Your Role in MS Improvements in Care: Demystifying Clinical Trials

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Kate Durack:
Hello everyone. Welcome and thank you for joining MSAA's live webinar, Your Role in MS Improvements in Care: Demystifying Clinical Trials, with Dr. Leorah Freeman and Ale Gomez. My name is Kate Durack. I am the Director of Communication and Patient Focus and the MSIN Program for MSAA. I myself have been living with MS for ten years, and I'm honored to be your host for this program. In case this is your first time joining an MSAA webinar, I would like to share information about MSAA and review housekeeping items.

MSAA is a national nonprofit organization dedicated to improving lives today through vital services and support for the MS community. Our initiatives are designed to advance educational, wellness and supportive resources. Our free programs and services include a national helpline, equipment and cooling distribution program, educational programs, award winning publications, shared management tools, and a peer to peer online forum. For more information about all of that, please feel free to visit us at mymsaa.org.

And then just a couple of reminders for tonight. During tonight's program, you will have the opportunity to submit your questions by using the Q&A chat box. And then, as time permits, questions will be addressed during the Q&A portion of tonight's webinar. Also, please know that this program is being recorded and will be available as an on demand video on our MSAA's video library in the next few weeks. And then at the end of the program, we ask that you please complete a brief survey. Your feedback is extremely important, and it helps us develop future content and programs, and a link to that survey will be included in the chat box.

And then finally, as a friendly reminder, this program is for educational and informational purposes only and does not constitute formal recommendations. Please speak with your care team regarding specific questions or concerns.

All right. And with that, we're ready to dive in. This evening, we are discussing a topic that can sometimes feel intimidating or mysterious. And that's clinical trials. For many people living with MS, including myself at one point, the idea of participating in research can bring up a mix of emotions like curiosity, uncertainty, and hope. And our goal tonight is to break things down and make the process more approachable so that you can better understand how clinical trials contribute to improving MS care and how you might play a part.

I am absolutely thrilled to be joined by Dr. Leorah Freeman, who is a neurologist and MS specialist and brings a wealth of experience in both clinical care and research. And Ale Gomez, who is a clinical research coordinator and works directly with people living with MS to guide and support their participation in clinical trials. Together tonight, they'll share insights from both sides of the experience - what research really is, what it's like for participants, how to become involved and what it all means for the future of MS treatment and care. And hopefully by the end of the session, we hope that you'll walk away feeling more informed about your role and how you can play a part in advancing MS research and care. And with that, I'm going to close our slides and get started.

Dr. Leorah Freeman:
Thank you so much, Kate, for having us. I'm really, really excited to talk with everyone and just want to thank everybody for joining us tonight. And, hearing more about research is really a topic that is close to my heart, and I hope we get to share a little bit of the joy that we have in working with people, not just clinically, but through these different trials that advance the field.

Kate Durack:
Yeah. So happy to have you. You too, Ale. What a joy. I actually get to work with these two on a pretty regular basis, so I'm happy to have this conversation in particular. I have quite a few questions for the two of you tonight. So we're going to do it kind of as a Q&A format. And my first question is very general, and that is for Leorah: what is clinical research? And then what is a clinical research study or trial?

Dr. Leorah Freeman:
Yeah that's the best way to start. So I mean, what we call clinical research is really research that involves human participants, you know, and we mean this broadly, either people who don't have a specific condition or people who live with a specific condition. And this is research that addresses a specific question about health and disease. So this is very broadly, kind of, the definition of clinical research. Now you ask kind of what is, you know, a clinical trial. Often people think when we talk about clinical research, people think about clinical trials, which are a subtype of clinical research. They're research studies that are testing, or researchers are testing whether a specific medical approach, meaning a treatment or some kind of therapy or intervention, is effective in a specific context of a disease. So that can be testing a drug for MS, that can be testing a specific lifestyle intervention, exercise program for spasticity. That can be many different things that we try, but it always involves an intervention.

Kate Durack:
That's awesome. And so my next question to dive a little bit deeper is can you talk to us about what phases are in clinical research and trials?

Dr. Leorah Freeman:
Yeah. So, I mean, first let’s think kind of more broadly, like kind of, what exists within clinical research? I think that's kind of important. You know, like because we talked about interventional

studies and that's like one subtype where we test those new treatments or there's new interventional strategies, but there are also different, you know, types of clinical research, some that are not interventional at all, where we're not testing a new intervention or a new drug, for example, where we're just observing patients over time to look at their outcomes. There also types of research that is more qualitative, where we have an interest in how people feel or what is their experience with a disease. There is also some research that is focused on how care is delivered. So it's what kind of what we call health services research, for example. And then we'll talk probably a little bit about that more later. But there's also implementation research, which is a different subtype. So that's kind of like different things that are under this big umbrella of clinical research.

Now when we talk about clinical phases, trial phases, and we talk specifically about those interventional studies, when we're testing particularly new medications, we do this in phases, because you can imagine that it would be quite unsafe to think about testing a new drug. And all of a sudden putting thousands of people on it and just seeing what comes out. Right? So we have to proceed in phases to make sure that the new medication or intervention first is safe. You know, that's usually the phase one where we test this new, usually, medicine on a small group of people who are healthy volunteers and we just see is it even safe to put human beings on this treatment. Then we move, if that proves this to be safe, then we move to phase two. In phase two, we take people who live with the condition we want to treat, and we take a slightly larger group of them, and we see in this slightly larger group of people living with this condition if the intervention of treatment is effective.

If we pass phase two, that's when we do the big trial. And that big trial is going to involve, you know, hundreds and sometimes thousands of people living with MS or another condition in different locations, most of the time different sites. And we put all these people on this new treatment, often against the standard of care, either placebo or, in MS, most often it is a standard other treatment. And then we compare the two arms to see if the new treatment, the new approach is more effective. And that's usually what we call the big pivotal trial. And that's usually what a pharma company, after they've done this big phase three trial, that's what allows them to go to the FDA and say, here we have this big, you know, this new treatment we've tested. We want to have it approved. Here are our results. And that's what leads to the approval by the FDA.

After the medication is approved, then we move on to phase four, which is a post-marketing phase where we conduct multiple different studies to look at safety elements or effectiveness in different subgroups - things that were hard to evaluate in the big trial, but where we can do more focused or, you know, in-depth study. An example, for example, would be studies that look at, you know, medication in the context of breast feeding. We can't do that in the phase three trial. But once the drug is on the market, we can design studies that allow us to do that safely with the marketed medication. So that's what phase four is. So, you know, usually when people participate in trials, the most common ones that they would be asked to participate are usually those phase three and four, because that's where we need the most participants. But there may be an option as well for participating in phase two.

Kate Durack:
Leorah, what does the structure look like or what can the differences be in research if you don't go through the phases because you're not studying a specific treatment or drug, I mean, what are the other options for that?

Dr. Leorah Freeman:

Yeah. So the other options is, you know, sometimes, you know, sometimes we follow similar phases for, let's say, an intervention that's not a drug. We might start with a smaller trial, look at safety and effectiveness in a smaller group. And then to a bigger trial that's more validating and multi centric. You know, but again, as I mentioned earlier, you may have also research that doesn't test intervention but that's also highly valuable. And, you know, some big ones is observational study, where we enroll participants in a study where are we going to track their outcome. For instance, let's say we want to look at all the outcomes of people who are taking this medication. So we do an observational study to just see how they're doing. Or we want to test, understand the outcomes of people with MS who are above a certain age and understand how older adults are doing in the real world with the disease. And those observational studies are really powerful to really look at the real world outcomes, you know, because sometimes, you know, those big studies and trials, they're just more, you know, structured and organized, you know?

But in the real world, we know that people behave differently. Maybe they don't take the medications all the time. Maybe things happen in their lives in addition to, you know, what we're testing. So that really allows us to understand, like, real people in the real world and how they're functioning and doing. For example.

Kate Durack:
I feel like that's super interesting for MS, the observational study piece, because if you're doing really well on your treatment, but you still want to help in some way, it's nice to know that you can still be part of something like that and have an impact on MS care.

Dr. Leorah Freeman:
100%. You know, because it's often a misconception. It's like, well, I'm on a treatment that works for me, then I cannot do research. You know. Well, no, there are plenty of other types of research that you can participate in, even if you're already on a treatment that works for you. You don't have to do drug research. You can help validate a biomarker. You can help participate in a patient registry where we're going to track your outcomes over time. And that's going to help us understand, you know, how people like you can be, you know, can do in the real world. Or you can, for example, be in research where we send you surveys to understand your experience at a more individualized and personal level. So there's many options for people who want to participate in research.

Kate Durack:
I'm going to circle back to a word that you just used, Leorah, and that's biomarker. Can you explain that to us?

Dr. Leorah Freeman:
Yeah. So a biomarker in a, you know... view quickly, it's a way that we measure kind of the biology of disease. What we call biomarkers can be different things. They can be blood tests that we do that allow us to measure a certain phenomenon in the body. Sometimes we also call things like digital biomarkers when we track people's outcomes using applications on their phone. That's, you know, what people now have called digital biomarkers. There are imaging biomarkers, where MRI, particularly in MS, allow us to measure certain process that happen in the body of of people with MS. So, those biomarkers are kind of indicator of how the disease is doing in individual patients. And they have to also be kind of validated using research.

We, you know, for instance, you know, many of the people who listen right now, have probably heard about the new MS diagnostic criteria, and these new MRI markers, like the Central Vein Sign. Well, our team was part of a big kind of national, you know, group that has been studying the Central Vein Sign for the last seven years where we have, you know, successively done like pilot study and then larger study to validate its utility in diagnosing MS more accurately and in a more timely fashion. So this is... there are research like that where you kind of validate these new tests.

Kate Durack:
That's awesome. Thank you so much for explaining that more. I am going to pivot to Ale so that you can chime in as well. And I am going to ask you another general question. What does a clinical research coordinator do? What does your day to day look like?

Alejandra Gomez:
Yes. So that is me. I am a clinical research coordinator. And as a clinical research coordinator, my main role is to be the bridge between the participant, the physician and the study sponsor, so whoever is kind of running the study. And I help guide the patient through every single step of the process, and that really begins from the second I usually go in and pitch the study and explain it to them in the clinic room, and answer any questions that they may have, to the next step being consenting the patient if they do decide to be part of the study, enrolling them and kind of running any sort of assessment or questionnaire that might be required in that first study visit. Apart from that, for a study visit, usually I will also take care of taking the patient to any MRIs or any lab testing, any sort of physical assessments with either just me, another coordinator, or sometimes even the provider themselves as well.

I am also in charge of scheduling any sort of follow up study visit, answering any questions, sending emails, being the main point of contact for the study, for the patient. And I would say that I think for myself, my primary goal as a coordinator is always to be a safe space for the patient, where they can always bring questions to me and reach out if they have any questions regarding the study or their own health or anything that they want relayed to their physician. I always want to make participants feel comfortable and safe and like they can come to us. So kind of just the main point for most of the things in the study, I would say.

Kate Durack:
That's great. Thank you. What does it look like when it happens remotely?

Alejandra Gomez:
We usually offer a telehealth remote option. So just like you can see your provider usually in a telehealth visit, the same goes for research. So we usually have either an encrypted and safe Zoom set up for that, where we can come in and tell you about the study and then consent you virtually and even enroll you there and then, virtually. So it's almost always an option. I think it really depends on the study. But it's really cool because sometimes they can make the research a lot lower maintenance for the participant without having to drive to the clinic or do a bunch of follow up appointments that take up time. So that is almost always an option.

Kate Durack:
So Ale, how do I find out if there's a “you” at my office? Because I honestly have no idea.

Alejandra Gomez:
Well, honestly, I think the first step is always just to ask. I think when a clinic or a specific university is a part of a study, there will usually be clinical research coordinators there at the clinic or on site. And they'll come in to your appointment randomly, or usually your provider will ask if you're interested in hearing about research. And if you say yes, then we just pop in, introduce ourselves, introduce the study. And like I said, we'll give you all the information, fliers, any info we might have and it is up to you to decide to enroll right then and there, or take it home and reach out to us and then schedule something with us. But you can always ask your provider if there's something running in your clinic that you might be fit for. There's always other resources, like the MSAA and nonprofits and things like that that you can look into, into their websites, and you can usually get on mailing lists or just look at what's on there for you to be reached out to in case a new study opens up.

Kate Durack:
Awesome. Thank you. Now I'm going to switch over to a question about what a patient registry is, Leorah. So, the three of us are actually working on a project called MSIN. And the first thing that we're doing is creating a patient registry so that we can dig deeper into data soon. So, Leorah, if you could explain what a patient registry is.

Dr. Leorah Freeman:
Yeah. Absolutely. And if I might just add a word, you know, to what Ale said, because I think it's really critical is, you know, clinical research coordinators are really a part of the care team. And I see this play out every day, you know, in our practice, because we do so much research that, you know, our patients feel so supported by our research staff. So really it's important to do as she says and reach out to your clinicians if you haven't been involved in research, because you may have access to fantastic folks like Ale, you know, that can be a part of your team. So just wanted to to highlight that.

So yeah, let's shift gears to kind of what a patient registry is. So, a patient registry is kind of... it's an organized system through which researchers collect kind of uniform longitudinal data on people that have a specific condition, like MS. As part of the MSIN, again, we're inviting our participants to be a part of the MSIN registry. And through that, we're collecting, you know, patient surveys. We're also asking our participants to share their, not just their medical history, but also their electronic health records, allowing their clinicians to share information about them, so that this data can be kind of collected over time. And through that, we are able to understand, as I highlighted earlier, real world outcomes, we can also sometimes interrogate registry to understand safety of certain treatments, to understand quality of care, to understand the treatment patterns that patients follow, some of the challenges that people experience, complications.

So a registry can serve as the basis for learning about a condition and can often be interrogated to, you know, spur some hypotheses. Sometimes, like, we have... there are a lot of registries, there have been, you know, several registries in MS. And sometimes when researchers have a question, sometimes they start with the registry and they're like, well, I'm going to interrogate this registry to see if my hypothesis may be correct. You know, so, for instance, I think that, you know, people who eat a mediterranean diet tend to have better outcomes. You know, instead of designing a whole new study, the patient registry allows us to have some of that data available, for example, you know, if it's designed in a certain way, and then we can interrogate that. And then from that information that we have from the registry, then we can go on and design an

additional research study that's going to go more in depth, or it's going to focus on an intervention. So it's a wealth of information for folks.

So what it involves in a day to day for people. So they might, you know, at our clinic, for example, they might meet with, if we have a registry going on, you know, that we want to recruit them for, they meet with Alejandra and, you know, and she, you know, talks to them about what's involved, you know, kind of surveys, you know, how often are they going to receive surveys, how are they going to receive them, what kind of data are we going to ask them to share. And then, you know, when they are part of it, then they may receive, you know, an email or text messages reminding them to fill out their survey every now and then, or we may connect them to a different system through which they can share their health data. And that's collected, kind of, longitudinally, in the long term, to have insights into those long term outcomes.

Kate Durack:
That's great. So, Ale, let's say I'm at my appointment and you come in and you explain that you're trying to get me to become part of a registry, and I'm all in, except that I want to keep my name out of the whole thing.

Alejandra Gomez:
Yeah.

Kate Durack:
How does that work? What does it look like on the back end? And how do you keep my data safe?

Alejandra Gomez:
Yeah. So I think data safety is always something people want to know about. And to answer that first question is that most studies, if not all, de-identify all patient information. So what that means is that when you decide to join the study or this registry and give your health data, your name is stripped off of it, any kind of identifiers, maybe it's your date of birth or your medical ID. Anything like that is taken off. So that's what is called de-identification. But in terms of data safety, also, I think it's also really good to know that in any research study or a clinical research trial, every study must be first reviewed by the IRB, which is the Institutional Review Board. And that is... what that consists of is a group of experts and community members who make sure that the study is ethical and participant rights are protected and all that sort of stuff. And so any study that might be offered to you always has to be approved by that first.

Apart from that, there is always an informed consent process. So there will be an informed consent form, always handed to you and something that we will walk through with you that will explain all of the data protections, the encryption, the de-identifying of the data, things like that. Like I said, also registries and all this information is usually kept in encrypted surveys. So your information is extremely safe and protected. Only people with very specific access to the data can see it. So not anyone can just pull that data if they want. Even coordinators or anyone that's part of the study is being observed. And, you know, they can't just do whatever they want with your data. So generally, or most of the time, everything is very, very, very safe. And of course, there's always a risk for data breaches and things like that, like with anything. But those are very, very slim. And in the case of that, your information is usually just information not tied to your name.

Kate Durack:

Good to know. So then what about... as we're talking about protection and data, it's got me thinking about the physical protection. So what if I opt into a trial and I'm trying a new treatment, how am I... What do you do to make sure that I'm still healthy and safe during that?

Alejandra Gomez:
Yeah, of course. So first of all, being a part of any clinical research trial always means that you're going to be very carefully monitored. And I think that always, of course, depends on the study. If, you know, you're just filling out surveys here and then and things like that, maybe you're not coming in to see us as often or even in person, but in studies where you are more involved, or have more concerns, we are always checking in with you, whether that be via appointments that we set with you every three months. Every six months. We're always, like I said, in reach for a call or an email or anything like that. Depending on the study, sometimes when you're coming in for a study visit, we're running tests on you, so that might be just neurological exams, physical exams, like a walk exam, cognition exams and things like that, where your physician will be given that data or be present at the study and can notice if there's any sort of difference in your disease or any progression or anything to note. And they will always be the ones that circle back to you if necessary, or the ones that give us the information to give to you in terms of that. So you're always very much looked over and protected, and there's always a great line of communication in a study.

Dr. Leorah Freeman:
It's important to remember, you know, Kate, what we talked about earlier when we're talking about drug trials, you know, this is something that is very codified. We have phases that look at, you know, safety signals, you know, in first in healthy controls and in smaller groups of people living with the disease before going to a larger group. And that is so that we can learn as we go what are safety signals that may pop up. And so, by the time we're designing the big study, where a lot of people are going to be subject to that drug or intervention, then we know a lot more already about potential safety concerns, and we can, you know, when the study protocol is being designed, you know, there are safeguards, you know, tests that are going to be ordered at regular intervals, blood tests or others that are going to allow us to keep monitoring that safety.

Of course, you know, it is still possible that even going through these different phases of clinical trial, by the time we go to a phase three, we still haven't learned everything there is to learn about a specific drug. And so, you know, there might be some safety signals that pop up - a patient, you know, in, you know, Nebraska may come up with a side effect. Well, there is a reporting system that we're mandated to follow as clinical investigators where if anything unusual, you know, even mild, comes up in our patients, we report it to the study sponsor. And if something severe enough comes up, they might be, you know, there are protections that are in place and systems that are in place so that, you know, sometimes even studies are paused because of safety concerns. Right? So there's kind of this chain of compliance and careful design that really allow for clinical investigators to protect their patients in the context of those trials. And through this active monitoring and reporting, then we're able to, you know, prevent, you know, a side effect that was not detected earlier from drugs affecting a large amount of patients.

Kate Durack:
That's really good to know. So, I am going to pivot again, to another general question for Leorah, and actually, this has already come up in the chat, so I'm glad we're going to talk about it. Who can join a clinical trial?

Dr. Leorah Freeman:
So I would... I mean, you know, the way we look at it that we want everybody to participate in research. But now that doesn't mean that every trial is for everyone. But I'm pretty convinced with the amount of research that there is in MS, there's probably a trial for about everybody if you look around and if you know where to look. Right? So, each study will have its own eligibility criteria, what we call eligibility criteria are the specific guidelines that decide who can be enrolled; who is, you know, can participate in a way that is safe and that is appropriate. So some, you know, sometimes that includes factors such as age or type of MS, relapsing remitting or progressive, you know, sometimes, you know, we want people who have not been on certain medications in the past or who don't have certain conditions. That's not really meant to exclude people, though, in the end, it does exclude some people from certain trials. But it's meant to make sure that the results that we obtain for the trials are valid, you know, and that the people that are in the trial are kept safe. You know.

So, that's part of the conversation when I, as a clinical investigator, I see patients in the clinic, and I know that we're running some studies and enrolling, then I will, you know, make sure I will talk to my patients about different studies that they might be eligible for. They may not be eligible for a drug trial because they don't meet those sometimes restrictive criteria, but they may be eligible for a registry that often have much wider, you know, criteria, because we want to understand the experience of large groups of people through registry, for example. So I think the kind of the best way, you know, and I think Ale said that earlier is like, talk to your doctor, look on the websites of different organizations, you know, look at ClinicalTrials.gov, which is a website where all trials and studies are listed, for example, because even though not every trial is for everyone, there is a trial for everybody out there.

Kate Durack:
We have had five questions and counting.

Dr. Leorah Freeman:
And I see this question.

Kate Durack:
Age restrictions.

Dr. Leorah Freeman:
Yeah, yeah. So it's do other, you know, somebody asked in the Q&A, do other chronic health condition make me ineligible for participating in MS studies? Not all MS studies, you know. So some, for instance, sometimes with particularly drug trials, they will restrict if somebody has uncontrolled kidney disease, for example, you know, you can understand that giving you a medication where we don't yet know all the safety signals might be difficult to offer to someone who has chronic kidney disease for, you know.. So, those trials may be restricted to people who don't have certain conditions. But as I said, there are other types of research that may not even be interventional at all, that may be observational or experience, you know, related kind of study or implementation trials that may be more adapted to people that have certain conditions. So it's always a matter of kind of looking at what you can participate in.

Kate Durack:
So there's been some specific questions about age restrictions. And it's sounding like women who feel like they are just past the age limit for eligibility. And they're wondering where they can

go because they really want to be involved. So we've had five questions about that. So do you have any specific examples of where they can go?

Dr. Leorah Freeman:
There's a great... the question of age is really important. And the reason why so many of the drug trials, in particular, have been restricted in age is because a lot of the drugs that we've been testing in MS focus on relapses, you know, as an end point. We want to decrease relapses and new lesions. And we know that, you know, as people age, we see much less relapses in the real world. So including people who are older may not allow the researcher to detect the signal that they need. You know, if already people are kind of phasing out of having relapses, it's hard to show that a treatment is doing much better than age itself. So that's why a lot of the drug trials have been limited to younger patients, who tend to have more attacks so that we have more signal to look at.

But there's been a real focus in the MS community to be more inclusive of people as they get older because, again, we know the disease changes. We want to account for everybody's experience. And we know... we want to learn how to treat MS across the lifespan. So I would say that while certain phase three trials may not be open to people above the age of 60, 65 these days, there are a lot of studies that are either phase four studies or registry based studies, observational studies that will not have age restrictions, you know, or studies that look at certain biomarkers or look at certain digital apps or intervention, for example. Those may not be limited by age.

So a great resource is, of course, always talk to your doctor. But I also want to point out to, you know, again, ClinicalTrials.gov, it's, you know, a national repository of clinical studies. And also, you know, websites like MSAA or National MS Society may have information about certain trials in certain areas. So, but always start with your doctor. Sometimes, you know, people like me, there may be a study that I'm not doing, but I know that a center down the street might be doing or somebody in another city in my state might be doing, or that there's this big study happening that's remote, you know, for example, where people can enroll without even leaving their home. So just start with your doctor, but then also check out ClinicalTrials.gov.

Kate Durack:
Thank you for that. All right. Again, pivoting. Here we go. We've talked about this in different ways, but I want to directly talk about what the benefits are for participating in a clinical trial. What do I get out of it?

Dr. Leorah Freeman:
Yeah. And it's true, I think that the first, for me, obvious that I see every day in clinic is that people who participate in research often have this, you know, sense of purpose and empowerment that comes from being a part of something bigger, like being a part of advancing the care for future generations of people with MS. I think that's a deeply personal feeling, something we can't quantify. But that's something that's really important. Something also that's really, that I experience every day as being a part of my team where we have, you know, three research coordinators, researchers, is that I see how much support, whatever research study you're participating in, are participants who are engaged in research have more people on their team, because they have our clinical research team as part of their team, and so they really feel more supported. They have new sets of eyes on them. They have somebody they can reach out sometimes, you know, very easily if they have a quick question or quick concern. And, you

know, I know how much joy that our research coordinators kind of bring to our patients by being accessible and just a listening ear. So I think that's really a true benefit.

Then some of the obvious is that, you know, if you decide to engage in a study where you're testing a new treatment or testing a new intervention, whether it is new exercise, new lifestyle intervention or other, then you get access to innovation before it's available to everybody else. And so that can, you know, be, you know, an incentive for folks. Of course, you have to weigh this, you know, there are risks and benefits to research, and see if that is worth it for you, you know, to be a part of this innovation. But that's kind of a big, kind of a big benefit also of being a part of research.

Kate Durack:
Yeah. I'll speak just as someone with MS. I think that I like the idea of a sense of purpose. And I also just like the empowerment that can come with it, because living with MS can feel like you have zero control over anything. And participating in something like this and opting into this, you have control over that decision, and it gives you a little bit of sense of control and something that can kind of feel all over the place at times. So for me, that would also be very intriguing.

Dr. Leorah Freeman:
Thank you for sharing that. Yeah, it's great to hear it from the participant perspective, you know, because of course I, you know, I see a lot of patients, but I don't live in their shoes. So it's great to hear from your perspective that you feel that sense of empowerment, you know, as much as we see it from the clinician side.

Kate Durack:
Yeah. Ale, do you have anything else to add?

Alejandra Gomez:
Yeah, I mean, I was, I agree with everything that Leorah said. I think that forming a part of a research study or a clinical research trial can be extremely empowering. I think it's a beautiful place to kind of feel like you have a sense of community, because even if you're just meeting with your coordinator or with your, you know, other coordinator or maybe with your physician, you do, like Leorah said, know that you're part of something bigger. And I think Leorah mentioned this a few times, but the relationship that you're able to create with your coordinator is so wonderful. Like, I can speak for myself, and what I love about being a research coordinator and it is honestly just being able to listen to the stories of people living with MS. You would be surprised at how much I love listening or how much any coordinator loves listening. I think it's extremely beautiful. I think it's extremely empowering. I think it's a very vulnerable place to be in a position where you can talk to someone routinely about your disease, about your daily life, about things you struggle with or things that you're extremely excited about.

So I think it's really, really wonderful having someone that understands your MS apart from your provider, that is a lot more accessible. Because maybe you see your provider every six months or every year, but you can talk to your coordinator every week or see them every three months, and they kind of see your highs and your lows. And I think it's a really, really wonderful thing to have someone that can experience that with you and sit with you in those moments and cheer you on and just watch you grow. So yeah, I think there's a lot of beautiful things that can come with being part of research.

Kate Durack:

I seriously hadn't even considered that component of building community, and I love that so much. That's so great. Okay. Leorah, can you give us another example of how a non-drug study contributes to improving care?

Dr. Leorah Freeman:

Yeah. I mean, there's... So, we talked earlier, we talked about non-drug interventions, you know, like lifestyle interventions. We talked about biomarkers. We talked about digital tools, for example. You know, something that I've been personally very interested in has been research that has focused on care delivery. You know, it's... we test kind of interventions, we test different things. But then how does the real world care happen? And how does real world care impact outcomes? You know, because sometimes, you know, we have these grandiose ideas like, you know, there's this big innovation that's wonderful. But then sometimes innovations are not necessarily applied in the real world. So, studying how care is delivered. You know, so for instance, my group, we do a lot of work in the state of Texas to understand the state of the state, you know, and through my clinic, because I treat people this way, I know that a lot of my patients are on high efficacy treatments and have really good outcomes. But what happens in a state like Texas?

And then we learn through this kind of care delivery research, we can learn about the gaps in care that exist. You know, when you look at a broader community, we know that, you know, less than 50% of people in Texas are on disease modifying therapies. That's... they're really, kind of, really important gaps to bridge. And so that gives us kind of more data, more information for us to be able to find ways to change, to address those problems and barriers. So that's kind of a way, kind of more like the healthcare delivery side. Another thing, so you mentioned earlier kind of our collaboration around the MS Implementation Network, you know, and so I would be remiss to not, you know, mention, you know, implementation research. And that's kind of something that people don't always know about or understand. So I'm going to try to kind of break it down in a way that's easy.

So in clinical research we try to test if new innovations work. So let's say I'm a researcher and I have this idea for a new exercise to improve spasticity for people with MS. Well, I may do a traditional clinical trial where I'm going to test my exercise program and I'm going to measure people's spasticity, and I'm going to see how it works. And then, brilliant! My clinical trial works and I have demonstrated that my exercise program works at treating spasticity. Well, does that mean that all of a sudden everybody with spasticity, you know, that have MS and spasticity, have access to my program and can, you know, implement it in the real world? No. I've just demonstrated that it works. Implementation research, implementation trials is what's going to try to answer the question of how can we make this innovation work in everyday practice in the everyday world?

And that's... often there's a huge gap. People are really good at coming up with new innovations, but making those innovations, you know, making those innovations accessible and work for people in the real world becomes a real problem. So through implementation research, then, you know, we can, we can kind of bridge that gap. So we're not necessarily testing a drug, we're testing how innovations kind of work in the real world. So we look at different strategies, you know, so for instance my exercise program for spasticity, you know, do I need to create educational material? Do I need a new digital tool to make it accessible? Can I make it accessible through PT clinics or through the YMCA? You know, where is it going to work? And then the implementation study component is going to be testing those different strategies to see if they work. You know, what works best to make my innovation, you know, work for as many people as possible in the real world. So that's kind of another type of research we don't often

talk about. We often think about demonstrating that innovations work, but we don't often think about the research that's needed to make those innovations work in the real world for as many people as possible.

Kate Durack:
Thank you for that. We are actually coming close on time, so I am going to run through a couple more questions just so that we try to cover all of our bases here tonight. So forgive me that this feels scattered, but, Ale, this one's for you. If I participate, am I obligated to take part in the clinical trial for everything?

Alejandra Gomez:
Good question. So the answer is no, participation in any research study, a clinical research trial, is always completely voluntary. And that goes from the second that we tell you about it in the clinic and just tell you all the information and show you the consent, you're always more than welcome to decline and say no, and you don't have to give us any explanation. It's always just... that's how research goes. And also, if you do decide to join a study and you are enrolled, you are always more than welcome to opt out without any questions asked. I think there's a common misconception or fear from participants sometimes that if they decide that they no longer want to do it, then their provider or their coordinator will be disappointed or their care will change in the clinic. And that is just completely never the case and will never be the case. I think research always prioritizes the patient, and we always want people who want to be involved and want to, you know, do all the stuff necessary in the study. But we always want everyone to know that it's always an option to opt out and that you just have complete freedom.

Kate Durack:
I appreciate that. I mean, I feel like we all want to be good patients and not a burden, but I like that, you know, you all are expecting that people are going to opt out at certain points, and it's not a disappointment and it won't change care. So I think that's a really good thing to reiterate.

Alejandra Gomez:
Exactly.

Kate Durack:
Okay. And then, Ale, I'm going to stick with you. What are the things that I should consider before joining a trial?

Alejandra Gomez:
So I think there's a few things to consider, but I would say the most important thing to consider is time commitment and what this study requires of you. So, like we've said, there's a ton of different types of studies. Some of them can have a lot of involvement where you have to be coming into the clinic, getting MRIs, getting blood draws, having follow ups in person. There's also other studies that only require surveys be sent out to you every three months, every six months. And those studies can range from like 5 minutes to 30 minutes. So I think it's always important to consider your bandwidth and what you have time for and what you can actually do in the study. So if you think that you would love to do it, but there's no way that you can come in person, and the study requires you to be in person, then I think that's something to consider.

But I think it's also great when we have telehealth options available and things like that, and then you can actually be part of the study without there being too much of a time commitment. I think another thing to consider is always just that you want to be a part of the study, and not that

you ever feel pressured to be a part of the study. I think when you have that sense of purpose and what you're being involved in, then it's a lot easier to just look forward to these visits and do the surveys and not feel like anything is a burden, because we never want anything to feel like it's a burden. So I would say those are the main things. Just know what the study requires, the time it requires, if there's resources available, maybe like telehealth or driving compensation or things like that. And just to make sure that you really want to be part of the study and that, you know, no one's forcing you to.

Kate Durack:
Just be honest with you what you can handle. And I think with MS, you know, I would be considering fatigue when I was asking myself that question.

Alejandra Gomez:
Oh, 100%. And I think there's also things like it's peak summer and you're requiring, like, a walk, and that's really hard for people with MS. So, I think there's so many things to consider and only you know you best. And so it's always just good to be honest with yourself and with your team.

Kate Durack:
Yeah. That's great. Thank you. Leorah, what are common misconceptions about clinical trials?

Dr. Leorah Freeman:
You know, I think the biggest misconception is people who feel like their research is, you know, makes them guinea pigs. You know, that research is, you know, it makes you kind of somebody who has no choice, no freedom, that we're just going to study you without any... without prioritizing you. And I think that's definitely kind of the greatest misconception. I think that there's been so many efforts over the last century to make clinical trials safe, to also improve the experience of participants in clinical trials, you know, through support for, sometimes, transportation, through compensation, through very different things to really acknowledge that, you know, it's a commitment to be a part of research and a choice that we're so glad you're making to help advance the field. So I think that's, that's kind of like the first misconception, I would say.

Second misconception is, we talked a little bit about it earlier, is that, well, if I don't want to change my treatments then I cannot participate in any research. You know, again, we talked a lot about this today, like, there are a lot of research that is not investigational, that is not drug, that there are a lot of ways to advance the field, a lot of ways that you can participate, you know, so that's also kind of... and I'm glad Ale talked about this just now, it's like the commitment that research is very involved. Well, there are some research studies that are just not very involved, you know, that are can be done remotely just completing surveys, but will still advance the understanding of the disease and still brings your voice to the field. And that's super important. You know, also some, you know, people, and I've saw this in some of the questions that believe that, you know, research is only for certain people with MS, either people who are younger, people who don't have comorbidities or people who have just a certain type of MS. And while this can be restrictive in some drug trials, you know, again, the scope of research is much broader. And I believe there's a trial, there's a study for everyone that that can help them be a part of this movement.

Kate Durack:
One thing that came up for me while you were explaining that, Leorah, was that I didn't know before starting in my current role how... about the big push in this space for people living with

the condition to be involved in the creation of the research and the monitoring of the data and all of that. Can you can you speak to that a little bit?

Dr. Leorah Freeman:
Oh, yeah. Absolutely. I think this is one of the greatest things and the greatest advancesss is really this motivation in the scientific community to not just, you know, have our patients be participants in research, but to become active designers of this whole research. So, there's more and more initiatives to bring people living with MS and living with any condition to the table as research trials or research studies are designed. So often, every big study has steering committees or councils, advisory councils, where we engage with people who have lived experience and participate in really designing the trial.

We talk a lot about research burden. Well, how can,... you know, sometimes research burden can exclude certain people from research. Let's say people who, you know, have a difficult life or they are single mothers who are also working outside the home who cannot miss work, you know. Well, how can we make research more accessible to people like her? You know, by having transportation, childcare, compensation, you know, and this is all brought by bringing the patient voice at the center and bringing people in the, you know, building all those little building blocks that are necessary to create these research opportunities. So I think this is a very exciting development. I know that as part of the MS Implementation Network, we engage, you know, we have people living with MS as part of our steering committee. We engage with people, you know, with lived experience and also, you know, advocacy groups as part of our council. And truly, that's kind of one of the most beautiful parts of being a part of that initiative.

Kate Durack:
Yeah, I'm thrilled to be part of it. I'm also, I've had the opportunity to be part of a couple other things where I get to use my patient voice for research, and it's just so nice and rewarding. And so, look for those opportunities as well. I think we've got four minutes. So, Leorah, I really want to make sure I have time for this question, which is: How do trials reflect diversity and inclusion in MS care?

Dr. Leorah Freeman:
Yeah, this is something that we've had a reckoning about over the last five or so years, is that historically, clinical trials have not really reflected the full diversity of people with MS. And I can speak to this kind of from, you know, even my, my own experience. My team led a study where we looked at all the phase three trials, you know, those big trials of disease modifying therapies. And, and we did what we call a systematic review where we dived into the data, in-depth and systematically. And we looked at 44 trials, phase three trial publications, and what we found was that historically, first, people didn't report, for instance, race and ethnicity properly. Some trials didn’t even report the race and ethnicity of the participants. Some only talked about the percentage of people who are white, some, you know, and only a third really reported the full diversity.

We also found that, you know, historically those trials have not been inclusive of people of all backgrounds. So we've found very small participants were black, for example. Definitely an underrepresentation compared to what is seen in the real world and in our communities. And that has an impact on how can we generalize findings. And also when we talk about the benefits of research, how can we spread the good around to all communities of patients. So we definitely have had a reckoning about this. There’s been a lot of data, a lot of publications about the lack of diversity of MS trials, particularly drug trials. And that has led to those intentional efforts to

reach to those underrepresented populations, to design specific studies in partnership with people from these communities to be able to reduce the barriers to research participation, to be able to bring more folks into trials, to build the trust that's needed, so that they can feel safe and feel a part of this movement that is clinical research.

So I think this is slowly changing, you know, as those initiatives to bring underrepresented communities into clinical research come to fruition. So my hope is that as we move forward, we're going to see more and more, more and more diversity and inclusion. Sometimes we cannot, you know, we talked also about diversity and inclusion, not just from a racial and ethnic perspective, but also from an age perspective or a disability perspective, wanting all people, you know, to be included in research. Sometimes that is difficult for reasons that I mentioned earlier in some trials. But, a lot of us that are clinician researchers also speak to, you know, industry and pharma to try to, if not being able to include the full spectrum of people with them, as you know, in terms of age, for example, into the phase three trials, how can we make sure that in the phase four studies, we really study their outcomes more specifically, that we learn more about how they're doing? So, it can take, you know, I don't see that we're going to, in the future, have phase three trials that represent all people with MS necessarily, due to certain constraints, but there's definitely efforts to get there. And there's certainly efforts to then focus research on the populations that need them.

Kate Durack:
Thank you for that, Leorah. I'm really glad that we were able to cover that. We have reached our hour and it looks like we have generated some excitement in the chat. So I'm going to answer one quick question before we sign off. And that question is: Can I enroll in more than one clinical trial at once? The answer is yes. And you need to talk to an Ale to see if that will work for you. So, and I think, is there anything else that you two would like to add to that really quick before we close?

Alejandra Gomez:
No. To that specifically, the answer is probably yes. I think, again, it's very dependent on the studies. But yeah, we've had various patients that are part of two of our studies. So definitely.

Dr. Leorah Freeman:
It's definitely possible. It might not be possible for certain studies to also be engaged in two at once. But there's definitely nothing that prevents you from, you know, participating in, you know, survey studies or observational studies, registry while you're also participating in others, for example.

Kate Durack:
Awesome. Well, thank you again, Leorah and Ale, and for all of you for being here with us. Clinical research is such an important part of improving MS care, and today's conversation helps remind us that progress doesn't happen in isolation, it happens because of the people who choose to get involved. This concludes our webinar. And on behalf of MSAA, we want to thank you for your time and participation. Just a reminder, this program was recorded and will be archived on MSAA's website in the upcoming weeks. Please also take a few minutes to complete the brief survey. We would absolutely love your feedback. Thank you again and have a wonderful evening. Bye.

Alejandra Gomez:
Thank you.

Dr. Leorah Freeman:
Thank you. Have a good evening.

Alejandra Gomez:
Bye.