

This unedited transcript of a continued webinar is provided in order to facilitate communication accessibility for the viewer and may not be a totally verbatim record of the proceedings. This transcript may contain errors. Copying or distributing this transcript without the express written consent of continued is strictly prohibited. For any questions, please contact customerservice@continued.com

Grand Rounds by ReSound: A Guide for Improved Patient Satisfaction with Noise

Presenter: Valerie Kedem, AuD

Well, thank you everybody for joining us today for another edition of Grand Rounds by Resound, a guide for improved patient satisfaction with noise. My name is Valerie Kedem and For the next 30 minutes we are going to be talking about noise concerns that walk through your door day to day. We also just want to, you know, make sure people feel good about the difference between sound quality and noise concerns mainly. So when you do hear these issues or complaints or concerns, you know, oh, I should go over here to this particular feature. Oh, I know over here on this page that's where I should find the feature that's going to help my patient out.

So just as an FYI, this is a 1 and 2 course, so we do have a sound quality 30 minute grain rounds course that'll fill in for those types of complaints. In addition to the noise concern course that we're going to be talking about today, we do have some risk and benefits that are inherent to this course. And as always, we have a lot of help, a lot of people that you can contact for further information on anything talked about today or anything resound. So let's take a moment here and think about what is everybody seeing in their day to day? What are those noise complaints or those noise concerns or issues that walk through your door?

And for the most part you're like, yeah, I've got this. But then every once in a while there's something that pops up that maybe we just can't get fixed for our patient in the way that we normally do. So go ahead and think about that for a moment. And as you do that, since this is more of a software based course, I'm going to pull up our Smart Fit software.

Now as we go through this next 30 minutes, just know that for the most part, when you do a first fit and you do your normal fine tuning and tweaking, that takes care of a majority of what our patients are experiencing. But there are those times that we have patients that just have more complex needs and this is the way to help them get to where they need to be. Now, in my mind, the number one complaint for noise is background noise. Still. It's the number one complaint that our experienced users talk

about.

It's the number one complaint that our new users talk about is background noise, background noise, background noise, and usually that correlates with understanding speech in the presence of background noise. So we're talking about how to address that here in our resound Smart Fit 2.0. It's always nice to remind our patients that they actually do have a Manual program for those types of environments where background noise is very loud. So it's called Hearin Noise. Then anything, any program that's meant to reduce the presence of background noise will be called Hearin Noise.

Now what's going on in the background as far as the directionality is going to be either front focus for level nine, ultra focus for a level seven, or if you have a level five, it'll be restaurant. But essentially it's going to be that bilateral beam former, both of them facing front. And as you go from a five or seven or nine, you become more sophisticated with the biggest differences is in the improvement in the signal to noise ratio. So it's always nice to remind our patients, hey, by the way, you do have a manual option for those background issues, but sometimes that's not going to completely fix it. Or maybe they're aren't really wanting to go into a second program.

So at that point we still have more options. And that's going to be again under our Advanced Features tab. So you might note that under Advanced Features we've broken out our features into Speech Features and Comfort features. So everything underneath the Speech tab is about sound quality and speech enhancement. Mostly.

There is going to be one on here as we cruise through that, we will be able to help address some noise issues. If we look over here under the Comfort tab, this is where a lot of those noise concerns can also be addressed. So if background noise is an issue, we have our noise reduction feature. It is called Noise Tracker 2. And with the beauty of all of these features here that we see, Wingar Impulse Noise Reduction expansion, they are all independent of each other.

So if you change what Noise Tracker 2 is set to the default setting and maybe you turn Expansion on and you turn Impulse Noise Reduction off, you're not going to mess anything up in any of the other features because they all operate independently of each other.

So when we're looking at Noise Tracker 2, if you like the background of how some of these features work, Noise Tracker 2 is using something called Spectral Subtraction. Now Spectral Subtraction has been around since the 70s, give or take, and it's actually what the movie and music industry used to remove background noise from their soundtracks. So this is what we've implemented into our noise reduction system. And in a very simplistic explanation, what's happening with Noise Tracker 2 is that it's monitoring the environment, it's looking for speech, it's looking for background noise. When it finds speech, it says, okay, cool, that's speech.

And it just Leaves it at the volume that it's found at in that environment. When it locates background noise, it says, okay, cool, that's background noise. And then it's going to reduce the volume of the background noise by a certain decibel. So if we take a look here, we have mild, moderate, considerable strong. If you have a Mild Noise Tracker 2, that is a noise reduction by 3dB, moderate is noise reduction.

Background noise reduction by 6dB, considerable is 8, strong is 10. When you're looking at the different levels of technology, when you have a level five, you still, it's not just on and off or often mild, you get mild and you get moderate even at that level five. So you do have some flexibility. And a level seven you add considerable. And in a level nine, you add strong.

In addition to adding strong, you get this magical thing called per environment. So I'm going to go ahead and click on this compass looking thing right here. And this is noise tracker 2 per environment. So what we're looking at with quiet speech, speech and noise, noise is different environments that the

patient could find themselves in. We're describing that right now.

I'm standing in a quiet environment that would just be like all of us hanging out here, nothing going on. When you see speech soft and speech loud, this is just saying I'm wearing my hearing aids right now and it's a speech only environment, no background noise. When I say speech and noise, I like to think of it like speech and noise, telling me that I have both speech and noise in this environment. So think parties, restaurants, offices, noise. We're not talking about background noise.

Even though this is our background noise reduction feature, we're talking about an environment of noise. So that's going to be a ball game, maybe a mall, a very busy parking lot, the side of a road. There's not speech in there. It's not a quiet environment, it's just noises around me. So if we think about these environments like that, what's happening is that the hearing aid in Level 9 is going to determine what environment the patient's in.

And it's going to apply different levels or different reductions of noise reduction. We give you a cheat sheet here on the bottom. So as we pull to the right, we are increasing the amount of noise reduction. So patients should be experiencing less background noise. If I pull to the left, I'm decreasing the amount of noise reduction.

So the patient should be experiencing more background noise.

And this kind of makes sense, right? If I'm in a quiet environment, reduction of three of that mild noise Reduction is probably going to be just fine. Why? Because it's a quiet environment. In theory, there shouldn't be background noise, or a lot of it.

At least if I'm in a noise, loud environment. So I'm standing at the corner of a very, very, very busy road, let's just say Times Square, there are a lot of stuff going on. It's loud and it's noise. Then I probably will

need more background noise reduction. So that's pulled to nine.

So this is one of the features that you do get in that premium product. So you go from having two options for noise reduction and a 5, 3 and a 7 and 11, because you had strong plus seven independent environments operating in the background. You can also adjust for background noise within the smart 3D app if the patient has a level 9. So that's one of the upgrades that you get for the level nines within the Smart 3D app is that you have something called sound enhancers. So the patient can independently make noise reduction adjustments.

This also holds true for the windguard, and this also holds true for the directional microphone beam widths.

Now, sometimes we also have a complaint of loud, sudden sounds, right? Like my door slamming and my keys dropped and I went out to dinner and my busboy was just really, really going to town. In those instances, impulse noise reduction is going to be their friend. Now, it does default on to mild in all levels of technology 5, 7, and 9. But if the patient's still flinching every time those doors slam, you can certainly go into moderate or perhaps even strong.

And this should help handle those loud, sudden sounds complaints. Also, what you're going to notice is that there are little eyes here. If you click on an eye, it's going to give you a written blurb on what's going on with this particular feature. And if you have a video, there's a video associated with all these features to try and show us what the feature is doing. For Noise Tracker 2, if you look in the background as it cruises through here per se, you can see that the background noise, or those people, if you will, are disappearing or getting lighter and fainter.

So we're reducing that.

When we're talking about how to help with wind noise, windguard is going to be where we would go. That makes sense, right? It's called windguard. Awesome. It does default to mild.

In program number one, if I put it into a program number two, wind guard goes off. And program number three, if I have an outdoor program, it goes to moderate automatically. And then if I do a music Program well, everything basically going to be turned off. So if the patient is complaining of wind being problematic, you can certainly either turn on windguard if it's not turned on, or you could make it stronger. When we're taking a look at these different features, what the differences is in the level of technology is how strong can you make that feature.

So we're not doing anything differently behind the scenes. It's just how many changes can you make? How much decibel basically can you reduce it? Is it 3, is it 6, is it 9? Usually if it's 9 or 10, you've got that premium product.

If it's 3, you've got more of that level 5 product. Now what Wingard is doing behind the scenes is that it's basically in sleep mode. And so if when it's on, it's just kind of hanging out and it's waiting for three parameters to occur at the same time, it's got to be a certain frequency range, it's got to be a certain decibel level, around 75 dB, between 750 and 1500 Hertz. And there also has to be an asymmetry between the front mic and the back mic, or turbulence, if you will. So once all those three conditions are met at the same time, windguard will come up out of its sleep mode and it will reduce that wind by whatever level we have it set at.

If you happen to have a single mic unit, so maybe the older mic and Helix custom products that were around for a long time and still are lingering out there, maybe you have a cic. If you do not see Wingard in the software, do not worry, it is not broke. That's exactly it. It is how it's supposed to be. In order for us to determine if it is wind, that hearing aid needs that dual mic system to complete that whole process.

Now we also have expansion here and so expansion is pretty cool. And basically this is going to be for our folks who they put the hearing aids in and say, wow, my room is breathing. It's weird. I had this weird sound in my room or huh. All of a sudden I can hear my refrigerator is running.

And so if you have that complaint, these low level environmental sounds and these environmental sounds are softer than what Noise Tracker 2 is going to be used for. So Noise Tracker 2 kicks in a certain decibel, these would be a little bit lower than that or a lot. That is when expansion is going to be your friend. So any really soft sounds, go ahead and turn expansion on. And again, you do get this in the five, the seven or the nine, it's basically off mild or off on.

In the five, the seven is moderate, the nine is going to be strong and you can turn it on. And they should be able to notice that those sounds are definitely being reduced. Now sometimes I get the question of, okay, that's great, but what about if I have a five, a turn expansion, a mild, and now I need more. So if that's the case, you know, sometimes you do come up against that type of complaint or issue. What we're looking for now is my gain adjustment screen.

So if I go to my gain adjustment screen, what I want to happen is I want to go to my environmental optimizer here. So if you're an expansion and it is just we need more reduction for those low level environmental sounds. Environmental optimizers in all levels of technology safety. So Environmental Optimizer 2 is big, fancy words for automatic volume control wheel. And these might look familiar, right?

It kind of looks like noise tracker 2 per environment. That's because it's just the same environment.

We're saying, okay, right now I'm wearing my hearing aid in a quiet environment, a speech only environment, A speech and noise environment or a noise only environment. And we're just saying that in each of these independent environments, we're automatically turning the volume up by 2dB, 1dB.

We're not turning any volume up, we're taking it down by 2dB, reducing that volume in the hearing aid

by 3dB.

So these are actual decibels. And so if that expansion situation pops up, you've already turned it on, you've maxed it out, patient's still struggling, you could come to this quiet environment and maybe we don't need to turn the volume up by 2dB for this patient, we could maybe take it down to zero. So that's the way you could utilize both of the features at the same time for that complaint, especially as you go down in tiers of technology.

Let's go back to advanced features here, back to comfort.

And let's talk about an actual noise that sometimes pops up. And that would be in the form of hair noise. So hair noise can be fun to deal with, right? Sometimes it's just like, oh my gosh, oh my gosh, I wish I had a different style of hearing for you. And we actually have had our global audiology department do a little bit more in depth research on which of these features truly work for a reduction of hearing noise.

And what we found is that for hearers, we thought expansion would be a good idea or maybe impulse noise reduction or Wingard. And we found that they don't really actually do so much for that complaint of hair noise. But what we did find work is increasing your noise tracker. So if you maybe want to make a hard cut, maybe we were at mild, but now we're doing noise reduction at moderate. Or if you happen to have that per environment because you have a level nine, you know, you might be hearing the hearing noise in a quieter environment or maybe a speech only environment.

And so you could boost that noise reduction, especially for those environments that the patient's reporting hearing a lot of that hair noise over those microphones. Another way that you can address hair noise is by changing from our comfort page over here to our speech page and looking at directional mix. Now, directional mixes are crossover frequencies. So essentially this is what's happening. We're

just changing how much information we're processing from omni versus directional.

Directional mix is always hanging out in the background for all levels of technology. 5, 7, or 9. We do determine the mix based on the hearing loss and the type of hearing aid the patient is wearing. And in level nine, you can change it. So we find that if you turn down and that means she's moving it to the left here, the directional mix, this can also help with hearing noise.

And then two more to go. Putting the hearing noise program on seems to help out quite a bit. And last but not least, you could try a different type of receiver if you happen to have a ric. And so this particular receiver is called a Marie receiver or Microphone and Receiver in the Ear. And its claim to fame is that it collects the patient's own pedicures.

It's just a fifth option in our receiver lineup between low power, medium power, high power, ultra power, and the mrie. And it collects the patient's pedicures by putting a microphone on the end of the receiver. So as the receiver goes down to the ear canal on the back part, where you would push in, there's actually a third microphone there. And because that microphone is protected by the ear, we find that wind is not so problematic because the top microphones are usually not on whenever wind is around. That's usually an outdoor program.

So that means that the Marie microphone is active. And because it's hidden down in that ear canal, wind can't just blow over it. And I don't know if anybody's heard wind through the microphones of a hearing aid, but it literally sounds like you have a hairdryer, like right up on it. Oftentimes and so if you use a Marie receiver, you can get up to a 15dB reduction for wind noise, which is pretty significant when you think about 15 decibels. Pretty, pretty good.

So just a couple more here and then we'll cruise into our case studies. I would like to mention that the case studies that we will look at here in just a moment are in the PowerPoint that's provided in the AO

course. So if you want to go back and reference those or you want to print them out, it is located in that course for you.

So we did briefly talk about directional mix for hair noise, but there's also another way for noise issues that you can use this. And this is going to be in the form of whenever your patient comes in and you've done all the stuff you normally do to reduce a quiet environment being too noisy. So it's still the quiet environment just seems too noisy, Too noisy, too noisy, not really doing anything to get it to be better. You could use directional mix and you would actually pull it to the left as well. So you could reduce directional mix for hair noise.

You could also reduce directional mix for the complaint of I'm in a quiet place, it still sounds too noisy. So let's pop over here back into our PowerPoint and in the last couple of minutes that we have, let's cruise through these case studies here. And this is just to firm up all the information that we quickly talked about. So as you leave the course and as you go back to your clinics, you feel much more confident about making these changes in the software and also just having some different ways to address these issues for your patients. So the first case study is that the patient's hair, it's too noisy.

So we know we can increase noise tracker too. We know we can turn down directional mix. We can activate front focus. It's also your hear in noise program. And you could also attach a Marie receiver to those Ricks if that's what the patient is wearing.

The features that have no significant effect, expansion impulse noise reduction and wind guard. How about this? While walking, the wind is noisy. Okay, cool. I can either increase the wind guard, I can turn on the wind guard if it's not active in that particular program.

And I could also put those Marie receivers on as well for up to 15 decibels of wind reduction.

Background noise is overwhelming. So of course we could put it in program number two, that hear our

noise program. And oftentimes that will help. But whenever it is not doing everything that we needed to do, we have an independent noise reduction program called Noise Tracker two.

So you can do level nine, we have a little bit more flexibility versus level seven versus level five.

My room has a humming noise, so that is going to be expansion. So you can either turn it on, you can increase it, and if you've maxed out expansion, you can also use environmental optimizer to that quiet environment and you can reduce the volume for that automatic volume control wheel. Just of note, when we're talking about expansion, if you ever notice that in one fitting it's all off and another footing, it turns itself on what seems to be automatically, that's actually the case. And what we do is that if the audiogram that's been entered has a low frequency pure tone threshold of 25dB or less, or easier said is you got good highs, good lows rather, and bad highs, then what will happen is the software automatically turns expansion on to mild. Because we know based on a bunch of research and years of data that more likely than not you're going to be turning that feature on for that particular fit.

If you happen to have any type of complaint of like receiver noise or receiver sounds, you can also turn extension on and that should eliminate any of those concerns. And then background noise is too loud and in a quiet environment. And that's going to be using one of our speech features, which is called directional mix. And you're going to pull that to the left or decrease the directional mix. So that brings us to the end of our time today.

I want to say thank you so very much for joining us for another grand round by Resound. I hope that as you go forward, you will feel more confident about handling some of these noise issues that we do hear day to day and maybe have learned a little bit about different ways to adjust for those particular concerns. Also, please don't forget to take your quiz so you can get your CEU associated with today's event. So thank you so much and have a great rest of your day.

