Pro Fit 201: Optimizing Starkey Fittings With Advanced Software Solutions

Presenter: Keeley Layfield, AuD

Hello everyone. My name is Doctor Keeley Layfield and I'm an education and training audiologist with Starkey hearing technology. And today we're going to look at the profit software a little byt more in depth so that you can build comfort with programming Genesis AI and signature series hearing aids from Starkey.

Now, before we get started, I do want to answer a few frequently asked questions for today's webynar. Please use the Q and a feature for any of your questions. I will be monitoring it so that I can answer all of them at the end of the presentation. And then you should also have a handout from today's talk as well. So feel free to download it if you need it.

And if you need ceus after today's course, you just need to go into your pending courses dashboard and pass the multiple choice examined. So I do have a couple of different learner outcomes for us all today. The first one is to identify how patient UCL data affects the MPO curves within profit. The second is to discuss acoustic considerations of an open versus a closed fitting. And then the third is to identify how you can adjust the consonant brightness feature within profit.

So when we released Genesis AI and our profit software, initially we really designed the software hand in hand with professionals, and we've continued to do this so that we can ensure that the software is convenient and easy to use as we move forward and make continuous improvements to it. So our goal with profit was to make it again easy and efficient for all different professionals to use it. So we wanted to keep it organized with three fitting session types or workflows that profit will default to depending on where you're at in that hearing aid fitting process. We wanted to make it intuitive so that you don't have to assign a right or a left hearing aid. It'll do that automatically for you.

And then we want to be supportive as well so that we can give you access to multiple tools like troubleshooting from every screen within the fitting software. And while today's course isn't designed to really go over the overall layout of profit, I do want to do just a quick recap in case this is new

information to you. So if you launch into profit from that NOAA menu bar, this is always going to land you on the connection screen. And that's my preferred method of accessing the software, following the connection screen. If this is your first time hooking up the hearing aids, you're going to land in that preparation workflow.

This is the process of checking in the hearing aids. After completing that initial best fit in hooking them up to the software. The second time you're connecting hearing aids, then the software is going to open up into the fitting workflow. This is what's intended to be used when a patient's the office with you and they're ready to be fit with their hearing aids. And then from there, all third and third and subsequent times, you're going to land in that follow up workflow.

So I love that the data logging is the first screen that you see from here because these are commonly used screens. Throughout that follow up session, we've also given you access to the fly out menu. So this is access to any of the screens within the software at any given moment. We've added the abylity to pin this screen open so that if you like to be able to view that at all times, you now can.

And then jumping back to the connect screen, I like to highlight the product simulator. You know, this allows you to simulate different RiC products, our wireless custom products, as well as our non wireless custom products. So you can simulate any profit compatible product and see a full feature breakdown with those selected and simulated hearing aids. So this is a really great tool to use if you're considering, you know, different form factors and if you're looking at, you know, what user controls or what features are available in a specific style or technology tier. So for example, as you can see here, I'm simulating a Genesis AI MRI and that just has a single push button on the hearing aid.

By simulating a fitting with this, I can see what different functions can be assigned to that user control so that I know if this is truly going to meet my patients needs.

So the product simulator allows you to filter the available products by style, by technology level, and then you can see if you want to do Genesis AI versus signature series. So you've got a lot of different filtering options. You also can compare two different technology levels so that you can see which features are specific to which level of technology, again, so that you can best decide that right fit for your patient without having to order a whole bunch of stuff. I love that on that right hand screen, when you filter between two different technology tiers, you can see which ones are specific to which technology tier and then which features are available on both.

So moving on from are simulating. I do want to just briefly discuss different acoustic considerations because oftentimes the selections that you make here could affect the different defaults that you see within the profit software. And so at Starkey, we offer a variety of both stock and custom options so that you can find that best solution for your patient. You know, for Rick devices, you can order anything from that simple hollow canal mold all the way to a custom full shell or maybe even something in our custom cased solution. And then in addition to providing ear molds in different styles, Starkey also has different materials to, again, best suit your patient needs.

So when it comes to stock options, we do have three different stock mold options. We have that hollow Rick mold, the solid Rick mold and then the helix mold. And this one is one of my personal favorites, especially if you have a patient with a very small ear canal. These are a one size fits most option, but they do have their place in the clinic and can be a very valuable tool in acoustic coupling. Then if you don't need a stock mold, then of course we've got stock domes.

And these have three different styles that come in various sizes. So we have open, occluded and power. These are all made from medical grade silicone and again come in multiple sizes so that you can work with varying ear canal shapes, sizes and then varying audio metric configurations. And if you do need a custom solution, this is just a very small sampling of all of the different custom options

available for ordering as well. So we've got multiple styles, multiple materials.

We have options that are more allergen friendly. If your patient has really extreme allergies, the sky's kind of the limit on our customization when it comes to fully custom molds. And then when choosing a receiver strength, it's really important that you're kind of looking at that 2000 Hz frequency. So 2000 Hz is that pivotal frequency for gain selection. You know, it takes more energy to reach those higher frequencies than it does the lows.

And the peak frequency response of a receiver is between two and 3000 Hz. Your receiver matrix decision can affect so many things about your programming and your sound quality. So it's really important that you truly fit the option that fits your patient's needs. I love this chart because I find that many providers are often surprised by the large range that can be fit with our l receiver and then coupling. You know, with receiver, it's also really important to look at the vent.

So the larger the vent, the better you can optimize by directional acoustic transparency. And to really maximize this for your patient, we recommend looking at 500 to 750 Hz on their audiogram. So the poorer the hearing at these thresholds, the smaller the event should be so that we can get adequate amplification and minimize low frequency leakage and loss. So then your venting selection again can also affect some of the defaults and the features that you see within the profit software. So you want to make that appropriate decision for your patient and for yourself.

So now that we've covered the basics of the flow and just a few fitting basics, I want to pivot into looking at some of our more advanced fitting tools within the profit software. Some of these you may already be a byt familiar with, but I want to take a deeper look at them to give you some more information that you may not have had previously.

So I want to take a moment to discuss the differences between best fit and target match is. These terms can also cause some confusion. So if you select best fit, profit will choose the best frequency response for the hearing aids and the features within the sound manager screen. And we'll get to sound manager later on. Target match though is only going to choose the best frequency response for the hearing aids.

It's not going to touch any featuring at all. Now, current program is going to only adjust the current program that you are in and selected and working in currently. And then if you do all programs, then that will make the adjustments and the changes to all current programs within the hearing aids. If you want to know which program you're in currently, it's the one that has the blue bar underneath it.

So profit uses both feedback cancellation and vent model optimization so that we can personalize the hearing aid fitting and we do this using that feedback canceler initializing measurement. So these are two completely separate features that run simultaneously. So our feedback canceler margins are separate from vent model optimization. So you can manually adjust the gain in a setting that may could cause feedback, but you're going to get an alert that's going to signal you and then we're going to manage feedback just as effectively as we always have using that phase inversion technology. Now, vent optimization measures the amount of sound leaking out of the ear canal back to your hearing aid microphone.

So if that default model is predicting less leakage than our individualized measurement shows, then gain targets will need to be increased to compensate for that additional leakage. Now conversely, if more leakage is occurring, then the gain targets need to be decreased to compensate for that as well.

So let's take a look at what these look like within the profit software. So the feedback canceler screen is the first screen that will populate when you're within that fitting session type. We have release some enhancements to our feedback canceler. And so one of the byg ones of that is now when you run it,

rather than that signal immediately coming on. It's a slow ramp up to that stimulus to get it to the full presentation level.

So this is a more pleasant experience for the patient. And then building on this, our feedback management system is designed to apply sufficient feedback cancellation without sacrificing sound quality. So when the feedback canceler is initialized, the feedback management system will measure the amount of maximum stable gain at each frequency and automatically apply the best settings for the patient's fitting so that we can help mitigate the risk of feedback. This is shown by those red and blue bars on the screen. The maximum stable gain measurements can help gauge how much headroom there is prior to feedback concerned in each individual frequency channel.

But as I mentioned earlier, subsequent gain adjustments during the fitting could increase the risk of feedback. It's our feedback management system functions automatically for most fittings. But for those more complex fittings then we do have other options to ensure the patient gets the most out of their amplification. So say you've either adjusted to a point of getting feedback risk or you're getting feedback potential at that initial measurement. Then you do have the abylity to use auto adjust and this assists in deciding what can be done to mitigate feedback.

The auto adjust functions may apply mid frequency management adjustments. If they weren't applied in that initialization, they could make adjustments to gain or it could do a combynation of both. If feedback potential is identified, profit notifies you and provides information. And then again if you hit apply, we're going to make the adjustments that we deem are necessary to mitigate feedback risk. If you don't want to have to hit apply on this, if you want us to just automatically manage this from the get go, then you can open up the profit preferences and select to automatically apply auto gain adjust to eliminate feedback.

If you don't want this to be done automatically leave everything as is and you can make those gain adjustments if needed or only hit apply when you want it to happen.

And there's new nomenclature around our sensitivity settings. This is now going to be referred to as adaptation. So strong adaptation is used for those occluded fittings. So again, if you're fitting an occluded acoustic coupling, this is going to default to strong. If you're doing an open acoustic fitting or a very large vented then that's going to default to subtle.

And this is also where you will see optimize acoustic model. This is available on all four technology tiers and it does default on. So if you do not want to take advantage of this, you would turn it off again from that feedback canceler screen. But if you are wanting to take advantage of optimized acoustic model, remember, it runs alongside your feedback canceler initializer. So run your feedback the same way that you always have.

You want to ensure that the environment and the patient is as quiet as possible after running feedback. If you get this pop up, this is saying, hey, that leakage that we have measured differs from the amount that we expected it to be based on the acoustics that you've got selected. What do you want to do with the frequency response of the hearing aid? And you've got a yes or a no option here. So I want to show you what this looks like when you select yes versus when you select no.

So again, run feedback just like you always have. We're still using that phase inversion technology to measure and manage feedback with our optimize acoustic model feature running in the background simultaneously, it's looking at the leakage associated with your hearing aid fitting. If you select no, you are saying that you do not want the gain in the hearing aid to match the newly optimized target based on their fitting. And so you'll get what looks like a fitting mismatch. If you're selecting yes, then you're saying you do want your gain to change to match these newly optimized targets.

So here you can see a side by side visual for the same hearing loss and what that fitting will look like when you select yes versus when you select no.

And then frequency lowering antenna tests are two tools that you may not use frequently, but when you need them, it's important to have access to them and to know the very basics of manipulation. So we do have courses that go much more in depth on each of these topics, but I do want to go over the highlights of these features so that you can better understand them. So frequency lowering is designed to improve audibylity in that potential high frequency dead zones that could be present with steeply sloping losses. So if you see yellow and green on your fitting screen like this, then frequency lowering has defaulted on, but you can manage it via the fly out menu. So clicking on frequency lowering will take you to this screen.

And this is where you can turn this feature off or on. You can adjust the bandwidth of what is being moved. That is what is being moved from that green source region over to the yellow target region, and you can adjust the gain of the signal that's being translated as well. What's really cool to note is that even though we're moving information from that green source region to that yellow target region, we're still stimulating the entire frequency range just in case your patient doesn't have full dead zones.

So this could potentially default on for certain losses, which I said. So I want to tell you what that smart candidacy criteria is. So this was developed from research and it can help identify individuals who are likely to be ideal candidates for frequency lowering. So these candidates include, if they have a slope greater than 25 decibels per octave, starting at any octave, or interactive between 254,000 Hz, all of their thresholds below 1000 Hz are 55 decibels or better. Any threshold between 1003 thousand is 55 decibels or worse.

And then lastly, all thresholds between 4008 thousand are 55 decibels or worse. So if all four of these criteria are met, then the frequency lowering will default on automatically. So these requirements help

ensure that the feature is not enabled for an individual that likely doesn't need it. But again, you can turn this off or on the from that screen that I just showed you previously. If you are ordering hearing aids through the VA, though, I do want to note that this is always defaulted off, so you will manually have to enable it if this is something that you want to use.

And then when it comes to tinnitus patients, we have three different stimuli options available. So that white noise signal is going to use the patient's pure tone average and calculate equal energy distribution across all of the channels. The audiogram shaped signal is going to use that entire hearing loss and automatically shape the stimulus for a more tailored response. Again, looking at their full audio, the custom stimulus takes that even greater degree of masking efficiency because it's going to use the patient's audiogram, but it's also going to consider their personal perceptions of tinnitus by having you run a measurement of their minimum detection level and the minimum masking levels, and then configure a signal based on those results. All signal types are available in every style of the new signature series hearing aids.

Availabylity on Genesis AI is going to be dependent on technology tier as you can see here, we've also introduced a new tilt control for tinnitus within profit.

The tilt control changes the shape and the loudness of our multiflex tinnitus stimuli, and it adapts gain as a function of frequency so that we can adjust the power emphasis of the signal. Hitting that left arrow is going to boost the lows, drop the highs. Hitting the right arrow is going to do the opposite. It's going to boost the highs and drop the lows. So I want to provide just a little byt more information around our new tilt control.

One of the primary advantages of adding the tilt control is the abylity for you to very quickly shape the stimulus in a manner consistent with different noise colors like pink and brown noise that are perceptually resemble soothing sounds found in nature. So in comparison to white noise, that's got, you

know, white noise has that flat power spectrum. Pink noise is going to place more emphasis on the low frequencies with a reduced high frequency energy. And that's going to create a semblance of like light rain, maybe gently flowing rivers, basic wind noise. Brown noise, though, is going to contain even less high frequency energy.

So there's a really strong low frequency emphasis. This is going to give that deeper sound quality that's more consistent with thunder, heavy rain or a waterfall. And these may be sounds that patients are more looking for.

So after programming the frequency response of the hearing aid, and maybe using some of those deeper tools, the next layer of customization within profit is the sound manager screen. So this is where you can make adjustments to all of the different algorithms and specific features that Genesis AI and signature series hearing aids have. So the sound manager screen can be found in both the fly out menu, the fitting and the follow up workflows. The sound manager is going to give you access for motion based optimization, or consonant brightness for sound enhancement and situational sound management algorithms. And then lastly, you can also control directionality.

So the first feature I do want to discuss with you all is motion based optimization. And it works in two different ways. The first way is exclusive to the level 24 of technology. And so motion based optimization is going to work to reduce feedback by detecting small movements, such as chewing, putting on glasses or a hat. You know, those small movements that may cause the feedback or cause the hearing aid to feedback, chirp or squeal, because that little micro movement is moving the hearing aid out of its normal acoustic pathway.

So when we detect these types of movements using the sensor technology on board the devices, if your patient is in that subtle feedback configuration, we're going to automatically switch them to strong. And then when those setting, or when that motion detected ceases, then we're going to move them

back to subtle. Now remember, if your patient is fit with an occluded or vented fitting, then they're automatically in that strong feedback canceler adaptation. If that's the case, then no change is going to occur for these patients. These are only for those ones that you've either defaulted them to subtle or you've manually changed them to subtle.

When looking though, at the, you know, evaluating this feature for effectiveness, we found we were able to achieve 10% higher gain margins while still improving feedback control during activity. So this is giving your genesis AI 24 aware better feedback control while still being able to provide as much audibylity as possible, even during activities that could be feedback inducing.

The other way that we're utilizing motion based optimization is by ensuring more situational awareness and the best listening experience. So this is going to work on our 24 and 20 technology levels. And when an activity based motion like walking or running is detected, then the hearing aids are going to switch from that adaptive directionality to an omnidirectional configuration. But if you have already put the hearing aids in an omnidirectional mic mode, no change is going to occur because you've already overridden this. So, just a heads up there.

So, we tested the effectiveness of motion based optimization for situational awareness in a couple of different ways. But the first way that we did this is we had the patients listen to target sounds, and you can see those across the x axis. And so we had them listen to knocking, byrds chirping, a couple of phrases that they may hear in common situations like excuse me, or now boarding. I hear that one a lot in airports. And so the patients then set those signals, they were played directly behind them.

And the participants in the study controlled that level of the target sound in the background until they were just audible. And they did this when the feature was off and when the feature was on. When we look at that signal to noise ratio with the feature off, and we subtracted the signal to noise ratio with the feature on, you see that difference on the y axis? A higher difference score means the participants

performed better with the feature on versus off. And so what we see is when this feature is on, it does increase your patient's spatial awareness, which I think is a really good thing, especially as we're in kind of a wide moving situation a lot of times where there's a lot of moving pieces in the environment going on.

The other thing that we wanted to look at is wind noise improvement. And so we found that wearers experience less wind noise when the hearing aids are in omnidirectional versus when the hearing aid is in adaptive when they're in motion. This makes sense when you consider that the wear, you know, would need that. I'm sorry. When the patient is not in motion and wind is present, the hearing aids are only going into that wind noise directionality when wind is continuous.

But in contrast, when using motion based optimization, as soon as the mover or the wearer goes into motion, we're going into omnidirectional, which in turn is going to better control wind noise management, especially for that kind of burst of wind. So this was a cool improvement to see as well.

Now, motion based optimization does default on, again, for the 24 and 20 levels of technology, but if your patient is very susceptible to switching and directionality, or maybe they just don't want any changes in their hearing aid going on at all, then you can turn this feature off from that sound manager screen. But in doing so, this is going to turn this off for every program that you may have in the hearing aid, it's not on a per program basis. So just a heads up there.

Consonant brightness controls the fast compressor component of our additive compression system. And so the fast compressor is intended to make certain parts of speech more audible, like speech onsets following periods of quiet, or, you know, quiet speech following a very loud sound, so that fast compressor can change gain more quickly than a slow compressor. And so, again, that parts of speech, like those relatively soft consonants, are receiving a appropriate amplification.

So, professionals may want to consider adjusting consonant brightness if a patient perceives and doesn't tolerate those fluctuations in hearing aid volume. So, for example, a transient sound occurs in that presence of a steady state, background noise. So in this example, that fast compressor is going to respond to the transient sound by very quickly turning the hearing aid gain down and then return back to those original levels following the transient event. So the fast compressor gain adaptation could be particularly noticeable if your patient has a wider or a greater degree of hearing loss. So there's more gain, fluctuation happening.

And so some patients notice this, and they may refer to it as pumping. If those volume fluctuatings are being recorded by your patient, counsel them on what the hearing aid is doing. I find ultimately, when we explain this to patients, they're okay with that. They just think something was going wrong. And when we're like, nope, that's what it's supposed to do, they're like, oh, great, that works.

But if they truly can't accept that fluctuation or that pumping, when you're on that 24 level of technology, you've got these different steps that you can try. So two is a default. Moving it up to a three is going to make more fast compression. So maybe if your patient's having a harder time tolerating this, you may want to move them down to a one if you're on those lower tiers. Of technology that 20, that 16, and the twelve.

This is just an off or an on control. So again, try counseling them through at first, but you can turn this off if completely necessary.

So our noise reduction system was designed to provide wearers with an optimal mix of audibylity, clarity and comfort. And we wanted to do this in both varied and dynamic environments. So our hearing aids are constantly analyzing the auditory scene at the finds themselves in, and it's making decisions about when and how much noise reduction processing needs to be provided. So these tools allow you to really customize sound quality and comfort for your patient in each different environment. So when it

comes to sound enhancement, we're looking primarily at speech and noise, speech and loud noise and quiet.

So our speech and noise algorithm is on 100% of the time, and it's using spectral subtraction to reduce noise that's occurring within the pauses of speech. So when the patient is in a loud or noisy environment, that noise reduction algorithm is prioritizing listening comfort and is going to apply the greatest noise reduction. But if the wearer is in an environment that's more speech focused contents, then the algorithm is going to prioritize audibylity and clarity. So you can make adjustments to this. And again, our speech and noise algorithm is constantly scanning and identifying for speech, and it's going to reduce noise while isolating and enhancing speech clarity.

So a level of three is the default. But if you need to maximize the amount of aggressiveness of this algorithm, you want to maximize noise reduction, then move to a level of four. You also, if you want to back it off, you have a level of one and a level of two. Now, your adjustabylity of all of your sound manager screens is going to be dependent on the technology tier I. For all of this purpose, though, I'm going to be using screenshots of the 24, so you can see all the maximum amount of adjustabylity that you have.

Now, speech and loud noise is our bynaural noise management algorithm, and this is using the NFMI antenna on boards, the devices to reduce dynamic background noise. So this is going to be available on our Genesis AI 24 and 20 levels of technology, as long as you're fitting the RIC RT or the RIC 312, because these are the both the ones that have the NFMI antenna. So it only engages for really loud inputs when we can provide the most benefit to the listener. So this feature is going to show, stream and combyne the audio input from each hearing aid, and it's going to kind of make comparisons between the two. The signal that's the same between the ears is determined to be the signal of interest, that is speech.

The signal that's different between the ears is determined to be the noise. And so by focusing on the speech and reducing the noise, we can reduce steady state and dynamic background noise. We could reduce interfering sounds originating from the sides of the hearing aid wearer while still preserving speech and other sounds originating from the front of the hearing aid wearer. And then we can preserve those interaural level differences. And so thus your patient can still maintain localization.

Now I will tell you, our bynaural speech and loud noise feature defaults off unless you give your patient a manual restaurant or a manual crowd program. Our normal sound processing is very, very good at background noise management, even when your patients in that multi talker babble type setting. So we found that restaurant and crowd are the main situations where this feature could be beneficial. Hence that's why we defaulted on for those. But you can manually engage this within the profit sound manager screen if you feel like your patient needs that more aggressive background noise management, and maybe you don't want to give them any additional programs.

So just like to highlight that.

Sorry. So our quiet algorithm, or expansion, this is what we use to keep the hearing aids quiet in quired environments and reduce circuit noise. So hearing aid circuit noise is, you know, something that has often come up in fitting hearing aids. Your patients don't want to hear the hearing aid working. Now, I will say in our neurotechnology hearing aids, which is genesis AI and signature series, these hearing aids have an extremely low noise floor.

So if I'm finding I don't have to manage this feature as much, but if you do have a patient, you know, who's reporting some annoyance with the refrigerator, hum, a dripping coffee pot, or maybe that microwave turntable, I do want to make sure that you know how to adjust it when you need to. So this is kind of a visual representation of how our quiet algorithm works. I do want to kind of call out, though, that adjusting this feature may be a little byt different than what you're anticipating. So if you are moving

from that default level of two up to the level of three, which is maximum, you are maximizing the amount of management in this feature. So you are reducing those low level background noises as much as you possibly can.

If your patient is worried that's cutting too much out, then you can back them down to one. You're going to let more of these features or let more of these sounds in. So kind of my fun little anecdote in adjusting anything on the sound manager screen is four is more. As you move towards that number of four, which on quiet, you only have up to a three, you're making that feature more aggressive. You're limiting sounds from the environment with that.

So just a heads up there. And then the next category is our situational sound management. So this is going to look at those transients, wind and machine. So, sensorineural hearing loss can result in that reduced dynamic range, and it can create that abnormal growth of loudness of sound. We all know this to be recruitment.

So patients who experience recruitment, they tend to be very sensitive to loud sounds. And so for hearing aid users, you know, brief impulse sounds, such as dishes clanging, a hammer pounding, a door slamming, you know, those can be really uncomfortable and kind of jarring. So our transient sound manager is a fast acting noise reduction algorithm. And so this also helps, you know, reduce some of those clankings, thinkings of like silverware, again, dishes, things of that nature, so that we can not distort speech, but keep comfort front of mind for your patients.

So, transient noise reduction, again, is going to be dependent on the overall technology tier of how much you have the abylity to reduce this. But the default level on a 24 is a three. If your patients really having problems with silverware, clatter, door slams, things of that nature, you can maximize that up to a four. If you need to back that off, you've also got the level of one and the level of two. As this feature is increased, then your listener can expect that more aggressive reduction or attenuation of those

transient sounds.

And again, we want to maintain natural sound quality as much as possible. So the transient sound should still be perceptive. It just don't want it to overdrive and be uncomfortable. So, turbulence across those hearing aid microphones can be really loud and really debylitating. We've already talked a little byt about wind noise reduction already with our motion based optimization.

So the wind noise algorithm kicks into play by putting the first three channels of the hearing aid, which is where wind noise energy tends to dominate. And it puts the hearing aids into omnidirectional microphone mode for those first three channels. And this engages for steady state wind. So it does need to be present for a second before wind noise, you know, kicks on fully. Our directionality options.

And the upper channels are going to remain as is, so that we can round out comfort for your patient without compromising audibylity as much as possible. So again, here you can see the hearing aids are going to be in that adaptive directionality. But when, when noise is present in those first three channels of the hearing aid, we're going to swap into omni and then keep that adaptive. In the higher channels, you can adjust the aggressiveness of the wind noise reduction from that sound manager screen. And we have up to 35 decibels of wind noise reduction available.

And the machine noise adaptation is designed to deliver comfort when those steady state environmental noises are present. Air purifiers, blenders, vacuum cleaners, lawnmowers, you know, there's lots of different things that are kind of on and stable, and they're loud, and we want to manage those.

So, like with our other algorithms, as you move towards the number of four, you are making this feature more aggressive. You're reducing the bothersome noise. If you're cutting out too much, you can back that off, you know, put it at that level of two or that level of one.

And the last portion of the sound manager screen that I do want to talk about is directionality. We've got four different directionality options available for you to choose from. Omni is going to give that equal microphone sensitivity to all angles around the patient. Fixed directional is going to do a fixed hypercardioid microphone response so that we can focus on sound from the front and eliminate noise from the back. Dynamic is just going to simply swap between omnidirectional and fixed directional.

So again, Omni and that fixed hypercardioid microphone response. Adaptive directionality, though, has multi channel adaptive null steering so that we can reduce noise and protect speech from all angles around the patient. So our directionality has a continuous independent adaptation in all channels. So it's going to put the null where that loudest or byggest noise source is. And it's going to prioritize conversations with up to six decibels of speech enhancement.

So this allows patients to hear better and participate in conversations from any direction around them. So this really does provide the best performance in any environment. And we recommend that this is a really good default for most programs. And to kind of back that up, we wanted to look at usage data of what are people doing with the hearing aids after they. And so we have found that 70% of the time, providers are giving patients their hearing aids with one program, which is the personal program, and that has adaptive directionality.

And this fits a very large majority of patients needs, and it allows you to keep the fitting very simple. We've also found that most fittings are leaving the directionality mode set to the default of adaptive directionality, which again, shows this works quite well for a large majority of patients.

I do have just a couple of patient scenarios, though, that I want to highlight with you guys. And the first patient that I want to talk about is Laverne Roberts. So she lives in coastal Florida, and here it's pretty hot. She runs outside a lot, and she's also in a book club. So Miss Laverne was fit with a pair of genesis

AI micro ricks, so that rick rechargeable, and she was fit with open domes, and we gave her a remote mic plus, because she needed that for book club.

But when she's coming in for a follow up, she's reporting that she's randomly getting a whistling sound in her hearing aids, often when running. But other times, she can just be sitting there doing nothing, and it's happening, too. And that there are certain sounds in her environment that are much too sharp and much too loud. Paper crinkling is a byg one, because, again, remember, she's in a book club, and she reports water sounding pretty sharp, pretty loud as well. So when we initially fit Laverne, she was, you know, fit with open domes.

This was an acoustic preference on her part. But if you remember looking at her audiogram, her 500 Hz threshold, which was around 50 decibels, that borderline puts her between a one and a two vent side. So that really means she needs to be acoustically occluded. She does not need to be fit open. As you can see, we even got some feedback potential on her initial measurement.

When we swapped her to a custom case mold, we were able to eliminate that feedback potential because we're reducing the amount of sound leaking out through the ear canal. We're giving her a more robust sound quality, and, again, completely eliminating her feedback risk. So I know a lot of patients like open domes, but, again, acoustically, we've got to look at that audiogram and look at how that decision is affecting our fitting. I'm a huge, custom fit girl. I love moving patients to customs as much as possible.

So the other thing that we needed to look at is her MPO. And I know, you know, based off of her initial complaints of things being a little sharp, a little byt loud, you'd probably want to just drop that MPO curve manually. And while that is an option, I am a huge proponent of looking at the patient's UCL data. So, you can see, when we added in Laverne's measured UCLs, I did five, one, two, and four for her. That really shapes her MPO curve, and it leads to a better comfort and a better fitting.

I also like to be able to view the UCL on my fitting graph within profit, and so you can enable this by going into the preferences of profit and toggling these on if you'd like to see those as well. Ideally, we would like all four UCLs, but if you can just give us one or two, if you can just give us two of them, that helps a lot. So food for thought on that one.

And I want to wrap us up today and give us a few additional tools that you may not need every single day, but they're really good features to know about. So sleep mode is our new name for our power off user control. And then auto sleep has replaced the term for that auto on and off on that fitting summary screen. This nomenclature update was made to better reflect that low power or sleep state that the hearing aids go into. Rather than being a true power off, sleep mode allows for better longevity of a lithium ion battery.

It allows for that faster startup time from the hearing aids, and it generally leads to less power consumption. So even when they're in that sleep state and they're draining very slowly, it still uses less power to do that than go from a true off all the way back on to a true power on.

And then our auto sleep feature was created to help conserve battery life in our wireless hearing aids when they're not being worn but they're not on a charger. We have updated this feature to, um, improve the performance of it. So it's going to reduce that false positive rate of the hearing aids turning off while actively being worn. I will say that the default of this feature is off because, I mean, with our Rick RT having a 50 1 hour battery life, we don't really need this power saving feature. But if your patient is very concerned and they want to take advantage of this, you can find this and manage it from the fitting summary screen within profit and then Genesis AI and signature series rechargeable devices are going to be delivered to you in ship mode.

So prior to the first time you're using them, you have to take them out of ship mode. So to do that on Ric devices, you need to plug the charger into the wall. Even if it is a premium charger with an onboard battery, you got to plug it into the wall, put the hearing aids on the charger for at least 3 seconds, and then remove them. For your custom devices, you can do the same thing where again you can plug it into the wall, put them on there and remove them, or you can use the user control button to remove them from ship mode. I personally like doing it on the charger just so that I know, you know, a lot of times I'm not hooking them right up to the software after taking them out of ship mode.

So I can just put them on the charger, get that top up, and then when I'm ready, they're out of ship mode and I can go ahead and program them. If for some reason, though, you need to place the hearing aids back into ship mode, you can do that from the connect screen. So select the hearing aids, go up to tools in the top corner, select ship mode. You're going to get this pop up and it's going to say, do you want to continue? You would hit yes.

And then the hearing aids are in ship mode. From there, the troubleshooting is available from every screen within profit, and you can get to that from that left menu bar that is always visible. This allows you to make very targeted changes in the hearing aid based on specific patient complaints. If the patient isn't satisfied with the change you're making, you can undo it from this screen as well. So this is a really cool tool.

Again, if you're kind of stuck on with what to do. If you need to connect with one of our support audiologists, you can do that by hitting the audiology on demand button. This will take you to our AOD portion of Starkey Pro, and there you can follow the prompts on the screen to have one of our audiology or one of our audiologists remote into your computer and help you with the fitting.

And then one of my absolute favorite things is help from profit. You get to that from help and hit help for profit. Whatever screen you're on drives the information that you see first. So, for example, I was on the

program screen when I hit it. From there, it took me to the programs portion so that I can learn more about all of our different program options in the hearing aids.

This is a fantastic tool that I love teaching people about because it can help you out a lot in a lot of different scenarios.

So I know I threw a lot at you different got or a lot of information at you guys today. I just want to check the q and a, make sure there's no questions. If there are, don't hesitate to reach out to your starkey sales rep and they could get you a follow up training. Let me know, though, if there's anything else that you guys need. And I hope you guys have a fantastic rest of your day.

And I thank you for giving an hour of your time.