[Introduction Discussion]

>> Welcome back everyone for our next session on COVID and pain. We are very fortunate and excited to have Dr. Ilene Robeck. Dropped her Robeck received her BA in English from Buffalo and the MD from Buffalo medical school. She went on to do her internal medicine residency and psychiatry Fellowship at Georgetown University Hospital as well as -- her career then took her to private practice for many years followed by work at the VA directing the virtual pain program at the VA. She now works in consultation with us and with that, I'm going to turn it over to Dr. Robeck for really a phenomenal presentation on COVID and pain, and Dr. Robeck, the floor is yours.

Thank you so much for having me and we are doing a presentation today that really asks more questions than gives answers but we must ask those questions to be able to proceed. Speaking to you from my office in Florida and you're listening to me from all over the country and perhaps even places out of the United States while we put our heads together and solve the conundrums that we will be facing in the upcoming months and years. The questions are, what can we learn from pain care from improved post COVID care and I say that as a question because really need to start thinking about that. It remains unanswered right now but we need to consider some of the things we learn in our journey to improve pain care. And what all clinicians need to do and improve care for all because in this unique situation we don't have any patients who have not been impacted by this virus. This virus has impacted anyone in one way or another and we need to be able to respectfully put that into perspective as we care for people as well as support one another.

I have nothing to disclose and the views expressed in this are mine. I would like to add that much of this presentation does, from the current CDC interim guidelines on long-term COVID. They have done a fabulous job of trying to put together the state-of-the-art where we are now. People really need to understand that, look at it, bookmark it when there are things presented here other than from the CDC it will be carefully marked.

What we need to really be honest about ourselves, our colleagues, our patients, our community is expect to change. What we know this year is so much different than last year. What we're going to know next year is going to be even different still. What we know is the tip of the iceberg. Once we accept that, we can take the information we have and know that we're going to be constantly building on it.

The New England Journal has recently come up with a very very nice description of our next national health disaster -- long-haul COVID. I highly recommend looking at this article but I want to summarize the key points for you. We know that 10% to 30% of people who are diagnosed with COVID will be experiencing debilitating symptoms, not mild symptoms, debilitating symptoms months after being infected. The average age of

these patients is about 40, which means that the majority are in their prime working years with multiple responsibilities both to their families, their jobs, and their community. The cohort of patients with long COVID will face a difficult and purchase experience. If we do not arrange our healthcare system in a way that will be able to help take care of them and I do think my biases that if we can look at our multispecialty , organ focused healthcare system and find a way to create a more integrated approach, a more holistic approach , an approach that incorporates specialty care and primary care together we will find that not only will be served patients with long-haul COVID and long-term COVID better, I think we will serve all of our patients better.

According to the CDC long COVID is the range of symptoms that can last weeks or months that can happen to anyone who has had COVID. It is early to know whether this may turn into years but we know it is weeks to months for a large number of patients with this. We also know that the symptoms may affect a large number of organs systems and it can have diverse patterns and can frequently get worse after physical or mental activity and we really need to be able to coordinate our efforts. It is not going to be helpful to have a patient go from specialist to specialist to specialist without coordination of care and a way to streamline care for them so that the ability to access care is not exhausting. There is an urgent need to really look at our systems approach and this article looks at five essential pillars but I think every clinician, every healthcare administrator, everybody in every aspect in healthcare needs to look at it. So what is that first pillar, primary prevention? Currently, we have a number of primary prevention approaches and I think we need to continue to educate about them. Vaccination is key. We know that our current vaccinations really do an excellent job at preventing serious illness, hospitalization, and death in most patients. They are not 100% foolproof and we also need to respect the fact that we need to be able to address symptoms in those that are vaccinated in a way that is also helpful for them and also advise people who are not vaccinated of the added risks related to not being vaccinated at the current time. We also need to look at the other multiple ways that we can improve safety. Masking has been shown to be highly effective at decreasing risks while not eliminating them. A high quality mask certainly has been demonstrated to decrease risk of contracting COVID especially when coupled with social distancing, handwashing, avoiding crowded spaces, and modifying opportunities so that virtual , and outdoor activities maybe more available than they have been in the past. Number 2, we need to continually build out a well-funded research agenda. This needs to not only be local, needs to be national, and international. We need to find ways to share our ideas both in terms of treating acute COVID, preventing COVID and looking at the problems related to long-term COVID. We know that we have prior experience from previous post infection syndromes and we need to look at that. We will talk about that a little later and we also know that those of us in pain care know that pain is also a multi-organ biopsychosocial conundrum that requires similar attitudes of coordinated, holistic, interdisciplinary care, and what can we learn from the ways that we have put that together.

Looking at our systems holistically, there have been some centers that have already opened up multispecialty clinics. There is a huge advantage to this because the patient is going in one-to-one place and everybody is talking to one another. However, there are not enough of these clinics to take care of everybody would long-term COVID symptoms and we need to learn from them and incorporate some of those practices into our own unique healthcare delivery systems and primary care needs to really be key here. And resources for primary care to coordinate care and understand the entire biopsychosocial aspect of post-tran01 care and the ability to be able to communicate with patients, families , other caregivers as well as other healthcare professionals needs to be placed into our system and our systematic approach. And the ultimate research and development and clinical management is critically dependent on us providing support for patients. This is not an isolated symptom-based approach for isolated symptoms. We need to be able to use motivational skills, we need to be able to nonjudgmentally and comprehensively listen to what the impact of this disease has on our patients, their priorities for recovery, and its impact not only on them but their families , significant others, friends, and the community. >> We have now seen many names for this evolving healthcare condition , long-haul COVID, long COVID symptoms, then you and I just saw is post-acute sequela and I'm sure there will be more names still. Also an interesting study demonstrated that there are ways to track potentially unreported symptoms. This is actually an interesting Fitbit study where they use Fitbit data for people recovering from COVID-19 and they compared them to people who were recovering from other respiratory illnesses. Both proved initially -- and a resting heart rates but these changes were significantly more pronounced in people with COVID-19. They found after 90 days after participants with COVID first began reporting symptoms their heart rates dropped. After this did, which was not observed in those with other illnesses, their heart rate rose again and remained elevated for months. This is very different than those with other respiratory illnesses. Is took 79 days on average for resting heart rates to return to normal and it only took four days for people with other respiratory conditions. People experiencing ongoing or long-haul symptoms after COVID were more elected to report pain as well , and challenges with physical activity were substantially worse compared to people even needing rehab because of cancer and this was a study reported in the CDC. They looked at data from January of 2020 to March of 2021, looked at outpatient rehab clinic visits and compared patients with these two potentially debilitating problems. And what happened? Compared with control post COVID-19 patients had higher age and sex adjusted all the reporting worse physical health and pain with physical activity. We need to be respectful of that and look at different ways that we can is slowly but surely improve outcomes in these patients. They had worse physical endurance. They measured this with a six minute walk and that's maybe something we want to incorporate into some of our evaluations and measures for improvement. Patients recovering from COVID might need additional clinical support.

They need options including tailored physical and mental health rehab services. They may need to be periods of time were you thinking about moving ahead of time gets incorporated into our programs even before re-improvement. Once again, this is a wide range of symptoms. They can be present in new car returning or other patients and without a

previous diagnosis and they basically are there more than four weeks after first being infected. Even people who did not have symptoms and they were infected can have post COVID conditions. Patients can present in any clinical setting. This is something that every single healthcare practitioner needs to know about. The pain may be presenting symptoms in many and we may be seeing patients in our pain clinics that have pain the noble more chronic pain the noble or exacerbation of previous chronic pain problems. They may have these physical complaints also impacted by psychosocial and or mental health complaints. Big symptoms are fatigue, cough, headache, they may present with headache de novo or exacerbation of previous headaches. Myalgia is this generalized achiness that heart to pin down but clearly impact function. And once again, let's keep in mind the age group. The age groups are worry some and that it really does impact people when they are at a point in their lives where they are in the most professional and personal responsibilities.

Whether patients present with pain as a primary symptom we also need to understand that the wide range of symptoms can impact pain by exacerbating or producing pain itself. Some patients will have potential Nuance and difficulty breathing will make rehab more difficult, joint or muscle pain may be a primary symptom. Depression or anxiety may worsen. Fever early on may increase general the ability and the symptoms can get worse after physical or mental activities need to be taken into account when we look at rehab programs and balance. Return to function with the ability to not overdo or under do our rehab suggestions. And let's remember the multi-organ effects of COVID. We can see multi-organ effects resulting from an acute phase infection. Complications from persistent hyper inflammatory state , the damage to virus leaves behind in there can be ongoing viral activity associated with a viral reservoir and this has been reinforced to us recently when a number of patients, about one third actually, have found that the post COVID symptoms dramatically improved after immunization. We have seen this even in patients with symptoms who were felt to be subtle were in fact they felt dramatically better after immunization and others who had severe symptoms. That really points out to us that there can be an intra-host viral reservoir and there is a subset of patients who will have an antibody response.

Things that complicate this that we need to be able to address our the baseline physical condition of the individual. Comorbidities, mental health physical comorbidities , and also the comorbidity of addressing a serious life-threatening illness with a long or complicated disease course that that will impact the rapidity with which people are able to rehab. We have also seen many people who have had lifestyle changes due to the pandemic. I think people have better lifestyle changes. They know they can get outdoors safely so they have done more outdoor walking or bicycling. In Florida we have seen more people kayaking. But for people that can't get outdoors and cannot get to the gym we may find that people have had problems maintaining their physical activity. We have seen weight changes both up and down. We have seen people who have use the pandemic as a mechanism for improving their diet but we're also hearing reports that many people have had their diet worsen during the pandemic.

>> Prolonged symptoms begin at the time of acute illness. It can be laid on said following asymptomatic disease or a period of acute symptom

relief or remission or it can be an evolution of symptoms and conditions that include some persistent symptoms with the addition of new symptoms. So it is a wide range of clinical outcomes. We know that there are post viral sequela with this virus and I think the thing that's most intriguing to me are the patients that seem to be presenting with myalgia, and Cephalon myelitis and fatigue and we will talk about that because I think ways of addressing that clinically can be very important to incorporate into many of our clinics. We are also seeing this on anomia would postural order static tachycardia and mast cell activation and we know from the flu of 1918 that patients were left with Parkinson's disease and following a bad and were going to be on the lookout for similar symptomatology here. >> So what do you all need to know here? We have so many questions, so many unknown. All care must be integrated. Inpatient care must be followed up with communication of both acute and chronic healthcare and timely follow-up. Patients discharge from inpatient settings need to be seen within a few weeks even if discharged. The other thing that's very impressive to me is that we need to routinely and regularly and meticulously do medication reconciliation and for prescription and over-the-counter. We have to assume a number of things. Number 1, if we don't have dramatic answers for patients, they may be going to multiple healthcare sources. That we don't know about. It is going to be important for us to really emphasize to patients nonjudgmentally, understanding they may go to multiple healthcare sources and what are they taking and what are they doing from each of those sources. In addition, we know when we don't have good answers, patients go over the counter. They get herbal supplements and some of those herbal supplements may cause more damage than good and may interact with some of the things you're trying to do. We need to be able to have that conversation once again, nonjudgmentally, where we agree with patients, I understand , this is frustrating. I understand that there are going to be over-the-counter or Internet-based medications. But I need to know what they are. We need to know what they are so we can make sure that they are not causing symptoms on their own or interfering with what we're trying to do. We need to really be respectful of the nuances of clinical course prior to going to the hospital, during, and after hospitalization and we need to get back to those basic physical exams that addresses the patient's symptoms as well as key covert COVID related symptoms.

This is something I found on the Internet. This is an herbal supplement supplier telling people that he had the cure for long-haul COVID. This is the supplements that he recommended, breakfast, lunch, and dinner. Obviously, this is a long list and very few people will be taking this full list but people will be taking bits and pieces of this so reminds us that there is a very well-done article about the fact that there are herbal agents that one people in the hospital and those top 10 herbal agents associated with weight loss, sexual enhancement and sleep and laxatives, bodybuilding, immunity or infection, pain or arthritis relief any of which may wind up sounding intriguing or helpful to somebody suffering long-term COVID who is not getting better or not getting better quickly enough. Be on the lookout for impaired renal function. We are starting to see problems with renal functions so routinely check if you see a change in symptoms. Critical illness

myopathy and polyneuropathy, residual cardiac or pulmonary manifestations, mental health sequela, and we want to create approaches for treating post-intensive care syndrome that is going to once again require a coordinated approach. Let's also keep in mind that not everybody is discharged and stays home so that people are discharged and we need to be on the lookout for problems the maybe resort resurfacing. Nearly 30% are readmitted within six months of discharge so we really need close follow-up. Reasons for hospital readmission our respiratory distress, sepsis, pneumonia, heart related problems. I one patient who wound up a heart transplant from psychiatric problems, falls and other miscellaneous causes. An older age and underlying conditions that increase risks and shorter initial length of stay or lower rates of in-hospital treatment does anticoagulation all seem to be risks for readmission. What about asymptomatic or minimally systematic patients? This is really a concern. Patients who think that they were lucky to escape with mild or minimal symptoms will wind up with prolonged COVID. Patients with a systematic infections to moderate illness might benefit from follow-up 3 to 4 weeks to initial infection so it may very well be that we want to keep tabs on people who we know had infection and did not require hospitalization and we seem to have recovered and make sure even if it's not in the office with a phone call to secure message or some way to check back to see how they're doing.

Most of those COVID conditions can be diagnosed by primary care however , this is going to need a patient centered medical home and is going to need the ability and time and space to coordinate with all of the other healthcare clinicians that are seeing the patient and we need to provide primary care with the ability to do the case management, disease self-management, coordinated care that primary care can do so well when given the time and space and the resources. If there is a COVID care center they may be a good way to coordinate that and providing holistic patient centered management is going to be very important. We want to facilitate standardized trauma informed approaches and we want to be to set expectations so that outcomes are realistic and not overly optimistic for quick response and provide hope. Some patients may experience improvements within three months, others may continue to experience prolonged symptoms. We need to really provide hope for our patients that we are seeing patients improved but everybody does it at your own pace. We also know about trauma informed approach to care. Who can teach her about that than us? What are the six guiding principles to a trauma informed approach? Safety, trustworthiness and transparency, peer support, collaboration and mutuality, empowerment voice and choice, and really respecting cultural, historical, and gender issues. This needs to be incorporated into all of our care. I'm going to follow up establishing partnerships and connecting patients to social services and is not just about the patient as well. What about their family. What is going on with their family and the finances and the childcare responsibilities and the potential for bereavement related to death. We need to really take this whole picture into account. Telemedicine has grown during this pandemic and I think telemedicine is an incredible adjunct to our care. I have had experiences with telemedicine that's given me much greater information than an office. Telemedicine allows us to catch up with patients when their symptoms are too mild to come into the office, when they are too busy and it enables us to speak to the family and enables us to be able to give more timely follow-up with less

burden on the patient especially when fatigue and feeling overwhelmed is part of the disease process. While an in person initial assessment might be ideal, if that's not possible, telemedicine can get us an initial assessment of a patient earlier with interventions sooner rather than later.

In addition , we do keep in mind that people who have never been diagnosed with COVID are also impacted by this pandemic and it is going to impact their general health and it will impact their pain care and it will impact their general physical and mental health for all of the medical problems we see them for. Let's think of new things we need to add to our questions as we are evaluating all of our patients, not just post COVID patients. Yes, have you ever been diagnosed with COVID? You think you may have had COVID without issue diagnosis? You know anyone who has had COVID because we know that people who have had COVID their families and their friends and their coworkers in their community may have been impacted by the disease. If you do know someone who has had COVID, have they had prolonged symptoms? Because that can certainly be impacting people that interact with them. Do you know anyone who has died and when we go around do you know anyone who has died of COVID the number of people that respond yes is profound and how do we bereaved and honor the lives of those people as we go about our daily lives . How do we address some of the bereavement issues and all of our patients when they have friends and family members, coworkers who have died. We have also seen a significant increase in stress related to return to face-to-face life after a period of quarantined relative or absolute. We saw people rushing to go back right after being vaccinated or increase in vaccination rates only to have people pull back with increasing cases. How is that impacting people and even if an individual has come up with a plan for their own return to face-to-face do they know someone who is struggling and how is that impacting them we have gone through the symptoms before but the symptoms once again impact function and the impact pain. It is important to remember that we want to be able to see what functioning is like and how the post COVID symptoms impact function and how we can come up with a plan to improve function.

Also, let's not forget taking a psychosocial history and acting on it. Housing instability for an individual or a family member, student security, transportation problems, utility help needs, interpersonal safety both within the home and immediately outside the home. Other financial strains. While all of our patients may be employed in some other family members may not be putting additional strain on them. What about family and community support, education, what is your physical activity level , how are they handling the pandemic in general and are there ways to provide support and help in order to be able to improve resilience as we continue to struggle with ongoing cases.

Let's look at every organ system and am not going to go through this in detail but let's look at every organ system and understand the real importance of coordinating care. Cardiovascular, pulmonary, renal, even dermatologic situations with alopecia. Rheumatology logic symptoms and endocrine and neurologic have been some of the most profound and difficult to deal with as well as the ongoing mental health concerns related to everybody in this pandemic. Hematologic problems have been a

big problem post COVID with sexual dysfunction and a variety of miscellaneous weight changes, vitamin D deficiency, allergies and mast cell activation and reactivation of other viruses, pain symptoms we have been talking about, and progression and worsening of comorbid conditions that have been more difficult to care for post COVID and during the pandemic.

Let's look at toolboxes. NAH has a toolbox that includes over 100 standalone measures available to assist cognition, emotion, motor and sensation. There's two types of measures, performance-based tests a function and self-report and proxy measures is available on an iPad and available in multiple languages. The toolbox lets you understand what is the post COVID functional status and can they live alone. Can they live alone with health but not completely by themselves? What are the symptoms and whether their mental health systems. Are the able to function? What duties can they understand. And they can provide you ways to ask these questions either in person or through the opera, and we need to come up with ways that we can incorporate these screenings and integrated approaches in a holistic way but also ways to constantly be reassessing. We are now seeing that these patients in addition to all the things you have been talking about have an increased fall risk and potentially increase balance problems and they may have orthostasis that may change over time and we need to figure out how we're going to evaluate that. We need to have emotion additional motivational interviewing approach to quality of life and we want to also never forget patients presenting symptoms and what are the most worrisome symptoms to them and look at how we're going to create personal and treatment goals for shared decision-making. We all know shared decision-making and sometimes the rapidity of healthcare they wind up being left behind and time to bring that back to the office. Share decision is based on true premises in patients armed with information can and will participate in the medical decision-making process by asking informed questions and expressing personal values and opinions about their conditions and treatment options. Clinicians will respect patient’s preferences and use them to guide recommendations and treatment. We also know that there is a large number of resources available that are important for COVID and pain care. We need to create these toolboxes for ourselves that take these resources and incorporate them into our clinics and on the one hand we want to spend a lot of time truly talking to patients. Not just reading from a toolbox you want to be able to look at these tools and find out from these tools easy ways that we can significantly incorporate a structured approach for a comprehensive evaluation for those initial phases and follow-up. Let's talk about myalgia, encephalomyelitis and chronic fatigue syndrome. This incorporates this interdisciplinary approach with disease entity that impacts multiple systems at once. We are seeing post exertion malaise. Orthostatic intolerance, sleep problems, pain, memory and concentration problems, depression and anxiety. The challenge of post exertion malaise is that when patients get better, and they have a good day, they may find that their symptoms worsen so the impact of pacing is going to be critical in our discussions and how do we create that balance of doing just enough but not too much. We may need to go back to using patient diaries if we have not been using them recently and brainstorm with patients how to adjust activities to actually improve activity over the long haul. Orthostatic intolerance is important and we need to be doing more orthostatic blood

pressure checks and understand what happened to that subset of patients who have orthostatic intolerance. Patients may have orthostatic intolerance symptomatically also without a change in blood pressure so we need to look at avoiding factors that aggravate symptoms when possible and improved soften fluid intake. We need compression and garments and we don't want someone falling as we improve their functions.

Sleep problems seem to be ubiquitous for everybody in this pandemic. We really need to reinforce for everybody really basic sleep measures that really need to get reinforced.

Go to bed at the same time when you can and make sure your bedroom is quiet, dark and relaxing, the right temperature, remove electronic devices, avoid caffeine and alcohol before bedtime, and get some exercise during the day.

>> We also have an app for that available on all smart phones that can also reinforce a lot of these ideas for patients. When we talk about pain we want to maximize the nonpharmacological approaches and integrate them. We talk about memory and concentration problems. Maybe we need to go to our experts to find out some of the things that have worked for our patients. Memory aids, organizers, smart phones that can be very helpful. Planning periods of rest after any anticipated mental activity is critical and avoiding exacerbation of symptoms.

We once again want to integrate and collaborate for depression and anxiety care, maximization of nonpharmacological approaches and when we use medicine, we will start low and go slow. And we know the stress levels are impacted by multiple factors and perspectives. This is actually a picture of a bear I took while on vacation. If you look at this picture alone you wander was I crazy? Why would I get so close to a bear? But I had multiple protective layers in front of me. While I have cropped this picture to make it look like I was on land with the bear, I was actually offshore with a boat and a long lens. So I would have never been able to get who are I was so up close with the bear. Let's look at ways that we can add layers of protection to integrate getting people back to life. >> Let's also keep in mind that we have seen another epidemic, and we have seen an epidemic of overdose. There were over 72,000 deaths in 2019 and last year over 93,000 deaths from drug overdoses. This search was driven largely by fentanyl and exacerbated by social isolation, trauma, job losses, and lack of access to treatment. People with substance disorders are more likely to have prolonged COVID so we need to nonjudgmentally ask about substance use. Even drugs that are more accepted like nicotine will exacerbate COVID and increase COVID risks. It has also been shown to exacerbate lung problems related to COVID. Hospital patients who received a diagnosis were more than eight times more likely to have COVID than those without and this is data and presenting to you. Opioids also create problems in terms of immunologic problems, cognitive problems, long problems, so patients with ongoing opioid use or opioid use disorder or opioid dependence are going to be at higher risk of COVID and maybe prolonged COVID. The fatigue that accompanies prolonged COVID may increase people's use of stimulants. Obviously increased use of caffeine , in very high doses can create problems but there may be also boring stimulants from friends and family due to this profound fatigue in order to function and once again,

increased use of stimulants will increase the risk of COVID. So where do we go from here? Evolving resources can improve our toolkits for all patients. The pandemic has impacted everyone, even those who have not been diagnosed with COVID personally. In all of my years in healthcare I have never seen a disease that has impacted 100% of my patients. In one way or another. Understand that knowledge of post-COVID conditions are likely to change rapidly with ongoing research and that's a good thing. Healthcare professionals and patients should continue to check for updates on evolving guidance and once again, the guidance I presented in a lot of this presentation today is labeled interim guidance from the CDC. But we also have to shift from a paradigm that asks, what's wrong with you? To one that asks, what has happened to you? And how can we improve your ability to function given that history. Offer hope. We have come so far despite having a long way to go. With that, I will end my presentation. Thank you for having me, and hopefully we can continue this dialogue in the days, weeks, and months ahead. >> Dr. Robeck, thank you very much for that. Absolutely fantastic presentation. I know that during a workshop and throughout the week that you're going to be getting more questions but if I could just ask and conclude with one thought and one question and that is, the presentation was so full of information. I almost feel overwhelmed, and if I'm feeling overwhelmed, the patients are feeling overwhelmed, the families are overwhelmed. Helped me break that down. What is some way that we can move forward with not getting overwhelmed with all of this that's going on.

I think that's a fabulous, fabulous question and it's something I'm going to address in our breakout session. That's what I really think that we can do better with smaller more frequent meetings and that's where I think telehealth plays a role. I think we also need to explain to patients that there's a lot of information we want to get because each piece of information helps them all and we don't have to get it all at once. And we need to make sure that they understand that we want there to be an open door with them giving us information that they feel is important to them and that's I think a very important thing. We need to focus on what people's chief concerns are for them and that is where the trauma informed care comes in so importantly and that's also very want to take the full array of visit options and interactions available to us and break this down into small pieces. This is a process and this is not a situation where everything is going to get resolved at once. We need to be honest about that. I have seen a similar situation in pain care so as you know I ran a high risk pain clinic in the VA and one of the problems with many of the patients that I saw was that everything tried to be fixed at once . And when we brought people into that high risk clinic and we give the multiple ways that we can get the information over time both in person, educational sessions, phone visits, virtual visits and there wasn't this pressure that everything had to be done at once, a lot of things fell into place. I think we need to once again look at the wide array of ways that we can interact with patients and bits and pieces and make sure that that integration occurs over time. What's very interesting is that there are times I think that some of the best information occurs when you set the guidelines giving people hope and asked to improve or ask to change one behavior that is most important to them that may get them feeling better and provide for the ability for you to hear from them by your

reaching out to them in between visits and I've always been impressed at the ability to reach out in between those more formal visits really helps to break this down and demystify it and take this into more bite-size pieces. That is where I think we need to start to put that structure into our clinic.

Fantastic. This is really the pain and COVID is really where we bring into the biopsychosocial model, really increase our relationship with the patients and bring that to a full circle. With that , Dr. Robeck Concord to thank you again for a wonderful presentation and I think the audience for joining us today and I look forward to seeing you all soon. Goodbye.

Thank you all.

Thank you, Dr. Robeck.

[Event concluded]