Management of Veterans with Severe Hearing Loss, presented in partnership with AVAA

Presenter: David R. Friedmann, MD, MSc

At this time, I welcome to Audiology Online, Dr. David Friedmann. This course is in partnership with AVAA. Please tune in to the rest of our AVA courses, but at this time, I'll hand the mic over to you.

Thank you very much. It's an honor to be here and to be a part of both the presentation from AVA as well as Audiology Online more generally. My name is David Friedman. I'm a neurotologist in New York as part of the Manhattan or New York harbor va, as well as at NYU School of Medicine. Just in terms of disclosures, I want to just mention that in addition to my salaried appointments, I do have funding, previously had funding from the VA and currently from the National Institutes of Health.

An important disclosure is that the opinions I'll be sharing are that of my own and not that of the VA or the US Government. So with that, there's some learning outcomes to highlight as it relates to discussing some VA initiatives and support for hearing rehabilitation for veterans, talking about best practices as it relates to management of patients who have severe hearing loss, in this case mostly in the veteran sphere, although certainly relevant to others, and to identify patients who may benefit from other support to adjust their hearing loss for a menu of things among which include referral for a cochlear implant. So I'm going to talk about hearing loss in the va, but before we do that, you know these, these formats. It's a little hard to know who's with us today. So if we can start with there's a polling question as it relates to whether or not those of you on the meeting have previously worked in a VA facility.

So specifically have you worked are you currently working in one? Do you have previous experience in the va, perhaps in training or a prior job? Are you current part time employee in the va, current full time employee in the va, or alternatively, no prior VA experience. So if you don't mind, the polling is open and we'll give that a few seconds and we'll take a look at the responses with that. So majority not having prior VA experience, about 60%, 30, 30% some prior experience and about 10% currently working within the VA.

Okay, great. And there's another question as it relates to thinking about severe hearing loss. In particular, what's your involvement in treating patients with severe hearing loss? Are you involved in diagnostics only, but not the treatment portion? Perhaps you work exclusively with hearing aids, work exclusively with cochlear implants, work with hearing aids and cochlear implants when appropriate.

So if you can Respond to that. We'll take a look at the results of this poll.

So quite a mix here. So we see about 20% involved in diagnostics, 50% I guess a majority is, you know, essentially half. Half of the participants only with hearing aids. Nobody exclusively with cochlear implants. About a quarter with both hearing aids and cochlear implants.

Great. And then one more question just sort of orient us to who's on the meeting here. How for those of you who do work with hearing aids, how do you go about assessing adequate benefit from hearing aids? So some potentially are other options here. So I apologize if it wasn't all inclusive.

But verifying real ear measures are meeting targets, validating aided outcomes with some sort of speech material, relying on a patient reported outcome measure of some sort. Alternatively none of the above.

So see what the results are from this question.

So 80% have are using real year measures, ensuring that they're meeting targets. 25% describe doing some sort of validated aided measure with speech materials.

About half also using some sort of patient reported outcome. So that's interesting mix there and will become relevant as we talk. I'll also just add that there is an active, as Chrissy mentioned, active Q and A. So please do feel free to add it into there. And throughout the talk I just find it'd be a lot more

interesting for all of us if there's more of a dialogue, as difficult as that is on this format, at least having some questions, I'd be happy to sort of talk through what your perspectives are because as hope is already clear, I am not an audiologist.

I admire audiologists and work closely with them, but I don't myself have that sort of training. So hearing loss in the va, for those of you that are less familiar, it's pervasive. And the VA for a while has been a leader in VA care. This includes the fact that it's one of the most common service connected issues. There's over a million veterans receiving some sort of disability compensation related to their hearing loss.

And then just from a workforce standpoint, 1100 audiologists at more than 450 clinical sites across the country. And when you think about how this translates into budgetary considerations. So in 2023, for example, about a million hearing aids were dispensed within the VA at a cost of more than $400 million. So cochlear implants are at many fewer sites than some of the other diagnostic and treatment audiology services. But it has been available within the VA for more than 30 years.

So what motivates this work? So this is a patient literally from Monday of this week. He's an 88 year old veteran. He comes in, he's actually wearing bilateral hearing aids, and this is his audiogram. So essentially a profound sort of flat loss in both ears.

And when you take the liberty, which I often do, of looking back at older audiograms, because within the va, these, as some of you may know, this is part of the medical record, so you can see hearing tests going back a number of years. This person in fact, had no recognizable speech understanding for more than 10 years. And so it's curious why a patient like this, you know, comes to attention when they do. And you know, when asked, he said, oh yes, in the last year or so, I'm really seeing a decline in what I'm getting out of my hearing aids and trying to understand sort of how, how does this play into how, how we think that these patients should be managed or could be managed. Is this the right time to be

doing something else for him other than hearing aids?

Might, might we have had an opportunity to do something earlier had we had this discussion a number of years ago? So, as I alluded to, I'm a cochlear implant surgeon and researcher and I do believe that the VA is a leader in hearing health care. Cochlear implants, in my experience, can be a life changing therapy for appropriately selected patients. But unfortunately, those of us who work in this space, I think share the belief that many patients who could and would benefit do not receive them. And I think we all have maybe our hunches and I'm interested in your perspectives, but I don't know that we really know to what extent these different factors are driving that.

Is this an access problem? Is it a knowledge problem? Is it just sort of preference, whether it's a patient preference or a provider preference? And I think it's fair to say that this issue pervades civilian settings as well. So while I'll be talking about the va, it's really in part because I think the VA is where you can study this, not because the gap doesn't exist in civilian settings as well.

So with that, I would argue that the VA is really the ideal place to be studying practice patterns. It's the largest integrated healthcare system in the U.S. they offer comprehensive audiology services. I alluded to this sort of what we call a repository of data. Basically every audiogram that any veteran has had at any VA site gets uploaded into this repository.

And really in a detailed way, you can look at distribution of accessories and hearing aid devices, whether it's a cochlear implant or hearing aids. And we have linked this data to electronic health record information. So you start to learn about who these individuals are from a demographic and geographical standpoint, what sorts of other medical issues they have. Really, I think giving some perspective that you could not get outside of the va. And I think most would agree that, you know, severe hearing loss is distinct.

It requires a different orientation from a standpoint of making sure that amplification is appropriately fit and providing sufficient benefit for auditory oral communication. And I think that when we think about mild and moderate hearing losses, this is less of an issue. But certainly that the potential for aided benefit in a sound field to be sort of predicted from an unaided word recognition score under headphones is pretty difficult. And talk more about that in a little bit. And I think complicating this issue also, and we sort of saw this even among our attendees today, that audiology education really varies quite a bit.

Training experiences with respect to whether or not we're exposed to hearing aid and cochlear implants during that time. Just sort of the level of comfort with that combined with all this is the fact that referral patterns have to try to keep up with what is essentially a pretty changing landscape for candidacy. Who's appropriate for a cochlear implant? And this is just sort of some diagrammatic descriptions here of what a candidate might have been a number of years ago compared to what we think about as more revised candidacy in the last, you know, 10, 15 years or so. And we don't, that I know of, have a standardized protocol for how we go about assessing when somebody should be referred, as opposed to somebody actually thinking, okay, let's refer this patient, and we'll see what comes of that evaluation.

The VA does have some valuable practice recommendations and certainly makes room for the idea that there's limited benefit for hearing aids for some individuals that may require other interventions, but it's not so clear how that would be assessed or if it is assessed. Sort of an interesting aspect of the VA is the fact that for many veterans, hearing aids are provided for free. So not universally, but a lot of veterans are gonna have access to free amplification. And so something that comes up a lot when you talk about this topic in the civilian settings is the potential for financial incentives to sort of drive some of this. Presumably, those are not in play.

There's no commission within the VA for dispensing or selling hearing A. So this allows sort of a unique window into thinking about patients who are really under audiology care already. You know, in the civilian space, we all talk about how few patients who would benefit from hearing aids have them. But in this situation, what we're able to do is sort of zone in on the patients who are already under audiology care, perhaps already have hearing aids, and then try to understand, well, what is driving how they get managed from that point forward. Is it factors related to the patient themselves, what they prefer, what they're interested in, what they have going on?

From a medical standpoint, does it have to do with who they're seeing on the audiology side, the audiologist experience or education? Does it have to do with where they are, how accessible, perhaps other resources are, just based on how rural of a location they're in or how far away centers are that would offer other types of services? So sort of alluded to the difference with severe hearing loss. And so with that, the idea that there's sort of a tailored set of approaches required across the spectrum of hearing loss. So VA care, diagnostic audiology is really integrated into the care itself.

I mentioned that hearing aids are often provided as part of the care. So I would argue that hearing aids or access to hearing care in general is not really the barrier here. So we're trying to understand what drives the clinical management of these patients. Is it, as I alluded to, sort of patient provider system factors, issues of access knowledge, or perhaps preferences? So here's how we've gone about this so far.

And this is work that's been going on now for about four or five years. We've largely used what's called a mixed methods approach. So thinking about the quantitative data, these really unmatched VA data sets, and trying to bring them to life, if you will, by talking with providers, talking to patients, veterans, and trying to understand sort of what is driving these different patterns. And here are some examples of some of the sort of power of these large data sets. So this is from our study looking at patients who

have hearing loss, so they've had an audiogram.

And if you look at the individual ear level, 1.6 million individual ears, and this is purely from their diagnostic or comprehensive audiograms. And what you see is if you look at the sort of moderate to severe group that I've highlighted with the red box, there's quite significant variability in their word recognition scores from anywhere from fair to very poor speech recognition. And obviously you could ask and appropriate to be thinking about, okay, well, were these tested appropriately and was this done at MCL and whatnot. But realizing that this is all patients within the va, licensed VA audiologists there tend to be, I think, a very high level of audiology audiologists that are employed within the va. And so protocol is pretty strict in terms of how these things are done.

I think this is, you know, what we can think of as pretty reliable data as compared with self report or other ways of assessing this in prior studies. And you might ask how many of these patients are there? And if you think about patients who both have severe hearing loss and also in this case what we consider poor speech understanding from the standpoint of their diagnostic audiogram, you get a sense here of how many patients there are. This is by quarter from 2005 to 2023. Some of these patients unfortunately pass away over time, particularly in older population within the va.

What this orange line depicts is when you account for the patients who have passed away, how many patients do you have at a given time in this case, let's say in 2023, who have severe hearing loss and poor speech understanding in both ears? It's about 38,000 according to our recent data. So this is just going to give you an idea of how we've sort of gone about trying to parse out the different information that we have. So if you start with a large repository, over 5 million audiograms in 2 million veterans can start to tease out sort of the patient population that we're focusing on, that's veterans who have severe hearing loss, a four frequency per turn average of worse than 70 dB. And that got us down to about a million audiograms and 465,000 veterans.

And then we wanted to know, did they have word recognition scores of worse than 50% in both years. And that sort of resulted in a, a number of about 50,000 audiograms with meeting those two criteria, namely poor speech understanding and severe hearing loss. And this is not intended to sort of get into the details here, but rather just sort of describe what kinds of information you can start to glean when you link together these different data sets. So here's that group of patients. In this case it's 137,000.

This is just with severe hearing loss. And you see sort of the age distributions. And this looks at treatment, so hearing aids, no cochlear implant. Cochlear implant and then no management within the va, although these patients are being seen within the VA and you sort of get a sense of that. And we can look at things like their age distribution, ethnicity, race, where they're living from an urban, rural setting, and then things like their comorbidities.

And this is from a recent paper that we published, if you're interested. The citation is there below. And the VA clearly is making strides towards expanding access for this. So one way that's happening is through greater number of sites. So this looks at sites in 2010 on the top left versus 2016, and you can see a number more sites popping up in terms of cochlear implant, either programming sites or surgical sites.

And then a more recent depiction that we've put together, looking at the distribution of these sites, you see that that's been expanded. And I think it's important to point out that there's multiple different pathways by which a veteran might get a cochlear implant. And so this is a graph that's sort of starting to. For us to try to put together those pieces. When you think about a traditional way being through VA care, they're a veteran, they're getting care at a VA facility, and at some point go on to get a cochlear implant, that's maybe you think of as the more traditional way.

Something that's certainly been expanded in the last number of years with the, you know, choice act and other things is community care pathways. So these are veterans who are having care paid for by

the VA system, but are receiving that care in the community. So, for example, an academic medical center nearby, or maybe not so nearby, unfortunately, in some cases. And that could be for any part of the care, that could be for surgery alone. That could be for the whole package of care if the patients require, if there's no cochlear implant, expertise on the audiology side, so that can be delivered.

And then a third pathway that I think we think about less and has been a little bit harder to track down is what we would call sort of the Medicare pathway. So many of these patients have benefits, at least for a portion of their care to be funded through Medicare that's represented here in the green. And we see that a sizable percentage of veterans are utilizing that approach to receive a cochlear implant. So those are sort of the different potential pathways to think about. And.

And like I said, it's not such a clean thing that they have to only be one or the other. In some cases, you might be receiving surgery through one of those, but then be returning to the VA for the audiology portion.

So something that we did to try to understand these patterns that we were seeing is to start to talk to audiologists, start to talk to ent doctors, primary care doctors, and get a sense of what was driving some of the patterns that we were seeing. And we also tried to speak with veterans. So veterans with severe hearing loss, I'll describe that group in a moment and then really integrate the numbers and the data we were seeing along with what these individuals were telling us about their perspectives. So we spoke with 40 providers, 20 of which were audiologists, about 40 veterans with severe hearing loss around the country. And these are some of the statistics, the qualitative approaches that are used in terms of how you identify these patients.

But we really wanted to get broad perspectives. So you try to find audiologists with different levels of training, different backgrounds, living in different parts of the country. When you're talking about veterans, we try to do what we call purposeful sampling. So looking at veterans of different ages,

different genders, geographic backgrounds, how severe their hearing loss was, how they were being managed, do they have a hearing aid, do they have cochlear implants? And with this kind of work, the idea is that you really don't go into it with a expectation of what you're going to find, but rather you sort of explore themes and try to saturate your data with perspectives.

So, you know, you sort of stop when you hear that the same perspectives coming up from repeat interviews. You sort of have a sense that you've, you've captured a, a large portion of what, what sort of perspectives you're going to hear about those issues. This information gets coded and analyzed with the computer software and with the number of sort of experienced methodologists who work with this kind of data. And that, that led us to this sort of information. So there, this is just showing you the distribution across, you know, the VA organizes geographically into visins.

And you get a sense here of where these different audiologists and providers were coming from in terms of, and, you know, certainly not at all representative, but a varied geography in terms of who we spoke with. And then likewise with the veterans, you can see here distribution between males and females and different ages to try to have at least a diverse representation of who we were talking with and what, what we would learn from them. So I will tell you that some of the veteran analyses are still ongoing, but as it relates to providers, what, what we heard from them was that, you know, each VA is different. And so these are some direct quotes from some of these interviews. We have an embedded audiologist and great collaborations.

When I want to refer, the vet has to travel three to four hours just to talk to someone. Some things from patients were the Idea that this is surgery on the brain, it can be scary. Some that's don't want a nade. They think it's whether it's a vanity issue or a stigma issue related to ageism. And then on the provider side that they were NCI practice and in some cases very comfortable talking about cochlear implants to veterans.

In other cases going by criteria but also thinking about the person being, thinking about the, the person as a, you know, patient or person as a whole individual.

And what we try to tease out from these are what are sort of what's driving the care? What are the barriers? What are the facilitators from a standpoint of what, what audiologists are telling us. So here you see on the availability of programs how that can influence management. So we're here in some large urban setting.

It's different once you get out there or to a VA in the country. Even if a CI was available in the private sector, which is unlikely, the veteran will have to come here to get treatment. Another, another comment related to the distance between providers and surgeon that might limit access. You know, having to travel hours just to talk to someone. We've embedded an audiologist.

We have a great collaboration that's from another site, another audiologist that was in a very. I was in a CI practice and comfortable talking with them. So they're just sort of varying perspectives of these individuals. And with that I'd like to if we can bring up a poll again sort of in thinking about some of these issues. So these are some of the things that we identified very curious in terms of feedback and please feel free to answer this poll and if you have other thoughts, add them to the, to the question answer chat.

But what are the major barriers that we see to cochlear implants? So if you think about patients with severe profound hearing loss, is it a lack of referral from the dispensing hearing aid audiologist? Is it a lack of patient awareness or frankly interest? You know, they just don't want this. Is it fear on the part of patients of surgery and what's involved of having an implant?

Or is it, is it an access issue? Is it limit access to specialty care to get this kind of treatment? So we'll give a few seconds to answer that and we'll look at the responses.

So you know, I think as we we'd expect a mix. Although dominating here was the, the fear of surgery, limited access to care about 40%, lack of patient awareness 50% and lack of referrals 30% okay, great. There's another question I think relevant to this topic. So if we think about, for those of you that are involved in hearing aid care, dispensing, what is your follow up plan with these patients? Do you schedule a follow up in that first month?

Do you schedule a follow up in a longer time period, perhaps two to three months after dispensing? Is there no planned follow up and you just allow the patients to return as needed or if they have an issue? And do you make that decision differently depending on the individual patient need or sort of perceived preference, you know, whatever goes into that, whether it's their age or their level of independence. So if you can answer that for us and we'll take a look.

So vast majority, interestingly, schedule a follow up visit in the first month. That was 80% of you responded that way. And I can tell you that in the VA we were not aware of a definitive protocol that establishes that, or in private practice for that matter. I think you see as these choices allowed for that, there's some variability. So 80% of you said schedule in the first month, nobody thereafter.

5% said sort of on a patient basis they can return as needed, and then about 15% depending on the patient, individual patients and their needs and preferences. Okay, one last question here on this topic relates to aided testing. Some of you said earlier that you do in fact use aided testing to validate outcomes with hearing aids, you know, specifically with speech materials. I'm interested in why is aided testing not often assessed, at least by audiologists that we spoke with and maybe some of your colleagues? What drives that?

Is that a lack of time in the visit? Is it the fact that it itself is not a billable service? Is it that the information gleaned from that is maybe not so useful or not so important?

Or is that you already know that answer from the, the comprehensive hearing test and, and you maybe don't learn anything else from it beyond what you already know.

So with that, we'll take a look at the responses. So we got some, some distribution here widely. So lack of time being the dominant one, about 67%. The fact that it's not a billable service, 17%, not so useful or important, 17% and that you already have a sense of it from the audiogram was about 19%. I think this, this to me is a really sort of interesting one.

And if anybody has either personal experiences or thoughts as to what, how they responded here, or maybe a choice that I didn't offer, please do put that in the chat or the Question, answer. Be interesting to talk about that and get some perspectives on what's driving that, but I will, in the meantime sort of share a bit about my perspectives on this and what we heard from ent. So these are some quotes, not just from the audiologists, but from the otolaryngologists around the country that we spoke with. And they felt that audiology are in fact the gatekeepers of hearing care, that audiology facilitates so much of the process. They're the ones seeking the patients that we never see.

Sometimes they are the ones that capture the candidates, determine candidacy on their end. Another otolaryngologist mentioned this. There's a group of four cochlear implant audiologists. We have monthly meetings, we communicate frequently. If other audiologists need anything, they usually go through one of them because they're the ones that have the most direct line to us.

At rva, they mentioned the speech and audiology are under the same administrative structure. So we have a direct relationship with administration. If there's anything on the administrator side, we have a decent back and forth with them. So that was the perspective here.

So a lot of this from, from my perspective is sort of thinking about how do we more comprehensively care for severe hearing loss? And I think we know that, again, this is a priority within the va. That's a priority for a lot of us taking care of these patients. But we're trying to understand how are, how are our patients doing? What else can we be offering them to do better and how do we reach them, perhaps in a more timely way to get them sort of the help that we think they'd benefit from.

So when you look at the data for what we do for severe hearing loss, it's, um, it's not very reassuring in terms of what's out there. And I say that because a lot of the studies have not included patients with greater levels of hearing loss. It's not to say that there aren't some studies about it, but when you look at sort of some of the landmark data that people rely on when they make decisions. So, you know, for those of you that don't know, Cochrane Review is a really well established group that, that puts together these consensus panels to look over what data is out there and make decisions or make determinations about what the level of evidence is supporting things. And the good news is a Cochrane review found that hearing aids are effective, but they're very clear that that is a description of the experience of patients with mild to moderate hearing loss.

And, and you just don't see similar types of literature out there with that sort of support from an evidence base for patients with greater levels of hearing loss. And unfortunately, this pervades, you know, the VA as well as outside of the va. So many of you may know that earlier in the 2000s, there was a lot of money that went behind this cooperative study group to look at efficacy of different hearing aids. And this was done in collaboration with the VA and the National Hearing Institutes of Health as it relates to deafness and communication disorders. They ran this very large randomized controlled trial across multi sites.

But importantly, when you look at the literature and you look at the details of, of how they put together the patients that they studied, if you had a threshold that crossed 70dB, a single threshold, not, not

your, not your Puritone average, but a single threshold, those patients were excluded from being a part of the study. And so when you think about these studies and you think about how many patients, how many people you know, providers make decisions based on this information, I think it's, it's, it's interesting to realize that it may not be generalizable to patients that, that don't meet the criteria that, that were included. And certainly if they were excluding anybody with a threshold greater than 70 dB, I think there would be significant concern about the applicability of patients who have severe hearing loss or worse than severe hearing loss in terms of how applicable these are. And that is not to say, I don't mean to suggest that hearing aids are not appropriate for some of those individuals, but I think that we can't necessarily use the data or the literature that excluded those patients to make those decisions. And so I think we need that data, we need that those studies to be done that's inclusive of this population.

Something that I've, I've really found has informed my way of thinking about this has nothing to do with hearing whatsoever. I'm an otolaryngologist, neurotologist. I focus on, on ear and hearing disease and ear surgery. But if you look within the va, there's a, a rich history of, of research on lots of other topics, and one in particular has to do with joint replacement or knee replacement in the va. And the questions being asked in these studies related to who gets knee replacements.

And on surface this sounds very different than hearing issues, but actually when you start to break down what kinds of things, you can look at differences based on ethnicity and race and the provider factors and patient factors, I would argue that it's actually quite analogous to some of the considerations that relate to severe hearing Loss. You know, patients with end stage osteoarthritis have usually maxed out on medical treatments, you know, managing the pain, managing discomfort, and eventually reach a point where more of that is not necessarily helpful. And there's a leading researcher who's no longer with the VA, but was in the VA for a while. And I found this quote sort of really inspiring and interesting as it relates to this sort of topic, that a decision to decline beneficial therapy based on

erroneous, incomplete or outdated information is not an issue of autonomy or preference, but of disparity in knowledge. And what Dr.

Ibrahim has really focused on is within these groups of patients who are not getting knee replacements, and in his case, they really did find an important relationship to some socioeconomic and racial and ethnic factors, but that it wasn't necessarily that these patients weren't interested or weren't choosing it, but that they didn't really understand what their options were or what that option would entail. So with that, I sort of bring it back to sort of topics that we're talking about here. I think that the veteran knowledge and preference piece is really important. And I think the truth is that audiologists are the gatekeepers of hearing rehabilitation. There's a trusting relationship.

Certainly we see this in the va, I'd say even more so than outside of the VA in terms of patients trusting their audiologist, having close relationships with them, seeing them over the course of years. And sometimes they come to see us as otolaryngologists or cochlear implant surgeons. And, you know, we might only meet them once before if this is something that they're pursuing as a surgical option, not something that we have much of a rapport built up over time to sort of talk through or guide them along their care. And cochlear implants, I think, are very clearly an elective surgery and a preference sensitive treatment, meaning that there's going to be patients who are very much in favor of it and others who are not. And sort of navigating that decision tree is something that I think should be done, taking into account that individual patients or veteran, in this case, their preferences, and then ideally reaching some sort of shared decision making that takes into account their preferences, their choices, but making sure that they're making those choices with good information.

And something that, that I see a lot, and I think about a lot, is that, you know, confronting patients with these decisions sometimes is done without maybe access to all that information for them to make that decision, that decision. And so I think thinking about how we inform that Is, you know, and. And it's not

always the person who they're talking with that's best positioned to do that. So to give you an example from my line of work, you know, if I'm seeing a patient with an acoustic neuroma with a tumor, I'm a neurotologist. I, you know, I know about radiation, stereotactic radiosurgery.

I do. I am certified in that. But I. It's not something that I do on a regular basis. So if I have a patient who.

Where we're talking through options, I'm going to likely have them, or at least encourage them to see a specialist that does do that sort of radiosurgery on a more regular basis to get their perspective on what that entails. Because for lots of reasons. For one, I want to make sure that they're well informed. I want to make sure that they feel comfortable that they've had the best information about these different options. And I think, you know, especially in cases where some audiology practices may not be offering cochlear implants, I think it's challenging to get that sort of information to sort of a balanced view of that for.

For a given patient. And so part of what we're doing with these interviews that we're going through with veterans is trying to understand what information they have. To what extent is this an option that they've been made aware of? To what extent is it something that they feel informed about? Did they have a chance to ask questions?

And did. Did they get sort of, on balance, an understanding of what. What it does and doesn't entail? You know, I think it's frustrating when we hear patients talk about, you know, I don't want to have brain surgery when it comes to cochlear implants, because I think, you know, those of you that work with cochlear implants, you're probably well aware that that's. That's really not what this entails.

These are outpatient procedures in my. My facility. This is something that we're often doing under local anesthesia if patients don't want to undergo general anesthesia. And so we're really, really trying to do

everything we can to. To not have that be a reason why somebody avoids being able to communicate better and be more engaged.

So we've talked a little about this already, and I think this is really sort of where some of my research focus has gone more recently is sort of understanding the ways in which we assess outcomes with hearing aids. And I mean that from a, you know, clinical Assessment of benefit in all respects. So I, I brought up the idea of sort of, you know, patient reported versus the real ear measures and what we're really learning from that. And the idea that, you know, when a patient shows up for a cochlear implant evaluation, the hallmark of that is doing an aided assessment, right? They come in with their hearing aids and we see how they're doing with the hearing aids.

If the audiologist that's evaluating them thinks that their hearing aids are not optimal for their pattern of hearing loss or not reaching targets, they might refit them with some sort of clinic stock hearing aids. But the idea is, we want to know, is this hearing aid providing maximal benefit? And then assuming it's, it's doing what it can do, are we meeting benchmarks? Are these patients getting enough from that device to be able to communicate effectively or communicate as effectively as they could with what we have to offer? And I think the idea that that's something that's not assessed as often in clinical practice is something that, you know, trying to understand sort of what's driving that.

That was sort of the nature of that question that I posed earlier. We know that for a mild hearing loss, if a patient is doing 100% from a speech recognition score on a diagnostic audiogram, I think you can expect that that's what they're going to be doing with, you know, their hearing aids. So I'm not arguing that this is something that needs to be assessed in all cases, but when you look at the data of what exists out there, you start to see that that relationship really falls off for greater levels of hearing loss. Our ability to detect aided benefit. And I think those of you that are work with cochlear implant patients or cochlear implant candidates, we see this, right?

We see times where when you look at their unaided and aided scores, sometimes there's a really tight correlation. Sometimes one is significantly better. And it's, it, it goes both directions. Sometimes aided scores could be much, much better. Sometimes their scores under headphones are better than with the hearing aids.

So I think that's, that's something that, you know, the only way I know of to know what that outcome is is to directly evaluate it, you know, sort of in the sound field with the hearing aids. And while I think it's, it's really compelling that really our measures add a lot to our understanding of what the hearing aids are providing. It's sort of an incomplete picture as it relates to what the patient's getting. What, what, what information is actually reaching them and what they can do with the information that you're providing. And so from a research standpoint, one of the things that I've been thinking about is this sort of more enhanced approach to screening for cochlear implants.

How can you do this in sort of a succinct way that doesn't take up a lot of time from a visit what's already, I know a very crowded visit from a standpoint of things that you need to get done and what's involved from a counseling standpoint. But is there a way that we can be thinking about how to better identify these patients that are struggling earlier, not waiting necessarily for them to come to us or for them to see an ad on TV or something like that, but to be able to more readily identify them based on how they're doing and what sort of challenges they're having and offer this to them. And when you look at outcome measures, I mean, the VA does utilize patient reported outcome measures. The IOI HA is the dominant one there. Interestingly, we don't see a lot of those being returned, so I don't know how many patients are completing them, but when they are completed, they get sent back and they're supposed to be uploaded into the same repository.

And what we've seen in our data, and I think some other groups have, have looked at as well, it's about 20% of patients dispensed a new hearing aid, complete and return a inventory of how they're doing with

that hearing aid. And so, you know, that's subject to all sorts of concerns, right? Bias, who's actually returning them and what's happening with the much larger group of patients that aren't returning them. And something that, that we're sort of trying to work on and focus on is, is identifying that better. Both, both with the standpoint of thinking about return on investment.

Right. To document and support the VA's efforts in this respect, we're putting all this effort, time, budget towards providing these services in an unparalleled way. I mean, it doesn't happen outside of the VA in terms of access for hearing aids, but we'd like to be able to show sort of what the return is for that investment and also potentially to help identify places where that money could be spent in a more efficient or more useful way in terms of whether it's supportive alternative strategies, you know, things like captioning devices, remote microphones, all sorts of things that many of you know a lot better than I, but things that would be supportive to an individual where hearing aids are in and of themselves are not sufficient for them.

So sort of summarize some of the points that. That I've made, and like I said, again, really welcome your questions and feedback and thoughts about this. But what I would say is that hearing loss is, you know, we all know it to be an inevitable but really a treatable part of aging. And the VA has demonstrated over the years that they are a leader in the comprehensive care for. For hearing and hearing aids.

Being made widely available is obviously a really critical step towards that. But when we look at our data as it relates to severe or worse hearing loss, many of these patients are being managed with hearing aids, and really a relatively small subset relative to what we see from their speech scores are getting alternative treatments. And that includes things like ordering of remote microphones, includes things like cochlear implants. And so what we're looking towards is a specific treatment pathway to better assess how patients are doing, both from a standpoint of their own perspective, as well as

actually measuring communication outcomes with. With hearing aids.

And I think inherent in that, in addition to identifying patients who we can be supporting, we're going to identify patients who, you know, in many cases would benefit from a discussion about cochlear implants. And I think this is going to just open the discussion more as to what those conversations should be like, who should be having them. Can we set them up with peer mentors that can sort of talk them through their own experience, potentially dispel some concerns that they have as it relates to what is or isn't involved in that process? We hear patients coming in all the time saying, I need to relearn how to hear. And obviously there's some validity to that and some truth to the benefit of auditory rehab after a cochlear implant.

But I think sometimes some of these messaging becomes sort of unproductive in terms of the way that they may actually dissuade people from considering these options. So with that, I really need to recognize some of the other members of the team. Hopefully some of these names are familiar to some of you. So both on the geriatric side, Dr. Chodosh Victoria Dixon is a qualitative researcher, has done a lot of work with the interviews.

Andrew Nicholson is a fantastic data analyst who's really familiar with VA data, has really made the magic of bringing together these different data sets in a way that's not been done previously. To highlight, Dr. Sherman is a important clinical trialist and VA researcher. Many of you probably know Pam Souza, who's a audiologist who's really done a lot of work both in the VA and outside now in her her lab at Northwestern looking at outcomes from hearing aids and really with a focus on this group of patients with severe hearing loss. So she's been a terrific collaborator and somebody who really is well positioned to try to make some inroads on this problem and some of the other audiologists on the team, Colleen, Olivia and Caitlin, and then collaboration with the VA in terms of being able to access this data.

So with that, I thank you and like I said, please welcome your additional questions in the remaining few minutes and really want to thank Kim and Christy for the opportunity to present here and to share some of what we've been doing.

Thank you so much, Dr. Friedman. We'll go ahead and open up the floor now for any comments or questions that we have. Oh, thank you, Dr. Friedmann.

This last slide, everyone is just to remind you to stay on until the webinar concludes here and to complete the multiple choice exam should you wish to earn CES for today's presentation. Wait a couple minutes here for any questions to come through. I wanted to ask you, Dr. Friedmann, if you can go back to slide 19, that's the slide with the cochlear implant center expansion in your VA. Would you happen to know, I mean, currently from 2016, how many more may have been added?

Often I don't exactly know the precise number, but like I said, there is a two different considerations here. There's programming sites and surgical sites. So whether or not they deliver sort of surgical care as well as the audiology portion or maybe just one or the other, more often there's more programming sites than there are surgical sites. I think there's different models for how this has evolved. But I think the important point is that the VA is clearly looking at where there's a need and how they can expand services.

And even though I alluded to these different ways of potentially receiving care, that is to say through the va, through community care, through Medicare, you know, the VA would like to see their own team of providers, audiologists, surgeons, doing and providing this care, it doesn't always make the most economic sense to do that. But I think in places where they see sort of the analyses are supporting that they are. They're trying to make those resources available. And I think another change that we've seen over the years is, you know, there's been some changes in some of the leadership and audiology and on the cochlear implant service within the va. And I Think, you know, in the best interest of veterans.

For a long time, there was really very strict criteria for what was involved in becoming a programming site or a cochlear implant site within the va. And I don't think that they've become any more lax from a standpoint of looking out for. For veteran interest. But I think there has been. They've made that process easier to navigate.

And so I can tell you, even in my own experience locally, one of my colleagues, Caitlin Toden, who's an audiologist in Northport, some of you may know, active in the abaa, she recently established a programming center and went through the steps to do that and at her va, which is in Northport, and, you know, so they're now set up as a programming site. As recently as this week, she sent a patient that we implanted, and then the patient came just for the day of surgery and is going back to see her in Northport and will be programmed there. So there's a lot of different models for how this is evolving. And I think the general point is how can we make this care more accessible? How can we sort of meet veterans where they are to make sure that they're getting access to, you know, what we think is the best care?

So I don't know the specific numbers to answer your question directly, but offhand we do have that information and some of that actually the VA has made more and more available online for you to see directly on their sort of hearing audiology website. But I think they've definitely gone a long way towards expanding access and looking at what makes the most sense. You know, if it's going to mean a significant drive for a veteran, maybe it's better that they go through the community care pathway. And especially if you think that the number of patients you're going to be serving by opening a new site is limited, it may not be the case that that's always the most efficient way to go. Thanks, Dr.

Friedmann. Yes, I agree. Access to care is probably one of the key components to success. And you can see that just in the CI programming center alone, they essentially doubled their numbers from going from four to eight in those six years. And also I can see here for the CI centers, instead of

essentially creating one and building one from the ground up, they converted, for example, the Salt Lake City one.

They converted that one from a programming center to essentially the a CI center, you know, six years later. So, like you said, there's different models in this progress. Yeah, no, agreed. And I think they are open to different models and sort of what's going on. Unfortunately, you know, some of these, the positions on the ground are not stagnant.

So, you know, you might have it. You might only have one audiologist or one surgeon involved. And unfortunately, I've heard stories of places that had like, sort of well established programs and for whatever reason a surgeon moves away and then all of a sudden, you know, program is left to try to struggle. And it's interesting, you know, when you look at these maps, it's not necessarily always encompassing that this, the major sort of metropolitan areas you'd expect, you know, for a long time. And I don't want to misspeak, but I think, you know, Boston, part of a major urban setting, does not have a CI program within the VA or hasn't in the past.

You see, the state of Oregon, which has really immense resources within the VA from a standpoint of what's called the ncrar, the Auditory Rehab Group, you know, has for a long time not had a surgical program delivering cochlear implants for veterans. They had to drive up north to Seattle. So, you know, there's, there's sort of some, some, I don't want to say gaps, but sort of, it's not so clear why, why some of the patterns have emerged, they where they are. But like I said, sometimes it's just a matter of personnel available that, that drive some of these things. Thanks so much, Dr.

Friedman. Why don't we go ahead and advance to that very last slide just to remind our participants to take that exam. We'll go ahead and close out the classroom now. We want to thank you for your time, Dr. Friedman, and for your exper.

This ongoing partnership with Ava. It's just a wonderful partnership because they bring on guest speakers that we normally wouldn't have on. And although the AVA courses on our site can be somewhat niche, this has been just a really great presentation overall. And I think it'll be content that can reach other CA audiologists outside of the VA system. So thank you, Dr.

Friedman. Thank you guys. We'll go ahead and conclude. Thank you so much for joining us today on Audiology Online. Hope everyone has a great day.