Grand Rounds by ReSound: A Guide for Sound Quality Concerns

Presenter: Valerie Kedem, AuD

All right, welcome everybody. It is right at, well, noon for me and the top of the hour for everybody else, wherever you may be in the country. Thank you so very much for joining us for another session of grand rounds by Resound titled A Guide for Quality Concerns. My name is Valerie Kedem and I am one of the trainers over here at Resound. The goal of today, and actually a previous one that we did earlier this week, is to help kind of define the differences between a sound quality concern and a noise concern, mainly.

So whenever you hear these complaints come through your offices, you can say, oh, that sounds more like a noise situation. That sounds more like a sound quality situation. And so you can just dive into the screens and the advanced features faster to get to a better result and goal for your patients. So we do have a lot to talk about today, and there are obviously inherent risks and benefits with any of the courses that we take. So this is what this slide is addressing.

And as usual, we do have a pretty deep group of people. So if you have any questions about anything presented on Today or anything at all, Resound, please don't hesitate to reach out to any of the folks that are listed right here on this course.

So let's talk about sound quality concerns. So I want you to take a moment and think about what are those sound quality concerns that kind of cruise through your offices? And while you're thinking about that, if something pops into your head, if you wanted to write it here into the Q and A, I will do my very best to answer them at the end if we don't address them as we go through the next 30 minutes. So if you want to and you'd like to participate in that Q and A, please feel free to do so. And while you are doing that, I am going to go ahead and pop into our Smart Fit software since we are going to spend a majority of our time working in here.

Now, once we go through these different features that you can utilize for better sound quality outcomes, we will go back to that PowerPoint and spend a little bit of time with some case studies, mainly just to

firm up what is a whole bunch of information thrown at you at a really, really rapid pace. So what I'm going to do today is just on each screen, point out and identify some different features that you can utilize for certain sound quality issues and also talk to what they may be and how you can use them. So on our gain adjustment screen under fine tuning, the first feature that I'm going to use is here, right here, called where my pointer is at the bottom middle of the screen called use instrument mpo. So if you haven't been in this version of the software, this is something new. And essentially what's going on is that we have an instrument MPO and then we have prescribed MPO for us to be able to see what happens.

I'm going to change my display options to output view and I want you to take a look here again my pointer is at kind of the top left ish of the screen and this is bright red line at the bottom of this gray shaded area. So this is representing prescribed npl. But sometimes patients will come in typically with bigger hearing losses, but not often, not always. And they'll say stuff like when the door slams, my hearing aids turn off or there's a something clatters, my hearing aid turns off or it's just not loud enough. So if you hear that and maybe you've tried some other solutions and it's just not really working out for you, what you could consider doing is maybe that instrument MPO needs to be utilized versus just the prescribed mpo.

So I'm about to push this button. When I push this button, watch this bright red line and see how it moves up here. So here we go. One, two, three, boom. So my bright red line moved from the bottom of the gray shaded area up here to the top of the gray shaded area.

Now if this is like way too much MPO for your patient, not a problem. If you come back down here to where my gain adjustments are and you come and you find your MPO tab, click on that and then you can come into the middle of the bottom part of the screen and maybe you want to bring it down by threes. And so now we're pulling that mpo, it's right about into the middle of that light gray shaded area.

So that's one way you can address eh, my hearing aid feels like it's turning off or it's just not loud enough.

I'm going to reverse this display option back to this gain or yeah, gain view and I'll show you our audiogram here. I really probably wouldn't ever fit this audio with an ultra power receiver, but for the purposes of today, wanted to be able to talk to a couple features that you see that only pop up whenever you're doing a power fit. So a power that can involve a power BTE, high power BTE, a ultra power or super power BTE that's going to be that Enzo Q988 or 88 with the 675 battery. The big Mac Daddy is what I like to call it, or what we see here, which is a RIC fit with an ultra power receiver. Those are all considered power fits.

When you do that, what you will find that pops up is a compression option. And it allows you to decide, do I want wdrc, do I want a semilinear fit, or do I prefer a linear fit? Now, of course you can do this manually, this transition between semilinear linear and wdrc, but this just helps out and kind of takes the guesswork out of what you're trying to fit. So we do have patients that have very specific preferences for sound or sound quality. And sometimes, especially with these more severe to profound hearing losses, WDRC might be just not what they're looking for.

Maybe it's too soft. Maybe they, even though they're responding appropriately and they're engaged in the conversation, they just don't feel like it's got enough of whatever they're looking for. You can change those compressions to help just make them feel better with that overall sound quality. So that's one of the features that you do get with what's considered to be a power fit.

Now, when I'm still here under gain adjustments, but I'm going to go to my next tab, which is an environmental optimizer. And so environmental optimizer. Don't let this big fancy name here fool you. It is just saying we have an automatic volume control wheel internal to the hearing aid and it automatically adjusts the volume based on what type of environment the patient's standing in. So quiet.

Just if we just sat here, we're doing nothing. Soft speech is probably what we're in right now. Somebody's talking, but it's still a quiet environment. There's only speech in the environment. It's what's going on with these two speech situations.

Speech and noise is really saying speech and noise. So think restaurants, parties, maybe office spaces. And then if I scroll up a little bit here, you'll see noise. And noise is just talking about a noise only environment. We're not talking about background noise.

We're just saying I'm standing out on the side of the road. A noise only environment. There's not speech, it's not quiet. So one of the big complaints or sound quality concerns that I often hear is my own voice doesn't sound good. It don't sound good.

You promised me six weeks ago it's going to get better. And it's just, it's just not. So when I Hear that? My go to is to come to Environmental Optimizer and find my speech loud category or environment, which is the third one down. Maybe when I'm wearing my hearing aids, every time I talk, I don't need the hearing aid to go up by 2 decibels.

So that's what these numbers are representing. Decibels 2, 22 1, 0. Maybe when I talk I just need my hearing aids to stay at the exact volume that they are programmed at. So my own voice is too loud. Okay, cool.

Let's try zero and see if that doesn't help out a little bit. Any type of complaint that's like everything sounds good but and it's like a volume complaint for specific environment or specific time. Try Environmental Optimizer out. It will fix a lot of those issues really, really fast.

So moving on to our advanced features screen here, I'm going to bypass directionality just for a couple minutes and then I'm going to come back around to it. But I do want to start with directional mix. So directional mix is our crossover frequency. Everything that's on the right of that line here where my pointer is, if you can see that is going to be processed in a more directional fashion. Everything on the left side is going to be processed in a more omnidirectional fashion.

The software picks what it's going to choose based on your audiogram and the hearing aid that's being fit. And fives and sevens, it's fixed, you don't have access to it. You cannot change it. If you go up to that technology level nine, you do have the capability to tinker with directional mix. So another common sound quality concern that I hear come through is ah, I hear everything around me, but I don't hear the person or the things right in front of me that I want to hear.

So if you have a nine, what you can do is come into advanced features under your speech category and make it stronger. So that's pulling it to the right so we're processing more information, more directionality, that should help out for that. I just don't hear the people that are right in front of me. Now. I recognize that sometimes not everybody has an eye.

So in that case you could come to gain adjustments, reset this and go back to fine tuning. And if you want, you might try to just kind of beef up maybe the mids a little bit and see if that doesn't help pull out some of that speech information. So that would be the alternative of using directional mix.

When I move on to my time Constants. And notice as I hover over each of these features, it does give me a little blurb on what the functionality of the feature is. So this is trying to help. We know you guys are busy, lots going on, it's hard to remember everything. So hopefully this will help.

Just like, oh, yeah, that's what it is. So time constants are one of those features that I do see utilized more and more. And before I go any further, I always like to just put out this, like, warning, if you will. It's

not a warning, but when you leave these courses on advanced features of any type, I don't want you to feel like you have to go and do all of this stuff before you even fit the hearing aid. It's really more about you can have an easy first fit.

A lot of our patients do really well. There's just those minimal, normal fine tuning adjustments that happen just to get used to amplification. But we always have those patients that they just need more. They need more things. And so.

So a lot of these options are going to be for, oh, gosh, I can't believe Valerie's back on my schedule. What do I do? I feel kind of like stuck up against a wall. So these are ways to get unstuck, and I hope that you find that they are really beneficial. With that being said, time constants is one of those features that is being used more and more often because it kind of helps with a variety of different things.

So one of the other complaints that we hear, and I'm sure that you hear especially brand new users, is everything's too sharp, sharp, sharp. And that could also go along with harsh and tiny. So if you've seen a patient several times and you have, I'm going to recalculate this so we can see. Maybe you have said, okay, all right. Her sharp, tinny, no problem, I've got you.

This is what we do for that. And then they're like, nope. And you're like, oh, well, maybe, maybe need a little more low. You got. I've got you.

No problem. They're like, so I would never, ever want anybody to see this fit following up behind me because I don't know what's going on. Right. I mean, we're clearly not giving them the audibility that they need. But they're still saying, hey, it is too harsh, too sharp, too tenny.

If that's what's going on in my head, I think, okay, first let's recalculate this fit. Boom. I feel way better with that. Second, let me go to my advanced features here.

And this is my speech tab. So everything under the speech tab under advanced features is about making sound quality better, speech better. Everything under my comfort tab is about comfort of the hearing. So a lot of our noise concerns can be addressed over here, and a lot of our speech and sound quality concerns can often be addressed over here. So harsh, sharp, tinny.

We've already recalculated, so we've got better mids and highs for sure. And I'm going to slow down my attack and release times. I'm going to slow down those time constants. We use really fast attack and release times that we refer to as syllabic. That's the default, default setting.

And what that does is it does make for a sharp sound quality. Most auditory systems are cool with it, but some are not. And this could just be how you're built or sometimes just what, what maybe you're coming out of different hearing aids and what that was doing for their time constants or their attack and release times. So chronic constant, harsh, sharp, tinny. You can slow them down.

I usually like moderate. It doesn't really matter which one you do slow or moderate. I would say if you want a more significant change, you should go at least to moderate, but you're not going to get anything wrong. And so what should happen here is that, yes, I can hear, I can understand speech way better because I've got my mids and my highs back in here. Oh, and by the way, that sound quality just is much more comfortable for me.

Now on the other way that you can use time constants, one of the other ways you can use time constants is going to be for our folks who maybe have. They've had a stroke, so they've got cognitive issues. You fit them a year ago, they've had a stroke within the last six months. On paper, audiologically, they are exactly the same as they were pre stroke. But they're just saying that sound quality is not right for them, that speech understanding is not right for them.

It's just not the same. You can go ahead and again slow down those time constants as you slow down the time constants. That should help those folks out. We also see slower time constants being utilized with people with bigger hearing losses. And that does kind of go hand in hand with, with having poor word recognition.

So if you got any of that going on, slowing them down tends to help out quite a bit.

Next on our roster here is going to be Sound Shaper. So Sound Shaper is Our frequency lowering. And so what it is doing is if I play my video here, it is going to be doing frequency compression. We do frequency compression in the form of frequency lowering. We do always leave it in the off condition because we don't want to distort the signal any more than we absolutely need to.

And if you read the right paper associated with this, I do believe the technical term is squish or squelch or something to that effect. But basically we're just moving it from the area of inaudibility to the area of audibility. So why would I use sound shaper when my I turn sound shaper on? Maybe your patients are saying that the S sound isn't what they're looking for or they could even be reporting garbled speech. I know there's a couple questions over here and I will go over there into the Q and A in just a few minutes and make sure that we talk about those.

So when we're using sound shaper again, it's just sound quality is not right. Garbled speech. This doesn't sound as good or at all what we're looking for. And so at that point you can definitely turn your sound shaper on. So when we're looking here at the bottom last advanced feature here on my speech screen, you might notice that my left, my right side doesn't have a recommendation.

Its recommendation is off because it's bolded. It's always in the off condition. But you might notice on my left side that the recommendation for this is mild and that's based on the how the slope of the audiogram is going. And it's going to be based on where the slope begins and ends and where's over a

10dB slope happening. So it's looking at, you know, some parameters in order to activate it or keep it off.

Sometimes we get questions about, well, we. This audiogram looks really similar from one to the other. It's just a few minute differences. Those differences often are what's going to recommend one being turned on or off or even just maybe very mild versus mild. So it is all based on that audiogram.

So we've talked about some ways that each of these features can individually help certain specific complaints. But what about when you just have like a general complaint and it's like nothing's happening, nothing's working. So that could be something like, hey, nothing sounds good, I don't like it, it's not right. Boo. So in that case, I have three solutions and they are in the order that I would do them in.

Solution number one is going to be right back to our time constants. Maybe it is a sound quality issue that is related to the attack and release times, but the patient doesn't hear it as harsh, sharp, tinny. Or it's just not being reported as harsh, sharp, tinny. Sometimes that happens. You're saying one thing, patient's saying the other.

It's just not exactly clear what's really going on. So in that case, you do get time constants and sevens and nines. So maybe just slow it down, try each of them, see if that doesn't help with that. Overall, I don't really like the sound quality. It can for sure, so that would be my first option.

Number two, directional mix. Maybe their auditory system just likes a different directional mix. You're not going to hurt anything here. They will tell you if it doesn't sound right or good or if the speech is being affected in any way. So go ahead and try it.

And these are kind of like Hail Marys, if you will. This isn't something that you're going to see every day. This is like, well, I got this, have nothing to lose and I have everything to gain. Why not try a couple of these things? So go ahead and give it a whirl.

Not a problem. So for that complaint of nothing sounds good, you can try directional mix too. Time constants first, directional mix second. Now, another way that you can address that complaint is by going to your patient screen under Prescribe first fit, which is the top left. You'll see target rule.

Now, Audiogram plus is Resound's proprietary target rule. If your patient has always been fit in NANL2, it's probably not going to sound right to them. It's probably not going to be their jam. Go ahead and change it to NAL NL2. That's totally fine.

We are not taking away any of the advanced features, and furthermore, we're not taking away any of the functionality of the advanced features if you choose to use something other than Audiogram Plus. So whichever one you see up here that works better for your patient, totally give it a whirl. You know, we do have nalrp, so because we've been talking a little bit about power fits, sometimes this is what makes things better. So, you know, tinker with it again. These are kind of last resorts, but there's nothing wrong with trying it to get our patients to the place that they are happy with that sound quality of the hearing aid.

And the last one that I have before we hop into some case Studies to kind of firm this up in our head here a little bit is going to be these hearing aids make too many changes. When I walk from one room to the next, I don't know what's going on. They're just doing something. I don't like it. So.

So there's a couple possibilities that are going on here. My go to is going to be this. I want to go back to my environmental optimizer, my most favorite feature in the whole software. And I want to make sure that I got something going on like this. Now the reason I say that is because there's always caveats.

Right. With Environmental Optimizer, we're making true decibel changes. It takes 1 second per DB change for the changes to happen. So if you have this positive 6 in quiet and you have this, which is negative 6 in speech soft, for that volume change to occur, that transition to happen, that's a 12 second transition or a 12 second delay. Yeah, it's absolutely going to sound like your hearing aids are doing something wonky and making these weird or too many changes.

So I always go and I make sure that I don't have stuff going on like this because that will always sound kind of off to the patient. We want to try and keep these from line to line to line. So quiet, soft speech, speech loud between two and in a pinch you can do three db. Okay, so that's more of what we're looking for so the patient doesn't hear that transition. Also, if you have folks with bigger hearing losses, sometimes they don't like all the automatic functionality that occurs in the background.

They sometimes like this off. They just want it all, all the time. They don't want any changes. Just give it to me. Nothing wrong with turning it off.

Never hurts to try. Now for the second option. It's not one that I see done very often. Not nothing to do wrong with doing it. It's just not something that I see very often.

But sometimes we have sensitive ears and when we see 360 all around, whatever default is for directionality, whether it's 5, 7 or 9, don't forget that in addition to having omnidirectional patterns for both sides and directional patterns for both sides at the same time, you have this asymmetrical pattern. And that means that one hearing aids and omni and the other is in directional. And so some really sensitive ears might notice that. So if they always feel a little off balance or they just feel like they don't like the changes, you could try doing Soft switching. That just means that both hearing aids are always together in their directionality.

That the right and left will always be together Omni and they'll always be together in directional. There won't be one in one and one in the other. This is usually not something that we hear, but, you know, from time to time things pop up. Okay, so we've got just a few minutes left here. And what I'd like to do is come back to the PowerPoint, go to the case studies and also look at our questions here and see how we're doing.

All right.

All right. So yes, Environmental optimizer. Environmental optimizer. Those different environments. Quiet speech.

Speech. Soft. We're just saying maybe I should go back to the software here. They're just saying, we're just describing where you're standing when you're wearing your hearing aids. So we're just saying, hey, right now I'm standing in a quiet environment.

Oh, okay. Right now I'm standing in an environment where there's only speech. I have both together. Have both speech and noise. And then the one that tends to get a lot of us is going to be the noise one, because we always want to make this background noise.

It's not, it's just I'm at the mall, I'm in a subway, I'm at the corner of a road. Just kind of a noise only environment. So that's what we're talking about with that, with the recalculate. Anytime you want to reset the gain, I use recalculate. So if I change my audiogram and Noah and it'll recognize that it's going to tell you, yo, do you want audiogram has changed.

Do you want to apply those changes to the fit? And you say, yes, that's cool. But you'll notice that the targets don't match up anymore. Anymore. And so what I mean by that is like, there's a light, there's a dotted line underneath these dark solid red and blue.

Then they'll look, they'll be different. And so at that point you're going to recalculate because you want to recalculate the fit to the audiogram. So anytime you just want to go back to first fit also for those gain values, you can do it there. Reset all fine tuning. That's your mayday.

That's like, oh my God, everything's horrible. I've done a million things, nothing's working. Then you can recalculate all fine tuning. So it's going to do all the gain. Adjustments, all the MPO adjustments, as well as any advanced features that you've done.

Let's come back over here. Good questions. And what's the best software option for a patient who continues to state that they're heavily bothered by their own voice even when using an open dome? Minimize low frequency decrease. I would do Environmental optimizer Speech loud.

Okay, I'll come back, Greg, to the output view if I can. It's just how how things look for sure. All great questions. If my hearing aid moves my right ear, my truck, I don't want that. What would I do?

And then you could change the soft switching.

Okay. And I think I answered that one, Megan, about the audiogram. So I think I did. Okay, so let's go back here. Thank you guys so much.

Those are all really good, good questions. 30 minutes goes by so fast. So really quick and dirty here. In these next two minutes, voices are sharp and tenny time constant. Slow them down.

You're not going to hurt anything. Patient reports hearing all around but not in front. Directional mix. Overall sound quality is not right in order time constants. Directional mix.

Change that target rule. Remember, if they don't like it, you can always undo it. Just don't save if it comes down to that Speech sound. Scarbled sound shaper. Turn it on or turn it up.

Phone voice is too loud. I don't like the sound quality of my voice. Pull that Speech loud. Environmental optical tab to the left. We want to reduce the volume.

Feels like there's too many changes. Again in order. Environmental Optimizer 2. Make sure that it is not like woo all over the place. And then you can do that soft switching directionality.

If they ever feel off center or believe that example is I don't like it. Pulling to my right ear. Left ear. That will also do the trick. And hearing aids turning off or not loud enough.

Try that instrument mpo knowing that you can bring it down. Okay, so we are right at the end of our time together. Thank you so much for all those great questions. If you want to look at the output view, just notice that it's just a different way to look at the screens in the software. It's not actually changing the fitting.

It's just how you like to look at things. It's really. If I had to have like a quick thing to say about output view, that's just how do you like to look at it? Thank you so much. Again, if you have further questions, please don't hesitate to reach out.

I'm@vcadmnresound.com don't forget to take your five question quiz and I hope everybody has a really wonderful rest of your week. Thank you so much.