perhaps the most relevant colleagues who have been interacting with us around these issues, as well as funding that is relevant to this work.

So, today, what we will try to do. I will start us off and talk a little bit about some key concepts around adaptation just to get us on the same page, and then I will introduce some ideas around how to document and analyze adaptations in examples of VA studies; and we'll hand it over to Dr. Glasgow who will be introducing some work that we have done in using iterative RE-AIM, an application of the RE-AIM framework to guide adaptations. And finally, we will close with reflections and future directions and opportunities and, hopefully, a rich discussion around these topics with you all. So, please do use that Q&A function and send in your thoughts throughout the session.

But before we get into the content, we have one poll question here and then, later on, we will have a second. I will read it out and I know that Maria is going to help us with the results. So, the question goes--and Maria, I think that it's flipped, actually. The first poll question is potentially the second that you have.

Maria: Oh, dear. Okay. I’ll actually see if I can keep that one open and then I’ll try to open it again.

Borsika Rabin: Thank you. And while you do that, I will read the question just so that folks can think about it. We would like to know how are you documenting adaptation in your current work; and obviously, there could be some overlapping issues here, but the first option is that you are not really documenting adaptations at this time; and the second one is that you are systematically and comprehensively documenting adaptations; and then the third one is you are documenting adaptations mostly pragmatically. So, if you could choose one of those, I know that some of you might want to choose multiple, that would be wonderful, and submit that answer, and Maria is going to help us look at the answers.

Maria: Yes, and it looks like currently, we still have people answering this one; and I apologize for the second poll and I’ll try to re-upload that one again. But it's starting to slow down, so I’m going to go ahead and close that poll, and I’m going to go ahead and share the results with you.

So, 19 percent say, "Not documenting adaptations,"; 19 percent said, "Systematically and comprehensively documenting adaptations," and 51 percent "Pragmatically documenting adaptations."

Borsika Rabin: Thank you so much, Maria. This is super helpful for us to know. So, it seems like a good portion of the audience have already made some attempts, some of you, with very in-depth kind of approaches to get adaptations documented in your work; and then we have some who are, perhaps, interested in learning about it and haven't had a chance to implement those yet. Thank you so much.

I am going to move on from here to a general concept of adaptations first before I discuss our methodology. So, just kind of, again, a background as we think about adaptations--and there are different ways of approaching different kinds of levels talking about adaptations and differentiating them from modifications; but in this particular presentation, we are going to think about adaptations pretty comprehensively, and we will define them as changes or modifications to intervention, an implementation strategy, or even to the context where the implementation is happening. We can also kind of think of adaptations in the context of improving fit of an intervention implementation strategy to a new context, and often, it means that it's a new population or setting where an already-tested intervention might be put into place, and so there needs to be some improvement of compatibility.

And so, as you might think about it, these things happen quite often that you need to make changes to your intervention and implementation strategy or modify your context to actually achieve an inevitable improved fit for the specific context. And as some of our colleagues--and this is a slide that Dr. Ana Baumann, a person who has just really done amazing work along with Drs. Stirman and Christopher Miller of creating frameworks for this area--this is a slide from her and it says that adaptations are not necessarily good or bad, they just happen. And in fact, if we try to suppress these--and this is kind of my addition, and we will come back to this--we might actually miss an opportunity to improve the success of that implementation study, and this suppression or avoiding doing local adaptations might lead to implementation failure.

One piece that I’m going to share that seems to be a little bit out of place for us today, but I definitely wanted to call your attention to, is the ADAPT study which is done by colleagues led by colleagues at Cardiff University in the UK, by the Center for Development Evaluation Complexity and Implementation in Public Health Improvement or DECIPHer, and then others from around the globe intending to develop some guidance for both researchers and then funders, and policymakers on how to make adaptations. And their work has used multiple methodology, including a review of the literature, interviews with various types of stakeholders and experts, including researchers and funders, and journal editors, as well as more policy and practice stakeholders; and then culminated in an expert consensus process, a Delphi process that Dr. Glasgow actually was part of; and developed a guidance--the ADAPT guidance.

And so, there are a series of really great publications that you might want to look up; you can go to their website, they link those there. But the most recent one just came out in August and it is in the BMJ, and you can see that it provides an overview of their ADAPT guidance, so this is something that you might want to look at. They're primarily focusing on how to select evidence-based interventions and develop their systematic adaptations, not so much about the documentation, although they do talk about documenting adaptations in the pre-implementation phase. So, I will move to this. So, this is a great resource and, again, a really newer kind of way of thinking adaptations.

So, now, now I’m going to move into talking about a little bit on documenting and analyzing adaptations and share with you a way that we have approached this. So, first of all, why would you even care of documenting adaptations? These are some reasons that we put together; and not necessarily comprehensive, and if you have additional ideas, please put those in the Q&A as kind of reasons why you would want to know about adaptations. But certainly, what we found helpful in terms of documenting adaptations is to create a list of changes that happened, and especially during implementation, that will help future adopters of the program, so you can make recommendations for potential successful adaptations that were helpful in the given context.

The adaptation documentation can also help you interpret your information and your data from your study; it provides you with a contextual understanding of what actually happened on the ground, which can give you a sense of why you see the outcomes, both process and effectiveness outcomes that you actually see. When you collect information about adaptations, that can also inform your refinement of your intervention and implementation strategies; often, it can happen on the go, and that's something that Dr. Glasgow will say more about, that you might be able to improve that fit in the current study; but you might be preparing for future studies and make those changes after the study has concluded.

And then from kind of more a geeky, academic perspective, information about adaptations can help us improve our ways which we think about adaptations through frameworks and measurement approaches, and so that's kind of the contribution to the implementation science field. And finally, but perhaps most importantly--and this is an area where we need to further develop our skills--is to describe the impact of adaptations, to understand that when we make that change, actually, did that result in better outcomes. And again, you will see a little bit how we are approaching that in our work.

I would be really missing out to not show you this wonderful framework that was developed by Dr. Stirman, Dr. Baumann, Dr. Miller, who are affiliated with many of the VA initiatives, and this really is the kind of most comprehensive framework around documenting adaptations and thinking about them. Our work was based on an earlier version of this framework, expanded with some of our own thinking, so we'll show you that. But this is certainly a place to go when you think about documenting adaptations for interventions. And then those of you who are frequent flyers within the QUERI webinars will remember that Dr. Christopher Miller presented in... it was in July for the QUERI cyber seminar series, and talked about the implementation strategy variation on the frame; and those of you over there know that they developed this more pragmatic kind of approach to think about documenting adaptation to implementation strategies, and I really like that they identified a set of core modules which you see on the screen here, these are the four core modules; and an additional Modules 5 to 7, focusing on optional things to a document. So, this is something that you have a separately recorded webinar available; please go back and check it out.

As far as our own work goes, we were trying to do something that can align with the QUERI roadmap; some of those stages you will recognize here on the top--pre-implementation, implementation, and sustainment--and then also, those different types of things that adaptation can happen to. So, this is a very simple visual that we use for our initial thinking around adaptation in many of our studies. Dr. Glasgow and I have applied this across different studies, and it seems to be intuitive for those who are working with us. We do expect that there will be some variation in terms of what type of and how frequently we see adaptations as we go through the timeline, and so that's important to us to start to understand the different time points and what kind of adaptations happen. And then, of course, we want to know whether that adaptation happened to the intervention, the implementation strategy, or to the context. So, this is one key piece.

The second one I wanted to highlight is how do we get data about adaptations? And honestly, that's still really tricky because if you want to be extremely comprehensive and systematic--and 19 percent of the participants have tried that--you know that documenting adaptations can be very time-consuming and it can be actually a heavy lift for the implementers who are already overwhelmed by the daily routine of their care. And so, thinking about the different methods that we use and balancing the comprehensiveness of the data with what is feasible is critical. So, here, we just listed more kind of inclusively different methods that have been used--or could be used--for adaptation tracking, and then I will show how we picked some of these in our own work and apply them.

So, this is one publication that we put out on our work, which describes a multi-method assessment of adaptations; and initially, it was four interventions and eventually grew into five. So, currently, we have one publication out of one of the interventions, and then we are working on another publication looking at the adaptations from the other interventions. But this was kind of the methodology paper; this is just kind of a reminder that, most of the time, we believe that using multiple methods to track adaptations is important and leads to a nice triangulation of different kinds of data and different kind of perspectives. So, all around, you can see these circles that are showing different methods that can be used for collecting adaptation information--and I would love to expand this, so please put into the Q&A, your ideas of what else can be used for this information.

In this five-study project, we use some combination of these four main data sources; some of the interventions used just one or two of these--actually, at least two--and then others used all four of them. So, the study that I’m going to show you will be only focusing on interviews and real-time database, and then we are currently analyzing another one that used all four of them. But this is kind of our way to get to the full picture of adaptations.

And this is just a brief snapshot. We have an interview guide that we have been using for tracking adaptations through interviews and this is available, we have a link that we can provide to you--I didn't provide it here--that gives you the guide and so you are welcome to adopt that if you find it helpful. And you can see it nicely aligns with some of the frame kind of domains and expands on those with RE-AIM reflections.

And then this is from our triple inquiry study that Dr. Cathy Battaglia is the PI for, and Russ and I were co-leading the implementation work. This is our simple tracking form--and I just wanted to show you that this is nothing fancy. Most of the studies, we have been using an Excel file; recently, we have moved into more of a RedCap platform, but we are still keeping it relatively simple of how we collect this data and where we store it.

So, specifically, we have one publication that was led by Dr. McCarthy and Ms. Ujano-DeMotta, and this is talking about the Transition Nurse Program, or TNP, which was one of the five programs that used this unified adaptation approach; and in this study, we used the real-time database and interviews to track adaptations. And so, you can see here our analysis, kind of rundown of how we enter the data into databases, and then did some multiple steps of member checking to get to the final analysis of the adaptations. And then, here, one table from our publication that shows you the distribution of the adaptations across the different sites. So, we had five different sites, and then we had different time points. As you can see, we decided that there was a distinction, even within the implementation timeframe, to early, a mid, and then late implementation; and then we can also see the distribution in terms of where we were less successful in terms of identifying adaptation in this particular study, specifically the pre-implementation phase where the database was not running yet and so we just didn't have that documented information. And in the sustainment phase where tracking was, perhaps, not happening with that same level of rigor as they were planning out their sustainment strategies.

And so, a lot that we learned from these earlier adaptation studies and analysis is how to do it better, what kind of steps we need to take in the next study; and we are certainly using learnings in the Quadruple Aim QUERI for the adaptation tracking and modifying it.

So, this is the distribution and you can see the different types of characteristics of adaptations that we were able to see within the program across the different time points. And then using different time points and stakeholders will lead to more kind of a richer understanding and triangulation of data; a key piece for us was using member checking because often, even if the adaptation database was well filled out, we needed that contextual historical understanding of the key people on the team, so we used it twice throughout the analysis process, and we learned a lot. And then we did see some difference between--variation across the types and the intention of the adaptations depending on when they happened in timeframe.

An interesting finding, and the lead author, Michaela, who has a really a wonderful kind of ethnographic thinking, pointed this out that as she's looking at the data from a more kind of qualitative perspective, we can see clearly that adaptations are connected with each other and often influenced by personal contact, so they hardly ever happen in isolation; and often, there are multiple adaptations that happen when a context change occurs.

And, as you can see, most of the adaptations that happen were coded as planned, although it's really tricky to make that distinction because when it happens during implementation, it's very hard to say whether it was a planned or unplanned. But what we saw that, even with the unplanned adaptations, when there was some thought put into it and the intention was to improve some fit or outcomes, the result of the adaptation was not negative; it was not making the outcomes worse or the study implementation worse. And then, finally, we had a hard time quantitatively tracking the impact of adaptations in this particular study. We had some subjective information about it, but not a systematic quantitative and that's certainly something that the field needs to move toward.

So, I’m going to finish up here with a couple of slides. This same methodology now is being adopted across a number of different studies; most importantly, I will highlight that we are using this methodology with some tailoring in our Quadruple Aim QUERI; and we are learning that, as we are moving to this more scaled-up, focused Quadruple Aim QUERI, we need to give up some of our detailed data collection, and we are learning from each of our projects, what they can do. And so,  we are working and we are going back and forth a little bit of what can we do, how much data can we collect.

We are also using this in a very rapid implemented [Red X Sub Co-Create] study at UCSD for testing for COVID-19. We are using it also in the VA a study that is led by Dr. James Pitman to implement e-screening for transition programs, and he has a really nice study and we are doing some very comprehensive adaptation tracking there. And then I’m mentioning one more here, which is through the NCI ACCSIS program, a colorectal cancer program, where we are doing, again, a variation of this tracking. And then finally, I wanted to highlight one of my wonderful colleagues, who has a VA CDA career development award, Dr. Emily Treichler and she's using--and she took off with this methodology really beautifully--she's adopting her collaborative decision skills training, which is an intervention that she developed in the civil context, civilians, she's adopting it to veterans with psychosis, and she used our methodology to document adaptations throughout this process, and expanded it with some information about size and scope of the adaptations. Lots of wonderful publications from other colleagues in this area, so please go out there and check them out.

And with that, I will hand this over to Dr. Glasgow who will talk about iterative RE-AIM.

Russell Glasgow: Thanks, Borsika. I think we have another poll coming up now; and while you're doing that, I might just mention, by way of transition, a couple of things that we can come back to. But, first of all, go ahead and put up the poll. I hope I can keep talking during that. But our approach, as I think Borsika has mentioned, and you'll see even more through mine, has really been a pragmatic approach where we're trying to walk the fine line between being at least relatively comprehensive and trying to advance the science of understanding this really complicated, complex issue of adaptation; but more rapid than usual, but in a way, Borsika said, that doesn't overwhelm our operations partners there. And I don't know if we've always hit that or not; but again, we've tried for this pragmatic approach, and we'd love some feedback on that.

The second thing is I think we've learned that there are--if you remember that slide Borsika put up--there are multiple ways to assess, multiple methods. And I think where we can, looking at two or more methods, really pays off and helps for some integration and better understanding.

So, with that, why don't we see? Hopefully, we have the poll results there.

Maria: Okay, I’m about to close that poll right now and I’ll share the results. And here we go. We see that 29 percent say, "I have read about it in publications,"; 45 percent, "I have used it in my own research for planning implementation or evaluation,"; we have 11 percent, "I am not familiar with the RE-AIM framework,"; and 4 percent, "I used it to guide adaptations." Back to you.

Russell Glasgow: Thank you so much. I hope for those of you that have used it, particularly for adaptations, will chime in and I will invite you to continue using Q&A. Borsika is better at it than I am in terms of keeping up real-time, and I’m sure Christine will be keeping track for general discussion; but please continue to do that, I think it'll make it a richer session.

So, let's go ahead with the next slide if we could, please. This is another approach--probably today, it's somewhat more widely known than ours, the MADI approach, that I won't take time to talk about today; but it is a different approach that combines a couple of well-named approaches, and it uses a slightly different, but highly-related set of outcomes--implementation outcomes--to help guide it. You'll see about our RE-AIM outcomes, which overlap a huge amount with it's classification that  [Enola Proctor] and colleagues have developed; and ours, I’d say overlaps about 85 with that, but this is a somewhat different approach in addition to the DECIPHer new guidance that Borsika mentioned.

Next slide, please. So, this is just the publication if any of you want to look up on Frontiers in Public Health, that I’ll be talking about summarizing today. For those of you not familiar, this is the bottom line that I’d be glad to come back to later, but to show you what the RE-AIM acronym is, those dimensions are going down the left-hand side. I will just mention, again, this is the pragmatic definition intended to be used with some operation partners, these are not the technical more scientific comprehensive definitions. But a couple of things that I’ll point out there is that for each of these dimensions, there are kind of two key points. One of them is like what percent of the relevant target audience are you impacting or reaching; and then the second one is the representativeness of those folks, and we're working a lot on equity issues having to do with the representativeness of both participation and impact. And then, finally, under implementation, our current approach is this is where we're characterizing adaptations, at least predominantly, under implementation. However, the caveat is we certainly know that adaptations are relevant across all of these dimensions.

So, what was this iterative RE-AIM about? RE-AIM, like most to my knowledge, most DNI theories, models, and frameworks are cited moderately often, but they're frequently not used throughout a project; they're used initially and sometimes for measurement. But if they are like RE-AIM, they've been used predominantly either for planning or evaluation, and RE-AIM has been used much more for evaluation than anything else. We feel that's a lost opportunity and we could maybe talk about that later, that it can and has been used successfully for planning. But this notion was, at least when we started, we hadn't seen any uses to use it for course corrections or for making adaptations.

So, this study basically was to try and address this, and we came up with this implementation strategy bundle that we call it, that in many ways, is an audit and feedback--a multi-component audit and feedback strategy--that tries to combine or inform the adaptations that are made from audit and feedback that combines both data on progress to that point in time. But then, secondly, stakeholder priorities, and we're looking at the kind of interface between those. So, the notion is we're trying to combine this kind of conceptual RE-AIM-based approach there with the stakeholder perspective. And again, as Borsika said, we've done this with five different VA health services projects on different topics.

So, here, this is kind of dense, but this is the heart of the process. So, I’m going to take a little time to walk you through this step. It begins with the project team--and I’ll speak about that--we try to involve a variety of stakeholders, not just the researchers or the principal investigator deciding by themselves on what the RE-AIM dimensions are going to be, how they're measured; and also, where we can, some initial goals. So, you do need to start ideally at the beginning of your project; but if not, before you start using the iterative process, you need to kind of define what your RE-AIM dimensions are, so we can tell if you're making progress on those or not.

The second and the third steps are really the heart of the process; and what involves is that a number of team members independently do a rating. We have a rating sheet I’ll show you on the next slide that you rate both the importance at the current stage of each of those five RE-AIM dimensions that we talked about. So, how important is reach versus the effectiveness or short-term effectiveness versus the implementation, et cetera? And then you rate the progress to date using any data that you have. But where you don't have data, use your subjective opinion. It's really important that we have people do this independently so we can hear from everybody.

Then in Step 3, which is, if you will, where the magic happens the team gets together to review; we provide feedback on these ratings, and then we facilitate group discussion reflection and decision-making, the goal of which is then to come up with, based on a GAAP analysis that I will show you, one or two key RE-AIM dimensions on which to develop some goals and action plans. And then we do follow-up and ideally, then, you would do this a number of times during the project. In this first application, we generally just did it one time and it was at varying points in the project, that life of the different five projects.

So, this is the rating form that each individual filled out, and then we collected the data and provided back. So, this is for the first dimension reach, and we did this for the other four dimensions also. So, you rate each of our various team members from their perspective rates, how important is this dimension at this time; and then secondly on the right-hand side, what would you say about the progress you've made to the date.

We summarize, at the team meeting then where we give the feedback, we summarize these results as you've seen, and the discussion goes around this after we walk through the slide, and we're presenting data both on the importance in green, and then the progress that's been made on each of the RE-AIM dimensions. Not quite sure what you call them; the ones with the little circle and the bars, that shows the range of ratings. So, it's also helpful to talk about how much agreement or consensus there was versus not. So, for example, you could see at the very right-hand side on maintenance, there's pretty good agreement, that's what's done there or maybe even better on some of the implementation factors in contrast to adoption; in terms of the progress for date, if you look at that, there's huge variation there. That, itself, is worthwhile and can create a productive discussion.

So, what did we find in this? First of all, we had a median of seven team members that were participating in this meeting; and in general, the feedback that we had the participants felt this was feasible, that it was understandable, we were able to translate what these RE-AIM dimensions met, and that it was helpful, at least, subjectively to them in terms of informing the adjustments. The RE-AIM dimensions across the five, the dimensions that were quite strongly rated as most important--and again, we're talking somewhat mid-course, although some of these are early, others are later in the process, but adoption and effectiveness were rated as the important. But the gap between how important they were and the progress to date was on reach, that was the largest gap. After discussion, the dimensions that are most frequently selected for improvement, and adaptations were reach and adoption.

Next slide, please. So, this is too small to read, I know. But this just kind of summarizes the five different projects, and then the center column is hopefully, the one you can read. It shows the dimension after having the team discussion of this feedback, and then deciding what to prioritize, these are the various things--and I summarized that in the earlier slide, but you can see a lot of projects focused on reach--not all. And then it shows just a sampling of the smart goals or action plans.

Next slide. So, this has a number of limitations. We felt that it worked moderately well, but it was an initial attempt. Keep in mind that, also, these were all VA projects and it was a relatively small number of teams, although there were five different projects there. An important caveat, the second one, these teams had used RE-AIM, but not all members of the teams were involved or knew about RE-AIM before; but at least the research leaders, the investigators had used RE-AIM for the proposal itself.

A limitation, I think, although we might want to talk about this, it has pros and cons. During these ratings, we did not include veteran patients or the higher-level organizational decision-makers; these were primarily the on-the-ground people doing implementation, a variety of different ones and then research staff, especially project managers. And then we'll come back to this, but this was an initial attempt; and we did not experimentally compare this, this wasn't a research study where we randomized people to have this approach versus a different one.

So, we have a lot of future directions that we want to go here. The first, and we're now implementing iterative RE-AIM as a strategy bundle in our new QUERI, our Quadruple Aim; we do want to replicate this--and there are some projects going on around the country now to replicate outside of VA settings. We feel that it's important to evaluate the long-term impact--or I actually should say both the short-term and the long-term impact--which is challenging for reasons we can talk about; and then we also think in the spirit of trying to be maximally pragmatic, we need some investigation of different timings: how often do you do this, when, and also different intensities of how much facilitation goes on from a cost-effectiveness perspective.

To summarize the iterative RE-AIM, I’ve mentioned some of this, but we do feel that to date, it did seem feasible across these different projects, it did help rather than just waiting till the end of the project and analyzing all the data, and then sharing it then, that it was at least much more rapid than the usual; not at the speed of QI, and maybe not at the speed that all practices would have liked, but we did feel that it was, at least, somewhat helpful to guide adaptations using the RE-AIM framework.

So, now, we're back to our last section there. I just have a few slides and we're kind of warming you up for the general discussion here, and then we'll turn it back to--hopefully, Christine can moderate that; I haven't been able to see all of the comments there. But here are some possible areas for discussion--and again, the first point, our bias is that we need to be pragmatic on this; but you can argue that that's maybe not quite the middle ground or not optimal, maybe we should just work on getting the science down--the basic science more first--or you could argue that this still isn't relevant enough, it needs to just be totally applied and totally rapid without worrying about all the measurement.

I mentioned the challenge of assessing the impact that adaptations have there. I think you can read most of these; but I think at the bottom line, we would like to understand over time--we're never going to get a definitive answer in any one study or project; but over time, we would like to try and answer this real challenge, that I call a realist evaluation perspective, of what types of adaptations; at what point in time; for what purposes; in what settings result in the best outcomes?  So, a grandiose goal, but something we'd like to work towards.

Our final thoughts. I think this is either my last or next to final slide here, is that, to come back to it, complex interventions. And almost everything that I think all of you are doing are complex interventions, and there will be adaptations here. Our perspective is that there should be adaptations, but they're not all positive or helpful. Adaptations should be, as Borsika started out with and I’ll come back here, embrace studies and we feel guided; rather than, as a lot of the scientific literature has done, to either ignore them or even suppress reporting on them because it's not viewed as good science or high protocol fidelity.

Let me see if we have one more slide, I think. So, this is just the plug and we're going to open it up. This is one of the other VA discussion groups that Christine facilitates for us, and Borsika and I co-chair a group doing a deep dive on adaptation fidelity and tailoring there. And you can see that this has expanded, it's been going about five years. We now have over 100 members; I’d say we maybe have 20 to 30 at a given session there, and we do meet monthly and you probably get notices in the general IRG about that.

I don't know if there's another slide yet or are we... okay. So, we're just framing, I’ll just mention a word about this to start discussion, but it's really kind of open to where you'd like to take it. But we felt that these issues might here be worth talking about.

So, thank you very much and we did save, at least, I think, 15... or, another one. This is more a general thank you and maybe after this one, we can go back to the prior slide for a discussion. But I did want to just mention this: I just found out about this book. It's about a year old, but this is kind of the big picture; we're talking about adaptation in our own projects, our implementation project. This really takes it all the way--this book--from just a personal level reflection to especially a lot of workforce and how dynamically it's changing, to a whole society adaptation, even talks a little bit about climate change. But it's a very readable book and I just would recommend it to you; it might be the most valuable thing you get out of this talk today.

So, we could go to the return back to the last slide and then I’ll open it for questions and discussion.

Christine Kowalski: Wonderful. Thank you so much Dr. Glasgow and Dr. Rabin. I am going to help us walk through some of the questions that we have. There are quite a few already in the Q&A panel; if you're still listening and you have additional questions, please feel free to type them in and we'll get to as many as we can.

So, kind of the first one I’ve chosen is just an overarching question that I think is one of the most common questions we get when people are talking about adaptations. So, this question says, "One challenge we've run into is finding a way to organize the data we collect. We sometimes have so much information, but not an easy way to aggregate and synthesize that later." So, if you could just provide your comments on that, and then we have some more detailed questions that we'll kind of ask specifics about those RE-AIM rating forms.

Russell Glasgow: Borsika, why don't you take that one, and then I can lead off on the RE-AIM-specific questions?