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Signia Podcast Series: Signia Xperience - Anecdotes from  
the World of the Wearer

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Jennifer Gehlen:

Well, welcome to another edition of our Signia podcast series. I'm Dr. Jennifer Galen, manager on the clinical education team for Signia for the South region and parts of the Central and Midwest regions. Today on our podcast, we're going to focus on our current Experience platform from Signia and its benefits, but from the perspective of the wearer, and how wearers are describing their benefits as they wear the hearing aids and experience the technology. I'd like to introduce my colleague, Dr. Carol Myers, manager of the West and central regions on the clinical education team for Signia. We feel lucky, both of us, to continue to enjoy hearing about the nuances patients experience as they move about their day in their ever changing environments. Hi Carol.

Carol Myers:

Hey Jen, nice to talk with you today. I'm excited to share not only the Experience technology, but the reactions we've seen from people who are wearing this new technology from Signia.

Jennifer Gehlen:

I agree. Carol, can you start us off by explaining what makes Experience unique?

Carol Myers:

Well Jen, we know that hearing loss is as individual as a fingerprint, and there's many variables to consider for each patient. The new Experience hearing aids are designed to understand the wearer and all the changes that occur in their listening environment. So first, what we do is accurately analyze the environment with our acoustic sensors, and then we make additional adjustments when the motion sensors detect the wearer is on the move. It's the combination of these acoustic motion features that deliver natural sound to the wearer. It resembles that kind of sound wearers remember when they think back about their normal hearing.

Jennifer Gehlen:

That's great. And it makes me think at the same time that might be difficult, given hearing loss is often so gradual and creeps up on us. Can you describe what you mean by normal hearing?

Carol Myers:

Sure. Think about what happens when you go to a social event if you have normal hearing. Your brain may focus on the conversation directly in front of you, but at the same time, if you stop to think about it, you can also hear speech and interesting conversations that may be occurring to the side or behind you. And as you're focusing on speech, you're still aware of all the sounds and the environment so that you can easily place where a fan or music may be coming from, or detect when someone enters the room.

Carol Myers:

The Experience hearing aids replicate that type of hearing as close as possible, so as close as possible to normal hearing. The hearing aids automatically provide the right amount of frontal focus when you're conversing with someone, but at the same time let you hear relevant speech from other. In addition, the noise reduction system reduces the annoying background sounds that might interfere with your conversation, but yet they're still present. So you have that feeling of awareness.

Carol Myers:

This system results in wearers making comments. I think you probably have heard some of these same comments, but we often hear that individuals who are wearing these new Experience hearing aids are saying things like, "Amazing sound quality", or, "I'm hearing all the sounds yet carrying on a conversation with ease, great speech understanding and noise." And another comment that we hear quite often is, "This is the best speech understanding I've had, but still aware of everything in my environment."

Jennifer Gehlen:

Absolutely. Thanks Carol. I have heard many of those same comments, and in fact experienced it myself because we have the chance to wear our hearing aids and take them into different environments. What about the wearers own voice? That's a longstanding issue for the wearer to overcome. Can you go into more detail about how Experience technology handles the own voice?

Carol Myers:

Well, we do now that the sound of one own voice with hearing aids can be quite distracting. So most individuals, unless they've been a public speaker, just are not accustomed to hearing their own voice being amplified. And we've all heard those comments. They'll say their voice is booming, or it doesn't sound natural, or it's echoing back at them. So starting with our previous platform, we were able to identify when the wearer is talking versus when they're listening. And this is done by a mathematical calculation, and we measure the arrival time of the wearer's voice at the front and the back microphones, and then we do a cross check between the ears. So the hearing aids can detect when the individual was talking, and then they will automatically reduce gain across the frequency response. But when the wearer is listening, they'll return to that target gain and ensure that the wearer has the audibility that they need to hear everything in their environment. The traditional compromise between comfort of own voice and audibility is essentially eliminated with OVP, or own voice processing, that we use in these hearing aids.

Carol Myers:

A little story here, I get the chance to be in the field and observe patient fittings. And the hearing care professional will run this test, it takes about 10 seconds, and then they'll continue on with their fitting. The majority of the time patients are not even commenting about their own voice. It doesn't even come up as part of the conversation. So getting that good first impression I believe is critical to the overall acceptance, and it starts with a natural sounding own voice.

Jennifer Gehlen:

Absolutely. There's so many examples I'm sure, that we've both come across and experienced, but would you like to give one example and describe where OVP helped a patient?

Carol Myers:

Here's one story that has come to mind for me, and it is a patient who talked very softly to avoid hearing the amplification of her own voice. This actually created a lot of stress on her family because they had difficulty hearing her speak. Once we activated OVP, her own conversational level increased to a level where she felt comfortable talking and her family members did not have to strain to hear her. So both of the parties, both the hearing aid wearer as well as her family members benefited from this technology,

Jennifer Gehlen:

Absolutely, everybody's happy. I've seen the same thing, wearers like the sound of their own voice with OVP. When own voice processing is activated and the hearing care professional doesn't have to counsel or adjust their way through that issue, it's just taken care of. In fact, one study found OVP raised first fit acceptance to 80% with dissatisfied wearers that would otherwise be dissatisfied. And keep in mind, binaural fitting of either [Rics 00:07:29] Or BTEs is needed for OVP, since it is accomplished using our binaural audio processing. But for the other acoustic sensors and the motion sensor particularly, even a monaural fit has the motion sensor benefit since it's built right into the [Ric 00:07:46] or BTE hearing aid. Carol, can you talk more about what the acoustic motion sensors are doing to help analyze the environment of the wearer?

Carol Myers:

Yes. So these sensors allow us to more accurately identify the environment and then deliver the correct features. So I'll talk a little bit about the sensors separately, but do keep in mind they work in synchrony to deliver the best possible sound. So we already talked about OVP, but in addition to that, we analyze the noise floor, the signal to noise ratio, front back direction, and ambient modulation. And for the first time, with the

Experience hearing instruments we incorporate the motion sensor into the hearing aids. And that allows us to determine if the wearer is on the go.

Carol Myers:

It's really important because your priorities change. If you are stationary, or if you're moving. Recently, I met a patient who'd worn hearing aids for about 15 years, and of course the patient has many demands on their hearing. They want to be able to hear conversations when they're sitting in a boardroom as well as walking through the manufacturing plant. And this particular patient appreciated the sound quality in the boardroom, but what really impressed this particular individual is the advantage he noticed when he was walking. Not only did he hear a speech, but he felt more included in the world. So the hearing aids recognize when the patient is on the move, and then they can automatically relax that directionality and noise reduction to make sure that the wearer is aware and they're safe in their environment.

Jennifer Gehlen:

Yeah, that makes sense. Right? When we're sitting or standing still our attention can be more focused, but once we're on the move we need to have that greater awareness of what's happening around us, and to know where other walkers or cyclists or cars are in that environment. Or if we're at a restaurant and someone's talking to us from the side or the back while we're walking through, we'll be able to hear speech from any direction, when it's not convenient or even safe to face the speaker. What other factors are being analyzed by the acoustic sensors Carol?

Carol Myers:

So it's very common for hearing aids to analyze the noise floor and determine if directionality is needed. What is different with the Experience platform is that it not only looks at the noise floor, but the signal to noise ratio. So in high noise levels, the wearer will need maximum support from the directional microphone system, as well as the noise reduction system. But if the noise floor is low, hearing aids would previously determine that wasn't a difficult listening situation. And in some situations that prediction was incorrect. So by analyzing the signal to noise ratio, the hearing aids can

support to the listener when there is a poor signal to noise ratio, independent of the noise floor. And a common situation where we hear individuals having difficulty is with a soft spoken spouse in the quiet of their home, or maybe at a place of worship. And that's what we're really looking at when we look at both the noise floor and the signal to noise ratio.

Jennifer Gehlen:

Exactly. The last thing you said there, about just difficulty in quiet, we know from the hearing tracker survey that came out in July, 2019, an over 10,000 person survey of consumers that revealed that quiet is one of the top three areas consumers place importance on in desiring to hear better, which we haven't always considered as one of the most important. But I have a patient story to give an example. This patient described how she really noticed right away how much better she hears in quiet around the house. And when there's not so much noise, and when the speech is really soft, she described when she was in the kitchen at the counter prepping dinner, her husband's at the table reading the news on his phone, and her back was to him most of the time. She not only noticed she was hearing him better, she noticed she could understand him better than ever before from that distance, even when she wasn't facing him.

Carol Myers:

That's a great story, Jen. You're right, for the first time in hearing aid technology, the signal to noise ratio can be measured and calculated even in a quiet room and determine changes to gain, directionality, noise reduction, all to benefit the patient. In addition, there's other acoustic sensors at work at the same time. One is ambient modulations. So in your story, it keeps the kitchen soundscape natural without disrupting or interfering with speech, and the front back direction sensor determines if there's relevant speech coming from any direction and allows access to that speech signal. So what patients are experiencing is that natural sound quality, and at the same time, no compromise to their spatial awareness.

Jennifer Gehlen:

Thanks, Carol. Yeah, I agree. I think this is a resounding example we hear time and time again from our customers and their patients. This technology understands that the speech from the front, they require more aggressive directionality, where speech from behind requires, maybe more relaxed directionality and spatial awareness. I have another success story to share if I could. And I'll read it, because this is a patient that had to write it down and share it with us because she was so excited. So she previously wore hearing aids for a few years, and she says, "Thanks so much for the new hearing aids. They made my holidays so much better. My family didn't know I had gotten new hearing aids, but several, even my daughter who", in parentheses, "Who can give the most brutally honest opinions, LOL, made comments to me on how well I was responding even with music and 19 people, two babies and two preschoolers, so you can imagine the noise level. Not only was I more comfortable in such an environment, but had improved discrimination that was noticed. A great big, huge, thank you." There's really been a shift in the technology to provide so much more benefit through its precise analysis.

Carol Myers:

That's a great story, Jen. It reminds me of another patient story that I heard recently. This is a gentleman who's wearing our Experience Charge and Go, and he's got that fairly typical sloping, sensory neural hearing loss, starting at 35 DB in the lows, to about 75 DB in the high frequencies. And this gentleman, he's an experienced hearing aid wearer. He's active. Even though he's retired, he enjoys a lot of outdoor activities and traveling, and I'm going to read some of his remarks again, because this is what he had to say. He said, "Great fidelity in quiet, and when listening to TV and music." He also remarked on good speech clarity and noise.

Carol Myers:

But what really stands out to him, and it's a comment that I've really thought a lot about, is that he says, "I rarely miss an unanticipated conversation." And I think that comment speaks to the analysis of the environment where we're looking at the noise floor and the signal to noise ratio, as well as keeping that good spatial awareness using

front back direction and ambient modulation. With all of these acoustic motion sensors working, I don't think we want to forget other benefits of experience. And that is that we have seamless and uncompromised connectivity to phones, TV, remote mikes for streaming. I know Jen, you have a personal story. Maybe you could share that with us.

Jennifer Gehlen:

I do. This is actually very close to home. My husband wears hearing aids, and he's worn them for a few years, now more regularly than ever before with his Peer 312 Experience aids. And he is a streamer. He loves to listen to the news at breakfast, and take a break at work to stream a news clip or a music video or a YouTube tutorial, and then take or make phone calls privately without having to use the speakerphone, as our listeners are probably all too familiar with, with their patients. He's not disturbing anyone around him, and he has greater focus on the conversation himself with great sound quality, all around a more enjoyable and beneficial way to listen.

Jennifer Gehlen:

Carol, back to the acoustic motion sensor technology. We know it works automatically in the universal program. Does the patient need to do anything else?

Carol Myers:

That's a great question, Jen. I think we both agree that most wearers appreciate not having to think about their hearing aids as they move around throughout their day. And that's the beauty of the automatic nature of technology. So many wearers really don't need to do anything except put the hearing aids in their ears. However, we know that each patient has different listening preferences. Each listening situation is unique. And therefore we want to make certain that the patient has the option to further enhance their listening experience when it's needed.

Carol Myers:

So for individuals with a smart phone, we have the Signia app, and it is the perfect offering because it acts as a remote control on their smartphone. And as a remote control, it allows for easy adjustments to overall volume and sound balance. That's an adjustment that can control those high frequencies. And additionally, if the wearer feels

they need less or more directional support in a specific listening environment, they can control the focus of the microphones. That means they can either tighten or relax that focus to the front, or they can take the focus and direct it to the right, left, or to the rear. For example, my dear friend wears the Peer 312, and when she's hiking single track trails here in Colorado, she likes to take the lead. And then she places the hearing aids or directs the microphone in the hearing aids to the rear focus, and that way she can continue to converse while she's hiking.

Jennifer Gehlen:

I love that story. That's just a perfect example of where most of the time it's automatic, but if you have that special case scenario, and certainly we want to hike in Colorado, that you can put that rear focus so she can converse. And the Signia app allows that. The Signia app has something new, now. Can you tell us about that Carol?

Carol Myers:

Yes, it does. The Signia app has a new feature. It's called the Signia assistant, and the Signia assistant offers help in the moment it's 24/7 support to the wearer. The new Signia assistant can optimize the hearing experience. So it offers a guided sound adjustment. When the wearer taps on the Signia assistance in the app, the Signia assistant will present questions. And then based on the patient response, it makes research based changes to the hearing aid settings. This gives the wearer the chance to try a slightly different setting in the hearing aid when they're in the moment, and they can actually evaluate right then and there if the change is helpful. Based on that, they can ask for additional help, they can accept the change, or if they think it hasn't improved the situation they can return to their original professional settings.

Carol Myers:

So this flexibility really gives the wearer the freedom to try a modification and make a judgment on terms of the benefit. For the hearing care professional. It gives them complete visibility of the patient interactions and adjustments when the hearing aids are connected to the Connects fitting software. So this type of intelligence can really support fine tuning during the followup session and make good use of clinical time.

Jennifer Gehlen:

Yeah, that's great. We can all use some more time on our schedules, right?

Carol Myers:

Absolutely.

Jennifer Gehlen:

Experience hearing aids really just continue to expand the limits of technology, making the lives of those with hearing loss more natural. Adding applications has always been important, but more so today than ever. When it's difficult for patients to physically return to the office, they can rely on Signia assistant to help them in the moment, and through our telehealth application, TeleCare, to work with their hearing care professional and stay connected. We've added more resources with our full remote care resources option, and just options are available for customers to be able to pick and choose what they need to better serve their patients needs remotely. Any last minute, thoughts, Carol?

Carol Myers:

I guess my last thought here would be, hearing is believing. So make certain that you take time to test these Experience hearing aids.

Jennifer Gehlen:

Exactly. You'll discover, or should I say experience, the difference of natural hearing. Thanks, Carol. This was fun.

Carol Myers:

Thanks, Jen.