

**Panelists:**

John (Jack) Denniston

Brian Bumbarger

Rita Noonan

Carol M. Trivette

*Please note: The following is a direct transcription and has not been edited.*

---

Jack Denniston: Good morning everybody. Thanks for getting up bright and early and coming to the session on Promising Models of Effective Dissemination. I'm Jack Denniston and I get to moderate, pretty excited about this. Getting here with these folks I have to say, I'm going to say just a few words of introduction and then we'll start right on in. First thing I'm supposed to say if you haven't been to sessions already is if you have questions we'll save those to the end and please talk into the microphone. This session is being recorded. So, if you speak that is you are giving your permission to be recorded is I guess how it works, so. The folks that are going to talk this morning are going to present to you several different models of dissemination and we think that they're promising. There is beginning to be some evidence that they are succeeding in accomplishing their goals and we I think that they have also been implemented pretty extensively. These folks have been doing this kind of dissemination work using these models for some time and have a great deal of experience with them. So, I'm really appreciative of these three people being here this morning to talk about that.

I think that one of the reasons if I understand their models correctly, one of the reasons that they are effective is that they're not isolated. If we think of dissemination as the link or the bridge between research and use of research with dissemination linking those two, I think that all three of these folks will talk about models that really engage with the research end and with the implementation end. They're not just sitting out there in isolation disseminating. They know a lot about the research. Maybe they're even doing the research themselves or synthesizing it themselves. They know a lot about the people who are going to be using the research. Maybe they even help, assist, interact, engage with the implementation of the programs or practices. So, I think that's one reason that they're effective and I think that as we learn more about effective dissemination, we're going to see that that's one of the critical keys to success of dissemination is that that you really engage with the researchers and the users. I'm going to talk just a few minutes about effective dissemination and so that we are talking the same language.

What I mean when I say effective dissemination and I share this with the panelists and none of them said no that's not what I mean. So, I think we're all on the same page here is that the dissemination is going at it so that you have a reason for disseminating and if there, it's very purposeful. It's not just putting it out there and hoping somebody will see it, it's putting it out there so some specific target audiences will pick it up and use it in some specific ways. And so there is maybe a 30 of change involved with the

dissemination, maybe there is a logic model; maybe there is a strategic plan, so a lot of thought is given to who the target audience is, what you want them to do with the product or finding, how you're going to know if they did it or not, how you're going to evaluate the effectiveness of the dissemination, so that's what we are talking about when we say effective dissemination. I'll introduce the speakers very briefly. Their bios are on the conference website if you want to learn lots more about them. Rita Noonan is going to speak first. She is a sociologist in the Center for Disease Control, CDC, National Center for Injury Prevention and Control. She is Acting Director for Program Development and Integration and is published on the International Debt Crisis which I don't think you're going to talk about this morning.

Rita Noonan: No, now I listen to the lot of them.

Jack Denniston: Women's movements in Latin America, empowerment evaluation, dating and sexual violence prevention, over adult faults. I'm going to be interested in that one of these days and translational research. Rita will be followed by Brian Bumbarger, Director of the EPISCenter and Translation and Dissemination Unit Leader at the Prevention Research Center at Pennsylvania State University, soon going to be living in a boat we hear. Brian has served as Instructor of Criminal and Juvenile Justice Penn State and Director of Technical Assistance for the National Coalition for Juvenile Justice Drug and Gang Specialist and a Project Manager for the Pennsylvania Center for Safe Schools. And at the end we'll save time for Carol Trivette. Carol is the Co-Director and Research Scientist at the Orelena Hawks Puckett Institute. She works in the translation of research and practice that promote positive behaviors. Many of the projects she works on are funded by the Office of Special Education Programs and read more on the website if you like to know more about these folks, so read it.

Rita Noonan: Great. Good morning everybody. How many people are evaluators? How many people are program developers? Program implementers? Okay, researchers? Okay, good. What's interesting about this field is it really does so to speak to all those different audiences. And if we had more time, I could kind of talk about this framework specifically in ways that I think make sense to evaluators and I've done that recently, CDC and the American Evaluation Association every year has a conference in Atlanta. So, if you all come to that you'll probably run across me talking more specifically about evaluation, but, I wanted to do today in about the next 20 minutes I'm timing myself on a device not a watch which means I'm a young person. I want you all to know that. That's the defining marker nowadays.

So, basically what I'm going to talk about is our interactive systems framework is a framework we developed a few years ago and I don't have time to go into all of kind of the deep dive into all the different sub areas, but, I think it's kind of a nice framework because it keeps you a conceptual home for a lots of different things that might have to do with dissemination or implementation or capacity building and all that. So, without further ado, let me just kind of you know you all might know this from different roads you've been down, but, you know the delay between discovery and delivery of you know I work in public health, but, you know we all work in very similar fields. We develop

interventions and then we want people to use them. Otherwise I don't think we would have spent all the time. We care. We actually want to make a difference in people's lives. So, the delay is anywhere from 10 to 17 years. It's been very well documented. It might be a little bit shorter now, but, it's still quite a long delay. So, if we worked in the private sector and you went to your boss and said I have the next thing that's really going to change the consumer behavior, change parenting practices, improve child welfare, whatever the topic is and your boss says, "Wow, that's great. When can we really go change people's lives? " Oh, around 20, 28. Imagine if you did that in the private sector, its great innovation is going to take you 17 years, people would say that's not acceptable. And I'm here to say that's not acceptable either. So, if you look at AHRQ data, the person who ran AHRQ few years ago was a very good advocate in talking about the billions of dollars that is the B, billion, 95 billion in development from medical interventions and 1% is spent on understanding how do you implement these things. So, that means a penny out of every dollar. And really this lopsided equation is like developing a serum or something that's life saving but now thinking about the syringe or how you're going to deliver it. So, it's really crazy. And what happens in injury prevention, child welfare, other fields, we care about, we actually do have some strategies that work. We have a serum. We have things that have been through rigorous evaluation trials. We have a lot of people maybe some in this room who spent a whole lifetime trying to figure out what works. But if no one uses it, what is the point?

So, we have very little research to understand how to take those next steps and not as adoption, it's used, dissemination to me is one piece, but, it's dissemination and implementation and its effective implementation. So, we make very poor use of our investments, of our scientific discoveries and again the bottom line is we have unacceptable levels of illness, injury, disability and death and we can do better. And I think that everybody in this room we talk about behavior change; we talk about changing the way things are; we have to stop talking about it, we have to really understand what it's going to take to move that needle. So, no CDC employee is allowed to leave the campus and do a presentation without showing the public health model. And if you ever go to any other CDC presentations, you'll know why that's fun and this is actually should we see it all the time, but, just to kind of help you all understand how we look at things in public health, we start in the left hand side of the model, how big is the problem, whether it's an infectious disease or injury, how big is it. You know who is most affected? Where are people affected? What are those risks and protective factors? Where are those key populations? We develop in test interventions, right. And then, well alas, the magic is supposed to happen we assure widespread adoption, so typically we move from left to right. Occasionally we move from right to left although that's less common.

But, the big mystery to me is how we could have always well trained people who look at this over and over and we talk about in every presentation when there is clearly a huge black box between the third and fourth step and that's really where all the science around dissemination and implementation sits and it's a growing science. It was actually a lot that we do now. So, I also think we need to stop saying we don't know how to do this right because there was actually a fair amount of information about not only the research but the practice of doing this. So, I always say, well, it's such a simple thing that no one

is even going to address it. They must think it's simple. They, us, whoever, I don't even know who I'm pointing my finger at, but, well, it's such a simple question such as what are the best modalities for disseminating, what kinds of information, what kinds of people, what kinds of organizations leading to what decisions about adoption and dimensions of fidelity, adaptation, moderated by capacity building, technical assistance, training, monitoring, coaching, supervision, clearly this is not a simple thing and that's why I think we struggle. I think there is a lot of work to be done.

But, what is the question that's not asked in all these questions? What have I not asked here?

Jack Denniston: What's the goal?

Rita Noonan: What's the goal? What's that?

Female Speaker: *[Indiscernible] [00:10:41]*

Rita Noonan: Yeah, all these lead to further questions, but, typically you know we're so obsessed with does my program work? Does my intervention work? These are the questions we ask after something has some known established level of effectiveness. Otherwise, we don't care about disseminating it further and getting really good adaption rates and effective implementation. So, it's funny at all these questions, so when we keep asking does it work, does it work, does it work, it's not even I'm here. Well let's assume things work already and there is people who have certainly dedicated their careers to doing it. So, we say, well, why does it keep happening? Why are we asking this other questions? So, this is a kind of a cute way to think about it, talk about it, but, I think it's also really true. What was the mantra? It is a movie.

Jack Denniston: If you build it they will come.

Rita Noonan: If you build it they will come. This is we love research and development. All we have to do is find it, right. You know, you build a better mousetrap and the beat you have a path to your door trying to find in this, Waldo Emerson, who clearly was not a translation researcher by the way. So, you know this is really reflective of you know we love this idea of you know an invention and if you build the people are going to come. And frankly in the social technology as there are some of the things that we're talking about trying to change human behavior, if you build it, lots of things might happen. They may not find it. They may not feel invited. It could be irrelevant. They might have one. They might want to go to the house next door. I mean there is a million things like that including they might really love it and they want 10 more right now.

And we're typically not prepared with our packaging, with our TA programs. Usually, we're not ready to say okay, let's go on a massive scale. Let's scale this up. I also think the Field of Dreams is such a great movie because I think that was the peak of Kevin Costner's attractiveness. Myself. This is just my way of looking at movies. So, basically what we've tried to do and again we're really in the I know you're not supposed

to say that at conferences. That's why it's funny. So, in the world of you know if things have known properties, we ordinarily have some level of effectiveness, then what? So, we're thinking about that black box now and that's where this framework was developed in conjunction with several experts I'm going to say maybe 40. We had two expert panels with a contractor A. Wandersman work with us. And basically we tried to pilot test some of these things and really get in touch with researchers and practitioners. And what we landed with was a system or a framework has three systems and I'm going to start at the bottom and work our way up.

And again what I like about this framework is that it doesn't look simple, but, cognitively it's actually very simple. There are three big buckets or domains. I use them all the time to try to plunk things down and say where does this fit, where is, what is this thing. So, let's start at the bottom. We know something has known properties, Dean Fixsen talks about this all the time. If you read the implementation monograph, they're very clear. We're starting with things that we think work already. You know by some level or by some standard. So, what do you do after that? We wanted to steal the information. We want to package it. We want to make it useful to people.

So, again let's go back to something that's very common sensical. For me this stuff works. For you, you might say like this is dumping it down too much, but, you'd be surprised people don't really get translation and don't understand what's happening between box three and box four in the public health model. So, I say we'll let's pretend we're not CDC. Let's pretend we're not in the business of developing child welfare strategies or evaluation or whatever business you're in. What would Coke do? So, you're Coke. You develop this incredibly tasty beverage and it is a secret of course. It's locked up in Atlanta. You know it's this great thing. You think you have your hands on the next best thing that's going to change consumers or change the world or whatever, and your goal is to have it within an arm's reach of desire, or to me it's just, Wow! that's ambitious, but, they are like supreme marketers. You know they did not invent this beverage and say, hey, let's write about that in beverage world. And if we get it in the best beverage journal...

Jack Denniston: There it is.

Rita Noonan: Let's move on to the next product.

Jack Denniston: Amen.

Rita Noonan: That would never happen. Right. So, the research and development is the start of the process. It is not the end of the process. I think and I know we're not selling Coke. I know it's a bad product. It's not going to be, all the CDC chronic disease people like stop using that Coke example. I use it because it's not just a beverage, it's Coke. And we know Coke. And we know Coke because of all the great marketing they did. And they did probably make sure this gets in almost every community in the planet. So, basically we need to think like Coke. When you're going to just still in market, you know who your end users are. You know their preferences. You know what kind of

consumable quantities they're going to use. We don't drop it at 50 gallon drums, right. We don't say like, hey, bring your straw to the center over there across town. Now we make it easy right. We package it up. You know some families may want 64 ounces, a lot of us want 12 ounces so we can you know have individual amounts. So, we need to think about that. How do people consume our product whatever those products are? It might be a surveillance system. It might be a program. It might be a policy change. So, user friendly, who's your audience, my communication friend is sitting up there shall we say, who is your audience and what do you want them to do, we have to keep thinking about that. So, a lot of us developed something. So, let's go straight to the consumer. But if you're CDC, I'm often going to some big national intermediary and I'm saying this is a kind of thing I want you to bring to your chapters wherever you do bring this to school system. So, think about who really is your audience and what do you need to do to get them to adapt and use this, include end users in development of your products. There is really nice examples in chronic disease and we can talk about those later not on tobacco is one that I like. So, if you look at Jim Dearing's work, think about dissemination. We do a lot of things wrong and I think the more education you have the more you get convoluted and how you think about dissemination. So, you know here is a lot of really, really cute examples, insightful examples about what we can do better and one of the overriding things is we think evidence a scientific weight really matters when people make decisions about adaptation and use. And that's just not true in many cases. And you'll know that if you know your audience. And I'll talk about that later if we have time. So, read Jim Dearing's piece. I really like it. How am I doing on my time? I have 10 minutes left.

Jack Denniston: You have about 12 minutes left.

Rita Noonan: Perfect, perfect though. Okay. So, let's move to the middle box. You know I like this middle box because this is what we call a prevention support system or sounds again convoluted you can tell people with advanced degrees made this, but, basically this is where capacity building and training happens. So, there is a middle step, okay. We've developed our product whether it's Coke or whatever. We packaged it. We know what people want, but, you still have to figure out you know how do you get them to use it. What is the infrastructure? So, if we go back to Coke, you can think about they knew once it was packaged, once it was all put in the right kind of format, you're still to get it two people. So, roads obviously are easy. Put a truck on there, but, donkeys that's kind of sad, but, it's actually shows how dedicated they were to making sure it was within an arm's reach of desire. Donkeys, bicycles, that infrastructure is what we need to think about. It's often that missing link it's that big chunk in the middle.

And so what I often think about is for some of our social technologies or our programs, you know knowledge is not sufficient to change behavior. How many people eat five to seven fruits or vegetables every day? Do we know we're supposed to? Oh, you do, good for you. Shell off. He said oh god, oh god, I'm going to move into your house. Smoking, fast food, it's not a knowledge problem most of the time anymore. I worked in sexual violence prevention for probably 20 years and we really thought if people just understood how bad it was that it really, really ruins people's lives or you know creates a

big problem and it's a hardship and it's sad and it's costly and we can stop it. It was we just have people needed to know about it. We should need to raise awareness. It didn't work. We're here 30 years later and we're figuring out we need to build skill sets. We need to teach people, change routines, we need to build in those capacities, so behavior can change so that the default action is a healthy action. So, a lot of this little box is really about for us what is that, what are the roads, what is that infrastructure, what are the training, what is that need to look at, look like Dean Fixsen is very good at this and talks a lot about those. There is core components of an effective implementation. These are sort of in the camp of you know selecting the right people of training them, not a onetime training, that's good if you want to sensitize people like what we're doing right now, but, if I really want to change your behavior, we need to have coaching, monitoring, skills development. It's much more intensive. It's important work and it's going to cost some time and money. There is a Cunard Hall article I can tell you about later if we have time, but, so, basically I like this framework because that middle box is often the missing piece and for a lot of us it's a piece that we can fill in given where we work where organizational you know practices sit. So, for CDC, we're very good at providing training in TA. So, if you read Fixsen there is really nice examples of how important certain things are that we don't think about coaching and monitoring. The Joyce and Showers article I really like this is a meta-analysis and it's in the Fixsen monograph. But this is a meta-analysis of what kinds of things predicted whether or not teachers would go to some kind of training or something and actually use that information in their classroom.

And if you look on the left hand side, those are the different components of what they try to do to get teachers to pick up something new and use it. Theory and discussion, we do that all the time, right. Training, practice and feedback, coaching in the classroom and just you know drive your eyes across, you see on the far right hand column, the use in the class is pretty dismal all the way until you get a coaching in the classroom. So, Dean Fixsen talks about behavioral rehearsals the kinds of things people need to practice in the practice setting and get feedback. Now, again it's a little bit more time consuming, but, do you want that outcome or not and that's really the question. So, the outcomes we want and I know we all want them. The nicest people I've ever met work in health and human services. And I love advocates of every description. People care or driven by mission. We want those outcomes. We want teachers using them correctly. We want all these effective practices to get used and save lives. So, we really need two things. We need those effective interventions which we obsess about and our journals are filled with information about which ones we're. But we also need an effective implementation. And this is what you know Dean Fixsen talks about all the time and I talk about all the time.

If you do a two-by-two table, there is only one quadrant they will actually yield the results you're looking for. You have to have an effective intervention and has to be implemented effectively. Doesn't matter how effective your intervention is if you're not implementing it properly. So, you could think about medicine, their sufficient dosage. If I only take half of my penicillin, I'm probably not going to get rid of that infection. It doesn't mean penicillin was the wrong drug. It means I didn't take enough of it. So,

there is lots of different components which we don't have time to talk about today, but, I should really like to always get that plug in about how important it is to build those capacities to implement properly and to understand what it means to select the right thing for the right audience and implement it the right way. So, now we're really moving into the last box which is putting things into practice and this is where we have a lot of information about you know adoption, why do people choose something or not choose something, why they like dare a program that never really worked versus something that my program works, why won't they pick it. So, there is a whole kind of domain here when we talk about the delivery system and it sounds like a lot of you work in a delivery system. So, what do we know from Rogers's diffusion of innovation. We know that a lot of individual perceptions about you know does, is it something that's hard to use, does it fit within my regular teaching schedule or even just on a simple level, there are lot of interventions that are developed for school-based format. But they're you know two-hour long sessions or even 90 minutes. And so, if you have a classroom that's 60 minutes long and every single week you're supposed to fit in 90 minutes that doesn't make sense. So, some of these things are simple. Fit into the format. Teachers like dare, you know it's a favorite whipping child for things that don't work, but, it's sticky, you know nothing adults language, but, something just kind of stick. Why was it so sticky? Well, some of it is like the dough factor. Teachers go to day off from teaching. They like in someone coming their class, they don't have to teach that day. I look at day off. I want somebody who could coming into my job for a day, right. So, there is some of it's sort of simple and it did really strengthen relationships between you know criminal justice, police force and schools and communities. So, there were some of these like late in benefits.

So, other organizational factors might be things like do I work in an organization that's very driven by a particular mission? If I work in an abstinence-only organization, it's not going to be a good fit if you're asking me to adopt something that's about condom use. These sound simple but you'd be surprised how misguided we are and how we're it's a scattershot. We fire this rifle. Some of the buckshot will go somewhere and land in the right place instead of really focusing. You know we are submission to fit. Is this an organization that really cares about innovation? Is it open to learning? What is that climate for implementation and there is really nice work by Klein and Sorra simple things that I think you could read about and say, wow, I really like that. We know these. I'm not going to walk through all of them, but, if you haven't read anything about diffusion of innovation you can read it quite easily and Rogers of course champion in this and he was a sociologist, sociologist like him talked a lot about you know why do people do what they do. There has to be advantages, has to be compatible.

You know if you're already doing something in your school or your community, you know does this fit with what else is going on and maybe you're doing something better, complexity. I crack up at some of the interventions my colleagues are developing and I love them, and I think they're fantastically smart. But I thought if I invented a prior to clean floors that required 14 steps and I have to mix it up in a barrel in my home, leave it outside, mix it up one more time in the morning let us sit for 24 hours, no. I don't care if that's the best for cleaning. I'm not going to use it. And you're not going to get anyone

else to use it either. So, let's stop being so crazy. People like to try it out. It has to be trialable. And they want to be able to observe some of the benefits and the results of it. So, we writers we have already flexibility, we know it's important and every community says my community is different. So, they want to have the flexibility to tweak some parts. So, it's good to know which ones you program or your whatever it is your initiative, don't touch this piece, but, we think these pieces around here are little more flexible. Everybody likes that flexibility and it does help with adoption.

I don't have time to talk about this, but, I and I knew I wouldn't and I put in here anyway because I want to remind you this is a wonderful book to read and it's just its fun. It's interesting and it talks about the architecture of choice and how you can make defaults and healthy actions for people a lot easier just by building your environments differently. And we know like for example when you walk through the cafeteria line the things that they want you to buy or early in the line and they were at level. Why don't we make healthier choices more like that? Make them easy. Make the default option that we already have safe routes and walkable communities. They already have smoke alarms installed or even sprinklers in every home and so on and so forth. So, it's a wonderful book and they have all these other really fun things they learnt from torturing their students at University of Chicago, but, really need experiments where they can highlight all these different ways that you can persuade people, because that is part of adoption is persuasion and making it easy. So, in terms of implications, we all have a role in closing this gap. I think it is like fast food and smoking. We have to stop talking about.

I think we know the gap is there. We know it needs to be closed, but, we keep just mailing stuff to people. We think like all information, knowledge will change people. Well, it doesn't and we really need to do better. We all have a role in closing the gap. Some of that I think is in this perfect science, the perfect floor cleaner. That's not usable. So, we have to think about what's useful in the real world, what are real people, your audience, your people, what do they want, what are they actually going to do, what do they need so they can do it better, part of that doing better is the training around even understanding you know what's out there, what's a good fit. So, even like the training around how to adopt something that's appropriate, but, then how to implement. And we definitely we always talk about evidence-based practice, but, we want practice-based evidence, which means we hear from the practice field, we need to bring that back into what we develop. And then not in tobacco I think is a nice example of how interventions can and should be developed with your end user in mind, with your dissemination channels in mind.

So, we can start with some ideas. We can start with what's already out there that resonates. It already has uptake. It's already been adapted by a lot of folks. So, we know it's something that field wants. We could start by evaluating those efforts instead of always dreaming up our own better idea. We always want to be the new inventor, but, sometimes I think it's a waste of time or at least it takes too much time, the trade F is too much understanding what practitioners need and I think this is really nicely illustrated in the Cunard Hall article that some of the strategies we developed really you need to think about who does implement, because there are lot of government agencies, a lot of us

who're developing stuff it's going to go on through some state welfare, opus or you know there were agencies on aging or it's going to go on through state health departments or county of local health. These are organizations with limited resources, high turnover and varied skill rates. So, if our interventions continually require somebody with a master's degree, well you have to think about where are those organizations that are loaded up with people with master's degrees to go into home visitation or nurse-family partnerships or whatever those might be. So, think about those skill sets. And so I think I've already said this but anybody who wants articles, you can read this journal. It highlights what this framework does and again a framework itself is just a place to put information, but, if you send me an email or give me your card, I'll send you some of my favorite articles and you'll enjoy reading I think so. Thank you.

Jack Denniston: Thank you very much, Rita. We're planning to save 10 minutes at the end for questions. So, each panelists will get to talk and then you can have at them, so save your questions for the end please.

Brian Bumbarger: Good morning everyone. So, I have to say before I start that I've had never met Rita until I walked into the room this morning and we did not share each other's slides in advance. And I have to say that because you're going to be stunned at how much similarity there is. In fact, there were some slides that Rita used that I actually used in 90% of the presentations that I give and I'm very glad that I left them out in this morning's presentation. I always use Jim Hansel's Field of Dreams article, if you build it they will come.

So, I'm going to present actually sort of a case study of how the interactive systems framework that Rita described has actually been used in Pennsylvania. Is anybody here from Pennsylvania? Okay. So, we've been using this interactive systems framework model of dissemination and implementation in Pennsylvania. At first, accidentally at first we didn't actually know we were doing this and then we actually figured that out that it was this interactive systems framework in practice and we embrace that model and have expanded on it. So, I'm going to talk about hopefully I'm going to be able to condense about 15 years of experience and practice in dissemination into 20 minutes and I've had four cups of coffees so, I'm confident that I might be able to get through most of this. Just want to mention that there have been a whole army of people at their Prevention Research Center Penn State University that have been involved in this work over the last decade and a half and that the majority of this work has been funded by the Pennsylvania Commission on Crime and Delinquency and I might add that not a penny of our work over the last 15 years has come from the Federal government which is pretty amazing that we've been able to build this body of research over a decade and a half without any specific Federal funding although we are starting a guess on that.

I also have obviously drunk the Kool-Aid of the public health model although I'm not formally trained in public health. That's really the field that I work in now. So, you know what we're trying to do here is move from, this is the model for developing prevention science and it follows these steps and I think it's important for us to stay grounded in the fact that the science that we're trying to disseminate followed this

sequence of events to be developed and tested and demonstrated efficacy. Then the challenge is then to move from that science that's developed back out into service in the real world environments under natural conditions not under carefully controlled research study conditions, but, under the messy real world. So that's really what we, that's what we've been trying to accomplish. So, in Pennsylvania, let me just give you a little bit of background about how this has unfolded over the last 10 or 15 years. Pennsylvania started out actually before disseminating evidence-based programs and practices Pennsylvania started out with a statewide initiative called Communities That Cares. Anybody familiar with the Communities That Care model, anybody familiar with the Strategic Prevention Framework, but, SAMHSA will never admit, but, it is in fact the Communities That Care model. So, Communities That Care is basically it's a community prevention planning model that organizes community prevention practitioners and service providers to gather epidemiological data from their local community, use that epidemiological data to establish priorities for prevention and intervention in their community and then seek out empirically validated programs and practices to address those priorities specifically prioritize risk and protect the factors. So it's again it's a very public health approach to what have traditionally been thought of as public safety issues mostly. So, first in Pennsylvania there was this CTC initiative that funded lots of community prevention coalitions around the state and this is important because it really created federal ground for embedding these evidence, for later embedding these evidence-based programs and practices.

Then the state funded communities to replicate evidence-based programs from a specific menu of programs and in Pennsylvania this initiative is euphemistically referred to as the Blueprints initiative because those programs were taken from the Blueprints for Violence Prevention list which are the programs that most of you are probably familiar with the usual passive characters, big brothers, big sisters, life skills training, the Iowa's Strengthening Families program, multi-systemic therapy, functional family therapy, multi-dimensional treatment foster care. These are the sort of the top of the heap in terms of empirically validated prevention and intervention programs. It's important to recognize though that that menu represents an incredible diversity of different programs targeted at different outcomes, targeted at different target populations and age groups, and working in different settings everything from school-based classroom curricular programs to community mentoring programs, to therapeutic interventions working with therapists and individual children and families so that just trying to disseminate that diverse of a menu of evidence-based programs presented some specific challenges.

Now, so the goal was then again we've got these lists of evidence-based programs. These are programs that have demonstrated efficacy and randomized trials. The goal of the state in developing this initiative was to get these programs out to as many, out into as many communities as possible. It was a it was clearly a dissemination goal. And now I'll say you know in hindsight they were almost blinded by the goal of dissemination and forgot about the goal of implementation and improving public health. So, in some instances we were pushing these evidence-based programs add into communities where they were a poor fit or there wasn't any good justification for why the program, why the community would adopt this particular program other than it was on the list. So, that's a

lesson that we've learned that implementation and dissemination and public health are all not the same thing. They're individual different goals. They sometimes work together. Sometimes dissemination of evidence-based practice is a means to the goal of improved public health. Sometimes there are other means to achieve improved public health. So, we know that getting from lists to improve public health involves, there are a lot of barriers to bridging that gap from list to improve public health. And these are the barriers that we all know about, but, I think it's important to list these barriers and then set about specifically trying to address each one of these barriers. And the interactive systems framework that Rita talked about we think is a really appropriate model for intentionally addressing each of this, each of the barriers that are included in this list. And we'll come back to this. So, again you've seen this interactive systems framework again it's a it involves, it recognizes that there is a prevention delivery system, that people in the trenches that are in the trenches that are delivering services to clients, to target population, therapists, social workers, school teachers, prevention practitioners. There is also at the bottom there is a prevention synthesis and translation system. There are researchers that are developing and testing theories about the etiology of these problems that we're trying to prevent. They are developing and testing interventions and then they're trying to distill that knowledge in ways that might that the knowledge might be picked up by the field.

What we recognize in Pennsylvania though is that pardon me one second, let me get my pointer. It couldn't be a pointer, but, I carry with me that I'm sure it is not going to work. Oh, look at that. So, what we recognize in Pennsylvania though was that although there is always a prevention delivery system, there are practitioners out there and there is a clearly a prevention synthesis and translation system, there are many researchers, there is lots of funding for research. There is almost never a specific intentional prevention support system that connects these two together. And this is we think this is a big part of the reason for those that many of those barriers exist. So, the EPISCenter the organization that I direct in Pennsylvania was created EPISCenter like an earthquake how appropriate. It stands for the Evidence-based Prevention and Intervention Support Center. And the EPISCenter was developed as part of a larger statewide initiative in Pennsylvania called the Resource Center for Evidence-based Prevention and Intervention Programs and Practices. I came up with this school name, Bureaucrats came up with this school name. And so, this resource center initiative it's also important to note that this resource center initiative is overseen by Multi-Agency Steering Committee in Pennsylvania that includes the Departments of Justice, Welfare, Education and Health.

That's really important because those are the four agencies in almost every state that are driving all the dollars, all the prevention and intervention dollars that end up in local communities come through or from one of those four silos. And all of those four silos are interested in moving science to practice right now. Okay, so that's important that we got them all together in one group to sit and oversee the statewide initiative to move science to practice. Now, this initiative includes the EPISCenter and another arm of this initiative that I'm not going to have time to talk about today that's run by the National Center for Juvenile Justice in Pittsburgh that's called the quality improvement initiative and it's really focused on moving, it's really focused on practice based evidence. So, looking at

what's already out there and widespread use and trying to build it up to be more like evidence-based practice, so that's an important component of this. I'm not going to have time to talk about it today though. So, these are the two pieces that the EPISCenter is responsible for this process of moving science to practice. We're supporting these community prevention coalitions, these Communities That Care coalitions, and we're supporting specific, the implementation, the high quality implementation and sustainability of these evidence-based programs.

So, we started with Wandersman's model that we've been talking a lot about, Rita talked a lot about with those three levels and one of the things that we really like that model. We recognized that it pointed to the important need to connect practitioners with researchers, but, one of the things that we thought needed some expansion or to be build up a little bit more in that model was the fact that if you remember in the interactive systems framework, this macro policy and funding, they're just not treated as you know this stuff that as the context in which all those stuff happens. And we wanted to actually engage the policymakers and funders as active stakeholders in this process. We wanted to develop a clear partnership with the state funders and policymakers so that they were part of this, not just providing funding for it. And the as the interactive systems framework describes, the goals of the interactive systems framework in this process are to build general capacity, so we're just trying to educate all of these stakeholders about the basic tendency of good prevention science. We're trying to at the same time build program specific capacity, so we have a specific menu of evidence-based programs that we're pushing out and we're developing a knowledge base and an experience base around each one of those specific interventions.

So, we're not trying to do a million different programs. We've got 10 programs on our list and we're trying to do, we're trying to learn as much as we can about each of those 10 programs and do each one really well. And that again this important role of facilitating interaction and communication across these three systems that normally work in isolation. I mean it's just not natural for the policymakers and the researchers and the practitioners to all be collaborated together, it just doesn't occur. You know it's like Sasquatch. You just you don't see it naturally in the water. So, this prevention support system as an infrastructure for moving science to practice in Pennsylvania we think has some important characteristics and some important goals. And it provides a statewide infrastructure for technical assistance and research and this is important because I think too often services and research are their own silos. For instance, the Federal government all the time rolls out these gigantic national initiatives where they fund services in all these communities across the country and then some other division of that Federal agency will provide grants to scientists to artificially create research environments to study some hypothesis.

When it would be a lot more effective and it would probably shorten that 17-year window of knowledge to practice, if the research could be attached braided to the service funding when we fund a 150 new programs on tribal lands to implement some new practice. Why isn't there a rigorous research study attached to that with a randomized roll out of those communities for instance. We can do both of those things together. This process

provides a logical cycle of research, technical assistance and continuous quality improvement. So, again we're not doing research just to write journal articles that are going to lie on some dusty shelf. We're doing the research specifically to feedback into the knowledge base of practice for both the policymakers to inform their allocation of resources for instance and also to inform the practitioners to facilitate continuous quality improvement for their practice, which ensures an immediacy and policy relevance of the research. So, again we're not, we're helping the researchers to not sit in their Ivory towers and think up empiric or academically interesting questions that they might pose as they're smoking their pipes, but, instead we're going to the policymakers and the implementers and saying what are the things that you're struggling with, what are the things that you don't know about these programs and practices that we're trying to move into the field. And then we feed those questions back to the researchers to do again immediately policy relevant research. Again it recognizes and engages the funders and policymakers at the active partners in this process. And so our role here as this prevention support system is really a broker and facilitator across these agencies and stakeholders. So, I want to just briefly describe some of the policy and practice innovations that this model has led to that we think are improving the ultimate goal of improved public health through the use of disseminating evidence-based programs. One of the most, I think one of the most valuable things we've done is to develop and support communities of practice among practitioners that are using each of these 10 evidence-based programs.

That's important and may it seems like a no-brainer. It seems so obvious, but, the reality is that the practitioners that deliver most of these programs whether it's a classroom teacher delivering your weapon is life skills training drug prevention program in a seventh grade health class or whether it's a therapist working with families to deliver multi-systemic therapy or functional family therapy, those practitioners almost always worked in isolation. They're not part of learning communities where they get together with lots of other people who are delivering that same intervention and talk about what's working, what's not working, what's causing them problems. So, we've created these communities of practice these learning communities. When we get people together four five times a year to talk about how the things are going to create their own knowledge based and creative peer support network for each other. We've included common public health language in all the states funding announcements, so any time the state rolls out, anytime any of these state agencies roll out a funding announcement, they include language about risk and protective factors and the etiology of the problem that understanding the etiology of the problem that we're trying to prevent or reduce. And it's freezing in here or suggest me.

Jack Denniston: It's freezing.

Brian Bumbarger: We've got a statewide surveillance system as part of this Communities That Care initiative there is a statewide surveillance system, thank you that collects this epidemiological data in each community. I think that's a that's been a really important part of this process for Pennsylvania. And part of the strength of that epidemiological surveillance system is it helps practitioners and policymakers shift their

focus from the behavior outcomes that they're trying to move the needle on to the underlying causal mechanisms which is a really difficult kind of paradigm shift for both policymakers and practitioners to adopt. We need to get them to understand that we want to focus on the underlying causes of these problems for a lot of reasons not the least of which is that a lot of these different silo problems have the same underlying causal mechanism. So, it's much more efficient to focus on the underlying causes than it is to focus on the siloed outcome. Again, community collaboratives as a local prevention infrastructure and then this whole idea of ongoing monitoring of implementation and we developed specific tools and skills and we're focusing on improving practitioners intrinsic motivation to want to monitor and improve implementation quality and I'll talk a little bit about that at the end. Just some other kind of concrete sort of policy changes that we've put in place to guide this initiative, data, the communities are required to do a data informed needs assessment every two to three years as part of the state surveillance system. The state provides multi-year funding to these communities to implement these evidence-based programs with a graduated local match requirement to address that barrier that was listed earlier on sustainability. It doesn't matter if you disseminate all this practice into communities through time-limited grants if the grants run out and the programs go away that's not going to lead to public health change. Detailed letters of support from both the program developer and the local prevention coalition, performance measures that are tied to the program's logic model. This was a huge area of work for us when we first opened the EPISCenter in 2008.

We saw that the state was giving grants to local communities to adopt these programs and as part of their account, traditional accountability process, they attach lots of performance measures to these grants that the communities had to submit quarterly reports on, but, what we found out was that the performance measures are not logically tied to the theory of change of the specific interventions. They were just really vague, kind of silly performance measures. And that actually undermined the practitioners and providers phase in the use of data for continuous quality improvement, because they were forced to jump through these silly accountability box ticking hoops, so it submits some nonsensical data to their funder, but, they knew it didn't mean anything and the funder knew it didn't mean anything, but, they had to just somehow prove to the taxpayers that the money was being used in a responsible way. So, we went and we rewrote all the performance measures for all of these evidence-based programs. To do that, we first developed a logic model for each of these evidence-based programs. We were surprised to find out that even these Blueprint programs didn't have a visual logic model for each program.

Quality assurance and verification by the program developer, so two years after a community has been implementing one of these evidence-based programs, they have to actually get a letter from the developer of the program or their national training infrastructure that certifies to the state as their funder that that community is delivering that program with a sufficient level of quality and fidelity. That's a big step in focusing on implementation quality. And they have to develop a narrative outcomes report to local stakeholders. Now, I talked about the balance between evidence-based practice and practice-based evidence. That's been really important in this initiative. I talked about finding a small number of things that work. We don't need to focus on 10 evidence-

based programs, because we can't be experts in 120 different programs and the reality is they're on a 120 different programs out there that have strong empirical support. This operating system of CDC, one of the other big things that we focus on in our work as I mentioned earlier is intentionally trying to shift practitioners from this extrinsic motivation of compliance wanting to say that you're doing the right things. You're wanting to show the funder that you're implementing with a sufficient degree of fidelity and quality because that's what you need to do to get your funding to an intrinsic motivation that says, I want to do the best that I can do because it's going to lead to better outcomes for the children and families that I serve.

So, we really try to focus on moving practitioners from a cultural compliance to a cultural excellence in the work that they do. Just a visual representation, this was our reach with evidence-based programs in 1999. This was our reach in 2010. So, we've clearly made an impact in a dissemination area. I don't have time to take it into the outcomes, but, we've had some incredible outcomes and outpost these slides on the conference website, we've seen incredible population level public health improving in areas of delinquency reduction, substance reach reduction, improved academic outcomes for kids, reductions in out of home placements for kids in the child welfare system and then we you know going back to communicating to your stakeholders in the language that they care most about. We've attached cost benefit analysis to these outcomes and calculated the cost savings to taxpayers from the outcomes that we've generated from this initiative. We calculated that the state has saved \$317 million on a \$60 million investment. It's a five to one return on investment.

So, again I'll we'll have time at the end for questions and I'll post these slides on the conference website. Thank you.

Jack Denniston: Great Brian.

Carol Trivette: Good morning. My name is Carol Trivette and I work with our colleague for the last 30 years, Carl Dunst, and the work that I'm going to be talking about is the work that we've done together along with a lot of other colleagues across the time period. Our background is early childhood particularly early childhood, children with special needs and we were originally working on a small applied research setting, so we never, we've always been very interested in all the ground practices what can really be used to make a difference. And I'm going to talk about some work that we've been doing actually over the last about 15 years now, most of this was funded by the Office of Special Education who is interested originally in saying, okay, after a while we really do have some evidenced in the world of early childhood, but, how do we figure out what it really means, how do we disseminate that out and how do we sort of focus on implementation.

So, through these three projects that actually have focused on different content areas, we really built this work in terms of systematically thinking about it. And so, first of all, we are researchers. We are applied researchers. So, we are interested in the research side of trying to translate this information and so we have been really systematically thinking

about and working about thinking about how to do synthesize in a way that leads to changes in practices. We've heard a lot in this conference about efficacy synthesize in an efficient synthesize. But I want to talk about translational, because this you know is where you're trying to figure out what it is that really is working across a body of literature that you could tell somebody in terms of what they want to do. We think about it as unbundling and unpacking what the research says to us in a way that you can tell people to sort of understand what matters the most in terms of research, sorry.

So, we think about the research in terms of small bodies of literature. Now, it could be lots of literature on I would say that, but, more focused body of literature. If I want to improve something in the lives of families, we've done a lot of work around family centered practices. So, one of the pieces is if I will look at the research around family centered practices and how you build capacity for families using that type of work, then that would be a small body of literature. It's focused on a very particular outcome that we would try to think about and isolate what those particular characteristics are. This of course leads us to what we consider evidence-based practices where you have sort of got this demonstrated through a process that's very detailed statistical or functional relationships. Now, the word functional is very important in that, because think about where we come from, we come from doing work with kids with disabilities. And often times those populations may be very small children who are visually impaired and hearing impaired. That's not a large population. It's not easy to establish statistical relationships, but, it's very easy to different methodologies to establish functional relationships between an intervention and an outcome.

So, we take this from a pretty a fairly broad perspective. So, we're looking at a practice based research synthesis or translational research synthesis. Isolating what really matters and then what is it that you're going to tell the field out there in terms of evidence-based practices. We think, any practice or any intervention is made up of lots of different features and elements. They can be development enhancing or they can impede. So, you're trying to sort through all that information that's out there and sort through what really is going to make the difference in terms of changing how people think about things and changing the lots of children and families. So, first of all you have to select the practice or the intervention that you're thinking about and I say this that is not as easy as it sounds, because words are used to describe very different, the same words are used to describe very different sets of interaction, responsive parenting. It's one yeah, oh yeah, we all know what that means, but, when you begin to look at what people really do as part of helping the parent being responsive, it's all over the place. Some of it's very directive. Some of it's very responsive to a child in its initiation. It's a very different thing.

So, first of all, trying to understand exactly what the practice is you're trying to study is a big deal. We do literature searches that covers everything. We do great literature. We love dissertations, because they tell you everything they ever did in a dissertation. So, you can really understand it. We don't just use published information. We feel like by only using as reported repeatedly in this conference, it's such a goblet to get published, but, what often don't get published is information about when interventions don't work

and so wait a minute. That's not that we need to know. The 15 out of the 20 studies that were done it didn't work well. It didn't go, but, we need to understand that and so that elimination of only using published literature as far as we're concerned really skews the field and this is not necessarily always popular perspective here. And then being very careful about the selection of studies, why are you including them, why do you leave out, I just reviewed an article that they said, they only included articles that were for 2000 and it was on parent-child interaction and I wrote back and I said what happened between 1999 and 2000 that you would discount. Why do you think that behaviors change at all this and you're what was just easier to do the synthesis if they excluded everything before. But it didn't make any logical sense in terms of trying to understand something by making those decisions. So, you have to think through these exclusion criteria. And then we quote the studies and then do the re-analysis. So, once we and that process is very time consuming and our research assistance recently told us that they were going to all pull their resources and do the lottery. And we said we're not doing, talking us about this and they said because when we win a lottery we're going to hire people to read abstracts, because they read thousands and thousands and thousands of abstracts day that joined here through, not a day, but, over time to try to find it. We go really deep in terms of the literature.

And from this we produce a formal research synthesis. This is a report that is prepared for researchers or for people who really will understand the technical side of it. And this is just one that we've done. They tend to be 10 to 12 pages long and have lots of lots of tables, but, that's not really what we're trying to do. We just have to document what we did, because what happens then rode us and when we produced products that are evidence-based people always saying to us you need to show me the evidence. And our research synthesis are the evidence behind what we're going to do, what we're going to suggest. So, what we then tried to do is to isolate what matters the most between the relationship between the practice and its consequence. And this is a really fascinating process. It's like being a detective because you have to think systematically about what was done and what was the biggest effect and what is most likely to sort of account for this. Now, we're using effect sizes and all kind of statistical analysis to help, but, it still has to require some logical thinking.

And one of the things that we've come to is there generally is not a direct correspondence between the findings of a Center of Research Studies and implementation of practice not a direct, you cannot just say they did this, this and this and put it over there. You have to think about it in a broader perspective. Experimental conditions rarely exist in day to day context. So, when you come up with a product and you're synthesizing something and say, you have to use this experimental condition in all these 15 systems have to be in place, it doesn't feel any good. It's not reality. They're not going to be able to do it. So, we're trying to stay in the real world and this is where this next statement is, we're trying to mirror the research evidence in a way that it can really inform practice, what is it that was doable in the real world, even pushing the real world beyond where we are that we get better and better, so what is really doable.

And this next thing statement has been talked about indirectly several times this morning, but, it doesn't matter how much research evidence you have about a practice if it lacks social validity. So, if somebody doesn't like it, they don't believe in it, they don't think it's got value, they don't think anything else will ever use it, it's not to us, it's really not going to be a practice. It's going to have any take up out there in the real world. So, we do lots of work around trying to understand the social validity of a practice before we spend effort in trying to help get the field to take it up and to use it. And the other interesting thing through all these years people used to say to us we want you to do research synthesis on practices and see very like I mean probably are not affected and might even be formal to kids with disabilities and we did some of those and we found evidence that they were not good practices. It didn't change what people did. If they believed it, they believed it and parents believed it and practitioners believe and we just say we're not doing that anymore. That's a waste of our time. We need to focus on practices where there is social validity and good evidence so that we can maybe change the field. We wasted a lot of time trying to do that. So, we're trying to then take these research synthesis and come up with something they can that isolates the practices, but, informs what kind of practices people might want to do. So, we have spent a lot of time forgetting lots of formats about practices that we put there in the field. We do a non technical summary. I'm going to run kind of quickly through some of these and these are one or two page briefs, non-technical restatements of what the research says. What's the bottom line and they are intended for policymakers and administrators and also trainers, people who did technical assistance so that they have some sense of the evidence that goes behind a set of practices. They also can be for practitioners and parents, but, really they are for policymakers. They are the front and back of one piece of paper. That's it but I got to read. It's short. It's quick and it summarizes, so people can say, yeah, I hear, I see the evidence behind this practice and have and be able to talk to policymakers in particular about it here you go.

We also create evidence-based practice guides. These are for practitioners and they are for parents. And we well, I'll talk about how we're doing differently, but, one of the things that we over the course of years have sort of come to is these four questions you know what people want to know, what is the practice, what is it look like, how I do it, and this last question which we think is critically important how do I know that it's working. So, if you're trying to get a month to use a practice with a child, what is she going to see that's going to give her some confidence that maybe she is headed in the right way. Children's behaviors don't change instantly I would tell. So, how did can she get something that gives for herself a path is making it different. People often try difficult things and they give up. They quit too fast particularly with kids with disabilities because their take up time may not be as quick as other kids. And so, this piece is one of the things that when practitioners are using our practice guides with families, they say they emphasize, because it keeps parents hanging in there longer to actually do practice.

And then we do then yet illustrating what the practice really show little things that illustrate what the practice looks like and again that's a piece that parents say to us they love, because they really get it when they hear of them yet. This is a project that we're

doing right now that's on early literacy from development for kids with disabilities and we develop two sets of everything. We have 76 for parents and 76 for practitioners. They're basically the same, the practice, but, they're written differently. First of all, when we write it for families, they are written at about a fifth grade level. That is a challenge. Trying to write in a way so people can understand it and yet you don't lose the even for simple practices you lose the nuances when you're trying to write in a very simple level, but, we've done that now. What we've given up I think is much trouble, but, we have done it. And the practitioner one is written at a tenth grade level. These are for teachers or for home visitors or for whoever maybe working with somebody often times. It's people who are working with teachers and child care centers and that sort of thing.

We also have a brochure format that we do a product. So, this is just very simple again brief description, what is it, what is it do, how does it look like, what is it working kind of things that people can hand it to families. And mainly this is geared toward families, but, it can also be geared toward this issue of working in a group when everybody is not using the same practices in the team, we people have used the brochures frequently that help other team members understand the practice that we may be talking about. Okay. We do videos. One of the things about the practice guides as I said all of them have exactly the same structure, so because it matter which practice guide you people you're going to see exactly the same set of things so that you're very familiar with and you're not having to rethink it. Our videos are all done the same way. We introduced what the practice is that we're talking about. We give the specifics of the steps or pieces of the practice. We show it in a video. We show it in another video with a different kind of family or different kind of child and we put, we highlight again stop and pause to sort of highlight what the pieces are and then we have one last video that a practitioner or a family person could use and just think about did they see those characteristics of the practice.

So, part of what we've learned is to be systematic about how you're presenting something information to people because it's easier to learn something when they're learning at using the same steps every single time, so in terms of product development that's been a big piece. We've also done to deal with different populations out of the separate piece. One of the things parents, people really wanted is they wanted us to develop things that were not reading because we were talking about a lot of families who didn't have reading skills themselves and trying to get them to help their kids in terms of early literacy development and so we do we develop podcasts of the practices. They've set of practices just different products, just different formats, different audiences that we were trying to hit. Some of them have animation. Some of them are audio only. Again, people were thinking about the same practices, but, how did you encourage it in a classroom. So, we did posters of things that so to say if you're sitting here at dinner with a child, at lunch with a child, what are some of the things that you can be talking about that can improve or how can we bring literacy and early literacy kinds of activities involved in it. We also have them on the website, so you just push a button. You just touch the mouse and able to pop up a different thing by moving it around. Those can be used for families.

So, that's a whole lot of stuff that we've done and let me just sort of summarize what the key characteristics are because particular practices do not apply to you but they I think what we've learned has. One is to identify the targeted audience. And to tail that language for the targeted audience and I think it's not just tail the language, it's tail the format to the targeted audience, because you have to think about it. We really strongly believe in simple straightforward messages. 10 is too much for me. I'm old. I can't remember 10. I can remember a number of three to five steps and little hard and fast some days, but, I can remember three things. We feel like the complexity of the interventions are real. Some of them are very complex, but, we have to break it down to people into and I love the three levels because and I just have to think about that one box and what are the pieces in that one box not one of the six things. All of a sudden you're giving your framework to take six pieces and keep it in my head at a very much more doable level. So, we really feel it that's very important. Carl always says to me. You have to bet in your pay check. What are that going to be the three things that you are going to bet your pay check on, on most important to change that they're using pretty things for kids and families. So, you know that makes you go oh, I can only do three to five and it's got to be the most important. So, thinking that way when you're putting out there is so easy as researchers who want to say well, I want them to do this, I want them to do this, but, no, they're going to remember all that one of those two little things, multiple formats is the same. And then dissemination does not equal implementation. We've already talked about that a number of times, but, this was sort of and this train that we developed all these materials, we put them out on all these projects, but, then the truth is you know people who loved them are using them, but, we were getting them out there. So, we think about this in sort of a slightly different way, but, we think about implementation practices in terms of what is the what are the methods and we thought about it in terms of adult learning that are critical to help people then be able to implement and practice and so, implementation practices are about adult learning, but, then the intervention practice regardless it could be applied some more practices or whatever.

Again by being applied researchers we went back in the research synthesis of what it was of the key factors that really seem to make a difference and we did not just use for example coaching. We used coaching, accelerated learning, design it, but, I don't have handouts. There are somewhere of handouts in here people want any of them. Got it designed in just in time training and so okay, what does that really mean then in terms of what kind of intervention, what kind of implementation model would you do in terms of training. And so we use this model and have used it in several studies, lots of implementation measures that we have to get fidelity in terms of whether people really do it. We love the term coaching and we hate the term coaching, because coaching has so many definitions to it. And so we don't tend to use it a lot, because what is that really mean. You can do coaching in lots of different ways and not be able to sort of get that what you're trying to do.

So, we really think about it in terms of introducing and illustrating, practicing and that person actually beginning to evaluate their own practices, what is it that they need to know in terms of being able to move it around. I'm actually going to finish early so we'll

have more time for questions, but, I want to just sort of conclude to say that findings from practice based research synthesis can provide useful information and inform practice. They need to be done in a certain kind of way for that to really make a difference. These characteristics you need to know what matters the most. And I think as researchers, my obligation is to struggle to help identify what matters the most and not just say, oh, do all 15 or 20 of these. That's my professional responsibility. It's not the field's professional responsibility to take that. I'm the one who is in the I and my colleagues are the ones who are in the position to do it. It's extremely hard work. The amount of hours that it takes to do a research synthesis well even in a very small body of research is just enormous. And people come to us and they say we want to learn how to do this and so we'll start working with them you know and they like no, we don't want to know how to do this. This is a lot of time and a lot of resources that it takes to do it well. To develop the products from this you have to keep your audience in mind. You have to know where you're going, who that audience is going to be, you need to think about the fact that probably multiple audience, your audience is the person, the intervener, but, your audience is also ultimately going to be a parent or a child as part of this. And their practice based research synthesis plus evidence-based products plus dissemination that's not necessarily yield implementation. So, we still have to go forward with that. So, I did it.

Jack Denniston: Well, thanks you guys, double super. If you have questions if you'd raise your hand I'll hand you the microphone and that this session is being recorded in that way the question will be heard about by whoever listens to the recording. You like to go first, okay.

Female Speaker 1: My first question is for Brian, are you studying the communities of practice that you're using, their structures and do you have a particular model that's evolved for those?

Brian Bumbarger: Well, we are qualitatively I don't know it depends on what you call studying. We're not intentionally artificially manipulating their use to test their added value, but, we are qualitatively documenting how they're being used in these situations to try to inform the knowledge base about their use. I think in the fields that I work in communities of practice are a new thing. These learning communities are it's kind of a new idea, but, there is a pretty well established literature base on communities of practice or learning communities in other fields, so we are going back and reviewing that literature and seeing what the gaps and knowledge are from other fields and how our use of those learning communities might inform those gaps in literature.

Female Speaker: You mean like a lot of great new ideas over the last five years what I've seen in the Children's Bureau program announcements is every single one ask you to create peer networks and so we have peer networks everywhere and just about all the grants but nobody is really asking the question well, what's the most useful structure or how are we using them, it's just do this.

Brian Bumbarger: Right.

Female Speaker 1: And...

Brian Bumbarger: Well, there is two, and there is two issues there. The one is you know just like we've always done with...

Female Speaker 2: Sorry that's my phone.

Brian Bumbarger: It's okay. Just like we've done with sustainability planning, you know we've the same thing, we you know funders have always said hey, you know when you're writing your rent application you're sure to include the sustainability plan as if we knew how to do that and we knew we would know what it looked like if we saw one. So, now we're trying to build a science and a knowledge base around sustainability planning. You're right. I mean we need to when we put those requirements out there, we need to make sure that the skills and the resources are available to address those requirements. One of the things that we are specifically focusing on I talked about that idea of trying to move from extrinsic motivation to intrinsic motivation and building a culture of excellence and a big part of the interactive systems framework model is about capacity building. We specifically use these communities and practices or peer networks in a capacity building kind of way. So, in the beginning we create the agendas for the meetings. We coordinate them. We structure them, but, in a very intentionally, in a very short period of time, after two or three quarters we are turning the agenda setting and the facilitation over to the practitioners and we let them you know we're just sort of making sure that keep doing them, reminding them if they kind of drift from the mission.

Female Speaker 1: So, will you be writing about some of that in the near future?

Brian Bumbarger: Well, we are writing about it now. We have three manuscripts in process or ready to be submitted from three very different research contexts. One is that well, from three very different contexts, one is within a randomized trial, one is in this very natural practice setting and one is in the process study very soon is going to be up to the editors of the journals that we submit to, but, I'd be happy to share those manuscripts once they're at the point where they're submitted.

Female Speaker 1: Okay, that's what I was looking too. Thank you.

Jack Denniston: Anybody else?

Female Speaker 3: Thanks. Carol I have a question for you. I am the communications person at CDC and so my questions about your communication products, I noticed that most of them are skilled based, how to, I wonder if you have any steps that you would recommend to make sure that the information resonates with the audience and addresses concerns. There are issues that they might need to face before they're ready to take action. For example, building you know self efficacy or beliefs that the action is worth taking.

Carol Trivette: We, this issue of social validity is one of the pieces that we have done some work on. We many of these things we've looked to see, I'm not sure I'm answering your question, but, many of these things we've looked to see whether they were social validity data as part of whether or not this practice is worth putting out there. But I think if you're talking about assessment kinds of things, is that what you like determining what the needs of the family are.

Female Speaker 3: Information needs, so looking at where are they in terms of their own hopefully...

Carol Trivette: Okay.

Female Speaker 3: Self efficacy, so what information needs would resonate with them, is there an opening for them to take action now or do we need to be just telling them more about the issue and about lives relevant to that?

Rita Noonan: You mean audience research.

Female Speaker 3: Audience research.

Carol Trivette: Yeah, I think the place that, not a lot, the simple answer is not a lot. We have just not done a whole lot of that kind of work. I think the place that we have done that is in our implementation model when we're talking about introducing and that sort of stuff, we so that's within like perhaps a program or we're working with speech and language people in a program. In that individual model, we do spend times with that practitioner, at the, we do much more at the practitioner level of what do they know about interest based learning, what are their interests in terms of activities and trying to assess that in terms of sort of helping strengthen what they don't know. So, not at the level that you're talking about.

Brian Bumbarger: Can I just say something in regard to that. We've been doing an annual survey of practitioners in regard to a whole lot of different factors related to their uptake and implementation of these evidence-based programs and we ask questions in this annual survey about issues of efficacy, self efficacy and organizational readiness and whether they think they will be able to actually deliver these interventions in their context, whether they will be go conflict within their organization or they're going to be told to do this, but, not given the resources and the time to do this. And we also ask questions about you know how confident do they feel in their understanding of the underlying theory of change in the intervention. And then we ask a separate question about how confident they feel in whether or not they could convey that, they could articulate that theory of change or logic model to somebody else to another practitioner to a peer. And interestingly, we see a big divergence in those two things.

They say that they feel after they've been trained in an intervention for instance, they say that they feel confident in their understanding of the programs underlying logic model, but, then they tell us that they don't feel confident in being able to articulate that to

someone else. So, that's it's just it's an interesting finding and we were curious about what implications that has for adaptation especially because we know that a lot of adaptation and drift from fidelity happens on the fly when things just come up and people have to make decisions on the fly about you know whether to leave something out or change something that they don't feel comfortable with or whatever. So, if they do they feel comfortable making those changes or without you know interfering with programs logic model or don't think?

Carol Trivette: I think another think that kind of follows up what Brian saying is that not in this work I was talking about here, but, so much of what we're trying to do is get a practitioner to learn something to be able to then translate it to parent. So, they may understand it. They may think and feel very good about their understanding, but, that doesn't necessarily mean at all that they know how to explain this to somebody else and that's a whole another level that we are only beginning to sort of say yeah, we got implementation here, but, we can't get it here and what do we need to bridge to bridge that gap. We're hoping some of the products may help, but, I don't know that.

Female Speaker 3: I don't want to hog the questions, but, this is really interesting to our work. So, do you have a particular validated instrument that you're using for that transfer for the practitioners or did you design your own survey?

Brian Bumbarger: We, are you talking to me?

Female Speaker 3: Yes.

Brian Bumbarger: We designed our own survey and again we've since we've administered it annually since 2005, we've run lots of psychometrics on. It's a psychometrically strong instrument, but, it's a very diverse for measuring a lot of different things. So, the psychometrics are strong on each of the individual scales and constructs that make up that overall survey. And actually we just started to write a manuscript describing the survey itself and its psychometric properties you know just to put it out there for other people to you know take up or throw stones at.

Carol Trivette: I mean I think that's very useful. There is some literature on that and we're using a particular validated instrument, because we train middle managers around the country in child welfare and leadership and the relevant change initiative and we're tracking that over five years to see whether they actually implement that. So, we're always looking for ways to really feel confident that we're getting at both the barriers and the facilitators to that transfer and implementation so I'm sure we'll talk.

Brian Bumbarger: Yeah, and I think our context is interesting too because a) it's non-research context. Its natural conditions and it involves this huge very variety of different interventions. So, you know we're trying to get where the global universal barriers and facilitators.

Jack Denniston: I see that we've reached the hour but I saw one more hand, so one last question and then we'll go to the closing plenary.

Female Speaker 4: So, a few of us in the room are affiliated or have been affiliated with technical assistance centers that are interested in capacity building, and so one of the things that I really like about the interactive system framework is the definition, at least the conceptualization of both general and innovation specific capacities for the support system as well as the delivery system and so as evaluators of technical assistance designed at building capacity, I'm curious from you guys that have used the framework, I guess so, is, are there common conceptualizations that articulate what those capacities are either generally or for specific innovations that we might be able to measure the impact of technical assistance in improving those capacities?

Jack Denniston: You've 15 seconds or less.

Female Speaker 4: Yeah I know.

Rita Noonan: Yeah, I mean you know I'll take a stab at this one. You know that was actually a part of the model that was a little bit speculative when we made it. I mean as Wandersman worked on it, but, with a team of CDC people and I was one of them and that was really one that we thought we probably should make a distinction there, but, it didn't really have a strong level of evidence about the need to say there is general capacity and then there is innovation specific. It made sense to us. I freak that and talk about it today because in my experience I haven't we haven't gotten a lot of traction around continuing to make that distinction. But intuitively it does make sense to let them to learn how to implement the our last Boeing program or do they really need to just sort of build their capacity and skills and motivation around running their organization around and bracing prevention or public health principles, so I don't spend a lot of time on that and so you know there might be other folks who have, but, we have a ton of capacity building programs at CDC and I think that with any kind of you know technical assistance and capacity, it really gets down into the particularities of that field and those programs and we actually have so many things I can tell you about when we're done, but,, yeah, I don't know how you guys feel about it.

Jack Denniston: We better wrap it up. Let's thank our panel.