Christine Kowalski: So, I'd like to thank everyone so much for joining our Implementation Research Group Cyber Seminar today. My name is Christine Kowalski and I'm an implementation scientist and I lead this Implementation Research Group. That group is a learning collaborative set up to share best practices and lessons learned in implementation science; we have over 500 members and this session today is part of our monthly catalog of events. If you just happen to stumble upon the session and you're not part of the IRG and you would be interested in joining, you can send an email to irg@va.gov.

And now, I would like to thank our presenters so much for their work in preparing for the session today we have Dr. Jen Van Tiem who is a Co-Investigator and Qualitative Analyst for the Veterans Rural Health Resource Center in Iowa City and the VA Center for Access and Delivery Research and Evaluation known as CADRE in the Iowa City VA Healthcare System.

And we have Dr. Jane Merkley who is the Director of Ethnographic Methods and Implementation Core and a Co-Investigator for CADRE in the Iowa City.

Ms. Lynn Fitzwater is also presenting; she is an APRN and the External Educator for telecritical care East in Cincinnati, Ohio; and lastly, we have Dr. Heather Reisinger who is the Associate Director of Engagement Integration and Implementation at the Institute for Clinical and Translational Science at the University of Iowa and an Associate Professor in the Department of Internal Medicine at the University of Iowa Carver College of Medicine and a core investigator for CADRE.

They're going to be speaking with us today about using ethnography in specific ways to document and track the implementation process in health services research from a project that was implementing telecritical care services in the VA.

So, I hope you all enjoy the seminar and now I will turn things over to Dr. Van Tiem and Dr. Merkley.

Heather Reisinger: Hello, everyone. This is Heather; I'm actually going to kick us off. I'm grateful to the team for asking me to put everything in a context as we're moving through this. So, Jane, could you move to the next slide.

Before we move on, we want to acknowledge many, many people and these visuals represent probably hundreds of people at this point; but we're reflecting on an article or presenting on an article that our team did with a telecritical care group in the east the name has evolved over time so I'm still getting used to it. And Lynn is representing them and we are thankful for her being on the call with us, but it represents many people

from that team as well as some of their spokes sites or sites that get telecritical care. We have a large telemedicine evaluation team that does different components.

We wanted to thank Christine for inviting us and the Qualitative Methods Group, the new group that's part of the IRG--I guess it's not as new anymore--but this really stems out of a conversation that they had--or we've had--and really appreciate being invited.

And then, finally, we're also embedded in the Virtual Care QUERI and have had great conversations with them; that has helped us move our thinking around this forward. Oh, I forgot to say Office of Rural Health, I saw their picture down there, but they've been a huge supporter of us.

So, I was asked to really put this paper in a larger context of ethnography and implementation science; and when I reflected on that, I really saw it as I'm a joyful observer. The recent article by Gertner and colleagues, The Scoping Review and Implementation Research and Practice had 73 articles that fit the inclusion criteria of implementation science and healthcare that used ethnography or ethnographic in the work and/or in the article. So, it really shows this great growth of ethnography and implementation science.

Now, of course, as this joyful observer, I have a bias. I'm a medical anthropologist and I would like to credit the fact that we've really seen this tremendous growth of anthropologists in the VA for helping contribute to that growth of ethnography and implementation science more broadly. However, of course, that is my bias and we all know that there are ethnographers who are not anthropologists; and Jane is a great example from our team, she's a cultural geographer--and due to this talk, we're kind of having a conversation about the history of ethnography and cultural geography and it starts in the 1920s and '30s just like sociology has this rich history and ethnography as well; and then in the '80s with post-structuralism, it really has kind of sprung board back into the discipline and really been a huge part of it as its move forward; and a lot of theoretical concepts and discussions that have gone on in culture geography, we've been having in anthropology too, so it's just an interesting synergy that's going on right now. If you could go to the next slide, Jane.

We figured we should probably start with a definition of ethnography. I like to talk about it as methods and mindset or epistemology, so it's one method where you're interacting with people in the context of their research question. So, that's a long way of saying in your field site, but you're talking with them, you're observing them, you're collecting and reviewing their organizational documents; you might be mapping the space, you might be collecting survey data--all of those things feed into

ethnography, they're all the data that are part of what ethnography is. And I'm using really big terms, we usually use in broad terms, I should say, we usually use semi-structured interviews, that type of labeling observational, participant observation, and things like that, but I wanted to make it as broad as possible when we're talking about it.

But for me, it's also that mindset. So, EMIC, where we're trying to get an insider's perspective; our goal is to be as holistic and comprehensive in our understanding as possible; and then we go into that space with cultural relativism, which means we go into that space trying to withhold our judgment of what's going on, but really trying to understand from the perspective of the everyone there. So, I also put "inductive", "iterative" and "suspend judgement" under that, because in this larger conversation that we have around qualitative methods, all of those are elements and critical components of when we do qualitative research, so they are integrated in many ways, so I didn't want to ignore that either.

So, specifically, I think ethnography fits well into implementation science because as a field, implementation has accepted the importance of context process and meaning--and I probably should go beyond "accept", but they see it--I should say we in implementation science--see it as critical for understanding and to doing good implementation science work. And then also, ethnography as a method to understand the how and the why which Allison and Aaron have really highlighted in this 2019 article, but are those critical questions of when you're implementing evidence-based practice, how and why is it working or not working? And ethnography is particularly good method for looking at those questions.

So, I move back to the same "What is ethnography?" slide, because long-term engagement is especially, at least as an anthropologist, I was taught that that was a critical element of ethnography; and that's become a tension for us particularly in implied fields because we do a lot of rapid ethnographic assessment now as well, which integrates methods and means of data collection that tries to make up for what you gain from doing long-term engagement. However, those of us who are ethnographers in the VA, we've talked about this for a long time, that many of us have been employed at the VA for years; so, in many ways, we have long-term engagement with the VA as an institution. I've been in the VA for 14 and a half years and that is a type of long-term engagement, but it's not always what we traditionally think of as long-term engagement.

And then, also, if you think about that context in which you're asking your research question, so for us telecritical care, or other things, it may be new to you even though you've been in the VA for a long time.

So, this is a visual of our work in telecritical care as a team, which is actually a representation of long-term engagement. It started in 2011 where the hub in Minneapolis started doing telecritical care into ICUs in our VISN and Iowa City was one of those; Pete Cram had the foresight to write an IIR before it was implemented and to study that process. Of course, it took a little bit, so they started with systematic reviews and then we started moving through the grant. I'm not going to go into a lot of detail here, you can go back to the slide if you want to look at it, but it shows the long-term engagement that we have had and all the different opportunities we've had to look at tele-ICU or telecritical care over the years.

So, what I am most excited about for this presentation is it's a presentation of science and technology study, or STS; and ethnography as a methodology and mindset has enabled our team to do this STS in a way that has had what we see as real-world impact. And for those in social sciences, you've probably heard STS as this very heavily theoretical approach that often stays in academia and it's really exciting to see it applied and the tools of STS being used--and Jen does a wonderful job in this presentation of showing how going through that process led to this impact; it highlights the importance of our long-term relationship and we're grateful for Lynn Fitzwater be with us today, and the emphasis in ethnography on building rapport and having those strong relationships with those you're working with.

And then finally, the creativity behind ethnography. And I think many of you might have this question, a doorbell, it's so simple, but Jen will show how focusing on that allowed the front line or the bedside workers in the ICUs to really talk about the deep meaning and value they have around their patient relationship and the privacy around that, and how the doorbell or the telecritical care coming into that space was incongruent to the way--or kind of violated in some ways--the way that they saw and valued their patient care relationship; and through going through that particular technology and they could focus on that conversation, but it really was about that depth, an in-depth cultural value in many ways or belief system around what is good patient care? And we'll talk about that a little bit more and how the telecritical care team could then use that as a way to enter in that conversation.

Now, I'm going to turn it over to Jane. Thanks.

Jane Merkley: Thanks, Heather. In this section, I'll provide a brief overview of critical care in the VA, telecritical care, and the focus of our recent qualitative evaluation.

Intensive care units provide management of patients who require a higher level of acute care than most hospitalized patients, so these are the

patients with the most severe and life-threatening illnesses and injuries; patients' care is managed by critical care nurses and highly trained doctors, many of whom have completed additional fellowships and have become board-certified intensivists.

In VA, there are roughly 135 medical centers with one or more ICUs; approximately 40 percent of these ICUs are in rural communities and 30 percent offered limited services compared to urban higher-complexity ICUs. Generally, these rural and lower-complexity ICUs utilize general inpatient physicians or hospitalists to manage critically-ill patients instead of intensivists, primarily because of the difficulty recruiting, supporting, and retaining intensivists in rural communities. This matters because the quality of patient care in ICUs is better under intensivist management.

Telecritical care was implemented in VA to extend the reach of its critical care workforce and reduce treatment variability particularly among rural ICUs; telecritical care programs vary in complexity, but typically involve clinical, information, and communication technologies that connect a centralized team of critical care specialists with geographically-dispersed ICUs to assist in patient monitoring and management. Tele-intensivists monitor hundreds of patients, so most of the contact that bedside staff have is with telecritical care nurses; clinicians in the hub work at stations like the one pictured in this slide, combing through patient data, attending to alerts triggered by values exceeding algorithmic thresholds, and contacting ICU staff via in-room cameras or phones at workstations about concerns and questions. Alternatively, ICU staff can initiate contact with the telecritical care staff if they have questions or would like a consultation.

So, this slide presents a timeline for telecritical care expansion in VA, beginning ten years ago with two regional programs based in Minneapolis and Cincinnati, to the creation of a national program in 2020 and rapid national expansion that has ramped up in the past month. The research we're presenting today draws on our rapid ethnographic evaluation of the telecritical care enterprise-wide initiative supported through the Office of Rural Health beginning in 2016.

Based on our early work, we knew that telecritical care is underutilized in rural ICUs; we traced its underutilization among rural clinicians in part to its implementation. We knew, with this evaluation, that we wanted to focus on pre-implementation activities leading up to the go-live which we hadn't been able to do before, then follow those activities forward through early implementation. We also knew that we wanted to explore theory-driven implementation science research; so, as an EWI evaluation, we'd be applying the RE-AIM framework to our analysis for Office of Rural Health reporting.

In addition to RE-AIM, we were interested in Normalization Process Theory, or NPT, a sociological theory with ties to science and technology studies or STS. Carl May and colleagues developed NPT and defined normalization as a routine embedding of a classification, artifact, technique, or organizational practice in everyday life. NPT asks if and how interventions become routine and what kinds of work people do to weave an intervention into a setting. RE-AIM provides an evaluation model to organize strategies and outcomes of an implementation; we felt NPT would help us contextualize those strategies and outcomes by situating them within the daily clinical, technical, and administrative work people did to embed telecritical care in their ICU; while RE-AIM gave us a global picture, NPT helped us hone in on specific moments including moments in which non-human actors like the doorbell were identified by bedside clinicians as important parts of their experience of telecritical care.

There's significant materiality associated with telecritical care, from cameras, monitors, buttons, and doorbells the data flowing and transforming through a complex network of hardware and software connecting teams on both sides of the camera. Jen and I wanted to explore the power these non-human actors have in embedding telecritical care in rural ICUs. Jen turned to STS, and specifically the STS case study, as a method to pull out these narratives.

Jen Van Tiem: Thank you, Jane. So, digging a bit deeper into the discussion about using ethnography and implementation science, Allison Hamilton recently published a scoping review in which she and her co-authors lay out the data collection methods indicative of an ethnographic approach. Those data collection methods are listed here followed by some data analysis methods and data presentation methods. Allison's article, as well as the white paper that Heather coauthored for the National Cancer Institute, are linked in the box; both of these sources provide a sense of the breadth of data collection analysis and presentation methods that could be described as part of ethnographic research. We've listed some articles and books at the end of this presentation that have helped us as we talk about our ethnographic work with colleagues who are unfamiliar with ethnography.

As Heather mentioned earlier, ethnography offers both a method and a way of thinking about implementation; the methods are briefly sketched out here and can be employed by researchers trained in many different disciplines. The ways of thinking are more discipline-specific; it was Jane's training in cultural geography and my training and anthropology that spurred us to interrogate our data through the lens of Science and Technology Studies or STS. Next slide, please.

The STS case study incorporates several ethnographic data collection methods, but relies primarily on coding for analysis and the case study as a form of data presentation. To frame our work for a broad audience, we situated it within the category of longitudinal qualitative research alongside other examples of ethnographic research categorized as LQR, specifically periodic reflections and pen portraits; the articles that lay out how to use these techniques are listed in the box.

The specific contribution of the STS case study to longitudinal qualitative research is that it builds a narrative about an intervention by paying attention to how local use and understanding of the material elements of the intervention change over time and what that could mean for the normalization of the intervention within the local context.

As a way of thinking, the STS case study method makes it possible, as Jane says, to look backward in order to see forward; material culture is the stuff with which people carry out the work of their everyday lives; stories about how people carry out their lives with their stuff has been the work of ethnography since its inception as a method, but STS shifts the point of view of the narrator. Rather than stories told from the perspective of the human actors, STS starts with the material object and builds stories about the world based on how things and people share and shape each other through social practices.

Medical anthropologists have been using ethnographic methods to try and think differently about medicine and to produce new perspectives by telling different stories. As the highlighted text suggests, doctors and nurses are familiar with navigating stories about daily life events in which entities of all kinds like beings, blood, and table companions coexist and interfere with one another. Mol & Law challenges to tell stories about medicine in a similar way.

We took up that challenge with this paper; pictures of the field are included on the slide; you can see a camera, a computer monitor, post-it notes, a PowerPoint slide and a brochure.

We encountered these kinds of things throughout the implementation of telecritical care during all of the moments linked here, from weekly calls in which technical and administrative elements of the intervention were organized and put in place during workshops in which workflows integrating the Tele-CC and ICU teams were thought through and later formalized during the weekly calls and during site visits in which go-live trainings and celebrations kicked off the implementation of tele-cc at the bedside.

Our evaluation of the Wave 3 implementation lasted 16 months and included continuous virtual ethnographic engagement punctuated by in-

person site visits and presence at training events. In total, we collected 101 hours of observation including 42 hours of observation of clinical information calls, 4 hours of observation of train-the-trainer activities; 35 hours of observation of clinical process design workshops; and 20 hours of observation of go-live events. We collected copies of distributed materials, including PowerPoint presentations, workflow diagrams, training templates, brochures for doctor orientation, patient and family guides, as well as copies of the scripts for training simulations.

Finally, we also conducted 43 semi-structured interviews with 65 participants pre-implementation and 44 semi-structured interviews with 67 participants six months post-implementation.

These are visual representations of the elements of data that we collected--please don't worry about reading them; we included them here to give you a sense of what we were doing and what we were working with. This is our stuff, if you will.

So, I cannot emphasize enough how much other analytic work and relationship building we did prior to tackling this analysis. This paper is possible because of years of ongoing analyses in manuscript writing and because of the relationship again cultivated over years between Heather, Jane, Ralph, and Lynn. Taking an STS approach, shifting the view of the narrator, we challenged ourselves to start in an unusual place that is not with interview data. I use the word "unusual" because it seems that often in the work we do, we collect a lot of different types of data but often prioritize quotes that illuminate, reflect, or explain the larger story we're trying to tell. I'm not mocking that at all; but as we talked about in this presentation, ethnography can entail so much more than interviews.

I also can't overstate how impactful it was to talk to Jane about all of our data and about science and technology studies, and about a bunch of other related theoretical ideas like boundary objects and data journeys. This paper was written out loud long before it was written down on paper.

When we started this analysis, we did not know how to look for conversations about the doorbell; we wanted to start with a field node or a piece of archival data. It was only after combing through our field notes and collected documents that we were able to trace conversations about the doorbell to planning and education materials pre-implementation and then forward to conversations about ICU staff six months post- implementation. To build out the story, we looked at the data around the doorbell at one site across time and then at all the sites at one point in time post-implementation.

The STS case study with the focus on material culture calls us to notice the archaeological sensibilities that are kin to anthropology and ethnography; so, we used the basic archaeological framing, the stratigraphic and horizontal exposures, to scaffold our story about cameras, chimes, motors, curtains, voices and the negotiations about how to make use of all that stuff. It was through conversations with each other Jane, Julia, and myself, and writing and rewriting parts of that story that we started to understand what the bedside clinicians were talking about when they talked about the doorbell.

So, when talking about the sound of the doorbell, ICU staff found a way to express their concerns about surveillance and privacy for their patients, for their relationship with their patients, and for themselves. The ICU is a place full and bursting with sounds; in fact, patients risk developing "ICU delirium" as a result, in part, of the sounds associated with continuous monitoring of vital signs; some nurses we spoke to even talked about having a "book of sounds". But the sound of the doorbell was new and the sound was associated with the moment when tele-CC staff would enter a patient's room and thus directly bump up against a privileged space protected by beliefs and values about privacy. The tele-CC staff needed a metaphor for a sound that positioned the tele-CC differently vis-a-vis the ICU; not a doorbell, but maybe an arrival chime. The goal is to initiate contact with a sound that signaled collaboration and partnership.

And with that, I'll turn it over to Lynn.

Lynn Fitzwater: Thank you very much, Jen. And first of all, I'd like to say the telecritical care team is very excited to have had the opportunity to work with the CADRE group on research surrounding these new and exciting clinical and technical services that are being offered to veterans in the VA. As we've seen this program grow and change, we've had input from this research to help us direct our clinical activities and make improvements that foster better relationships with our sites; but most importantly, we're excited to be a part of providing state-of-the-art care to our veterans.

So, I'm going to talk a little bit about the clinical perspective--and I'm a provider on the telecritical care side, not on the bedside, but I do have much interaction with the bedside teams. In looking at the research from the clinical perspective, it's not surprising at all to learn the connections with the doorbell and its possible negative connotations when used upon entering a patient room. Being a remote provider in a clinical care environment can be very tricky; typically, ICU staff nurses and providers are highly invested in their patients care and outcomes due to the severity of their illnesses; in an ICU, you have less patients to be seen than on the floor, so you end up spending much more time with your patients and

families, and there's an element of protecting or control over the patient's environment.

A remote provider or RN can be an odd concept in this environment. One difficulty is that communication with the bedside team is episodic, and what I mean by that is we enter the room by camera for rounding or in response to vital signs or lab alerts, we're not in the room all the time; we do not have continuous feeds into these patients' rooms. Also, the telecritical care team member, whether provider or nurse, enters the room blind; they don't know what's happening in the room at that moment and it may be that the bedside provider or nurse is in the room caring for their patient when the telecritical care team member arrives, and they will most likely have their backs to the camera which is positioned on the foot wall of the room.

The telecritical care provider or nurse needs to alert the bedside team to their presence; the mechanism for alerting them is the doorbell. This may be delayed because it's possible that the bedside team is talking to their patient or doing an assessment; the decision needs to be made by the telecritical care member depending on what's happening in the room, should they ring the doorbell and interrupt or should they wait and see when would be a good time to step into the conversation? Or they could possibly just simply leave the room and come back another time.

There are times when ringing the bell would be very disruptive; the patient may be sleeping even during the day and the bell can startle them or wake them up--and maybe they didn't sleep overnight; the telecritical care team would not know this since the camera activation is only episodic. So, you can see the doorbell can be disruptive and the bedside teams might find it fairly negative.

Many bedside teams have told us that they find it more upsetting to be in the room taking care of a patient and find that a telecritical care team member is silently present in the room and have not alerted them; it could be seen as spying on them or dishonest in some way, and is completely different than an in-person conversation in a group where who's present even if they're not speaking. The telecritical care team walks a fine line when entering the room; the doorbell, although necessary, can have that negative connotation. I find it interesting that some bedside teams request that we ring the bell even if the patient is sleeping so that they know we're in the room; and others would prefer we don't ring the bell if the patient looks to be asleep.

If you think about a doorbell in your home, you can make a decision of whether you answer it or not; you can look through the peephole and pretend not to be home if you don't want to have an interaction. Calling it a "doorbell" makes it feel like you can answer or ignore it; it sometimes

feels like there could be a connection with the sound of the doorbell and the telecritical care team causing a negative reaction even before an interaction begins.

As we know, perception matters and there's something in a name. Our medical director decided we may be able to remove some of the negative connotation by changing the name and not calling it a doorbell. So, what we did was we had a month-long contest with our staff to come up with a new name; and the contest's winner's name was "teletone" so it didn't have that doorbell negative connotation.

So, I just wanted to talk a little bit about where telecritical care is now and moving into the future because, as Jane said, because of the shortages of intensivists across the country, telecritical care is growing. The COVID pandemic has highlighted the use of telehealth and caused the growth to happen even more quickly. Telecritical care is now a national program that will grow to cover more than 90 VA hospitals by the end of 2023. And we have adopted this new technology of teletone when we're doing our training with our sites and with any marketing materials that we use.

I just wanted to thank the CADRE group for their work in making telecritical care better today and going forward. Thank you.

Jane Merkley: Thank you, Lynn. The STS case study helped us notice three things: one, the importance of long-term engagement and building trust with operational partners as an integral part of using ethnography to study implementation; two, how ethnography creates a space for creativity; for us, it was the application of different theories to engage our diverse data. And three, through this creative impulse and willingness to follow something unusual like a sound, ethnography helped us impact implementation in a way that we didn't anticipate; ethnography can be productively disruptive because it allows for the exploration of unexpected moments.

To reiterate what Heather said in the opening of this presentation, the doorbell seems like such a small thing, but it represents deeply-held beliefs and values; telecritical care violated these beliefs and values and the STS case study became a way for telecritical care to address the tension and repair relationships with bedside staff. So, we're fortunate in that we get to continue working with Lynn and others in the telecritical care network on two projects: one focused on optimizing coordination of multi-disciplinary critical care management in rural ICUs; and a second project focused on improving sepsis outcomes among ICUs in the critical care network, and we hope to bring the insights we glean from the STS case study to our current projects.

Jen had compiled a list of additional resources broken out by data collection, data analysis, and data presentation that we've pulled on in addition to the resources that are highlighted throughout the presentation. So, we have this here; it's not exhaustive, but particularly, as folks reference this slide deck, this may be helpful. And we just want to thank our colleagues in our other VA anthropology colleagues for inspiring us and the work that we do.

And with that, I'll open it up for questions; and here's our contact information if you'd like to reach out to any of us after the presentation. Thank you so much.

Heidi: Great. Thank you all so much for this fantastic presentation. I do have one pending question--or a couple pending questions here--but for the audience, we do have plenty of time for questions right now; please take this opportunity and submit your questions using that Q&A screen on the right-hand side of your screen.

The first question that I have here is, "What's NPT?"

Heather Reisinger: Heidi, I was actually going to ask, is it possible for me to send responses to the questions? Because I included a link to Normalization Process Theory is what NPT stands for.

Heidi: You can. If you have a link, if you just go into that Q&A pane as a presenter--as I think anyone can do this--if you click on that question that was submitted at the bottom, it will turn into an answer box and you can just type your response in right there. It looks like a couple other people are helping out too.

The next question: "Is there any way to get the reference list for the articles cited within the presentation?"

Jen Van Tiem: Absolutely. I can include that in the Q&A box.

Heidi: Fantastic. Thank you. Next question, "What do you believe are your limitations and biases?"

Jen Van Tiem: I can start answering that question. So, we talked about limitations in the paper... one of them is that we don't have any information about how patients perceive the sound of the doorbell, that would be neat to know; and then another limitation is that our data collection plan ended at six months post-implementation, so we didn't have the opportunity to observe and learn how staff interacted with the doorbell when the name was changed and some of that repair had taken place between the two staff. I think those are the limitations that we talked about in the paper, but Jane, Heather, and Lynn, what do you think?

Jane Merkley: Heather and I, and Cassie Gedkin had done the original work with VISN 23 which is now TeleCritical Care West, and I coming into this new round of evaluation with TeleCritical Care East, I had the feeling of--I'm not sure what more there is to learn--I don't know if you all have brushed up against that--so, I had a little bit of anxiety going into the field and I was lucky and that I was working with Jen and our colleague, [Julia Walhoff, Freberg Walhoff] who had fresh eyes on telecritical care, and I think that that having--and also Jen is an anthropologist and Julia is trained in public health--has her master's in public health--and so we had a different configuration of the data collection team, people with experience with telecritical care and folks who were new to telecritical care and to VA, and I think that that helped check a lot of the biases that I felt that I might be bringing to the field and some of the assumptions that I was bringing in to help me, at least, see the interactions with new with fresh eyes.

So, I appreciated that we had continuity and that Heather was still involved, but not in data collection, and then I was involved. But having that different team configuration helped us ask different questions, pay attention to different things like sounds. So, I'll stop with that, but I just wanted to, I guess, thank Jen and Julia for that.

Heather Reisinger: And I'll just add on to it briefly is that I think it's a great point that Jane brings up, and that's one of the ways that rapid ethnographic assessment discusses kind of making up for long-term engagement is that you have to have a team, and your team has to include people that it should include people that are more familiar with the setting and those who aren't, and those who kind of know the language and those who don't. And so, I think it's a great point of showing what rapid assessments as well and what that brings to it.

Heidi: Great. Thank you all. The next question that we have here, "Since implementation science is the study of putting evidence-based practices, EBPs into everyday practice, what would you consider the EBP here? Isn't telecritical care too broad?"

Heather Reisinger: Maybe I'll jump in on that one. I guess, to me, that's one of the million-dollar questions in implementation science is how we define the EBP or the innovation. And we have--I have gone through different iterations of understanding telecritical care from an implementation science perspective. And for this one in particular, for this paper, for looking at it through the STS perspective, I would say that telecritical care was the EBP, was the evidence-based practice; and that the information and the findings that Jane and Jen presented were important to share with Lynn and Ralph in how they developed their implementation process, and it changed how they did their implementation process. So, I would say it was the EBP in this particular instance.

We have also--and this is part of what Jane is doing now and what we're doing with the sepsis study--is then there's many evidence-based practices that exist within the critical care setting. So, you could use telecritical care as one of those implementation strategies as well that will help implement, for example, the sepsis bundle or multi-disciplinary teams and the best practices around multi-disciplinary teams. So, in my mind, it depends on how you define it for your study--and you could define it at different levels.

Heidi: Thank you. Next question that I have here, "What resources are available for others to implement your process to other scenarios?"

Jen Van Tiem: The STS process, the Mol & Law article on embodied action and from the example about hypoglycemia would be a great place to start. Like all academic articles, there are large chunks of it that are kind of impenetrable, but there are a couple of paragraphs that are really well-written and clear and in terms of orienting yourself theoretically, that would be a good place to start. Annemarie Mol also wrote a book called The Body Multiple, and the way that she organizes that book, she lays out theory, method, and practice in a really interesting and vibrant way, so that would be another place to start.

And then, Jane, I can't remember now the name of that project that maps the weather stations in England. Do you have the name of that project? Because that would be another great resource for folks.

Jane Merkley: I don't have it, but let me see if I can find it, so I can link it.

Heidi: Thank you. The next question that I have here, "How did you decide what of your existing data or notes to include? Is everything considered relevant in this framework?"

Jen Van Tiem: Well, that's a great question. So, I have two answers. One is--not to belabor the point, but like Margaret Reed said, "We were there," and the idea that we were there for a long time. And so, we started to do our analysis; we had kind of a sense of different pieces that we were interested in, that we noticed had come up a lot or that sort of stuck with us; some of those were dead ends like things that we were interested in, we went looking for them in the data and they just didn't pan out, it wasn't something that the people we spoke to talked about.

And so, the reason we landed on camera etiquette that workflow was because we had a really good example of how it started and how it ended. So, over the process, the clinical information calls were weekly and they started editing it one week and they finished editing it the next week, and so we had--we had the two PDFs of the workflow as well as the conversation around the editing process; and then we went back and

looked at our notes from the clinical process design workshop where the workflows were kind of initially talked about, we had a lot of conversation recorded in field notes around that same issue.

And so, we started really with camera etiquette because we had a lot available, and I think that's probably my best answer to that. Is that helpful?

Heidi: We'll hear back from them if they want more.

Heather Reisinger: Can I add something quick that? The way I always think about it is a metaphor that my mentor would say, and he would talk about a funnel in ethnography and you start at the top of the funnel, you're gathering an overwhelming amount of data, but that it's critical to really think about, and read, and write about all of that data at the top of the funnel so that you can distill down what you are observing and what people are telling is important. And I think if you--what Jen presented and going through that very carefully, you can see how we started at the top of the funnel and have gone down to that point where realizing that the doorbell was a critical juncture and trying to have that conversation.

Heidi: Thank you. The next question that I have here, "Thank you so much for this; it is great to see how these methods can help to improve interventions. As you say, it seems like such a small change, yet it can have such a big impact. Do you have any suggestions for getting this message across to leadership to make them see the importance of these issues and invest time into investigations like this?"

Lynn Fitzwater: Specifically in this situation, I think the doorbell has--or the teletone--has a huge potential to build or destroy trust within the telecritical care and the bedside teams; and for many programs, I think as you're working with patients mostly in telehealth, that trust is so imperative. So, I think that, actually, this kind of research where we actually look at that is very beneficial when we're caring for patients.

Heather Reisinger: I'll just add that many of us in the VA have had the opportunity to have long-term evaluation or research partnerships with our operational partners to use it twice; and I feel like that has helped us feel comfortable, I guess, coming to Lynn and Ralph and saying, "There's an issue with the doorbell." And I guess also drawing on trust as Lynn said, the trust that you build with the organizational leadership can be really important and I don't want to discount that.

Jen Van Tiem: I don't know if this helps answer the question, but something that I found is helpful in like communicating about this kind of work is finding terms and terminology that sort of specify what we're doing and then encourage people to ask questions. Like if I use the word--like we're

taught in graduate programs--certainly I was taught--that the anthropologists kind of like go and "hang out" and it's kind of like this cheeky we have methods, but no methods and that does not work in the health services research context. Like it's really important to say like, "I go take field notes; this is what a field note looks like; these are the kinds of things I look for when I take the field notes," and to describe interviewing in a very specific way like, "These are the kinds of questions I ask." Like Sarah Young talked about, root questions and grounded probes, and getting more and more constraining questions and they talk about like the way that you frame and structure the interview guide.

So, I found that using specific language and specifying my language has helped me communicate especially in writing and in manuscripts when I'm responding to questions from peer reviewers. I don't know if that helps. I hope it does.

Heidi: We'll see if they follow up, but thank you. The next question here, "Was an IRB involved? Did this work require some type of IRB approval? And if so, are there sources of guidance available for working with an IRB on this type of research?"

Jen Van Tiem: Yes, we got IRB approval. The Program Manager, Monica Pies, helped us write the IRB. If you have questions about our process related to writing qualitative research into an IRB, please you can get in touch with me or Jane or Heather and we can connect you with Monica. Is that okay, Jane?

Jane Merkley: Yes, yes. It was just a standard IRB for including qualitative data, there was nothing special that we needed to do in addition to what you would typically include--if that's helpful.

Heather Reisinger: I will have to say that us working on qualitative research in the VA context for 14 years has probably helped smooth out that process and figure out what our IRB needs to see in order to understand the work that we're doing and see it as ethical and protecting human subjects.

Jen Van Tiem: Monica's been doing it for 14 years, so she's a great resource.

Heidi: Thank you. "Can you talk a little bit more about your data organization process? What software did you use; did you use traditional coding techniques?"

Jen Van Tiem: Yes, sure. We used MAXQDA; so, EMIC has, I think, a license with MAXQDA, so all of all of the analysts have it on our computers. So, we use that software for all of our projects; we use traditional coding techniques--I'm not sure what you mean by "traditional"; I'm assuming

you mean like inductive and deductive coding. So, we mostly used deductive coding, we coded by the RE-AIM framework and then we also coded by the different constructs of normalization process theory; and Jane talked about how those two--how that framework and how that model or theory helped us think about the data in different ways and sort of ask different questions of the data. And while we were coding--it was a consensus coding--so, Jane, and Julia, and I would sit and talk and think through kind of what we were reading and what we thought was interesting and what kind of threads, what narratives we were picking up on.

Heidi: Thank you. The next question here, "Has there been experience implementing this in ICUs in the time of COVID?"

Lynn Fitzwater: So, there's been--we are growing exponentially right now; the VA has funded for telecritical care to be in up to 90 VA hospitals up and we'll be finished by the year 2023 with all of that. So, as far as this research goes, we'll be going forward and using what we've learned from it and I'm sure that there's more that can grow from it as we move forward in opening up all of these other ICUs--and COVID was the impetus for that happening.

Heidi: Thank you. The next question here, "There is so much in here, so much to stimulate conversation. One question: would you be able to speak a bit more to how the longitudinal work of ethnographic engagement shapes this project?"

Jen Van Tiem: Yeah, yeah I can start I don't think that this project would have been possible without a longitudinal engagement. Like I said, we did not know to ask questions about the doorbell when we started; when we went back and re-read our interviews that we did six months post-implementation, we noticed how we had started asking, if not about the doorbell, about the different sounds that the tele-CC made in the ICU; folks talked about they could hear the nurses in the rooms and that it was a different kind of sound; they said it was like a radio or you could hear it kind of in the other room; you knew it wasn't a conversation between two people in the room, it was kind of something different.

And I think the ability to--or even like the utility and noticing that kind of small thing was really only possible and worthwhile, I think, because so much work had already been done.

What do you guys think, Jane and Heather?

Jane Merkley: I think that this has been a process over ten years of building our knowledge about telecritical care and deepening our relationship with the people involved in our operational partners. So, I think that that's given

us more access and different kinds of access, and then also helped us have a greater impact as Heather and Jen have already talked about. So, specific to the study, I would agree with Jen--and then I'd also say that if we were to continue--if we had been able to continue to do studies 12 months down the road, it would be interesting to see if attitudes have shifted with the change in the tone's name.

Heidi: Great. Thank you. And we are at the top of the hour, so we are going to wrap things up here. I know that there are a few pending questions out here; if you do still have a question pending and you would like to submit it to our presenters, their email addresses are on the screen right now. I just want to check with any of our presenters if you have any closing remarks you'd like to make before we close the session out?

Heather Reisinger: I guess I can--although, Lynn, maybe you should close out. But I just want to mention that VA is a great space to be doing this ethnographic work because it really does feel like research can have an impact on veterans and improving health care, and the opportunity to have this long-term engagement and frame it through ethnography has been really important for my own development as a researcher a health services researcher. I don't know, Lynn, if you want to say anything. We so appreciate you taking the time to do this work.

Lynn Fitzwater: No, I'm really happy to be here. I think that what you guys came up with was really fascinating and we will learn continually from this kind of research. So, it's exciting as we move forward. Thank you.

Heidi: Fantastic. Thank you. Christine, did you have anything you'd like to say quickly before we close out?

Christine Kowalski: Thanks, Heidi. Just a big thank you to our presenters. You can see in the comments that we got that this presentation really resonated with people; it's really wonderful work. Thank you so much for your work in presenting this to this group.