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## Advanced Target Programming

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- [Erika] Good morning everybody and welcome to this Advanced Target Programming class. We're excited to have you with us today and appreciate you sharing some of your time. Just as a quick overview, if anyone has not done an audiology online class before, a quick overview of what you're seeing on your screen. Over on your left there is a Q and A section. If you have questions as we go along, you can feel free to type them in there. We'll try to save a couple of minutes at the end of class to answer those questions. Below that there is a section that if you're having any trouble with audio or what you're seeing, that's the technical support line for audiology online that you can contact. And then down at the bottom is a handout of today's slides if you would like to view that and see that.

Quick overview of what we're looking at today. This is all about the Phonak Target software and so we're going to dig into some adjustments that can be made, especially to address patient complaints. We're also going to look at a couple of tools that maybe you're not as familiar with. We just completed the poll. For those of you that were in the classroom a little bit early, they were able to do a poll about how often they had used some of these features and seeing those results. I am excited to share with you some of what's available that you may not be aware of based on that. With that we'll do a quick overview just to make sure we're all starting at the same starting point. Then we'll look at those patient complaints and then dig in a little deeper. And so let's go ahead and jump into things.

When I was a little girl, I was fascinated by my dad's toolbox and he had one that looked like this and when you first opened it, the top tray was everything that you would need to fix the everyday problems. That's where the screwdrivers and the pliers and the hammer, they were all in that very top tray. And so those were things that we used often. But if you lifted off that top tray and looked under it, that's where the tools for the specialized jobs were located. That was the plumber's wrench and the vice grips and the chisels, things that maybe we're something we were not as familiar with

but that were extremely useful for given situations. And I feel that the top Target software is really a lot like that.

On the are the tools that we're very familiar with. We use them day to day, but if we go deeper, then we have specialized tools for when things are a little bit more complex. Today we'll do that quick overview of the top and then spend some time going down in, regardless of where you are in the Target software, it's broken into three sections. It's always subdivided into those three sections along the top. Under client this is everything about the patient. So this is their Audiogram. This is if you enter RECD, this is where that will be if you do Tinnitus matching, then you can enter that information at the bottom of the Audiogram screen under this section. So first section is everything about the patient. A lot of us don't spend a lot of time here because most of that transfers over from whatever our testing software is or from Noah. In the middle section, this is everything about the devices themselves. So this is the, where are we enter the acoustic parameters. This is the Accessories tab that if you would like to document serial numbers, you can do it in that tab, if you this is where you would make the connection or when the hearing aids are active, hovering over the little silhouette at the top would give you information about serial number in battery and Roger licensure.

And then the third section is everything about how the hearing aids are set up. So this fitting section is where we spend most of our time. And across the top are those icons to help us do a nice streamlined first fit. Even fitting hearing aids for years, it's, I still click it through 'cause it's just a nice, easy way to navigate. That's the basic basis and foundation of the software. Let's now take a look. When you first connect the hearing aids, then it puts you into this acoustic parameters screen. When we talk about adjustments and setting the hearing aids, one of the key things is you want to be sure that whatever is in your acoustic parameters screen is what matches what's on the device. There's a lot going on behind the scenes and the software takes this information into account. When it's setting it's Gain Targets, so it's very important that

it be accurate, including if you have a whatever your venting is for either a custom device for a custom shell mold. If you order something like a seashell and you Acoustically Optimized Vent , we know that hearing aids where you choose AOV have a lower remake and return rate. So it's really a great benefit to you in choosing that.

But when you get the hearing aid, it may not be quite as easy to see at a glance exactly what size of the vent is. If you look on the packing slip for that mold, you'll notice right next to the serial number, there's something that says AACCC and then list six digits. That is the acoustic coupling code for that Acoustically Optimized Vent. So if you will come in and just type in those six digits, you don't have to put this space between them, just type in those straight six digits. It will then know exactly what the venting is to again give you that accurate information. Equally important is the next step when you're doing a fitting is it's going to bring you to this feedback screen. Again, we've got our little ear icon up at the top and you always want to run the feedback test. When you do, you'll get a graph that looks something like this. The purple line is the feedback threshold. The skinny red and blue lines are the Target and the thicker line is the current setting. Many of you are very familiar with at the bottom, choosing where it says, "Allow Gain to exceed feedback threshold by five DB." That will bump up the give a little bit more headroom there. What I find that people are not as familiar with is the box just above it where it says, "Use estimated vents."

I'm gonna pause here for just a second to answer a question. For the AOV venting, the six digit number will be on the packing slip right next to the serial number. It'll say, "AACCC for acoustic coupling code," and then you'll see that six digit number.

Back to the feedback test. When there are standardized Targets, they're based off of the average estimates of ear canal size, but we know that all ears are not average. If a patient has smaller ear canals, they'll have a smaller residual volume between the end of the aid and the eardrum which can result in higher SPLs. Meaning that for the

patient, things may sound louder than you just looking at the software would indicate. When we run the feedback test, one of the things that's actually going on is that we are measuring the ear canal. When you choose real use the estimated vent. It means that when we are calculating the Targets instead of just using the average, we're using what was measured for that patient. And so when you look on the graph, we can see that for this patient, that Target line, that skinny blue and red line has shifted. And so this gives us a chance to recalculate to include that. And even if you do, when you do real ear verification using estimated event can give you a more precise starting point. So that's something that I do recommend. If you click use estimated event and nothing changes, great. That patient has a pretty average two CC ear, but that's a tool that you can use to make a little bit more precise of a starting point after these initial steps.

Then Global tuning is the first step along the way for the basic fitting. So we've got our little icon at the top and there's some important controls on the screen, one of which is that there are different options for the fitting formula. Adaptive Phonak Digital is the default and that's great most of the time. But if you do need to switch to something else, this is where you can do that. If you had a patient that was a child and in junior mode, then if you were on this screen, you would notice that the default instead of APD would be DSL Pediatric. Also on this screen is where you can set overall Gain. So if you had chosen a new user then this would I would say, "80% Target Gain "instead of a 100%." So this is where you can kinda pick that starting point for that patient. So when you're doing that initial talk with them, "Am I too loud, too soft, just about right." This is where you can make those changes. And I do just also like to highlight that you can adjust the graph view to whatever your preferences.

So if you like to look at the game display like we see here, then you'll be able to see the feedback threshold. If you prefer to look at the output view, then you'll see the curve for the MPO. The output view is also great for when you are adjusting the Tinnitus Noise Generator to be able to see exactly what is going on there. After Global tuning,

then you come to the Fine tuning tab and this is where most of the changes that you make will be. Certainly this is where we spend a lot of our time. And so I want to go through just a little bit of kinda just highlight it and touch on what the different tabs are. One of the things that I always like to remind people is within fine tuning, you see the program list along the left, whatever is highlighted in green, that's what you're making a change to. So if you're wanting to change everything, make sure that everything that you click All Programs and everything is green. If you're only wanting to make a change for calm situations, then make sure you just click Calm so that you're not going advertently changing things that you don't want to.

So let's go through a quick cliff notes version of this fine tuning. The first tab is Gain & MPO. This is where you can choose exactly which frequencies and which intensity levels that you want to change and how much you want to change them. You can group the handles for the frequency adjustments. If you want just low, medium, high, you can pick three if you want to see each of the individual channels then you can choose that and of course if you need to make a change to one ear and not the other, you can decouple the hearing aids right here in the center so you can change the ears independently there. Audibility Fine Tuning you choose a specific type, whether it's a speech component or a situation. It will highlight and show the area that's affected and then you can choose how much change you want to apply for those specific areas. Program Options allows you to change the sound cleaning features within the different programs. This is where you'll see microphone Directionality and then down at the bottom you have WhistleBlock which will be feedback control. SoundRelax, which is going to affect sharp impulse sounds, so dogs barking, dishes clattering. If those sounds are bothersome to your patient, then certainly you can make SoundRelax stronger. NoiseBlock is for noise reduction. It looks within each of the channels to see where noise is present looks to reduce it. WindBlock to help with wind noise. If you're in a premium level device, you'll also have access to EchoBlock as part as the of the

comfort and echo program and with EchoBlock it looks to determine what the primary sound signal is and what are the reflections and reduce those to really clear things up.

Next is SoundRecover2 within SoundRecover. This is where you can adjust the frequency compression and we're gonna go into that in more detail a little bit later on. Then we have TK/Gain 35 this is controlling Gain for very soft sounds. So if things like the refrigerator running or the air conditioner, if those sounds are bothersome, then you can come in here and choose that G35 curve and bring it down. Automatic fine tuning is a great tool to use when you're getting familiar with the software or when you are not quite sure what to change to affect a certain area. With automatic fine tuning, you can choose the situation in the issue and then it will recommend changes to make. And then the last tab here is the Tinnitus Balance. And this is where you can do some fine tuning to the Tinnitus noise generator. And I mentioned that output view is what you would want to be when you're working with Tinnitus. And here you can see on the graph that when you're in the output view, that green area is actually the response for the noise. And so that's how you can see that.

After any fine tuning, then we come to Device Options. This is a little wrench there at the top. And this is where you can see how the devices are set up for what the changes will make when they use the push button. You can play the signals and alerts if they need to know what the low battery beep sounds like. This is where you would go into that tab at the bottom. Also on the screen is where you can print reports. Reports are a great tool to use to really customize it for the patient. So instead of them having to look through the all of those pages in the instruction book at everything that's possible. This is specifically how their hearing aids are set up. It can be printed in multiple languages, it can be printed in large font, which is especially useful for some of our geriatric patients. And so the reports is a really nice tool to use. The last little icon at the top as following along brings us to the Bluetooth tab within the device options section. So this is where you will, you can rename the Bluetooth hearing aids for what

they'll see in their Bluetooth menu. So if they're confused by seeing, right Phonak hearing aid and instead you want to say, "Right David's hearing aid, "left David's hearing aid," this is where you can make that customization. Also on this screen or just as something else to be aware of is this phone compatibility button.

If a patient brings in a phone that you're not familiar with, when you click that phone compatibility button, it will take you to our Marvel support website. And on that website you can type in the model of the phone and it will tell you what we know about compatibility for phone calls and streaming as well as the myphonak app. Two green checks everything's great. One green check, you're probably okay, but it may depend on what version of Bluetooth the phone has. If there's a red X there are some known issues. There are very, very few red Xs. I actually couldn't even find one. I was gonna pull one up as a sample, but I couldn't find one. But that's where you can go to double check phone compatibility. When you've confirmed all of your settings. Then the final step of course is to click save and close the session. This finalizes the settings in the hearing aid. So always be sure to do that. You don't wanna be like me and forget one time and have to chase your patient down in the parking lot to bring them back so that you can save the settings into the devices.

So those are the everyday tools that are in our toolbox. Now let's take a look at a few case studies to see how we can use those to address some common and a couple of not so common concerns and patient complaints. First up, "My own voice sounds funny." I'm sure you've never heard this from your patients. Just kidding. If I had a quarter for every time I heard that over the years I would have a very full piggy bank. We know that hearing their own voice is one of the very first things that patients notice when they're suddenly hearing through the hearing aids as well as in their head like they're used to.

So let's take a look at a couple of ways that we might be able to address this. Automatic fine tuning can be a really useful tool both for the patients who have trouble articulating what they're experiencing as well as for you as a quick way to make changes. I especially like it for own voice complaints just because it helps guide the patient. The patient will come in and say, "My voice sounds funny." "Well what do you mean?" "Well my voice sounds funny," doesn't really help me know what to adjust. I can come in here and I can choose the situation and I'm gonna say, "Okay, this situation is own voice." And then when I go to select issue, there's a dropdown. Now I can give my patients multiple choice and we can say, "Okay, which of these "fits what you're noticing?" And they can go through and they can look at it'll kind of help guide them to know how to articulate. And so they may say, "My voice sounds hollow and boomy," okay, you can then click fix issue and the software will apply a solution to that. When you're looking at the graph, you can actually see what's being changed as well. The lightly shaded area is Target. The darkly shaded is where they currently are.

So if we compare to previously we see that they reduced the Gain for low frequency sounds. If that did not solve the issue, then you can always undo and put it back. And I do want you to to do that. So if it didn't fix it, put it back to your starting point. Don't just make another change from there. If it did help, but you're wondering if maybe going another step further might be even more help. Then you can click fix issue again and it will tell you, you'll see right there in those sentences on either side of fix issue and undo, it'll tell you the change that it's making. So that can be one way that you can address some own voice complaints. Of course, you can also take a look at the physical characteristics of the hearing aid as well. So if you want to try a different dome or if you want to make changes to the venting, you can do that as well to try to adjust for own voice. When you do make changes, it will prompt you, you'll notice anything in orange wants your attention. So it's saying, "You've made a change, "you really need to recalculate and rerun a feedback test." And so that's just remember that if you do make a change, that change needs to be applied in other areas. A third tactic might be

to use the occlusion compensation that is located within the Global tuning tab. And this is something that you might use more if it was a more occluded area. If it was a custom hearing aid or a standard ear mold with more open fits, the area that's affected isn't getting much amplification anyway. So it does it make as much difference there. But with that inclusion compensation, it will reduce the Gain for loud sound. You can see here on the graph where it's bringing down the sound's below a thousand Hertz, little bit more for loud sounds. Than for the other input levels, but that's another tool that you can use.

For our second case study. We have the report of, "Speeches loud enough "but I can't understand." The first thing that I would check with this is to see what their current Gain level is. Are they still at a new user setting where they're at 80% or experienced at 90% and maybe they're ready to move up to a 100% of the Gain Target. Certainly that is a good starting point to check and see. You can also take a look at their SoundRecover2 settings to see if perhaps they're not getting that high frequency audibility due to either the configuration or degree of their hearing loss. I love our SoundRecovery. It is extremely flexible and adaptive. All without introducing extra distortion and I'd like to talk about it for just a little bit to make sure that you understand what's going on. With SoundRecover2 it's looking at the sound and looking to identify is this a true high frequency sound, an F or an S or is the sound more low and mid frequency weighted and if it is, it's going to treat those two sounds differently. Here on the left we see a high frequency sound. When we apply SoundRecover2. You'll notice that there are two cutoff frequencies, so there's CT1, CT2 and then the maximum output you'll just notice at the top. If the sound is one of those high frequency consonant sounds, it's going to compress all the way down to CT1 so that whole area will experience compression. If however the sound is more based in the low and mid frequencies, maybe it's something like a vowel sound like an E where there are formats that carry on into those high frequencies, but most of the energy is in that low to mid frequency area for those sounds the compression will stop at that CT2.

So the area between those two cutoff frequencies is an adaptive area. It's protected, so it's not every sound is getting compressed all the way. It's very adaptive in what it's doing and very instantaneous in how it's making those changes. This is what it looks like in the software. So on the SoundRecover screen, you have two sliders that you can control. At the top is audibility and distinction and below that is clarity and comfort. If a patient is not hearing those soft consonant sounds, then we would need to shift that top slider to the left. Going more towards audibility we'll make the SoundRecover stronger. Now if they're hearing, /s/, /sh/ "Yep, I hear that there's two sounds, "but it's hard to tell which is which. "They're kinda lispy. "It's hard to distinguish between them." For those types of reports. Then we would want to shift that slider to the right more towards distinction. When we do that, it's going to create more separation between those two sounds. If you're looking at verification measures, while you're looking at this, you want a third octave between the /s/ and the /sh/ to really keep that distinction there. If you, yep they're hearing the sounds. They can tell that they're different, but the vowel sound a little funny or something's just not quite right. That's when you can go down to the clarity and comfort slider. As you shift from clarity to comfort.

So from A to B to C to D, what happens is it moves that CT2. So that second cutoff frequency is the dotted line that we see in the graph. As we shift towards comfort, it's going to change the proportion on either side of that. So it will make a larger protected area and a smaller fixed area. Between those two sliders, there's 80 different possible combinations. So really a lot of flexibility there. You don't need to worry about remembering to turn on SoundRecover. If the hearing loss meets the certain criteria, it will automatically be applied. So that is how you can have some control over maybe increasing some of those consonant sounds to help speech be a little bit clearer. Now we're gonna take a look at a complaint that is more rare. "It sounds like the hearing aid is fading in and out "or shutting down." If you hear that one thing that you can do and

the first thing that I would do is I would come in and look at the where their MPO is, so their maximum peak output. Where is that curve? It may be that the patient is hearing the compression. When they get into those louder sounds and it starts bringing that down, the patient is hearing that. Raising the MPO will keep that from happening, so that's something that you can do as a first step is to increase the MPO.

Another thing that you can check for is to compare the Gain and program options between the programs within AutoSense. If I have my speech and noise block set to 20 and I have my comm program set to eight, then as the hearing aid blends between those and shifts between those, guess what? That's a pretty big difference. The patient may hear when that kicks in, so comparing between those, maybe make it to where they're not as drastically different and the patient won't hear those transitions. similar for Gain, if you have one of the AutoSense program set much louder than the others, that's gonna be a more noticeable change that they will hear there. Coming from a slightly different direction. Maybe you have a patient who is in premium aids. They're in the 90 level technology partly because you were able to explain to them the benefit of StereoZoom, which is part of our speech and loud noise program and how using that binaural voice stream technology really can help speech understanding and reduce listening effort in those loud noise situations.

All of that research showing that you can find on PhonakPro in the evidence library, but you're really excited for the patient to experience this. But let's say they come back for their followup and report that they are in loud noise all the time, but they aren't really noticing a difference. You being the savvy investigator that you are connect their hearing aids and come into their data logging. And when you look at their program activity, so this is where the hearing aid will record how often it is in each of the programs. You notice that it's only switching to speech and loud noise 2% of the time. This patient's definition of loud noise may not be the hearing aids definition of loud noise for that type of situation. What you'll do is you will come in to their fine tuning

screen and within program options you'll click on the header for AutoSense, so not any of the programs themselves, but the header itself. When you do, you'll find a couple of hidden gems that are available for some of these advanced changes. At the top, you'll notice that there's a section for speech and loud noise and it says activation level. For this patient that we've just been seeing, what we would want to do is instead of leaving that slider at loud noise, we would want to move the slider more towards the left, so make it to where speech loud noise kicks in. At a more moderate noise level. If you have a patient who's the exact opposite, who the patient feels that they like to hear everything that's going on. They want to hear all of that sound. Then if you move that slider to the right that will shifting it to loud or very loud, that will make it to where the noise level has to be at a louder level to trigger that change into StereoZoom. So that's an advanced adjustment that you can make.

Below that we have Transitioned speed. And this Transition speed is not specifically just for speech and loud noise, but it is for transitions between the programs and AutoSense. So you'll see it at the different technology levels of devices. If your patient feels that the hearing aids are not adjusting quick enough, you can move from balanced to faster, very fast. If your patient feels that they're hearing it change, then you can slow down that transition speed so that it's not reacting quite as quickly. So those are some ways that you can make changes. Again, they're only gonna be needed really once in a blue moon, but it's a little hidden gem. That's good to know.

With our current, everybody being at home time streaming, whether it's with the TV connector or directly with Bluetooth devices is certainly a high priority for many patients. And you may get patients who feel that they need the ability or they need some adjustments to the stream sound relative to the sound coming in from their microphone, so maybe this is somebody who's watching TV at home and says, "It's hard to hear my companion "when I'm streaming." "When my husband talks to me during the commercials, "I have a hard time hearing him" or maybe it's somebody who

is, "I'm listening to my audio book "and it's really noisy at the house. "Is there any way to turn down that noise "and just get that string signal?" And the answer is certainly yes there are ways that we can make some changes. By default when you are streaming the stream signal gets priority over the ambient sound, so their default microphone offset is negative six DB when you're streaming. If your patient is the one who reports, they're having a hard time hearing their spouse and they don't want that come in here to Program Options and reduce the attenuation, make them more equal that way both the the hearing aid microphones and the stream signal are both getting the same priority. That's a technique that you can also use for patients with more severe hearing losses who feel that when they are, maybe when they're using Roger or a partner mic, they'll say, "My voice suddenly like "I can't hear my voice anymore to know how to monitor it." It's that reduction in microphone offset come in here, bring it to zero and that makes a big difference. But the patient can also make changes themselves in real time in the moment when they need it and they can do that using the push button.

When you're on the device option screen and click Streaming to see how the button functions. You'll notice that when the patient is streaming the volume control function as an environmental balance, so when they do a short push up, the stream signal will increase the ambient sound from the hearing aid microphones will decrease and if they push the down button then it'll bring them closer together. They can also make changes within the myPhonak app. So if they're streaming something and open up the myPhonak app and go to the advanced features, then you'll see that slider and they can choose, do I want to pick just the stream sound or do I want more of the surrounding sounds? And that can be handy because when you're watching TV with the TV connector, it made me be that during the program, more streaming sound. But then if my husband's talking to me during the commercials, I can just slide it over real quick and really give him the priority there. So if your patients and that dynamic listening environment and they want to make changes to their microphone, then

environmental balance is a great way to do that. I'm gonna go off on a tangent for just a second here.

This next slide has absolutely nothing to do with environmental balance, but it's another something that I find that it's not the most obvious thing for patients. And so I do like to explain it as well. With the TV connector, the default activation is automatic. So when the TV turns on, it's gonna start streaming to the hearing aids. If your patient doesn't want that, you can change the activation mode and finding it for the TV connector is not the most obvious, but what you'll be is within Program Options, you'll click on the header for AutoSense streaming, so when you're on that header itself, that's where you'll find the options for the TV connector activation. And of course if you need more information, the little blue eye in any where in our software will give you more of an explanation. So that's something too if you're looking for it that's where it is. The way that technology is advancing very quickly, we are finding ourselves not only needing to be experts in sound and acoustics and hearing, but also becoming experts in connectivity and Bluetooth. And so we're developing new skills to work with that.

This is something that you won't hear very often, but occasionally you may get a patient who gives a report like this, "Sometimes when I'm on the phone, "so direct streaming, the phone call to my ears. "Other say that my voice is soft, "so I hear them fine, "but they say that my voice is soft." On the Bluetooth screen for device options. There's a couple of things that we can adjust there and one of them is Bluetooth bandwidth. Bandwidth refers to how the phone communicates with other Bluetooth devices. When Marvel was first introduced, all cell phones were using adaptive bandwidth, but then with iPhone 10, Galaxy 10 and some of the newer phones, they switched and we were getting reports that the patient would say, "I'm making a phone call. "I hear them just fine. "They're not hearing me at all," or, "The phone is really losing connectivity." If you're getting those types of reports, then I would recommend changing bandwidth and see if that solves it. Fixed bandwidth was what was the

solution for those reports at that time, and fixed bandwidth is now our default because phones that use adaptive will work with fixed, whereas those with fixed will not work with adaptive. If you have a patient with an older phone and they say that the sound quality is a little bit echoey for those patients, you might wanna switch them back to adaptive. Sometimes that can be a better sound quality for them.

So if somebody's having connectivity issues, regardless of where they're at, they can try the other bandwidth and see if that's better. You can make that change here within the software, but they can also make that change themselves within the myPhonak app. So if they open the app and choose my hearing aids and Bluetooth phone call, they can switch over to the other one and test it out and see if that resolves the issue. That wasn't however, this particular patient's complaint, this patient said the other person was hearing him, it just wasn't very loud. So this has more to do with own voice pickup. It's easy to fall into the pitfall of going straight to program changes and forgetting all of the other physical characteristics that affect hearing. Don't forget to consider the placement of the device. So take a look at the hearing aid if they're wearing a RIC, is the wire a little bit long? And the hearing aid is back behind the ear, kinda slid down the back. That's going to affect where the microphones face and their ability to pick up the own voice.

So first thing to check is microphone positioning. If the microphone placement looks good, you can then come in and take a look at the microphone offset. Within the phone call program, you'll notice that we won't let you go more than 60DB the offset because we need that microphone to pick up the own voice. But if they're having these reports, then reduce that offset. This will increase the sensitivity of the microphone. It might also result in the patient speaking a little louder because they're hearing more of what's going on around them as well. So this is something that you can take a look at. Back in the Bluetooth tab. This is where we designate the Bluetooth side. We know that this is the hearing aid that we pair within the Bluetooth menu. This is the one that kinda

controls things. They can answer on both ears. They're hearing the phone call in both ears. And so sometimes I get customers will ask, "Well, if they're hearing binomially "why does it matter which side is the Bluetooth side?" The reason that it can sometimes matter is whichever side is designated as the Bluetooth side. Those are the microphones that we're using for the own voice pickup, so if the patient is always making their phone calls in the car but they're always the passenger and they've got that road noise on the right hand side, switching to left ear for the Bluetooth side may make it a clearer phone call for who they're speaking to.

For the report that our patient had where the other person reported that their voice was soft. One of the things that you can look at is you can come in to the feedback screen and take a look at how much of a gap there is between the Gain curve and the feedback threshold. Whichever side has more of a gap there that will give the hearing aid more headroom to amplify their voice for the outgoing phone call. If a patient has an asymmetrical hearing loss, then certainly whichever side is the better ear, generally that's the better side to make the Bluetooth side. If you are having phone issues and you're calling in for some help, we were happy to do that. But the very first question that we're going to ask you is what phone is the patient using? So as you're troubleshooting this, the more information that you have as far as what phone is the patient using, what operating system are they on, that will really allow us the best ability to do troubleshooting with you and to guide your concerns. So generally these things that we've just looked at will resolve the issue, but if not or if you're having different concerns, be sure to get that information from the patient for when you call in.

To wrap things up this morning, we are now going to go deeper into the toolbox and take a look at some lesser known but really very useful tools. From the polls at the start. It looks that like most of you are not as familiar with these, so I'm very excited to share them with you so that you can add them to your arsenal of things that you have to help patients. We'll start with Audiogram Direct. Audiogram Direct enables you as

the hearing care professional to test the client's hearing directly through the hearing instrument. So in-situ testing to provide an accurate fast starting point for the fitting process while taking into account coupling, insertion depth, things like that. It is not the same as a clinical diagnostic audiogram. It's used for different purposes. That one allows us to really we do bone conduction, we monitor where the hearing has changed. Audiogram Direct is specifically designed to help us with fitting the hearing aid. It's located within the fitting section right after the feedback and real ear test and you'll click simply click start to begin and it will let you know that, okay, when we shift into this mode, the hearing aids are now muted. You would need to press talk over, talk to client when you want to do that. And it reminds you that ideally you want to have run the feedback test before you do Audiogram Direct so that it can have that information when it is doing the correction factors, there's no need to occlude the patient's earpiece. You do want to make sure that their current coupling is what's on the hearing aid.

So if this is gonna show what is in the software. So in this software here we see we have a vented dome and a medium receiver. If that's not what the patient's wearing, cancel out, update the acoustic parameter screen and then come back in because as long as that's accurate, then Audiogram Direct can apply the appropriate correction factors. Then it will bring you to the testing screen and here you will use the arrow buttons. Left and right arrow will change frequencies, up and down will change intensity. The space bar will present the tone, enter will record it. There are four mandatory frequencies, 500, one, two and four. But if you're gonna do it, go ahead and do them all because ear canal resonance we know falls more within that 2.5 kilohertz area and so sometimes you'll see slight changes at the interactive. So I would recommend doing all of the frequencies within the testing you can test air conduction and you can test UCLS. During a remote support session. There has recently been an update to the software that you can now do Audiogram Direct during a remote support session as well. Couple things are different. One is you can only do air conduction, so

no UCLS and whereas when they're in office you can enable the hearing aid to go over a 100DB. When remote support you can't so that's limited, but that is a functionality that's now available to you in that mode as well. If you need to enter no response, just right click on where you want it, there'll be a little dropdown and you can choose no response.

Once you've completed Audiogram Direct in the software, it will use that measurement when it is setting the Targets and you can see at a glance that an Audiogram Direct test is being used because it show the little AD in the little icon up at the top. Acoustic or Audiogram Direct takes into account characteristics like the acoustic parameters, the insertion depth, the ear resonance to provide you a fast accurate starting point for the fitting process. So really is a good way to again get an even more precise calibration for those Targets and for that fit. Next we have client view. Client view is an option that you can use when there are live hearing aids connected. It's another little bit of a hidden gem. It's right along the very top bar just above the fitting icons and you'll see client view. When you click that you'll get a popup window with the bouncing green bars. You see the patients test results there. This can be really useful for that patient who says, "Why do I need hearing aids? "I can hear you. "I can hear this. "Somebody's talking." You can pull this up and show them with the bouncing bars. Yap here in the low frequencies that's what you're hearing, but for these sounds, and you can click the letters to insert the phonemes on the graph. You can see they fall below those lines. So that's what you're missing out on.

With the hearing aid then we see that the green lines are above that threshold, so that's what we're looking to do is to bring up that sound for you. This will can be a really great way to visually represent what we've been telling patients they've got a hearing loss, but we talk at them all the time. Here's a way to visually show them what we're explaining. It can also be really useful for that third person that's there in the appointment with them to really understand what's going on. If SoundRecover is

activated and in an area, in this case, if it was a little bit stronger, it would actually show where those phoniums are shifting as well.

One thing to keep in mind is that this is not a technical real ear measurement. We don't have a probe tube down in the ear canal. What's happening is on the hearing aid microphone is picking up that input signal and then it's applying whatever Gain levels you show in the Target software. So if you were set to 80% Gain, those bouncing bars are gonna be lower than if you were set to a 100% Gain. But that can be a really nice counseling tool to help explain things to patients. TargetMatch is a way to run actual real ear integrated verification. It works with the GN Otometrics Otosuite and the AURICAL freefit hardware. If you have that equipment, then you'll notice when you go into Global tuning that you have an extra tab along the bottom and that tab will say TargetMatch. TargetMatch works for Marvel, Belong and Venture hearing aids. So it's something that we've had for a while and it is a step by step workflow to seamlessly guide you through the verification and real ear fitting process.

So it adjusts with probe tube placement. You do it all using the button on the freefit so you don't have to jump back and forth between the computer and the hearing aid. The guided probe tube replacement is actually really quite fun to use. As you're sliding it in. You'll see that little orange dot go deeper and it'll light up green when you're at the right placement there. And this is for adult ears naturally not for pediatrics, but doing this really allows it to be repeatable and you can match Targets not only to NHL and DSL, but also to the proprietary Adaptive Phonak Digital fitting formulas. And for all of the fitting formulas, when you're doing the testing by being integrated, it takes into account the venting of the hearing aids. So you're not having to match to an occluded Target. It actually will show specifically for the venting that the patient has.

So with TargetMatch, it's designed to help things be efficient for you, easy to use. You can choose whether you want to manually match Targets or whether you want it to do

the matching on its own. There's a really nice article that was in hearing review a couple years ago that showed that when you allow it to automatically match, it's actually an even closer match than you could get making the change manually. So that's a tool that can really help in making an amazing fitting but nice and easily without you having to switch between softwares. A tool that's available for everyone is the A/B Comparison. So this allows you to easily compare one setting to another when you're making multiple adjustments for a patient. We know that auditory memory is not always the best when there's a gap between presentations. And so A/B comparison will allow you to set up two group of settings and then compare between them. Let's see how it works in action. It is located on the tab label of Fine Tuning. So you'll see there's a little A and B and then there's a little camera. The camera will let you take a snapshot of the settings so you can set up what you want to let's say I wanted to compare with SoundRecover at one level.

So I might set that up and click snapshot, click the camera. I can save that as anything that I want. So I would say, "SoundRecover on," and then I could come and I could make the shift to I what the other set settings that I wanted to compare. And then I would click on A/B and when I do it brings up this window, whatever was on the screen when I clicked A/B, that's going to be our B option. Here on the left is where I can choose the A option and I can choose between prior sessions from earlier dates. I can choose between the starting point of today's session or I can choose any of the snapshots that I've taken. So once I choose what I want to compare, I would that would then become A, at this point I can activate one, activate the other, the media player is there. So if I'm comparing speech and noise, for instance, I can put on party noise and have that going while we're doing the comparison. And then I hit select when they've made their decision. At that point they can choose to copy all of the programs or just the current program and it will then apply it to their session.

So a really nice way to compare not only within the session but you can compare to previous sessions which can really be nice for that patient who says, "Well, I think last week might have been better. Training session is one of my favorite tools. So Training session is a way that you can simulate a fitting for any of the hearing devices. When you open the Target software, not going into a patient session just opening the software. There is a little dropdown next to where it says, "New fitting session." When you click new training session, you will then choose what hearing aids you want and from that point on you'll hit connect like you would if the hearing aids were live and you can go through the whole process. You can run the feedback manager, you can look at data logging, although I'll warn you, the simulated data loggings are always a little bit wacky. The thing that you can not do is client view is not available in the training session and it won't save. So you don't have to worry about saving that as a session and wondering the next time they come in, "Oh, was this what I was playing around with "or was this the actual session training sessions." Training session won't save. So you can feel free to go in and really simulate and play around especially with some of these new tools that we're looking at.

And the last thing that I want to touch on is just a couple of words about some Setup Options. When you open the software instead of being on client and session, if you choose Setup, then at the top you can choose Fitting Session. Within that, there are a couple of things. One is if you decide that you always want it to apply that estimated vent that we talked about at the very start, instead of you having to click that box each time, you can come in here to Setup and make that the default. So you could click use estimated event from the feedback. And real ear test. The other thing, if you have a longterm power user who maybe is used to our original SoundRecover and that's really what they prefer, you can come in here and click show SoundRecover response and Global tuning. Once you click that, then when you open up their session and go to Global tuning and the SoundRecover tab, you can choose whether you want to

activate original SoundRecover or SoundRecovered2. Again, that's gonna be something very rare. But if you need it then it's there.

Also in Setup is where you can take a look at Junior Mode settings. So if you are fitting pediatrics and you want to look or adjust those, you can certainly go into that and settings as well. So with the Target software you have the whole toolbox. You've got that top tray of everyday solutions for really a streamlined first fit as well as the more specialized tools that are available that you now are experts in that you can apply for those more complicated or more complex patient situations. And just my very final word is don't underestimate the power of recalculating to Target, so if just through incremental changes you're suddenly not sure where you are, or how you got there, click that recalculate Target, do the drop down to say, "Recalculate, fine tuning "and or program changes," bring it back to baseline. You would be surprised at how many patient assist appointments I go to we're doing that solves the problem. Which is it's frustrating because we made these changes based on their reports but don't forget to give that a try that really can be a useful tool. And if not then certainly feel free to reach out to your trainer or reach out to tech support because we are here to help because together we change lives.

Thank you for joining us this morning. I know we are right at time. I will stick around. I see we have a couple of questions so I do want to address those but thank you so much for your time this morning.

One question is just regarding the use estimated vent, so use estimated event is it better for ears that are average or not average? It will make a big difference for ears that are not average. So they're really large ears or they're really small ears. They will notice more of a difference. If the ear's average and you click use estimated event, there won't be much of a difference there.

Another question was regarding fitting formulas and when you might change from default. A couple of times, so certainly Adaptive Phonak Digital does an amazing job. Pediatrics, the default will shift to DSL pediatric. If a patient has a more severe hearing loss and needs a little bit slower compression times in order to maintain that temporal envelope and get those temporal cues. For those patients, they may do better with Adaptive Phonak Digital contrast. So if somebody wants slower compression times that Target or fitting formula they may prefer. So those are some times when you might make changes but as is very common with the Target software, most of the time you won't need to make changes. But if you do, we give you a lot of flexibility and a lot of options there.

Then we have a couple of more specific questions for patients. If the patient complains of hearing their own footsteps loudly, what should I change? My first thought with this is how new are they to the hearing aid? So is it just the fact that they're hearing sounds that they have not heard before or is it something that is very bothersome to them and how loud are their footsteps? So if this is stilettos on tile that I might adjust SoundRelax so that that impulse sound is a little bit more cushioned if it's softer sounds. Then sometimes bringing down the TKG 35 would take some of the edge off and make that better for them. So those are a couple of things that you might look at with that patient.

What'd you do Audiogram direct for all patients or more specific situations. That is certainly something that is up to you. I've heard both ways. Some of it may depend on how much time you have doing it. If you're able to do it with all patients, then that can't hurt at all. I mean that would give them, again, taking into account those specifics. If you don't have time for that and you just do it, then I would at least do it for those patients who are having issues maybe some of those more amorphous complaints where things just don't sound right, but you can't really figure out why. I would absolutely do it for those patients. But if you're able to do it for every patient, then

that's a great way to, again, look at the thresholds specifically with the coupling of their aid.

And with that, I think that we will go ahead and wrap up. Again, thank you so much for your time today.