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Oticon Government Services May 2023 Contract Update

Presenter: Kirstie Taylor, AuD

Hi, I'm Kirstie Taylor, and I am one of the account managers with the Oticon Government Services team. I'm very excited to share with you the contract update from May, 2023. The learner outcomes are that after this course, participants will be able to list the two new features in the Oticon Real, which are the wind and handling stabilizer, and the sudden sound stabilizer. Participants will also be able to discuss the instrument accessory and connectivity options on the Oticon VA hearing aid contract. And participants will be able to discuss the benefits of Oticon's new earmold material, OtoTherm. So what this launch is about, is really looking at solving these four unmet needs where hearing aids, yes, they've had solutions for this in the past for sudden loud sounds, sudden soft sounds, for wind and for handling. And when I say handling, what I mean is when you touch the hearing aid, or the patient's hair touches the hearing aid, that noise that they get from that, that artifact.

So there have been solutions for these particular problems, however, there has been often a compromise. So when you look at the way that Oticon develops our hearing aids, you see this journey that we call, or journey towards our philosophy that we call brain hearing. And that started back with the Oticon Opn one, moving towards the Opn S one and then the Oticon More, and now the Oticon Real. And really what all what brain hearing means, is being able to give the brain a very clear and complete signal so that it has as much information to work with. Because we all know that it's not just about audibility, the brain uses other cues to be able to determine where sounds are coming from to be able to even understand a voice. And when it has access to this information, then it's able to have selective attention and use that information to be able to focus on what you wanna focus on when you want to. So understanding how the brain works and the needs, this clear neural code that has been the driving force and how we develop our hearing aids. The hearing aid platform itself is called the Polaris R, and it powers the real sound technology in the Oticon Real that we'll talk about later. It runs these new detectors for fast and precise processing these

disruptive sounds. It also has an onboard deep neural network, which we introduce with the Oticon More hearing aids. I'll briefly touch on that later as well. And it is ready for wireless updates, future ready for wireless updates. So that's good to know that it's ready once those advances happen. At Oticon, we do believe that we have a solution for every person. But let's first look at this new hearing aid that we have, the Oticon Real. It is available in four form factors, the miniRITE R, the miniRITE T, the miniBTE R, and the miniBTE T. So one thing that we like to think about is that all of our hearing aids have a telecoil. So every hearing aid that fits over the ear has a telecoil. So in the past when we were talking about miniRITE T, or miniBTE T, we were referring to the fact that it had a telecoil where perhaps other hearing aids did not. Now since they all have a telecoil, and this is unique to the government team, we prefer to look at it as miniRITE R, being a rechargeable battery, and miniRITE T being a traditional battery. And of course with the rechargeable instruments, there are two different chargers that are available.

The Oticon Real is available in seven different colors and a couple fun colors. The Hear Pink, which is a really pretty little light pink color. And then the new Olive Green, which is available for only the miniRITE Rs. And it's been a really, it's been a big hit with a lot of our patients. The Oticon Real is still available with the same receivers that we've had in the past. So no need to restock the clinic, no need to learn anything new, as far as what the fitting ranges are, those are the same as what you should be used to. So we have the 60, the 85, the 100, and the 105, and the miniBTE is available in an 85 fitting level. The Oticon More is still on contract, so you still have access to the miniBTE R, the miniBTE T, the miniRITE R and the miniRITE T, and these are available in the seven colors as well as the Hear in Pink. With our earmolds and ROES, we've changed the way that we are talking about these. We found that using terms that were unique to Oticon often created a lot of confusion, because we know that you're working with five different manufacturers and everybody has different names. So we decided to make it more simplified for you. So now we call our earmolds, Standard Molds and those are for the 60 and 85s. They are the ones where you can change the

receivers in the clinic. And then the Hollow Molds, again, 60 and 85 they're also available to change in the clinic. Both of those will come in acrylic, as well as the silicone for the Standard molds. And then they both will also come in OtoTherm, and I'll explain what OtoTherm is in a moment. The embedded molds are either for the power molds, the 100 or and the 105, and those are available in acrylic, or the embedded molds can also be the MicroShells, which are the fully encased earmolds for 60 and 85. And they are also only available in acrylic material. You do have 180 days to order earmolds. I believe this is something that not everybody is aware of. You do not need to order the earmolds when you order the hearing aids for them to be at no charge. You do have 180 days, just file it as a service request and you'll be able to get those at no charge.

So OtoTherm is an alternative that we have for the VarioTherm. So for those of you who have used, or are familiar with VarioTherm, it starts out hard and then once it's exposed to body temperature it will soften. And so it's makes it very easy to put in because it's more stable. But then once it's in the ear, it kind of conforms to the canal and it's very comfortable. The biggest difference between the VarioTherm and the OtoTherm is that the VarioTherm is clear. So it's not that opaque milky kind of color. It looks much better than for patients of all skin tones compared to what the VarioTherm did. Now, keep in mind you cannot modify it. So if there is any fit issue, it would need to be remade. And currently it's only available for the Standard and Hollow molds, with the 60 and the 85 speakers. You do need to warm it up to take off the speakers because it is held on by the material itself. It doesn't snap in to another grommet, which the benefit of that is that it will fit deeper into the ear canal and the wire will hug your patient's face closer. The MicroShell that I mentioned earlier as the fully embedded for the 60 and 85 speakers, that is available in a variety of colors. Now keep in mind though, because it is printed altogether, if you have a retention feature for in the earmold that is red or blue, the retention feature would also be in that particular color. Far as chargers go, we have two different chargers, but the default in ROES for both

the miniRITE and the miniBTE are for the smart charger. The smart charger has a lid, it has a power bank that holds three charges. It takes a full four hours to get those three charges. But then you're set to go and your patient can be mobile and take it with them where they go. When the lid is closed, it will provide some drying capabilities. So that can be wonderful for your patients when they are active or living in humid areas. Yeah, so it is a very complete system at that point and there's nothing for your patient to change. There's no desiccant that they have to worry about. And it also provides a very quick charge. So you can get a full charge on the hearing aids in three hours, and if you need to just pop it in there and get a little bit of extra, you can pop it in for for 30 minutes and you're gonna get a, I believe it's 12 hours, yes, 12 hours of charge. For the desktop chargers, they are still available. They're really there for your patients that have perhaps some vision or dexterity issues. They're very stable, they're weighted on the bottom, so they're not gonna flip over.

The cord is intact into the charger. So you don't have to worry about that coming in or out, or being a a point that could break down at some point. And they are also contact free like the smart charger is. So you don't have to worry about any kind of yuckiness getting in the charger that you'd have to clean, or that you'd have to clean the hearing aids themselves. And they are indicated with these stickers, if they're for the miniBTE or the miniRITE. And this also helps your patient to understand which way to insert them. One of the hearing aids that has been more recent to be on contract is the Oticon CROS and the CROS PX. And I've found the solution for CROS systems to be very complete. I've heard a ton of great feedback from the accounts that I work with about how easy it is to work with. So there are two transmitters available. The Oticon CROS is the traditional battery style and the Oticon CROS PX is the rechargeable. And one thing that's wonderful about this rechargeable hearing aid is that, it does give you a full 18 hours of use. So that's gonna make sure that your patient has a complete day of use with their CROS system. It is clearly marked on the belly of the hearing aid if it is a CROS system. So you'll know you won't be trying to make something, make noise

and have no success and think that it's broken because it just won't make noise of course. And then as far as compatibility there, every hearing aid that fits over the ear that's on contract will work with either transmitter and you don't need to work in particular, both transmitters work with everything. So you don't even have to think about it. You can just be like, oh, they're wearing this hearing aid all the way back from Velox S. So the Opn S one and the Xceeds through the Oticon Real, everything is compatible with either transmitter. One of the biggest benefits is that, it's a first CROS system that uses the TwinLink dual streaming system. So it allows the hearing aid to be able to get information from the transmitter. At the same time the hearing aid can be paired to an accessory.

So one thing this also always makes me think about is, what does this mean for the patient? You know, this type of patient that wears a CROS system always has to think about which ear they're putting by, whomever they're sitting by so that they can hear a person as well as the TV, or a person as well as the teacher and or the speaker. And I think, you know, that's something that probably, I haven't had to experience this myself thankfully, but it could be very exhausting that every time that you go into a noisy situation, you have to think about where you're placing yourself. And because we're able to get a dual streaming system, your hearing aid can be getting information from a phone at the same time as somebody's standing there, or the TV ad adapter or something like that. It just makes that not have to be such a thought anymore. And you know, when you think about some of the negatives of hearing loss, it's about exerting effort. And that's an effort that these patients are having to exert every time they go into a situation. The other line that we have on contract is the Oticon Own, which has been a very successful custom product line available in five different colors and five different sizes. There's a lot of different options for dexterity as well. The canal, half shell and full shell have the capability of that dual wireless system that I was just talking about. So the benefit for that is, of course you can program them with the no Link wireless, you don't have to use cables and they can have that near field

magnetic induction to maintain spatial information, as well as the 2.4 Bluetooth to communicate to phones, accessories, and like I said, the no Link Wireless. Now keep in mind if you do want a telecoil that doesn't play nice with the 2.4 antenna, it creates internal feedback because they both vibrate. So what we would recommend at that point is to keep the 2.4 in the hearing aid and then order an accessory like the EduMic, if you want to have a telecoil. The canal, or excuse me, the CIC and IIC do need to be programmed with cables. But the good news is when you order those hearing aids for the first two times that they're shipped to that your particular clinic, they will come with the cables that you need, so you don't have to hunt them down in the clinic. All of the hearing aids that we have, every single one of them that's on contract is IP68. So what that means is that it's in ingress protection rated 68. So it has the highest rating that you can have for a hearing aid, meaning that it is resistant to any kind of dust or debris coming into the hearing aid, as well as water and moisture. And IP ratings are standardized.

So there's something that internationally, everybody has to meet the same requirements. And all of our hearing aids are the highest rating that you can get for a hearing aid. All right, so let's jump in and talk a little bit about the technology. This is really the biggest thing about Oticon is the way that we develop our hearing aids. Like I said earlier, we really look at our philosophy of brain hearing and what steps can we take to achieve that. So what steps can we take to achieve supporting the brain, the way that the brain is made to work. And every development that we have is, geared towards that. It's taking another step. It's like taking little stepping stones on our way to this goal of having that support to the brain. So when we came out with the Oticon Opn in 2016, what we looked at, what we chose to address first was, you know, the reality is that our brains are used to hearing sounds from all around us and our brains are actually scanning constantly all around us. And that doesn't stop happening if you don't have access to that. So if you think about somebody who has more normal hearing, when they go into a crowded situation, when they go into a noisy room, what

happens is that their brain is looking for cues. It's looking for the redundancies where, you know, the timing and level differences between their ears. So that's how, you know, our brains will be able to tell where sounds are coming from and will allow us to focus on what we wanna focus on. But in the past before when we were using the Alta2 hearing aids, those hearing aids were using a more traditional method of trying to improve the signal to noise ratio. So what they were doing was using adaptive directionality and a more traditional type of noise management system. And honestly, you know, our brains don't focus like this when we go into situations where there's a lot of noise, our brains use all those cues around us.

So with the Oticon Opn, what we did was we found a way to use our directional mics that actually, it's actually called inverse directionality. And so as opposed to looking for speech sources in front of us, it's identifying where noise is, no matter where it's coming from, and being able to reduce those noise sources without impacting the speech. And by doing that, it gives the brain access to all those sounds around us, but in a way that's not overwhelming. So you can still identify the speech, but the noise is reduced. So we are improving the signal to noise ratio more so than what we were able to with adaptive directionality, but in a way that's more natural for the brain. And one thing I always like to look at is, you know, what is the impact to the patient when this happens? And when you break it down, you know, that's really what's most important. You can throw around all these terms and say all these things, but if they don't, if you don't have the proof that it's actually improving something for your patient, then you're really not, it's not important really. So when we move from the Alta2 to the Opn one hearing aids, we tested to see how this patient, how patients that were happy with their Alta2s, how they performed and what their effort level was. So we use pupillometry, which is a method that is very objective. So it's looking at the size of your pupils. And when a patient is tasked on something, the pupils will get bigger. They'll get bigger because it's working hard, and it's trying to absorb all this information. And so when we used pupillometry, what we found was a decrease in

listening effort from the Alta2 to the Opn one by 30%. Well 30% is a big number, right? That's a lot, to be able to be able to participate with 30% less effort, that's a huge thing. So you know, that's something that I always said when I was practicing and working in the clinic was, you know, my job isn't to fit you with a hearing aid. My job is to make it, so that you can do what you wanna do for as long as you can do it. And really what I meant by that, was I didn't want their hearing loss, or the way that their hearing aids were working to be the reasons that they stopped doing the things they wanted to do. So when we came out with that Opn one hearing aid, it really kind of sang to my heart because we were able to prove that patients could stay engaged in those difficult environments on average for as long as they're normal hearing peers. And we do have research to back that up. So if that's something that you wanna take a look at, please feel free to reach out to your Oticon account manager.

So the next step that we chose to look at was with the Oticon Opn S hearing aid. And you know, the story of the Opn S is one that is wrapped up in a feedback story, which in 2019, you know, to be honest with you, I've been an audiologist for over 20 years, and going back and talking about feedback in 2019 felt like, okay, this is a little late to be talking about feedback. However, it's not really a story about feedback, it's a story about having a constant sustained output, having the hearing aid for the, having the hearing aid output be stable. And when the hearing aids output is more stable, then the brain has more information to work with. So it's about, again, providing the brain with that information, and the way that we went about it is just a really fascinating thing because, you know, like I said, I've been an audiologist for a long time and when hearing aids stopped having issues with feedback, I thought, wow, this is just great, it makes my life so much easier, it makes my job so much easier. I don't have to worry about, you know, manipulating the way the hearing aid fits, or plugging the vent, or changing the output, dropping those highs so that the patient didn't get out, or get any feedback, excuse me. But the reality was that I didn't realize behind the scenes how much the hearing aids were distorting the output by having these

aggressive feedback systems. So traditionally what hearing aids do is they look and see if there's any kind of feedback that's going to occur, and if that feedback is going to occur, they'll put in a notch filter or a gain reduction, or some kind of frequency shift until they find phase inversion. Because ultimately that would provide a more stable output. But if you keep in mind that feedback, the frequency is always changing, you know, as well as I do, if you hold a hearing aid in your hand and you slightly manipulate your hand, it's gonna change the frequency of that feedback. So if the hearing aid is always looking for phase inversion and that frequency is always hopping around, really what you're getting is the hearing aid that's constantly manipulating the output in those soft high frequency sounds.

Well, keep in mind, what do we need to hear well, when we go into noisy situations, we need to have soft, high frequency information. And a lot of times when patients are getting feedback, they're in social situations, they're not just sitting there watching the news, they're talking, and laughing, and chewing, and dancing, and hugging people, and the things that we want to do to stay connected to people. But then the hearing aid is constantly distorting the output. So we found a way to be able to prevent feedback from occurring before it had to manipulate that output. So it's a really unique system because it operates so fast. Whereas in the past, traditional feedback systems take up to four seconds to find phase inversion. The Opn S one hearing aids, were finding it in 16 milliseconds and putting in these little breakers that happened so quickly, your brain wasn't aware that there was a cessation of that sound, so the output was remained stable. And with that, with pupillometry testing, we found another decrease of 15% listening effort compared to the Opn one. But I think the really, the interesting statistic that we have on that one is when we looked at patients who loved their Opn one hearing aids, and we just transferred settings to Opn S, we tested them, and what we found was that 96% of those patients preferred the Opn S. And that was the only difference between the two hearing aids, was the feedback prevention system. So if that doesn't really tell you that feedback systems really are not

innocuous, feedback systems can really disrupt the output of the hearing aid, not only making it sound worse, but making it harder to understand speech. When you have a system that prevents the feedback from manipulating the output so much patients drastically, I mean by large prefer it, it's phenomenal. So from there we moved on to the Oticon More, and this one's on a new chip. So the Velox was the chip for the Opn and Opn S hearing aids, Velox and Velox S, One thing to keep in mind is the speed of that chip was very fast. It updated about a hundred times a second. So it was able to keep up with the speed of speech, which was really important, because that's what we were trying to do was preserve speech. So we moved then to the Polaris platform for the Oticon More. Now this platform actually updated 500 times or updates, excuse me, updates 500 times a second. So it's actually keeping up with the movement which is important for the fact that we're trying to reduce noise with noise removal systems. In the past what we had was more for comfort, maybe a low frequency roll off, capping your MPO a little bit, just making it comfortable in these more difficult environments. But again, you know, eliminating sounds from the sides and back because you're having to use a directional system and then the manipulation of the output to make it more comfortable.

So ultimately that's not a noise removal, or a noise reduction, that's noise management. So what we wanted to do, was we wanted to look at, you know, how does our brain, how is our brain able to reduce different noises and not pay attention to them and not focus on them? And the reality is that we've learned them, we've learned what these sounds are and if they're important or not. So as opposed to having a noise reduction, or noise, or excuse me, a noise management system that was based on algorithms that a person was sitting and writing, which, you know, keep in mind how hard would that be? How hard would it be if you were tasked to write algorithms for all these different noises? Well ultimately you couldn't, which is why global detectors were used. If the level of the room is this and speech present, then do this. So that's why the algorithms were written the way that they were. But if you had a hearing aid, that

actually had been exposed to all these noises and had learned what they were, and if they were important or not, and most importantly how to balance the environment around that, that's where the difference really comes in, because you can identify these sounds, even if it's something that's novel to the hearing aid, it will identify the characteristics of it and be able to put it into the most likely bucket of speech, important noises, not important noises, really loud sounds, whatever buckets it has and be able to manipulate the sound that way. And again, because we can identify what these noises are, we are able to preserve speech, because not only is it identifying the noise 500 times a seconds, it is identifying the speech that quickly. So because it can do that, it can enhance the speech as it's going through the whole process of the hearing aid through the, from the beginning to end. It's identifying speech and being able to not even maintain it, but enhance it, identify noise and reduce it. And when we move to this method of noise reduction, which is a noise reduction, because it does happen real time and that is a characteristic of noise, you have to qualify that the hearing aid is reducing noise in real time to be able to say that it is actually noise reduction as opposed to noise management.

And with that, because the chip had been exposed to 12 million different sounds and sound scenes, and had learned by trying to figure out is this an important thing and if it made a mistake, it went back and it tried again until it came out with the right answer. Because of this, again, we saw another using pupillometry reduction of listening effort from the Opn S by another 30%. So again, working towards identifying how the brain naturally does things and developing technology to support that, we have found is just really a way to help reduce that listening app. For the last thing we ever want to hear as audiologist is, hey, how you doing with your hearing aid? And your patient says, oh, you know, I'm really good most of the time, but boy, when I get home I can't wait to get those things outta my ears. That is not what we wanna hear, because a lot of your life is still happening at home. So we want your patients to be able to wear them without effort, without thinking about it, have it be something very natural. So

with that, the next step in this evolution is the Oticon Real. So with the Oticon Real, it's very interesting to look at the impact of the technology that we have. So like I said earlier, we're gonna talk about these four unmet needs, the sudden loud sounds, sudden soft sounds, the wind, and the handling noise. And like I said, I think that we thought we had that covered in the past, but we didn't do it the way that we're doing it now. So we didn't do it in a way that was supporting the brain. We didn't do it in a way that wasn't making a sacrifice. So let's first talk about these sudden sounds. And what I talk about that compromise that we've had to make in the past, you know, your patient, my goodness, I cannot stand it, it drives me crazy. Or when I'm working in the office and my colleague starts typing on the keyboard pretty aggressively, that's all I can focus on, that's all I can hear. You kind of have two options at that point. Do I make those soft or the, excuse me, do I make an adjustment to the hearing aid to make it more comfortable? But I know I'm gonna be sacrificing clarity at that point. Or do I say, you know, you need this information for clarity, so you kind of just gotta deal with it, you know? Neither of those things feel really good because they're not a solution that you're not compromising, or sacrificing something.

So that's really what this is about. It's about being able to provide a solution that not only provides the clarity, but also the comfort in those types of situations. And this is occurring in the amplifier, it's actually the very last step that occurs before the sound goes in to the patient's ear. And the reason why it is the last step, is because it's analyzing that environment and looking for those impulse, those sudden sounds and they can be loud or soft. And the way that we're identifying them is just anything that is above the average of the long-term average of the sound in the environment. So identifying those specifically and being able to adjust those immediately. So one thing I thought that was interesting when this launch first came out was, knowing that these sudden sounds happen 500,000 times every day and that's on the low end, you know, that's somebody who lives in a fairly quiet environment. But you know, when you're looking at what quantifies those sudden sounds as just something outside of the

long-term average of the environment, that could be when the ice maker drops ice. That could be when someone clicks a pen in the library, could be heels on the floor when you're walking into a restaurant, or into a doctor's office. And while we've had a solution for this in the past, if you look over here on the left, you can see we've been able to attack that sound very quickly. However, we've had a longer release time, because if you release too fast you'll hear pumping. But the problem is if you have a long-term release, it's covering up a lot of that speech information. So you're losing the audibility, and therefore the clarity, and you know, all of that information is just gone. So what the goal for the sudden sound stabilizer was to be able to instantly attack and release that with the extreme precision because of those sensors that are determining what the long-term average is, and therefore maintaining that speech and preserving that entire speech spectrum. So this actually happens very quickly within milliseconds, or within a millisecond microsecond actually to be honest, where it's able to find an attack and reduce that sudden sound. And it's not something that everybody necessarily needs for the same level.

So you'll find when we get into Genie, there is ways that you can personalize this based on what your patient needs. But the one thing I always like to think about when I talk about this feature, because it is important, hearing those sounds in the environment does provide context to where you are. So it is important, but the point is that as somebody acquires a hearing loss, the way that their brain manages these sudden sounds is different, because our cochlear filter structure changes, and then on top of it you're wearing a hearing aid that's amplifying them. So the premise behind this is not to remove those sounds, but really to normalize them, to bring them down to the point where they're as disruptive to the person wearing a hearing aid as they are to somebody with normal hearing. And that's really what it's about, is to give them a more natural perception of these sounds. It defaults to medium. We do recommend for new users or patients who have adverse reactions to those sudden sounds that you do bump it up to high at a first fit. And I will show you later what you're actually looking at

when you see this graph. But this is available in Genie at the fitting screen. So you know, I love to talk about the benefits. So using pupillometry again, we looked at what the benefit of not having the exaggerated version of these sudden sounds, but a more normalized version of sudden sounds meant to the patient. And what we found was the decrease in listening effort by again 22%. You know, and you kind of think like, where does this listening effort come from with these sudden sounds? Well, you know, if you think about like I find even just reading a book in my kitchen and the ice maker drops ice, for those brief moments, I'm like, oh good, I can have a ice latte tomorrow or whatever. And then it takes me a minute though to come back to where I was in the book and find where I was without having to go back and then go forward and oh yeah, I didn't read that, I did read that. Oh there I am. I'll just start over at this page because I can't remember. So you know, all those things that are distracting and and pull you away from the normalcy of that environment is really where the benefit of this reduced listening effort comes in. And the other thing, of course it's gonna improve speech clarity because we're not having that longer release time, we're able to instantaneously take care of this within microseconds, so that your patient has access to those speech sounds without them being disrupted.

So ultimately, you know, what we're looking at is identifying, you have to be able to identify, you can't do something with something if you don't know how to identify it. And that's really important with each one of these features that I've talked about. But it does identify those soft and loud sounds and then it's able to also preserve the speech, because it's so quick and you can customize it. So now let's get into the wind and handling stabilizer. And in the process, this is actually the first thing that the hearing aid is doing, is looking for this wind or handling noise. And it's important that you understand that that comes first because then it's removed before it pollutes the rest of the signal. So it's very important. So you know, when you think about wind noise, wind noise can be very disruptive and especially when it's an artificial type of wind noise, where you hear like somebody blowing across a microphone, it's a

different sound than wind is when you hear it naturally. And the other thing that I always wanna point out too, is a lot of times when people are in windy situations, they're trying to be social, you know, they're at the golf course, they're at the beach, they're at a ball game, they're going for a walk, sitting on the porch, and then handling noise, you know? How many times do you hear, whenever I touch my hair, whenever I put a hat on, I hear this artificial staticy noise. I noticed it when I was practicing. I would find that after I, you know, fit my hearing aids earlier when the patients would pick up their glasses to put them back on. As you know, think about glass that one. I believe the statistic is that 92% of people who wear hearing aids also wear glasses. So there's a lot of people doing that. But when my patients would pick up their glasses and put 'em on, I would stop talking for a moment. I would take a drink of my coffee, or water, just so that I wasn't trying to talk while they were making that noise, because I knew that they would immediately have an objection and say, I didn't hear you, these hearing aids aren't working well when that wasn't true, it just wasn't something that we could manage at the time without sacrificing a lot of audibility. So this is the first prevention system and the reason why we're able to call it prevention, again is because it's identified first and it prevents that from polluting the signal.

Because of that, it does give you more access to speech. So when you think about traditionally how hearing aids have managed wind or handling noise, what they've done is they've looked for turbulence across the microphone. So basically if here's your hearing aid and here's your front microphone, and here's your back microphone, if you have speech, it's going to be the same signal no matter which direction it comes from, it's just gonna have different timing or level differences to the different microphones. But if it's wind, it's going to sound different, because it might hit one microphone at a different speed than the other, or touching, same thing. If you're rubbing something, it's likely that you're not able to maintain the exact same speed. So it's going to sound different. It's not a correlated signal anymore. So that's what the hearing aids have looked for in the past. But due to the limitations of the way that the

hearing aids worked, what we were able to do, was to do more of a low frequency reduction. Well that doesn't encompass all speeds of wind. We found that as wind speed accelerates, the higher frequencies are impacted as well. But now what we're doing is we're monitoring 500 times a second, looking for that uncorrelated signal. And what we're able to do is to break it out into 24 channels with the microphone that's being impacted the most and reduce it up to 30 DB depending on which channel is being impacted and where it's happening. So we're still maintaining the audibility of speech at the same time. So the things to note about this again is that, it's preventing the wind and handling noises to enter the sound processor, and it therefore provides a more clean signal, and more access to those speech signals in those noisy situations. So it really is making it so your patients can be in those noisy situations and interact and talk. I really believe that the best way to really evaluate the system is to listen to it yourself. So one thing, if you do not have a set of demos, we can provide those for you. If your clinic allows them, again, please reach out to your Oticon account manager and we can get you the paperwork, so that you can listen to that yourself and we'll provide you some tips on how to program it, so that you're accurately identifying how the wind and handling stabilizer has advanced. So another thing that of course patients are always talking about is direct streaming.

So the one thing that we found is that of course, the number one reason people get hearing aids is so that they can hear better in noisy situations. However, that's not the only situation that they struggle with. They also struggle with communication over their phone, computer, iPad, that kind of stuff. We use the Bluetooth low energy type of signal that is compatible with Android and also made for iPhone. If you do not have this QR code, please again reach out to your account manager, we'd be happy to send some magnets to you. So when you scan this QR code, it will tell you immediately is your phone compatible, or is it not? It will show you just with a little green smiley face that it is compatible, or it might tell you that we haven't tested that phone yet. And that's really cool and important, because what happens then is it lets us know when a

new phone is scanned, so that we can test that phone and find out. But likely if it hasn't been tested, it's a newer phone and it likely will work. So another thing with staying connected is sometimes we do need to use accessories. You know, even people that have normal hearing will have trouble in certain situations. So there's a lot of different accessories that we have to be able to help your patients. The connect clip is an all-in-one accessory that allows you to have hands-free communication with any type of phone, including flip phones. And it also will be a remote microphone, excuse me, a remote microphone as well as a remote control itself, where you could do volume up, down, program change and mute. It does stream from those phones, both phone calls, and music, and whatever you're connected to.

You can connect it up to nine different devices. The TV adapter is really a great TV adapter. It sounds really well, I mean it sounds really great like, it streams in a very surround sound way. And anyway, so it's super easy to pair. All of our accessories are really easy to pair, they're all paired outside the software. So you just put the hearing aids in pairing mode and put 'em close to the accessory and they find it automatically once you put 'em in pairing mode. The TV adapter your patient would need to change into the ghost program for that to happen. So a lot of times people will keep their remote control right on top of the TV adapter and use that specifically to be able to go into that ghost program and then change the volume of the TV independently of how the TV is set for everybody else in the room. So often those two are ordered together. And then we also have the EduMic. The EduMic is a really cool accessory that is primarily a remote microphone, but it also has an audio jack on the bottom, so you can plug it into anything that uses that Aux plug. And it has a telecoil. So like I said earlier with the customs that you wanna have a telecoil for a looping system, you can pair them to the EduMic and have that compatibility. We do have a new app that is called the Companion app. The ON app is still available, just know that. The only reason why, I'm gonna just address this really quickly, the only reason why you would recommend the ON app instead of the Companion app right now, is if you have a patient that has

an onboard tinnitus program that they want to be able to manipulate the modulation, or the frequency response of that broadband signal. The Companion app will be fully featured to enable that likely by the end of the year. But at this time it doesn't have that capability. So you do need to be able to, if your patient wants to be able to do that, you would still use the ON app. Once it is available in the Companion app, they will be notified though. But the really cool thing about the Companion app is that it makes it now so that you have access to remote care inside the same app as the hearing aid app. So your patient only has to download one app, which is awesome. So now with the Companion app, there are a couple different features that are consistent as far as where they've been, but there are some things that are new. The speech booster, there's a new troubleshooting feature, something will pop up if there's anything important to find as well as like I said, having the remote care access embedded in there.

So I get a lot of questions about what is speech booster, what is it doing for your patient? So basically it's our way of giving your patient control of improving the signal to noise ratio in those difficult situations, where perhaps they wouldn't always classify them as difficult, but for some specific reason they're extremely difficult that day. So you know, if you think about how, you know, some apps might give you control over how the directional microphone is angled, or noise reductions, stuff like that. Because we use our directional microphones in a very different way, this speech booster is going to be a more accurate way to improve the signal to noise ratio, because really what it's doing, is it's kicking in the more aggressive noise management that is being provided by that deep neural network at a softer environmental level. So it gives them that benefit of more aggressive reduction of noise using the deep neural network even when it's a situation that's not as difficult as what they've had in the past. So what I would recommend to your patient as far as when to use that is, if you're struggling in an environment, hit the speech booster. If you find that you're hitting it all the time, come talk to me, and maybe let's take a look at how you're programmed, or maybe

your patient likes to push the button. I mean that could be good for them. Some people like to play with their settings. So, but that is what it's available for. As far as any changes in Genie, there have been some new additions, but by large nothing that's gonna make it difficult for you in fact, it should make it much easier for you. The first one being a new quicker way to detect the hearing aids. And it's more complete because it tells you exactly what's going on as this is happening. So you don't have to question is the hearing aid connecting? Is everything working okay? It will automatically go through this whole sequence and then close on its own. So, you know, just helping you make things a little bit easier than what they had been in the past. And whoops, let's go on forward. Sorry about that. So a couple of the new sensors that we talked about, the sudden sound stabilizer and the wind and handling stabilizer, where they're located in Genie, that would be important for you to know.

The sudden sound stabilizer, like I said, is in this first fitting screen. So it's right here next to the gain controls, which is where it defaults the view defaults to. Sound controls is where you would go in for the soft sound perception, or to increase or decrease the higher frequency sounds and then sudden sound stabilizer. It defaults to medium. This is what's happening though, and this is a really important screen because it will let you know that you can have an up to 30 DB reduction of these sudden soft or loud sounds. And the other thing you'll notice is where the activation level starts. So if you put it on low, it's gonna start at 60. So not so much with those softer sounds, but as you get up to high it's gonna activate at 40. So that's why a lot of those newer users will recommend that you start at 40, so that they do get the benefit of those softer sounds being reduced as well. The wind and handling stabilizer is in the automatic screen. The automatic screen in Genie is one that you're not gonna go into very often. That's the screen that you go into that really manages a lot of the behind the scenes kind of features. So it defaults to on, the wind and handling does, you know, I think most people do not enjoy hearing that sound, so that's why it defaults to on. But if they decide that they want to hear, I mean you can still hear very lightly when you rub

across the hearing aid. So if your patient uses the hearing aid, or uses that method to see if it's on, they'll still be able to tell. But it definitely does reduce it significantly and allows audibility to happen at the same time. So if you find that you wanted to turn it off, that is where it's located in the software. There are also some new data logging tools, which I find to be really cool, because in the past we had a pretty simple way of looking at if the patient was using the hearing aids, how much and if they were adjusting the volume. But now they can see, you can see what different types of environments are they going into. And I just find that this is gonna provide a lot of really good conversation with your patient. So as they're going into these different environments, you can hover over which time periods you wanna read about and take a look at. But you know, let's say they start spending more time in more complex environments. Why? Why is that? I think that could lead to a really good conversation, or it could lead to a conversation of, okay, is this not because they chose to and they're having a hard time?

Okay, well then maybe we need to add an EduMic as a remote microphone or yeah, I started, you know, being able to go back to this activity, 'cause I can hear so much better in noise. You know, there's some really cool conversations that you could have that give you a little bit more insight into your patient's life by utilizing this. And then the other thing you can do is look at conversation activity in different environments and during different periods. So if they start talking more, you know, what's going on, if they're listening more, you know, what has changed in their life that is creating this, why is it different? So again, just giving you that insight to your patients, giving you something to talk about that can help you to understand where their settings need to be. And then the other thing that's new is, we do have a new voice notification for the low battery warning. So it'll give 'em a little beep and then it'll let them know that the battery is low. It currently does default to the tone. So keep that aware, or keep that in mind that it does default to a tone. So if you want to have it go to voice, you do need to select that in the end fitting screen under the buttons and

indicators. And you can pick a bunch of different languages. So depending on what your patient wants to hear, or if you just really wanna scare 'em, I'm just kidding, don't do that. But depending on what language your patient prefers, they are all female voices. Just like most like Siri and Alexa are female voices, they found that those are are less alarming, so that's why they choose, they are a female voice and you can select the level to be softer, normal, or louder. So that's what we have for you today as far as what's on contract with the Oticon Government Services VA contract. If you have any questions, or if you would like to have further training, just please reach out to us. Same thing goes for the demos and anything else that we can help you with in the clinic, any of the QR codes, any research, any information. Another thing to keep in mind is that for the government employees, we do also have a lot of seminars. So get on the Oticon government services website and just feel free to browse and and register for a seminar. We would love to see you there. They're always extremely informative and a lot of fun and they're great for networking too. So if there is anything you need, please do reach out. Otherwise, thank you very much for your time.