Beltone Amaze Product Updates & Beltone Boost Ultra

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- [Laura] Hello everyone, I'm Dr. Laura Schachtel, the product training development manager for Beltone, and I'd like to welcome all of you to this course on the Beltone Amaze product updates and the Beltone Boost Ultra. We've had two very successful launches of Beltone Amaze. First we launched our RIE products with not only the best-in-class rechargeable solution but also its exceptional sound quality. Then we extended the family with attractive custom products all running on 2.4 gigahertz wireless. Now we are completing the family by launching our BTEs to provide a full Beltone Amaze product family. We're also rounding out our portfolio by introducing the most complete hearing care solution with those with severe to profound hearing loss with our Beltone Boost Ultra. We've added features, upgraded existing ones, and improved the overall functionality to ensure that this is one of the most powerful hearing aids on the market. This course will walk you through all of our new additions.

But before we begin, just a little housekeeping. In the Handouts pod, you will find some handouts for this course. I have the updated cable guide, the PDF of the slides, the Amaze feature chart and the Boost Ultra feature chart as well. So I believe you just click on that, and then follow the onscreen prompts to go ahead and download those. Also, feel free to type questions into the Questions pod as I go along and as they come up, but I might not be able to actually answer your questions until the end of the session. So with that, let's go ahead and begin with our learning outcomes. So after this course, hopefully all of you will be able to identify the key differences between our current Amaze product portfolio, and then the one with now our new products added onto it. And then hopefully after this, you'll then be able to list three benefits of our Amaze products. You'll also be able to identify the key differences between our current or Beltone Boost Max Super Power hearing aid and then our new product with the Boost Ultra, and then be able to list three benefits of that Boost Ultra for your patients. So to start, let's look at our now completed Beltone Amaze and Boost Ultra ecosystem. Many of our Amaze products have been updated, and you can see our newly launched BTE models and the Boost Ultra up there as well. Beltone's ecosystem provides the best-in-class rechargeable option with our 63 style. It allows for direct

streaming with Apple and Android products. All of the styles in our ecosystem run on 2.4 gigahertz, meaning that they can all connect with our direct line wireless accessories, and we have our apps that allow our patients to have even more flexibility with their hearing aids. This is truly the industry's most comprehensive hearing care solution. Let's also now review the current Amaze product line in a slightly different format. So again, we now offer a full family of RIEs, custom products, now BTEs, and we're adding in our Super Power BTE in all three technology price points, so the premier, the advantage and the quality. So in order to fit any of these new or updated styles, you must be running Solus Max version 1.6 which you can download from Beltone community. You would just have to go to the library page, and then I believe you search for either download or for fitting software, and the link is there for you to install the new software.

So let's review our RIE styles with a little bit more detail here. So RIEs as most of you know are a very popular style in the marketplace because of their cosmetic appeal, and Beltone is now excited to offer three different RIE styles. And let's break these down and start with the one that most of you are fitting, which is our RIE option for the Amaze 63 rechargeable. This was launched back in 2018, and since it's a rechargeable hearing aid, there's no need for you or your patients to worry about a battery door or batteries because it's using induction charging. So the patient would just need our charger in order to be able to power up their hearing aid. And since we are using induction for our charging mechanism, there are no external contact points that need to be kept clean or that you have to make sure it hit the right spot in the charger in order for the hearing aid to get that powered up. The Amaze 63 also has an LED light that serves as an indicator for the patient when it's in the charger, and also just so the patient knows that the hearing aid is on versus off. And just like all of our previous families of the 63 model, there is a multifunctional program button that can be configured within Solus Max, meaning in the fitting software you can control whether that single pushbutton is a long press or a short press, and you can make that become kind of a volume control as well as a button to press just to scroll through your

programs. But again, just like all of our other 63 models, there is no telecoil or DAI available in this form factor. If a patient did need a telecoil or they wanted DAI, a myPAL Pro would be added and it would provide the same flexibility as if it was physically on the device. Since that R63 style has been our most popular and best selling form factor, we have decided to launch the Mini 63 RIE that uses a traditional 312 battery. So this now becomes our smallest most cosmetically discreet RIE style. The Mini 63 will work with all of our SureFit receivers so low, medium, high, and ultra power, and it comes in three technology levels, so the 17, the nine and the six. It has the same options that the rechargeable 63 does so it comes with that multifunctional program button that again can be configured within Solus Max to allow some flexibility for volume control, but again, it still does not have a telecoil or DAI but it can pair to a myPAL Pro if a patient really does need access to those features.

And then our last RIE style is the 64 which uses a traditional 13 battery. One of the great additions with the Amaze chip is approximately 20% extra battery life, so the battery will last even longer than with our previous product families that had the 64 style. The 64 has a multifunctional toggle button that is also programmable within Solus Max. So because it's a toggle button, there is a definite rocking up and rocking down, but within the fitting software, you can change what a short or a long press up versus down does. So there's four options with this toggle switch. And now our 64 model does come with a telecoil, and you can add DAI functionality to this product as well should your patient need that. Last year we launched the world's first wireless CIC with 2.4 gigahertz featuring made for Apple and Android, ear-to-ear communication, and remote fine-tuning capabilities. In addition to the CIC model, the Beltone Amaze family includes our ITE, ITC, and Microphone in Helix styles. These four discreet custom offerings support full wireless compatibility with our Beltone direct wireless accessories and direct streaming with compatible Apple and Android devices. Additionally, all models except the ITC offer ear-to-ear functionality for an improved overall listening experience. Now let's go ahead and review these four styles with a little bit more detail. So we'll start with our ITE model, and we offer this with either a

312 battery so that would be more of a half-shell size if you wanted, and you can order it as a half-shell, or a 13 zinc-air battery option and that would probably be more of a full shell which is the picture you're seeing here on the screen. The receiver power levels include medium, high, and ultra power only, so there is no option for a low-power receiver with our ITE. Because the ITE comes with dual microphones and it's equipped with ear-to-ear technology, it now has the addition of benefiting from our most premium directional system which is CrossLink Directionality two with Personal Sound ID. There is the option for a pushbutton and a volume control if the patient would like that. And again since there is ear-to-ear, you could add a pushbutton on one side, and it would control both ears. Again, that one pushbutton would be configurable within the fitting software to act as volume should the patient not want both manual controls on the faceplate of the hearing aid. And this style has now been updated to offer a telecoil as well, again, should the patient require that. So since we are now supporting telecoils in our products, the nomenclature for the hearing aid models is going to change just a little bit.

So for example if you were to order an ITE, on paperwork you would see ITE dash DWT, and that T now stands for telecoil. So you'll be able to see which of those products has the t-coil and which one does not. The same can be said with our 63 styles now that we have two of them. The rechargeable one in the nomenclature there will be a C, so DWC, directional wireless, C for rechargeable. The Mini one that takes the regular zinc-air battery will not have the C in the nomenclature, so again you can tell which product the patient has. So our Microphone in Helix product is a unique style only offered by GN. And this style comes with either a 312 or a zinc-air battery. It just depends on what you and your patient talked about and which one you will order for them. But that 10A battery option is not available with the Amaze family. And just like our ITE, the receiver power levels include only the medium, high and ultra power, so again a low-power receiver is not available for the Mic in Helix. But it does have ear-to-ear functionality, but does not utilize directional microphones, and that's because of the placement of the microphone that's tucked in under the helix. Where that

placement of the microphone is, it helps capture the normal acoustic cues of the pinna, and that results in a natural directional function which is very similar to what, you know, you and I are doing with our ears right now, so very normal hearing experience for that patient because of the placement of the microphone. Our pinnas also introduce a natural peak resonance. That gives us a boost in the mid-frequencies which offers even more of a natural sounding quality to patients that wear this style. The Microphone in Helix style also has the option to come with a pushbutton or a volume control. Again, that pushbutton is configurable within the fitting software, and now it also does come with the added flexibility of ordering it with a telecoil. We have updated the custom order form to allow for this option of a telecoil should you be ordering a custom product for your patient. The In the Canal or ITC style comes standard with the 312 zinc-air battery, and now all four power levels are available, so unlike the previous two, you can order it in a low power, a medium, a high or an ultra power. Both the low and medium power receivers are offering that extended high frequency bandwidth. The high and ultra power don't allow that because it's a limitation of the receiver itself.

And since we now offer that low-power option in this size, you can actually get something a little bit more cosmetically appealing for some of your patients. Directional microphones come standard on the ITC, but the ITC does not support ear-to-ear functionality so CrossLink directionality is not an option with this style. As with our other custom products, the ITC can be ordered with either/or a pushbutton, and/or, sorry, a volume control, but since it doesn't have ear-to-ear functionality, you cannot utilize the manual control synchronization, meaning if your patient wants a volume control, then you will have to order that on both hearing aids because making adjustment to the right ear, the left ear will not follow. The same thing if you want a pushbutton, you would have to get it on each ear. But just like our other custom products, it now has the option of a telecoil but since this product is wireless, if a patient does want that flexibility to adjust volume and programming without having to push ear level and at each ear, you can order a remote control or the remote control too or you can have that flexibility for them through the HearMax app. So there are

ways around it even though it's not ear-to-ear at either level. And our Amaze CIC is the world's first 2.4 gigahertz CIC with ear-to-ear functionality. And this is made possible because of the increased efficiency of the Amaze chipset which boasts less power consumption and the addition of the pull-out antenna. So the antenna is built through or in, if you wanna call it, the baseplate. So the chip actually sits right behind where the battery door is, and that pull-out antenna is soldered into one end of the chip, thread through the faceplate through the other end of the faceplate and then soldered back into that chip. So that removal line is very sturdy, or that antenna is very sturdy and it can now act as that removal line. You do not need to order a removal line in addition to just having the wireless antenna because your patient can just pull on that and it's meant to be pulled on. But please do not cut or remove that because then it will lose all of the wireless functionality.

So our Amaze CIC runs on a size 10A battery, and it's available in all receiver powers so again low, medium, high, and ultra power. And just like the ITC, the low-power receiver will offer a little bit more of a cosmetic advantage because it's smaller. The CIC can only support a single microphone because it's so small, but it does also utilize natural ear acoustics, specifically pinna cues for directionality. The only manual control option that you could get on this would be a pushbutton, but again because it has ear-to-ear you would be able to configure that within the fitting software, I believe, haven't tried it, to allow some kind of volume control option as well. You can also add a remote control or pair it through the HearMax app if the patient would like the flexibility of having some volume control as well. But because this is such a small hearing aid, there just isn't room to put the telecoil in so this option as with most of our CICs, just they don't have that feature. So that was a quick review of our expanded Amaze RIEs and custom products. So by completing the Beltone Amaze family, we are now able to offer a full line of products with our powerful new chip with each model addressing different patient needs. This provides you the flexibility to provide your patients with cleaner, fuller, richer sound and be flexible with direct line streaming options and for the patient to customize their hearing aids to their specific needs. And this all comes in

three technology levels. BTE hearing instruments provide more options for your patients that have dexterity issues or have something medically going on with their ears, so like a draining or weeping ear. So the BTE offerings that we have is the Mini 66 BTE which has a multifunctional program button so it has that single pushbutton which again, configurable in the fitting software, and it does have a telecoil and it can be configured as either a standard earhook or as a thin-tube. And so you're seeing a thin-tube on the screen. Should your patient need more gain than what a thin-tube can provide, you can configure it within Solus Max to a closed fitting with an earhook and then a standard ear mold. So this small versatile BTE has a maximum power outage of 130 db SPL. And you can see the fitting range there of what you can fit with it being open as pictured or when you close it and have a traditional earhook. The standard 76 BTE has a multifunctional toggle button, so kind of most people will use that as volume and a pushbutton.

So the volume and the pushbutton are now separate which a lot of patients do like. It also comes with a telecoil and it has DAI functionality already built in. And just like with our Mini BTE, the standard BTE can also be configured for open fittings with the thin-tube as you see here, or a closed fitting with that standard earhook and an ear mold. And our standard BTE has a maximum power output of 134 dB SPL, and again you can see the fitting range of where you can go down with an open fitting, probably more with a closed dome towards the bottom of that graph, and then what you can fit when it's configured as closed. And then our last option for the Amaze BTE is our power 86 BTE which has all of the same manual controls and a lot of the same functionality as our standard BTE. So again, it has the volume control toggle, and that single pushbutton. It has the telecoil, it has the DAI, but it cannot be configured to be open so you cannot use a thin-tube with this style. It also has the largest fitting range of our three BTE styles with an MPO of 141 db SPL. So we've kinda made a big deal about getting updated for telecoils and direct audio input, so I just wanna spend a minute to explain why having a telecoil and DAI ability is important for some of our patients. So although telecoils are now seen as obsolete technology, the tele-loop systems are

widely used in a lot of environments such as cinemas, theaters, places of worship, and schools, just to name a few. So a lot of environments like a theater have placed a lot of money in looping their facilities so that a patient who has a t-coil in their hearing aid regardless of the manufacturer, make, model of that hearing aid can connect into that loop system and then get that nice kind of amplification from the speaker without that speaker having to have every manufacturer's product kind of pinned on their shirt. So if you were going to see a play, you can't have all of the actors wearing a myPAL, but if you could connect into the loop system, you would be getting their voices kinda coming through your hearing aid through the telecoil nice and clear. There's also people use telecoils to connect with phones. You can still use it even with a cellphone. It doesn't just have to be a landline phone. And what's nice about this is that it actually when you're in the telecoil setting, it turns off the hearing aid microphones so when the phone is up by the ear, there isn't any feedback.

So that's especially nice if someone has a lot of gain running through their hearing aids. Direct Audio Input or DAI for short allows a direct connection from an external audio source to the hearing aids. So basically what it's doing is it's going to take this audio source, and you're going to plug it into a shoe, and it looks just like the programming boots that we use with our BTEs except the bottom of this shoe or boot has three holes that these pins would fit into, and then you would connect the boot to the RIE or BTE model so that you are now streaming from let's say the FM system. So a lot of schools have invested in FM systems. One manufacturer has that, but if that child's family did not want to invest in that manufacturer's product, they went with somebody else, the child can still wear the manufacturer they want as far as hearing aids. That hearing aid would just have to have DAI availability so they could connect into the FM system. Also, our CROS and BICROS systems utilize the DAI program, so that's what this image is. You have the offside microphone. It's corded over to that shoe that then the DAI program would take over for a patient using our CROS or BICROS system. So just to review, our BTE form factors do offer a lot of benefits for you and for your patients. So with all of our Amaze products, the BTEs offer some

extra ease in handling for patients that do have dexterity issues. Some find it more comfortable to have an ear mold with a more open vent than a dome. They all offer telecoil, and the 76 standard and the 86 Power offer the direct audio input. They have an IP rating of 68, and it fits a broad fitting range so you can fit someone with a mild loss down to a more severe hearing loss. It also because it's the Amaze chip, it has that high input dynamic range, and the extended bandwidth. You can make customized solutions with your patients through that HearMax app. It allows for remote care, a remote fine tuning. Patients can direct stream with their Apple and Android devices, and again the patient has availability to our full ecosystem so all of our accessories are open to them.

And again, just to quickly review, this is a lineup of our now complete Beltone Amaze family. So again all styles now support the telecoil except the CIC 'cause it's too small. And then our 63 RIE models, both of them do not support the telecoil. And the DAI is now supported in our RIE 64 style and then the standard 76 and the Power 86 BTE. And then we just have the one rechargeable which is our 63 model. Again there'll be a C in the nomenclature so you know it's the rechargeable version. So as I said earlier, we are rounding out our portfolio by introducing the most complete hearing care solution for those with severe to profound hearing loss with our Beltone Boost Ultra family. We've added features from our latest chipset so the Amaze chipset. We've updated existing features and we've improved overall functionalities to ensure that this is one of the most powerful hearing aids on the market. But before we discuss the features in the Boost Ultra, let's talk about some of the characteristics of the patients that need this Super Power hearing aid. So individuals with severe to profound hearing loss have greater demand on their hearing instruments than individuals with less hearing loss. Though they represent a very small proportion of hearing aid candidates, hearing aid technology for this group has traditionally lagged compared to other products. However, without appropriate amplification, users with severe to profound hearing loss will strain to hear and understand speech, enjoy music, or even hear important safety sounds like traffic at a busy intersection. Most of these individuals

need and use amplification at all times, meaning they're almost lost without their hearing aids. They require high-quality dependable performance from their hearing aids, and they also have a very strong individual preference for how they want their hearing aids to be programmed. As they've had hearing aids probably for a good chunk of their life, some of these patients, they know what they want and they will be kinda adamant about what it is that they want. So there is a great need for flexibility within our programming options. So for many years, the Beltone has ensured the most up-to-date hearing instrument technology has been made available for all power levels. So the introduction of our Beltone Boost Ultra continues this commitment to Power and Super Power users.

So let's take a look at our Boost Ultra options. The Boost Ultra is available in two form factors, the 86 High Power BTE is similar to the Amaze 86 BTE except the Boost Ultra comes with a metal earhook that provides an increased gain of about five to seven dB in the lower frequencies. Otherwise, it's pretty much the exact same hearing aid, exact same hearing aid to the Amaze 86. It uses a 13 battery, and has a multifunctional toggle and a separate pushbutton. And it has a telecoil and DAI ability. If your patient needs that extra five to seven dB of gain in the lower frequencies, then you have to order the Boost Ultra 86. If you order an Amaze 86, there is no way in the fitting software to configure the earhook to allow that extra gain. So that is why it is classified, even though it looks the same as an ultra, Boost Ultra, because of that metal earhook. The Boost Ultra 86 has a frequency range, excuse me, of 100 to 5,270 and a maximum output of 140 dB SPL. The second form factor is the 95 Super Power, and it uses a 675 battery, has a multifunctional toggle and a pushbutton so again the controls are separate, and also has a telecoil and it has ability for DAI. The Boost Ultra 95 has a frequency range of 100 to 6,120 and a maximum output of 145 db SPL, and both versions are available in three price points or three technology levels, so available in the 17, the nine and now in the six. So with the added processing capabilities, memory and efficiency, our most powerful chip platform yet provides the foundation for the most advanced sound processing available. Again, the new chip platform which was

the Amaze chip platform provides 30% more computing power, a speed increase of 100%, consumes 20% less power, and provides a memory increase of 100%. As I stated earlier, Power and Super Power users usually have experience with hearing aids, a lot of experience with hearing aids. So this means they have preferences and expectations with how their hearing aid should sound 'cause if it doesn't sound the way they think it will, they will never adapt to the new hearing aid. So within Solus Max, you have the flexibility with our advanced features to cater to gain, output, signal-to-noise ratio improvement and comfort. So let's dive a little bit deeper into some of the signal processing strategies of the Beltone Boost Ultra and why it's the top-notch solution for users with severe to profound hearing losses. So as I've been saying, this patient population, a little bit different than our kinda average patient. They might want some different type of compression modes, because, again, they've had experience with this hearing loss. This might be their third or fourth set of hearing aids. But you can't tell based on a patient's audiogram what type of compression mode they would prefer.

So this is something that you'll have to gain either by looking at what they were previously wearing, or in conversations with when you're fitting. So Solus Max supports linear, semi-linear and wide dynamic range compression when fitting any Power or Super Power hearing aid. So if you were using an RIE with the Ultra Power receiver, you will see all of these features that we're talking about right now. So these settings are changed within the fitting screen under the gain adjustment option, and these settings are adjusted by ear and by individual program. So when you're selecting this, the default comes from what you've selected as the patient experience on the patient screen. So if you selected the patient's experience level as experience linear, then the compression mode will default to linear. If you selected any other option under experience level, it will default to wide dynamic range compression. And please note that that semi-linear option is not available for all products and technology levels. So I believe the sixth level might not have the semi-linear option. So let's look at some of these compression modes in a little bit more detail here. So we'll start with linear, and I

think most of you know what that is, but it prescribes gain for each frequency, but they're the same for all input levels, so the gain cannot be controlled per input level since only one level will be visible on the screen and you can see that right here. Also the compression ratio is set to one because linear is a one-to-one ratio. This setting is recommended for previous users of linear amplification who have a very strong preference for this type of processing which is a little bit more aggressive and you could say harsh. The semi-linear setting has a little bit less compression if you were to compare it to wide dynamic range compression, so it's kinda that nice stepping stone between linear and wide dynamic range. The setting is recommended for previous users of linear and as I said as that kind of stepping stone into more compression. So the three gain input levels are back. You can see the compression ratios are not exactly linear, but they are pretty close to linear. There isn't that much compression in this system yet. And then the last option is wide dynamic range compression which sets the gain with the goal to ensure that there is audibility for soft sounds that conversational levels are comfortable, and that loud sounds are loud but not uncomfortably loud. And this setting is recommended for new users or someone that has already had experience with compression.

So again the three gain inputs are available, and you can see the compression ratios are the highest of the three that we've offered. So if you did select linear as your compression mode, this extra feature as I like to say unlocks for you which is the compression limit mode feature. This offers you two options to change the output compression of the hearing aids to either soft or hard peak clipping. So the default option is soft peak clipping which is represented by the orange lines in the diagram. This keeps the sound wave more rounded and closer to its original form so there will be less distortion in the sound signal. So this is a form of peak clipping, but we're rounding those peaks so that the original sound signal sounds pretty close. It's just not quite as loud. So this mode is recommended if you have a patient that has a mixed or severe to profound hearing loss who prefers linear amplification, but you might be trying to step them out of linear amplification. The hard peak clipping option is

designated by the red lines in the diagram, and this cuts the peaks of the sound waves. So this is a true peak clipping, and it changes that sound wave from being more of a sine wave into more of a square wave which does add more distortion into that sound signal. This setting is recommended for patients who have profound hearing loss that were previously fit with linear amplification. And it should almost read analog linear amplification. Or if your patient is requesting that they want more power, even though they're already in a linear setting. And I don't know if that really means more power as in gain or they just want more harsh sound quality which is what this will offer them. Sometimes you will have a patient in this population who won't move into a new product unless their current product sounds like their old hearing aid, and again, that's because the harsh distorted sound that they might be used to, it holds meaning for them, and it's gonna take a little bit of counseling and trust on their behalf from you to explain and for them to realize that I can hear just as well even though I don't have a lot of this extra noise or distortion; I'm still hearing really well.

So another feature just for our Super Power users is this low frequency boost, so again you won't see this unless you're fitting more of a power instrument. This feature adds additional gain to the low and the mid-frequencies, and you can see that right there on the graph. So when you apply this, there will actually be a visible gain change to the frequencies that are being affected. So you will see this in the fitting screen. But if you've already reached the maximum output of the hearing aid, and then you try to activate this feature, you won't see that visible change, nor will the gain actually be changing for the patient because the compressor can no longer increase gain because you've maxed it out. And again, these changes can be applied per program. A CrossLink Directionality two with personal Sound ID, so that would be in the 17-level model, has been shown to improve ease of listening when compared to straight omni-directionality or directionality alone, and in a study, patients with severe to profound hearing loss saw a four dB signal-to-noise ratio improvement. This translated into about a 60% better speech intelligibility for speech coming from in front of the patient while preserving audibility for sounds coming from other directions, and that was when

we compared it to other premium hearing aid brands where the sound was limited to just being in front. So that meant that patients wearing our product understood 60% better of what was being said in front of them while still recognizing that what type of environment they were in and feeling connected to that room, where some of our competitors, especially with this population, they try to eliminate that environmental sound and just focus in on the speech, but that patient is not enjoying the setting as much as someone maybe who has a more mild hearing loss and that's not really fair to that patient. Because gain is needed for people with severe to profound hearing loss, and it's very high gain, there's also a very high risk for feedback which will limit the amount of usable gain. Feedback Eraser with Whistle Stop has been redesigned with a new chip platform to provide the best feedback management yet. This not only provides prescribed gain at the fitting; it also prevents feedback in daily situations without reducing gain. And that's a big key point, as our feedback manager does not reduce gain. A lot of our competitors out there, they have good feedback systems, but at a certain point, it does start reducing gain, and gain is what a Super Power user really needs.

So basically this patient population would be teeter-tottering between getting enough gain to hear but not having too much that now their hearing aids are whistling at them. So these graphs up on this screen are meant to show what our product with Feedback Eraser does versus our competitor's Super Power BTE. So it's hard to see I know, and this was a movie playing, but it was just too hard to put the movie in here. So the teal line that both graphs have is let's say the target. That bluish purple color is when we turn the feedback management system on in both products, and then that red line is when we put a hand over the hearing aid. So as you just focus on our Boost Ultra product, you'll see that all three lines essentially overlap each other so that just turning on the feedback management system, we are not reducing gain. And when we put a hand over the hearing aid with Feedback Eraser on, there is no feedback spike, and we're still not reducing gain. But if we look over at our competition here, we notice that when we do turn on the feedback management system, and it is all kind of right here at

that one frequency, but the gain does drop. So they are reducing usable gain just by turning their system on. And then looking at the red line, when you hold a hand by the hearing aid, you do get a feedback spike, so not only do they reduce gain, they're not really stopping feedback in more of that dynamic situation. So again, with this patient population, it's very important that they don't have feedback. So our feedback system really does do a great job, again, in the static and the dynamic situations that our patients can be in. Our patients also are getting a lot of sound, again with high gain pumping through their hearing aids, and that's wonderful, but sometimes it can be very fatiguing hearing all of that sound especially when some of that sound is uninteresting or it's unpleasant such as a door slamming or dishes dropping. So with Boost Ultra we wanna strike the right balance of having some noise come in for environmental awareness, but not be so overpowering that the patient is fatigued at the end of the day.

So with impulse noise reduction, it just takes the edge off of some of those sudden onset sounds which can particularly be jarring through hearing aids, especially ones with a lot of gain running through it. In a recent study, almost 90% of listeners judged that impulse noise sounds were softer when they had the impulse noise reduction turned on. So it just kind of mutes or dampens the sound. So you still know a door is slamming; it's just not overpowering the rest of what's going on in the environment. One of the most important features for users with severe to profound hearing loss is Beltone sound shifter which gives the user the potential for greater high-frequency audibility. A relatively high proportion of Super Power users are simply not able to hear high-pitched sounds, or the level of gain needed to cater to that hearing loss for a specific frequency region would exceed the user's UCLs. So either there is no usable hearing in that range, or if we were trying to amplify up there, we just couldn't because it would be so uncomfortable for the patient. So to solve that problem, Sound Shifter compresses the inaudible sounds, and then it shifts it just slightly to the next frequency region where the patient has some usable hearing. So to help illustrate that, we're gonna use the analogy where we unravel the cochlea, and we arrange it like a piano

where those high-pitched sounds are on the right side of the keyboard and the low-pitched sounds are on the left side of the keyboard. The high-frequency sounds that are inaudible for that patient are highlighted in that bluish purple color. So when we activate Sound Shifter, it compresses those high-frequency sounds in the inaudible region and smushes and piggybacks them over to the next frequency band that is in the patient's audible range. So I just want to reiterate that we are slightly compressing and moving. We're not taking a high-frequency sound and then putting it all the way over in the low-frequency band. We are just trying to piggyback and condense as little as we can because the more shifting that sound we do, the more distortion we would add into the signal. Just like with our Amaze products, when fitting a Beltone Boost Ultra product, there is no longer a separate phone accessory program tab. Th removal of this program results in next to no audible delay for a patient when they're direct streaming with their Apple or Android phone or using a phone link too. The phone link streaming options are now found in each program tab under the advance setting screen all the way at the bottom, so keep scrolling until you see the phone accessory options.

If you make a change to one of the phone options, even in program one, it's a global change meaning that change will be applied to the other programs that the patient has. The gain used while phone streaming is determined by whatever program the patient is in when they answered the call. So if your patients are like any of mine, they wanted a low gain or a mute program so if they happen to be in that program when they answer the call, they're not gonna get much gain, and while they can try to make a change within the app or on their hearing aid, it might be better for them to actually get into a program that has more gain. The way that they can do that is within the HearMax app using the carousel of their available programs, and that carousel is up at the very top of the screen where it almost lists like the first four available programs and they would just pick which program they want the gain from. If they were to swipe with the tile, that main tile in the middle of the screen, they would essentially hang up the call, so if they want to change the gain, it has to be at the very top of the app which is in what

we call the carousel. And again we want to make sure that our patients with this population can take advantage of our increased connectivity. So again the Boost Ultra has our full ecosystem so they can connect to all of our accessories and they have our apps and direct streaming as well. This patient population is very diverse. Half of the population that are in the severe to profound range are under the age of 65, so you have very young and you have older people. All of them are using technology to communicate because at some point in time that might have been all that they have, so this population might be slightly more tech savvy than others, but just so you know that you do have the full support of our ecosystem behind the Boost Ultra.

So to summarize, the Beltone Boost Ultra family is built on the same chipset as our Amaze products with a high input dynamic range and increased bandwidth and enhanced feedback management system. There are two styles, the 86 High Power with the metal earhook, and the 95 Super Power with 140 and 145 db SPL output respectively, and each style comes with a telecoil and DAI functionality and they both have an IP rating of 68. The Boost Ultra also connects to all of our direct line wireless accessories, and direct streams to Apple and Android devices. Patients can also utilize the HearMax app for personalized control with access to remote care features. And again, the Boost Ultra family is now available in the 17, nine and six price point. So to end this course, I wanted to provide an update to our minimum system requirements for direct streaming with Apple and Android devices, and to review some of the new screens that Android users will see in the HearMax app to help them connect to the ASHA protocol which is that Audio Streaming for Hearing Aids protocol. So as of Sunday, March 1st, the minimum operating system requirement for Beltone HearMax and HearPlus apps have increased. The minimum Android operating system will increase from Android version five which is Lollipop to Android version seven or Nougat, and the minimum iOS version will increase from iOS 10 to iOS 12. So this means that Beltone HearMax and HearPlus apps will not be available for download on devices running Android version five or earlier or iOS 10 and earlier. So if you have a patient that is running an older operating system, they will not be able to download

either the HearPlus or HearMax app. But we wanted you to know that we are not taking anything away from patients that already have these apps on these older phones, so if your patient does have an older operating system, their app will continue to work just fine. They will just not be able to update the app to the next version. But if that patient deletes the HearPlus or HearMax app off of their phone, they will not be able to re-download it. This change does not affect our Smart Remote app or our Tinnitus Calmer app. It is only the HearPlus and HearMax app. The reason this change needed to be implemented was on the Android side Google has stopped supporting their operating systems that are lower than seven, and on the Apple side, this allows us to be consistent with which operating system we are using so that we can provide app updates a lot faster.

So there will be some devices that your patients are no longer able to use because they're just not supported anymore because they're not compatible with iOS 12 or Android version seven which is Nougat. However, the majority of devices are compatible with these versions for our apps. So for example, the iPhone 5S which was launched in September of 2013, it's compatible with iOS 12 along with any iPhone release in the last 6 1/2 years. So on the Android side, the Samsung Galaxy S7 was released in March 2016 and is compatible with Android version seven, and some have even been updated to a newer version along with every Galaxy phone released since then. So if patients have questions, we recommend that they contact their phone provider for more information about operating system compatibility for their particular smartphone. So to switch gears just a little bit here, within the Beltone HearMax app version 1.7 which is available to download in both the Apple app store and the Google Play store, there are updated screens to help support patients seeking to use audio streaming for hearing aids which allows for direct streaming with Android phones. Compatibility with Android phone models will be driven by the individual cellphone manufacturer and the service carriers as they all start to roll out Android version 10. In order to have this ASHA protocol on an Android phone, the operating system has to be version 10. I also wanna point out that Beltone won a big innovation award for

partnering with Google to develop this ASHA protocol. So within the updated HearMax app version 1.7, there is new support for three common patient scenarios, the first being a patient with a compatible Android phone, but they're running an old version of Android so not version 10. The second scenario is when a patient pairs their hearing aids through the Bluetooth menu rather than the HearMax app. So their phone is on version 10; they just paired their hearing aids incorrectly. And then the last version is showing confirmation for a patient who has a compatible phone and paired their hearing aids the correct way through the app. So again, this first scenario the patient attempts to pair their Beltone Amaze or Boost Ultra hearing aids to their compatible phone, let's say a Samsung Galaxy S9, but their S9 is running Android version nine and they haven't yet accepted or been able to update to Android version 10. So in the app that they've updated to version 1.7, the patient will see a notification next to My Beltone, and when they tap on the Direct Audio Streaming row, the app will inform the patient that their hearing aid must be running Android version 10 or later, and then that direct streaming must be enabled from their phone manufacturer. It also lets patients know that without this update, they cannot direct stream, and it just provides a little bit more information.

So if this patient who, I know Samsung is now rolling out version 10 to their Galaxy S10s. It also is starting to do it to some S9s, again it does depend on what carrier you're using, but it is starting to trickle through. I just don't know about any other phone manufacturer at this time. Our second scenario is a patient that paired their Amazes to their phone, their phone that is running Android version 10, but they paired it through the Bluetooth menu and not through the HearMax app. So when they open the app, they will see a notification next to My Beltone, and they'll notice that the status of their hearing aids has a question mark. It's flagged as well. So when they tap on the direct audio streaming, the app will instruct the patient to unpair their hearing aids from the Bluetooth menu of the phone, and then come back to the app and follow the prompts on the screen to pair their hearing aid into the phone. And I just did this the other day. It's extremely user friendly so all a patient would have to do is just tap on

that link that's in the app. It would automatically switch them right to the Bluetooth pairing screen. They would just have to click unpair the hearing aids, and once they do that, the app will then pop back to the forefront and walk the patient through the onscreen pairing instructions. So if you have a patient that doesn't know where their Bluetooth settings are and it might be too much of an ask for them, if they do it right through the HearMax app, they basically are never really leaving the app 'cause it takes them to where they need to go and brings them right back. And then our last scenario is a patient that has a compatible phone that's running Android version 10, so within the HearMax app, there will be nothing flagged because everything is working correctly, and if they tap on that Direct Audio Streaming line, they'll receive confirmation that everything is compatible along with some tips on how to control the volume of their phone and the hearing aid microphone.

So this patient is ready to direct stream with their Android phone. I just wanna mention a change that Google has now implemented when pairing any type of Bluetooth device to their phones, and that includes our hearing aids. Google has now made it mandatory, a mandatory requirement that location services be turned on in order to successfully pair any Bluetooth device. Again, that includes our hearing aids. So as you're pairing, or helping your patient pair their hearing aids to their phone through the app, you have to say Yes to allowing location services. Once you have successfully paired the hearing aids to the app, then if the patient does not want location services on all the time, they can go and turn that off and the hearing aids and the app will work just fine. It's just that initial pairing has to have location services on. And that is something that Google has implemented, not us. So to summarize, our Beltone Amaze family is now complete. We have three BTE styles, three RIE styles and four custom styles, and a lot of them do now have the telecoil and DAI ability back in them. The Boost Ultra is a complete hearing care solution for those with severe to profound hearing loss. We have the two styles, and now it comes in all three technology levels of a 17, a nine and a six. In order to program anything that we just covered, you will have to update your fitting software to Solus Max 1.6, and you can find the link to do that on

Beltone community. It's under the library tab, and then I believe it's either in fitting software or download folder. And then also the HearMax app has updated for both iPhone and Android users so they can go ahead and update that, and if the patient has an Android phone and they think they have the ASHA protocol on, once they update to version 1.7, they will get those in app notifications to make sure that they have done everything correctly to be able to direct stream with their Android phone. So that is all I have for today. If you do have any questions that you haven't typed into the question pod, please do that right now, but if you need to run and go see your next patient, I just wanted to thank you for spending an hour with me. I know I see that I have one.

Okay and with that, I'm going to end the session. So again, thank you everybody for spending an hour of your time with me. I appreciate it. Hopefully I will see some of you at National Meeting in a few weeks. Otherwise, hopefully I will see you at a Pro Fit later on this year. So everyone, thank you so much.