Christine Kowalski: I’d like to give a warm welcome to all of you. Thank you so much for joining. And I am truly honored that we have Dr. Carl May speaking for our Implementation Collaborative today. He’s joining us all the way from London. And for those of you who don’t know me, my name is Christine Kowalski, and I am the Director of the VA Implementation Collaborative. The seminar that we’re having today is part of our monthly catalog of events so, if you happened to joint this session but you are not part of the Collaborative and you’d like to receive notifications about our monthly seminars and newsletter, you can join by sending an email to irg@va.gov.   
  
And now, I'm going to introduce Dr. Carl May. He’s the Professor of Medical Sociology at the London School of Hygiene and Tropical Medicine. His research ranges across medical sociology, science, and technology studies and implementation science. Dr. May has led, of course, the development of the normalization process theory, which is a conceptual toolkit that helps us to understand and trace mechanisms that motivate and shape sociotechnical change in healthcare and, also, to understand the calls such changes make on professionals, patients, and caregivers.   
  
So, to frame up this session for today, in all that we do, all of us as implementation practitioners and researchers, we need help understanding the ways in which organizing and delivering healthcare, how are those things adopted, implemented and sustained in practice. And in implementation theories, there’s sometimes a lot of mystery around them but that’s exactly what they help us to do. And this seminar today will introduce the normalization process theory as a framework that identifies, characterizes, and explains key mechanisms that motivate and shape implementation processes and their outcomes. And Dr. May will also discuss the normalization process theory coding manual, which is new, and presents a set of well-defined and validated theoretical concepts that form the core of NPT and show how they can be simply applied in our qualitative work.  
  
So, I’d just like to thank you all again so much for joining and now, I will turn things over to Dr. May.

Dr. Carl May: Oh, thank you so much, Christine. Well, good afternoon, everybody. It’s a real privilege and a pleasure to be invited to talk with you this afternoon and to digitally visit with you, I think.   
  
So, I'm going to talk a bit about implementation processes and I'm going to talk a bit about theory and I'm going to talk a little bit, I hope, about why qualitative research on implementation processes is important.  
  
Just to introduce myself, like most people in the Academy, I have two personas. So, I have a CV, which is essentially a list of all of the things that I’ve achieved, which doesn’t cover any of the things that I failed to achieve, which are legion. And these things always conceal what we’re really like in real life. So, there’s a picture of me in a very untidy office to sort of give you a sense of who I am in real life.  
  
So, I'm going to talk about normalization process theory, and I can’t speak about normalization process theory without giving due respect to my friend and colleague, Tracy Finch. She reminded me the other day that we have worked together since 1998, which made me feel very old. Tracy’s a social psychologist and we worked together on all of the studies that led up to NPT and on many of the studies that are subsequent to the development of the theory. Those of you who’ve ever thought about measuring implementation processes might be interested in the Nomad Scale that Tracy’s developed, which is available from the NPT website. More about that later.  
  
So, to get on with the heady business of my little talk today, I want to start by asking some questions about methods. I'm a qualitative researcher and I have a background – my first job was working in agricultural statistics where I literally counted sheep for a living. And that was about I wanted to do something that didn’t involve counting anything. And I discovered qualitative research as a PhD student, and I found myself captivated by these methods and by the things that come from them.   
  
So, when we kind of do qualitative research, it’s because we wanted to understand and make sense of how people work and live and what they do and why they do it. But from their own perspective, to get their own accounts of how things are working for them, and what they hope to achieve. So, my PhD was about the nursing care of dying patients in a Scottish hospital. And at the time, I failed to notice that I was looking at the implementation of a particular form of nursing practice. Because in 1989, there was no such thing as implementation science. But it occurred to me later on that I’ve been doing implementation research for my whole professional career as an academic.  
  
So, why should we do qualitative research? And I’m sure that there are many people participating in the seminar today who are far more expert in qualitative methods than I am. But here’s the thing. I think after thirty-odd years doing it, I’ve kind of distilled my thoughts about why qualitative investigations matter into these four things: That they provide us with purpose, epistemological purpose. So, they provide us with a purposeful way of understanding the world and they force us to pay attention to the wide variety of natural language and everyday settings that we can apprehend with our eyes and ears without mediating them through different technologies. So, I love interviews; I love interview data. And in the past, I’ve greatly enjoyed doing ethnographies. But there’s always a question about what methods we should use. But the other great thing I think about qualitative work is the privileged access that it gives us, that people let us into the private world of their thoughts and actions. And they give us the opportunity to exercise interpretive power. We’re always very keen to talk about methods. The principal method of the qualitative researcher is the exercise of interpretive power; how we shape and understand the ideas that are presented to us by the people who we speak with or watch or listen to. The principal research skill in qualitative work, I think, is listening.  
  
So, I’ve lost the thing. Right. One of the remarkable things, I think, about doing qualitative research is that it leads to discovery. I’ve never seen a qualitative study that failed. And every qualitative study that I’ve been involved with has helped us to discover something. One of the sources of sadness, I think, for many of us is the degree to which qualitative work is increasingly descriptive and theoretically uninformative. I’ve just been involved in a qualitative evidence synthesis of studies of lived experiences of different health problems. And I was astonished at how few of those studies actually said anything that was explanatory. They did a great deal of describing. There was a huge amount of coding. And I have to tell you that the United States and United Kingdom compete with each other for the production of themes. I’ve never seen so many themes as I’ve seen doing the EXPERTS 2 study. And the US and the UK lead the world, I think, in the production of themes.  
  
But going beyond themes, what do they mean? Why do we have them? This slide shows the sort of methodological approach that I’ve used for my whole career. And it’s really how we got from investigating different aspects of clinician behavior and different aspects of technology adoption to a theory. We began by doing a lot of work that identified different components of those processes and we had an endless list of barriers and facilitators. But what we didn’t have at the time, I thought, was an effective way of linking those barriers/facilitators with a framework that would tell us about the relationships between those categories and their relative significance. And this is something that’s missing in so much qualitative work with little idea of the relative significance of the material that’s presented to us.   
  
So, at some point, we started to build a model from many different qualitative studies. We started to build a model of what at the time we were calling an adoption process. But gradually, we began to think of it as an implementation process. We saw a difference. We began to explore the ways in which it wasn’t an adoption decision but rather a process by which people brought things into play, mobilized them, operationalized them, and then, incorporated them routinely into everyday practice. A lot of that work was about telemedicine systems. And again, this was a few years before implementation science became a thing. So, we started to publish that work in 2001/2002 and really implementation science became a real thing in 2004/2005. So, we were slightly ahead of the game but not by a long shot.  
  
But what we really wanted to do was to interpret. We wanted to understand the implications of what we were discovering, and we wanted to develop propositions that clinicians could use and follow. We didn’t want to build a theory as we were doing this work. The theory was entirely accidental. But once we had begun to build conceptual models and proper theories, then, we realized immediately that we were developing a generalizable set of ideas that were not restricted to telemedicine systems or, indeed, restricted to healthcare.  
  
So, we’ve talked a lot about – or I’ve talked a lot about – how normalization process theory sort of appears, you know, in a long process that began by sort of failing to understand a number of important things in nursing care. We often fail to understand things and those failures are often hugely productive. I guess the process of coming to understand something is often an extraordinary journey and a very exciting one, sometimes a humbling one, too. So, how does normalization process theory help us? Does it help us at all? I'd like to think that the answer is yes. And there are about, I supposed, 800 protocols, empirical studies, reviews, and theoretical discussions now that are oriented around it. So, I think we should assume that some other people find it valuable and useful, too.  
  
Theory’s really important in research because theories are explanations. That’s their purpose. Their purpose is to provide us with an explanation that’s rational and reproducible. And when we have those explanations, it lifts a cognitive burden from us. It means that we don’t have to make sense de novo about the topic of our investigation theories. Theories provide us with a mental template that we can use, and we can impose on data in ways that help us to really understand what’s going on. But the really important thing about helping us to understand what’s going on is that when we use a framework like normalization process theory, or when we use any other kind of framework-- when we use the consolidated framework or EPIS or a theoretical domains framework-- when we use anything like that, the thing that we’re looking for all the time is what’s special, what’s different, and what surprises us. What doesn’t fit in the framework or doesn’t fit in the theory? When we do that, that’s when we make discoveries.  
  
So, just a little word about implementation processes and implementation science. I know lots of you are very au fait with implementation science. The implementation science is a study of methods. It’s about how to – what do we need to do to translate? My research is slightly different. It’s about what do implementation processes look like and how do they work. Because implementation processes are ubiquitous. They happen everywhere all the time. We’re constantly involved in implementing some sort of innovation or another. Anybody who works in a government department or a healthcare provider or, indeed, a university will find themselves suddenly involved in a project to do X or Y. And that often involves implementing, for example, a piece of software that seems to be designed entirely to inconvenience the user or an administrative process that seems to extend the working day by a couple of hours. There are all kinds of things that we’re implementing all the time. So, we’re not just looking here at things that happen in healthcare. We’re trying to explain those processes where they happen anywhere in the social world, anywhere in our daily lives. Which is quite a big ask, I think.   
  
So, how did we get here? Well, we got here because a bunch of us were looking at the adoption of telemedicine systems in the National Health Service in Britain. I said we needed a framework. We needed a generalizable framework. And underpinning that, there was a very fundamental problem in social science research, which is how do we understand the dynamics of human agency and the conditions or constraints? How can our actions lead to achievements in highly structured environments? Theory-building, I have no experience of it at the outset and I think most of the people that I was working with didn’t either. But it is rather more difficult than we imagined. And twenty years later, we’re still building theory. And I shan’t repeat the extent to which those theories have been successfully adopted by people.  
  
Often, people say kind of, what do you mean by "normalization"? And I always go back to this one interview that I was doing with an emergency department doctor who subsequently became a bit of a television star in the UK because he appeared in a reality TV program about doctors who arrive at the scene of road traffic accidents in helicopters. But we were talking about why it was difficult for telemedicine systems to become integrated and be made to work in the British Health Service. And he said this to me, and it was a moment of insight. He said, “The trouble with telemedicine, Carl, is that it doesn’t work. The name tells you that. If it worked, it would just be called “medicine.” And I think that encapsulates what we mean by normalization. Just the routine incorporation of a set of material artifacts and a set of practices into everyday working life. And that is what we have sought to explain with NPT. So, NPT characterizes and explains the mechanisms that motivate and shape implementation processes. But really, we’re interested in how do things disappear? How do things become so normal that we don’t notice them anymore? And anybody who uses PowerPoint has lived through that.   
  
So, what’s NPT a theory of? Well, it’s a theory of all of these things, isn’t it? So, we’re interested in collective action and collaborative work, we’re interested in how people work to achieve things. But we also have a specific definition of implementation that I think is a useful one. It’s that implementation is the translation of the strategic intentions of one group of actors into the everyday practices of others. So, in that, we have to think about power and influence, we have to think about persuasion, and then we have to think about how those lead to material work. And that work never seems to finish, does it? When we implement something, we still have to keep working at it. And we call that continuing translational action. So, we’re always tinkering with things that we’ve implemented or we’re always fiddling with them, trying to make them better and trying to keep them on track.

So, let’s think about how we got to applying NPT. We know it offers a useful set of tools, we know that we can use those tools to underpin evaluation and research. And I’ve always been interested in complex healthcare interventions of differing kinds and we’ve been working hard at developing ways of understanding those. Because often, they’re very complex and very complicated.   
  
And over the years, NPT, over a period of perhaps a decade, NPT tried to cope with that complexity by developing an ever more baroque theory. And this is a very common problem in theory development, which is that we have to cover an increasing area of ground, an ever-larger conceptual terrain, to explain the processes that we’re interested in. And so, we have this map and it just got bigger and bigger and bigger, and there was a succession of papers and systematic reviews and studies that demanded more and more and more of the theory.

And that led to us spending a great deal of money on open access publication, but it also produced something that, as I say, was quite baroque. And over a period of – let’s see here, look, 15 years. NPT mutated into something that covered 149 quite separate identifiable theoretical concepts and this is too much for anyone to use. Unfortunately, a lot of people simply ignored the ones that they weren’t interested in. But even so, we took the view then, we would rationalize and simplify them. And the mechanism that we chose to do that with was actually to build a coding framework.

And so, we have the NPT Coding Manual, which last week, I think, passed about 10,000 accesses on the journal implementation science website. It’s been published for a year now. So, people are certainly looking at it a lot. It’s a coding manual so, we’re intending to use it. But it consolidates and simplifies the theory, and it does that around a context mechanism outcome model. The kind that fits well with realist evaluation. That was not a deliberate federation of two ways of thinking about things but it has worked out that way.  
  
So, what do we do with a coding manual? Well, when we’re using a coding manual, we’re trying to make sense of our own data. We’re trying to simplify the analysis, if you like, the framework-building, the taxonomy-building, the description of data, so that we can devote more time and more cognitive energy to interpreting what it means and understanding its implications.   
  
You know, the whole thing about this, we reduced it from 149 to 12 primary constructs and 16 sub constructs. So, essentially, we got sweeping theory that investigates and interrogates context and mechanisms and outcomes. So, how are interventions shaped? What happens when people enact an intervention? And how do things change when the interventions are implemented? We think a lot about whether an intervention is successful, and we find ways of measuring its success. But quite often, when we do that, we’re confronted with a bigger problem, which is what does that mean for the people who are working with those intervention components? What does it mean for patients when we do these things? So, how does it change the way that people relate to each other? How does it change the rules and resources? We’ll come to this in a minute.  
  
So, we start with context, and context is as troublesome as any concept in implementation science can be. So, it just goes on forever in every direction and anybody who’s ever tried to create a taxonomy from contextual influences in a consolidated framework for implementation research will know just how far forever looks when you’re trying to think about all of the different legislative and economic influences on an implementation process.   
  
We try to avoid that by simply focusing on four key things. So, what are the strategic intentions that lie behind an intervention? How do people make those workable? How do people make interventions workable in the environment that’s they’re delivering their work in? The question here is how much wiggle room do they have, and how much can they change things? I had a slide about wiggle room once, which people laughed and giggled at. So, I simply translated the concept into French, which is [Speaking French] and everybody took it a great deal more seriously after they thought that it was the product of some French philosopher. Anyway, negotiated capacity. So, what we’re interested there is how do people integrate those strategic intentions with the spaces in which they’re being operationalized? So, we’ve got how to make things workable and how to integrate. And of course, everything is organizationally framed so, it’s about how contexts are changed and negotiated when we have a strategic intention that we’re trying to get other people to adopt.  
  
I talk a lot about strategic intentions rather than specific technologies because almost always, when we say we’re going to implement, for example, telemedicine system. We’re not implementing a technology, we’re implementing a different way of working and, often, a different way of thinking about work, and frequently, a different pattern of relationships around work. I find that fascinating to observe and it’s been an important part of the theory-building journey.  
  
At the center of normalization process theory is this question, what’s the work? In an NPT, we always start by saying, “Well, what’s the work? What do people have to do to make this thing happen?” And so, our core of NPT is to think about the mechanisms, a really simple model of mechanisms, that drive elective action and collaborative work. Sometimes they don’t drive those things, of course. Sometimes those things don’t happen. So, any implementation theory has to be able to explain failure, as well as success.  
  
So, we can find four things that people are involved in doing. They’re building the coherence of an intervention in practice. They’re planning their-- trying to understand the things that they need to do. And they’re building networks of participation in communities of practice. And central to that is that they’re negotiating very often the legitimacy of an intervention about whether it’s the right thing to do, as well as whether it is the efficient thing to do or the cost-effective thing to do or the technologically advanced thing to do. We often forget when we’re doing implementation studies, they're the people that we’re working with, have huge moral commitments and that those need to be taken seriously. collective action, of course, is how do people work together. What do they practically do? Reflexive monitoring is how do they make sense of what’s happening? How do they look back and say, “Yes, this is a success. We can see that this is working” or “No, this isn’t working. We need to stop.”  
  
These are the core things that people have been writing about who are using NPT. And there is some extraordinarily sophisticated and interesting work out there that has mobilized these four concepts to explain implementation processes. We’re doing a big qualitative evidence synthesis of implementation studies using NPT at the moment and we’re able to-- we’re sort of releasing some preliminary results of that later in the year. But one of the remarkable things, I think, about it is the extent to which those four simple concepts actually add understanding to often very complicated and very messy nonlinear dynamic processes. So, it’s quite exciting to have sort of developed what looks like a simple framework and, indeed, is intended to be a simple framework, that enables us to interrogate things in a sort of more interesting way.   
  
So, we need to think a little bit about what the results of implementation processes look like from the perspective of NPT. I’ve sort of thought a lot about this slide about whether I should say implementation outcomes are always more interesting than the sum of their metrics. I'm not sure that that’s always true. But we need to sort of think about what happens when people are judging the outcomes in implementation process.  
  
So, of course, we look at the performance of the intervention. Has it worked? And often, we’re not always clear about what "has it worked" really means. But from my perspective, there are two really key things that are outcomes. One is how have relationships between participants in this process changed? So, how has, for example, the implementation of remote consultation during the time of COVID changed relations between doctors and their patients? I think that there is some really interesting work about patient cultures that needs to be done to fully understand that. But it’s very clear in many countries that the relationship between doctor and patient has been profoundly weakened, rather than strengthened, by those technological interventions. How have the rules and resources changed? What normative restructuring has taken place? And how have resources been reallocated or reorganized? How have rules changed as a result of an implementation process? Because the successful implementation, or the unsuccessful implementation, of some intervention or technology or technique or sort of protocol for interaction, those have big effects that ripple through a clinical context. And of course, I'm really interested in whether an implementation process has led to something being sustained or normalized, or imbedded in practice. And if it has, why? I think understanding why something has been successful is something that we need to pay much more attention to. What are the sources of success in implementation processes?  
  
So, I talked earlier about the really important thing, which is that we never stop implementing something. We’re always trying to make it work better. So, we’re always locked into a process of continuous translational action. What do we need to keep doing to make things-- to keep and sustain an intervention in practice?

That’s because NPT is always about what’s happening in the real world. And I can just see that when I uploaded this slide to WebEx, it resized some of the fonts. I'm very sorry about that. I really can spell “translating” and “intentions.” We’re always interested in these things as causal pathways. So, we have strategic intentions. We translate them into action. That action is about enacting a practice and working with things; working with components of the intervention.  
  
And so, what changes? Well, here’s the thing. We can use a coding manual like the NPT Coding Manual and the constructs that I’ve been talking about to assist our thinking. We always need to remember that not all data fits any particular theory. And I’ve said earlier that surprises or deviant cases are the things that often lead us to make discoveries. I always want to say that it’s not the purpose of the coding framework to verify the underpinning theory. And I know most of the big frameworks for understanding implementation now have some sort of coding framework or coding wiki. But the really most important thing is that these are of value only if they help us think. I’ve always said the coding manual for NPT lifts some cognitive burden. And that’s quite an important thing because it frees up cognitive space to interpret and to identify difference and surprise.  
  
Well, the NPT Coding Manual describes these processes I talked about and it has a value. Because theory-informed qualitative investigation is useful. It’s absolutely useful. It provides a rational framework for valuation and implementation.

But here’s the thing about theory. Theory is generalizable in a way that data often isn’t. So, if we’ve got a good explanation that fits or works across a few different contexts, we can start saying this is an explanation that we can move between interventions without necessarily concerning ourselves too much with enormous statistically powerful studies. Theories tell us why things work. They tell us why they don’t work. And the thing that I would say here that’s really important is that when we use theories like NPT or like Bryan Weiner’s Theory of Organizational Readiness or like the Theory of Plant Behavior, they offer us robust strategies for successful implementation. They tell us what we need to do. They tell us what we need to think about. And so, coding is really important because coding is the fundamental feature of qualitative research. But it’s what we discover when we code that becomes the most important thing.   
  
So, I’ve reached the end of my little talk and I'm very grateful to you for your attention. And one of the great sadness of doing webinars is, of course, you can’t see your audience. So, I hope most of you are still conscious after listening to me. I must thank many of my friends and colleagues who contributed to this program of work. I’ve mentioned Tracy Finch but Tim Rapley, Elizabeth Murray in the US; Victor Montori and his team at the Mayo Clinic; in Australia, Jane Gunn and her team in Melbourne. Developing this work has been good fun because we’re working with lovely people.   
  
And so, I'm eager to answer your questions. But just to wet your whistle a little, coming soon is a framework. It’s not a theory, it’s a framework to look at patient-centered and justice-oriented design. And we finally finished the paper yesterday so, just about off to the *Journal.*  
  
So, thank you all so much. I'm very grateful for your attention and obviously, I'm at your disposal for questions.

Christine Kowalski: Thank you so much, Dr. May. And just to say not only are people conscious, they very much enjoyed the session. I’ve just been getting texts and emails and notifications from people about how much they enjoyed this and listening to you speak. And I think that this was really outstanding and will be a seminar that I can point people to often, even just in regard to your beginning statements about qualitative research and why it’s so important and what it’s intended to be in theory and how it can be useful. And then, your very humorous and a little bit self-deprecating explanation of how you developed the theory was really wonderful.   
  
And I think that-- I’ll get to the questions in just a moment-- but it really struck me, and I'm going to mention this to people a lot going forward, when you said we’re really interested in how do things disappear when they actually become so normal that we fail to notice them anymore? And that is kind of how I’ve come to view the normalization process theory and intention, and I think that’s just a wonderful explanation for people. And in this collaborative, you know, oftentimes, people can get very overwhelmed by models, theories, and frameworks, and what they are. And the way you’ve just presented it so succinctly, I very much appreciate it and I think it will be helpful to many people.  
  
So, I'm going to go ahead and read out some of the questions we have. And in the audience, if you have more, feel free to type them in while we’re going through the first few.  
  
So, the first question that I'm going to read for you, Carl, is how would you suggest we use the normalization process theory in different phases of a project? For example, how would we use it when we are designing an intervention?

Carl May: Gosh, there’s a question. Well, we have used it as a design tool and a good design is always patient centered. It’s always user centered. And so, with, again, by working with users, whether those are clinicians or patients or observers-- sorry, administrators or other researchers. There is a whole gang of people that we can be involved with. But critically, I think the whole thing here is about listening. I’ve talked about listening several times and I feel very strongly that we can qualitatively investigate and qualitatively enjoy what people have to say about the content of our interventions.   
  
And in Britain, the National Institute for Health and Social Care Research, actually insists that this is done. They insist that in the design phase of interventions that the patient and public representatives are actively involved. So, we’ve used it as a framework for understanding what they’re saying, for identifying the implications of those views. But sometimes we’ve also used it to design, if you like, thought experiments about how things would work, and to think about alternative ways of delivering an intervention or framing it.   
  
So, we use an intervention design. It’s a very adequate tool for feasibility testing. I can’t think of a more important part of any large and expensive implementation project than working out whether it’s possible to do. And we’ve used NPT very widely to understand feasibility. Because if people can’t do the collective action and collaborative work, they can’t make the intervention work. They can’t make a service work. And if people don’t think that an intervention is a legitimate way of delivering a service, then, it's never going to happen. So, these are useful concepts. They’re obviously useful when we’re thinking and evaluating about intervention implementation and they’re useful to think about what we do about scaling up. I think scaling up is the really under-investigated area in implementation science. And it’s really under-investigated because there’s no grant funding in scaling up.

Grant funding is about a trial or a cohort study or economic modeling or whatever. You can’t set up a grant to scale up a service because that’s funded by services. I mean, in the VA, actually, you might be able to do that work, and you can do it in the British National Health Service, which is a bit like the VA but without flags. And that’s certainly the direction in which my research is going to move, I think in the future, is to start thinking about how we adapt NPT to explore scaling-up processes.

Christine Kowalski: Yes, absolutely agreed. Incredibly important and under-studied and underfunded, scaling up.  
  
And the next question that I’m going to read is, I believe, about two of the specific constructs within NPT. The question is can you offer an example that helps distinguish the key differences between adaptive execution and negotiated capacity? Their labels and descriptions both sound like adaptation.

Carl May: Well, okay. So, for adaptive execution, the question is how do we make something work in the space available, okay? Negotiated capacity is how do we make a space in which something can work, okay?   
  
So, when we implement something, we have to change its environment. We have to create spaces in which we can do this work. Because, for example, in big trials, we’re often running an intervention next to a normal service because that’s our control group. So, when we adaptively execute something, it’s how much can we change it in the space that we have, so that it will work, workability, and when we’re looking at negotiated capacity, we’re looking at how can we create a space for something to work in its environment? That’s the really simple difference between the two. Working in space and working to make space. Does that work for you? Because I think sometimes these things aren’t easy to understand. And in NPT, as in many other theoretical frameworks, people often say, well, these concepts overlap. Of course, they do because life isn’t simple and sometimes, we’re looking at things that are bumping up against each other.

Christine Kowalski: Yes, absolutely. I think that was a very clear distinction, thank you. And as you said in your slide, context is troublesome, and it goes on forever in every direction. And having worked with Ann Sales for years, she used to always say that implementation science is wickedly complex, and this is just one of the ways in which that manifest.  
  
So, now, the next question I’ll read is there a mapping between the normalization process theory constructs and any particular behavioral change tools or interventions? And the specific example this person offered was the theoretical domains framework.

Carl May: Well, of course, the answer to that is, well, it depends. Which isn’t a helpful answer, I know. But the theoretical domains framework, remember, is a collection of constructs from theories. So, it’s a catalog of theory constructs that we can apply using the behavior change wheel or some other kind of technical device. The answer is sometimes yes and sometimes no, and it depends on the context of the study. So, I’ve certainly been involved in projects where we have used particular constructs drawn from the theoretical domains theory. And in particular, the COM-B model. I'm involved in a big trial now that is using both NPT to explore implementation issues and Susan Michie’s com-B model to explore individual motivation to participate.   
  
I think an important thing to say about NPT was it was designed to be federated with other theories. It assumes that it doesn’t cover everything. It’s not a theory of everything, it’s a theory of what implementation processes are and how they work.  
  
The TDF, or COM-B, are theories of individual behavior change. NPT is a theory of how people work together. So, these are complementary in some kinds of studies but they’re oppositional in others. When we look at individual behavioral theory, I really like self-determination theory because it’s about how people get to do things. And I'm sure that there are constructs from self-determination theory in the theoretical domains framework. One of the differences between psychological theories, theories in health psychology, and theories in other social sciences whether it’s sociology or anthropology is that actually, areas in health psychology are about individual differences. In sociology and anthropology and in some kinds of social psychology, they’re about group processes and those are different. They’re just different. So, yeah, the answer is it depends. And I'm sorry that that’s-- I'm not sitting on the fence when I'm saying that. It’s actually about the research question that we’re answering and the methods that we’re going to use to answer it.

Christine Kowalski: Yes, absolutely. This question is actually a followup to the one that I asked just before. The person wrote back in to say, when you were mentioning space, can space refer to people and, for example, making space for an intervention requires pulling in new or different people to assist with the intervention components.

Carl May: It could do. Yes, it could do. But it could be about saying what do we need to do to change this context so that we can integrate the intervention?   
  
So, we don’t want to tie some of these things down too tightly because when we do that, we find that we have to invent some more \_\_\_\_\_ [00:57:28]. So, the way to sort of see this, I think, is to say that space could mean many things, to be really flexible about what some of these things mean. That’s something you can’t necessarily do in psychological research. But because contexts in-- once you start looking at organizations and groups of people-- contexts become really complicated. And when we look at how people make things work, we often find that they’re pushing some other things aside. Then, that's work they’re not doing when they bring a new task in. There are things that they are de-implementing or just ignoring and sometimes things that they just pretend aren’t there so that they can do this work. Because nobody that we investigate in implementation science lives a leisurely life. Everybody is under the cosh, as we say in London. They’re overworked, they’re under-resourced, and they’re having to make tactical decisions all the time about what they do, what they do well, or what they’re not going to worry too much about. So, that’s the second time I’ve used the term under the cosh this afternoon.

Christine Kowalski: Yes.

Carl May: Alright, I'm just trying to think please, don’t anybody ask me precisely what it means because it’s a phrase you see used quite a lot on British detective shows. Everybody’s under the cosh because they’ve got to catch the villains. Anyway, there you go.

Christine Kowalski: Yes [laugh]. That’s so true, and I think that when we come to the – with the framing that you just described, as researchers, it’s so much appreciated because it’s very true that in these healthcare domains, people are always under the cosh. And it’s not they’re not doing something out of laziness or not paying attention. I think that they appreciate that framing so much.   
  
I’ll just ask Maria can I ask one more question or shall we stop now? And also, Dr. May, I don’t know if we should end right now.

Carl May: No, it’s fine. I could carry on all evening.

Christine Kowalski: Oh, wonderful.

Carl May: It’s 6:00 in the evening here so, I’ve got no meetings and [interruption] it’s a public holiday.

Christine Kowalski: Well, I'm going to squeeze in one more question.

Maria: Sure, go ahead.

Christine Kowalski: Okay, wonderful. I’ll do one more question and then, we will wrap up. I appreciate your kind offer so much.   
  
So, this one, and I'm not familiar with this myself, but it says, “Thank you for this work.” This person is using the NPT in their work implementing person-centered approaches in VA nursing homes, which is great. In addition to using NPT to inform their qualitative interviews and analyses, wanted to hear your recommendations for using a quantitative NPT tool called the Nomad.

Carl May: Yeah, it’s fantastic.

Christine Kowalski: Okay.

Carl May: It’s developed by Tracy Finch and Tim Rapley. I think it’s translated into nine languages now and it’s available from a website that I don’t have the address for at the moment. But I can send you and you can distribute it, if you like.  
  
It's really useful, unlike many quantitative instruments. You can be a bit flexible about how you ask the questions. There is no point in imposing a rigid structure on implementation research because it’s so dynamic. So, you can use it in a slightly flexible way. I know that Tracy is eager to speak with people who use it, and I would always recommend it. But the thing is it’s a process evaluation instrument. So, it’s formative, not summative. So, a really useful thing to ask, “how are we doing?” and to track what’s changing. Because it’s not always clear in individual implementation projects what summative measure people would like to use. Do they want to see everybody doing something or some people doing something really effectively? You have to be a bit careful about what people say the outcomes of their projects are going to be and so, a formative instrument is much more useful in that context.

Christine Kowalski: Wonderful. Well, thank you so much. I guess we do have some questions we weren’t able to get to. But Dr. May did kindly offer, prior to the session, we can send him those questions along with the email addresses and he will respond. So, that was very kind.  
  
And I wanted to thank all of you so much for joining and paying such apt attention. And a big thank you to Dr. May for speaking with us today. It was a pleasure.

Carl May: It’s my pleasure.

Christine Kowalski: Thank you. And I will let Maria close us out, then.

Maria: Thank you, Christine. To our attendees, when I close the meeting out, you’ll be prompted with a feedback form. Please take a few moments to complete the form. We really do appreciate and count on your feedback to continue to deliver high-quality cyberseminars. Thank you, everyone, for joining us for today’s HSR&D cyberseminar and we look forward to seeing you at a future session. Have a great day, everyone.

Christine Kowalski: Thank you so much. See you all next month.