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Beltone's New Multi-Mic+

Presenter: Laura Schachtel, AuD, FAAA

Welcome everyone to today's webinar Beltone's new multi Mic plus with Auracast. We are so pleased to welcome with us one of our very favorite people from Beltone, Doctor Laura Schachtel. Laura Hand, thanks to you. Thanks Kimberly. Hi everyone, good afternoon again.

I'm Doctor Laura Schachtel, your product training development manager. The last of our series. Today I'm going to quickly review our new multi Mic plus. New name, a few new features, but it is essentially the upgrade to our MyPal Pro, an accessory that I think a lot of us know and really like. And we know the benefits to our patient.

But again, there's been some updates with this new version of the multi Mic. So in general, the multi Mic plus will help patients hear better in that more difficult environment where the signal to noise ratio is poor, where the speaker is maybe very far away from the hearing aid listener. So thinking of like a lecture situation, or in situations where they want to stream audio from like a different source, like t coil, some type of music input, or like an fm system. So we'll quickly go over the benefits of this accessory, the updates to it, and then how to connect and pair it within the software and our app. Again, please download the handouts, otherwise you can find them on our training homepage www.beltoneuniversity.com.

so after today's session, you should hopefully be able to describe the new design of the multi Mic plus. You should be able to compare the pairing process for our new multi Mic plus to the pairing process you had to do for the MIP Health Pro. And then you should be able to describe the different ways that patients can use the multi Mic plus. Because again, just like the MyPal Pro, there are several different ways that you can use the accessory. So let me quickly introduce you to our new multi Mic plus.

Again, it's the world's first remote Microphone and it now has Bluetooth low energy audio and that includes the aura cast capabilities. So again, our multi Mic plus, formally our MyPal Pro, is an external Microphone that helps your patients with speech understanding in those more difficult noise

environments. Now the main function of the multi Mic plus is to stream speech into the patient's hearing aids. This can help reduce the challenges again when hearing in environments with background noise, when that speaker is further away, or even in environments where there is reverberation. And that can include being in like an outdoor environment.

Now this can all be accomplished because the streaming range from our multi Mic to the hearing aids is about 80ft and that's a very similar range to what we had with our MyPal Pro. Now, before I get into the updates to the physical design of our multi Mic plus, I just want to talk about the benefit of this external Microphone. So according to MarkeTrak, only nine to 10% of respondents with prescribed hearing aids use a streaming accessory. And that's not just an external Microphone, that's any type of accessory that streams audio. And that's really unfortunate that such a low percentage of patients are taking advantage of streaming accessories, as most of us know how well, especially this external Microphone, can really help a patient with understanding speech in those really more challenging listening environments.

Several years ago, we tested how much benefit our external Microphone. Then it was the my pal pro provided patients when hearing a noise. So we set up a study pretty simply. We took a hearing aid user and measured their SRT threshold in speech weighted noise that was placed all around them using just the adaptive directional Microphones on the hearing aid, and then using the MyPal Pro with the hearing aid Microphones muted again, we measured the patient's speech and noise threshold at different distances from the speaker. As you can see from the chart, the further we got away from the speaker, especially with adaptive Microphones, the worse the patient did.

Which makes sense if we're talking and we're 6ft 5ft apart here, you can hear me pretty well. We're 10ft apart, you don't hear me quite as well. We're now 20ft apart, and if I'm not raising my voice, you're having an awfully hard time hearing what I'm saying. But with the MyPal Pro and again the hearing aid

Microphones muted that distance between the speaker and the hearing aid where didn't really matter because there really wasn't distance as that speaker's voice was streaming right into the hearing aids. We measured that nice consistent signal to noise ratio benefit at about 21 decibels.

We can say at the minimum using the MyPal Pro in this case provided at least a twelve decibels better understanding compared to just using the adaptive directional Microphones on the hearing aid. Now this study was performed, I think it was 2016. So at that time it probably was just adaptive directionality. This study is kind of dated because we have better Microphone systems now like CrossLink directionality four and UltraFocus two. This led our research team to go.

We have our new multi Mic plus. Maybe let's repeat the benefit study here to see how much better we are even compared to our great directionality with UltraFocus two and CrossLink directionality four. So this year they really did essentially repeat the study. So they took test subjects. They were presented with 65 decibels spl of speech weighted noise.

They had four speakers placed around them at 75, 9180 and 270 degrees. Again, a speech signal was varied in intensity. To find the signal to noise ratio at which 50% of the words were understood correctly, they used three test conditions. The first was the hearing aids alone put in the hearing noise program. Again, that was using UltraFocus two, because these were bell tone serene hearing aids.

The second condition, where the words stream through the multi Mic plus with the hearing aid Microphones turned on. And then that third test condition where again the words streamed through the multi Mic plus. But this time, the hearing aid Microphones were turned off. And so you can see, on average, the signal to noise ratio benefit from just the hearing aids on. In that one condition was 8.5 decibels.

And this is very, very consistent with a lot of other testing that we've done using UltraFocus two. So that 6.1 decibels signal to noise ratio benefit improvement that we've talked about a lot, we got that same number here in a different study. So just confirming that we really do have that great signal to noise ratio benefit within that hearing noise program with UltraFocus two. And that's also part of CrossLink directionality. For now, adding indirect streaming with the multi Mic plus, the signal to noise ratio benefit was increased to 4.8 decibels.

And then it improved even more, muting the hearing aid Microphones to 6.3 decibels. So that means using the multi Mic plus increased the signal to noise ratio benefit by 6.3 decibels. And then, in addition, muting those hearing aid Microphones added another 1.5 decibels of improvement. So again, this study confirms that the multi Mic plus doesn't just help speech and noise for someone with, say, like, profound hearing loss, it helps improve speech and noise for a full range of hearing loss, because the test participants in the study had a range of hearing loss from pretty Mildred, too severe. But they did notice in the study that those participants that had a moderate to severe hearing loss really did gain the most benefits out of all the participants.

So, real quick, our multi Mic plus can be worn vertically in what we call presenter mode. And I'll talk more about each one of these in a moment, can be placed horizontally on a table for table mode, and then there's four, sorry, three additional inputs that the multiMic plus has very similar to the MyPal Pro that can additionally help patients in certain situations. So in other words, the multi Mic plus is a tiny little accessory, but it has a lot of flexibility and can provide your patients with a lot of additional help. So again, the primary use, I think most of our patients use with the multiMic plus would be to hear kind of one speaker in that poor signal to noise ratio environment. Again, we call this vertical position presenter mode, and this presenter would clip the multi Mic onto their shirt or jacket or whatever, about four to six inches away from their mouth.

This allows the on-board directional Microphones of the multi Mic to help reduce incoming background noise. So we have one Microphone facing up towards the speaker's voice to capture that, and then we have an outward facing Microphone to collect the sound from the environment, where the multi Mic plus would then help kind of filter some of that out. So what's streamed to the patient's hearing aid is just the presenter's voice or more of the presenter's voice. But we know that not every patient only wants to hear, like, one person. Some are still in work settings or they're in group meetings and they're sitting at like, a longer table.

It could be a large family gathering. So we also have our table mode where the multi Mic plus is put horizontally on the surface of the table, and then it allows the speakers around it to be their voices to be picked up and then streamed over to the hearing aids. The multiMic plus has an on-board accelerometer, so when you wear it vertically versus putting it down horizontally, the accelerometer can sense this. And so it turns off the directional Microphones and activates the omni-directional Microphone again, allowing the multi Mic to pick up more voices all around it. Also, should the multi Mic plus fall so the presenter is handling it, you're handing it over to the presenter, someone accidentally knocks it off the counter or the table.

We have kind of a fall detection mode where if the multi Mic plus senses it's falling from 3ft or higher, it will mute itself so that the patient doesn't have to hear the a big crash or any clinking when the accessory falls to the floor. Now, as I stated earlier, there are three other kind of modes that the multi Mic plus can be used for. So again, asides from the Microphone mode and on the back, you will notice that the led will light up green when it's in either one of our Microphone modes, whether it's presenter or table mode. But we have an on-board t coil in the multi Mic plus, and so this is helpful because we know not all of our hearing aids have an ear level t coil. For a patient that would like a device size like our Micro, or a custom hearing aid that doesn't have a t coil physically in the hearing aid, they compare their hearing aids to the multiMic plus and then utilize its t coil to then connect to the Telecoil loop that

might be at a church or community event.

And then it would pick up the t coil signal and then stream that into the hearing aids. All the patient would need to do to activate the T coil mode is press that mode button, and then the LED light would switch from Microphone, and it would highlight on the t four t coil. We also have a line. In mode, you get a 3.5 millimeter mini jack. It comes with the accessory.

So you would plug one end into the underside of the device, the other end into a computer or anything that has a headphone jack. And when the audio starts playing automatically, the patient should see that the led light moves from Microphone mode to that little musical note. And then whatever that headphone jack is plugged into, that audio will start streaming to the hearing aids. And in a moment, I'll play a video that kind of highlights how to do this. And then we also have an fm receiver mode or a Dai mode, where a patient who possibly has an FM system, they, instead of having to have two ear level receivers and audio shoes, they can just take their one fm receiver again, plug it into the bottom of the multi Mic, and then that audio source would stream wirelessly into their hearing aids.

Now, in addition to all of this, we also now have aura cast within the multi Mic. So now multiple Bluetooth low energy audio devices can connect to one multi Mic plus. And this is an advantage that patients have when they pair their accessory to their here max app, where in the app, they can toggle this feature on and off so they can say, nope, only, I am going to hear this lecturer at the meeting. Or they can open that up and say, okay, I've turned this onto a public mode. So now anyone that has bluetooth, le audio and Auracast can take advantage of this better signal to noise ratio with the speaker in this large auditorium.

So I want to real quick, just run through a video. You'll hear Jeff's voice kind of highlight again, the different modes of the multi Mic plus.

Belton's multiMic plus helps you hear better in environments that are normally extremely challenging. To start using the multiMic plus, press the power button located at the top of the device. Hold the power button until the led display turns green. The multiMic led will continue to flash green while the device is powered on. Presenter mode is automatically activated when the multi Mic is in the vertical position.

Presenter mode is the best way to listen to a single individual in a large, noisy or reverberant room. To use presenter mode, clip the multi Mic plus four to 16 inches away from the speaker's mouth in the vertical position. This will automatically activate the directional Microphones. Table mode is automatically activated when the multi Mic is in the horizontal position. Table mode is best for listening to folks gathered around the table at home or on the town.

When horizontal on the table, the omni-directional Mics will activate, allowing you to hear voices all around the table. The multi Mic plus allows for connections to the most common hearing systems, t coil line in mode and fm systems. These options are located on the back side of the multiMic plus. To select t coil mode, press the mode button located just under the white pairing button on the back of the multi Mic until T coil is selected. The Telecoil signal will now stream directly to the users aids.

The bottom of the multiMic plus is a 3.5 mm mini jack. Using this plug allows you to stream audio from an external device, like a stereo or TV, directly into your hearing aids. Attach the fm receiver to the bottom of the multi Mic. Once connected, the multi Mic plus will automatically switch to and stream in fm mode. You can see the battery status of the multi Mic by holding the mode button.

Each active led indicates about a 25% charge. So with two led lights showing, this multi Mic plus is about 50% charged.

That was a great recap of the different modes that the multi Mic plus can use. So moving on to the hardware updates, if you didn't notice from the video, we have changed kind of the top cover, if you will

design. So it's a little bit lighter in coloring, so it's a lighter gray, but it also is less glossy. And we made this change because the more black looking glossy cover on the my pal Pro left a lot of fingerprints, so someone wearing it, it just kind of looked dirty, so, or unclear. So just to make it look more appealing, we took away some of the glossiness, made it a slightly lighter color, and this way you don't see all the finger smudges on it.

The other thing we have now is that it's USB C charging, so we've updated the way that you charge it, but all of the buttons. So it's the power button, the volume to control. So the plus and minus and that mode button on the back have all been redesigned to be more responsive when pressed, so they're a bigger size so patients can touch them. And every time they do press on that button, it is more responsive. You might notice from the one image here, the two images that we remove, that mute button, we got feedback from patients that it was really difficult to even get to that mute button because it was so closely aligned between the two volume buttons that they really couldn't press just that.

So in order to mute the multi Mic plus, the patient can do that. When the accessory is paired to their Hearmax app, the patient can also, on their hearing aids, roll the volume down all the way so they don't hear much, or they can just get out of streaming mode and then they're not hearing whatever is connected to the multi Mic plus. Now, battery times have also increased with this new design. So for the Mic mode, whether that's presenter or table t coil and FM mode, patients can have up to 15 hours of use. And when using the line in or music mode, if you will, patients can have up to 20 hours of use.

A full charge of the multi Mic plus using a wall plug, not just to another USB a side, takes about 3 hours for a full charge. I also want to point out that the led lights on the, like on off button, they've changed. We no longer use the red and orange coloring, so everything will either be green, blue or white. So those flash patterns have changed. So using the volume controls, when the patient presses, whether it's plus or minus, they're adjusting the streamed audio how more or the intensity of what's being

streamed compared to what the hearing aid Microphones are picking up.

And these steps are three decibels. So every time they hit plus, they're increasing the strength of what the multiMic plus is picking up by three decibels every time the patient turns off, and then back on their multi Mic plus, that volume will reset back to how you have. I believe it's the accessory to Microphone balance slider in the fitting software. Now, some patients might say, I had this perfectly set. I don't want it to reset to the default value every time I turn off the accessory.

Or they're saying, I'm handing this to so many people, I'm afraid they might accidentally hit one of the volume buttons and change what I want. So your patient can lock the volume to the desired level that they want. So then even when they turn off the device and start it back up, it will stay locked to the volume level that the patient has it set to. So, to lock the device, the multi Mic plus needs to be powered off. The patient would press both the volume down and the power button together for about one and a half seconds until the Led light at the very top turns green.

And then it'll turn off like you won't see the color. And this happens very quickly. Once the light turns green, the patient needs to let go of the power button while continuing to hold that minus button until again, at the very top, they will see a green blue green, very quick flash. So green blue green led sequence. And once they see that, they need to let go of that minus button.

And now their volume is locked at whatever they had it set to. So they would set the volume where they want it and then lock it. So now if they turn off their multi Mic plus turn it back on, three days later, the volume is locked where they originally, where the patient had it set. Now, to unlock it, you kind of do the process backwards. So, multi Mic plus is powered off, press and hold the volume up and the power button for about one and a half seconds until the led turns green.

Then quickly let go of the power button while still holding the plus button until that same green, blue green led sequence is seen, and then they will let go of that plus button. Now, charging status. Jeff kind of talked about that in the video. Now, when it's charging, as in the USB C is plugged into the device and we're connected to the wall outlet, the LED will give you a little bit more specificity of the charging status. So if it's one, the very bottom light is green pulsating.

You have less than 25% is charged. If the second light. So two solid lights, but the very top light is pulsating, we have up to half of the device charge, or up to 50%. Three solid, but the top lights pulsating, we have up to about 74%. All four lights are green, but again, that very top one is pulsating, we are still charging.

We have about 75% there. When all four lights are solid green, then the multi Mic plus is fully charged up. Now, while the patient is using this, if they want to see how much battery they have left in the device, this is what Jeff talked about in the video. The patient would just press and hold that mode button, and then depending on how many led lights light up, that is the percent of charge left in the device. Each light is about a quarter charge.

In our example, with three lights, we have at most 75% charge left. In our multi Mic plus now this is the new led light indicator flashes for that multi Mic Plus. I don't remember if this is one of the handouts that you can download, so if you need to take a screen grab, please do this. Otherwise this is in the multi Mic plus user guide, but it might be beneficial for you to have as a reference or to have your PCC have as reference. So just take note that all the flash patterns are different, but just generally speaking, usually green light is something indicative of power.

Blue light is for pairing and then white light indicates something with volume. So to pair our accessory very similar to what we talked about last year with our TV streamer plus, we now use our new one touch pairing. So the pairing process step one pair the hearing aids to the multi Mic plus. This can be

done out of the software with one touch pairing or in the fitting software. Step two would be to pair the hearing aids to the smart device and then the Hear Max app.

And step three, which is completely optional, would then be to pair the multi Mic plus into the hear max app. Steps one and two can happen in any order. If we're going to do step three, that has to be the last step. So just real quick we're going to listen to Jeff as he reminds us how to pair now our multi Mic plus using that one touch pairing process pairing our Beltone hearing aids to our multi Mic is easy. It just takes one touch.

Before starting the pairing process. Make sure that your hearing aids and the multi Mic plus are turned on. Place the hearing aids no further than two inches from the multiMic plus.

Press the white pairing button on the back of the multiMic plus.

The top led will flash blue as it pairs to each hearing aid individually. Pairing takes about 12 seconds per aid. After the first aid is connected, the pairing process will automatically start. For the second hearing aid, the led light will start flashing blue. Pairing is complete when the led is solid blue for 3 seconds.

Once both hearing aids are paired, the multiMic led will flash blue while it does a final 15 2nd search for any other hearing aids. If no other hearing aids are found, the led on top of the multi Mic will flash green indicating it is powered on.

So again, one touch pairing is the same with our multi Mic plus or the TV streamer Plus. I just want to point out that when in the video the lady was pushing that pairing button on the back of the multi Mic plus, it is just a quick push and let go. It's not a press and hold to get into pairing mode, so that was out of the software. If you prefer to pair the accessory within Solis Max. You would just navigate to device

controls, then accessories and then you would click the button for pair new generation accessory.

Once you do that, a pop up window will occur. Turn the multi Mic on again, that same pairing button in the video, that white button just press and let go and the software will search for it. And once it finds the multi Mic plus it will pull that over with the serial number. Clicking on close will then bring you to the page where now you can see which accessories have been paired and any smart devices that were also paired to the hearing aids. And then just showing you in the fitting software, you still have the Mic streaming to base boost sliders and the Mic relative to the accessory Microphone slider.

So we haven't taken any of those patient controls away from you. Just to highlight that, we now utilize mix in streaming with Beltone Serene. So any older product, remember you will have those separate channels that you need to pair in. But with our new accessories that are only able to pair with Beltone Serene, we no longer have this. So now if you want to pair your multi Mic into the Hearmax app, you would just navigate to the more menu and then click on pair new wireless accessory.

You would select the multi Mic plus if it's the TV streamer plus, select that one and then just follow the on screen instructions. So again, very quickly press and let go that pairing button. So now the led light will flash blue. Click on Search in the app, it will say, is this the device you want to pair? You will click ok, you will accept that bluetooth pairing and then you will get the green indicating that the pairing process has been complete.

And once you click on ok, you'll be back at that main screen in the app. And then to start streaming, all your patient has to do is go to that streaming bar and just hit the play button. And then they'll see the little green squiggly lines of and they'll hear the little trill and then they'll hear whatever the multi Mic plus was on. So it'd be the presenter's voice or in a pinch, if they're using it as like a TV streamer, plus they'll hear the TV streaming to their hearing aids. Now again, that's how you activate it.

If the patient wants to in the app, they can, while actively streaming, again, adjust the amount of Microphone input. So that's what the orange lines are adjusting. It's that I multi Mic plus strength that's going to the hearing aids versus what the hearing aid Microphones are bringing into the hearing aid. The blue would just be the overall volume of the hearing aid. So that's the hearing aid volume.

The orange is kind of volume of the accessory. Now if a patient had multiple accessories paired into their app in that streaming bar, they would just click on the part on the top where it says select your streamer and then it would accordion expand up. They would select whichever streamer they want to connect to. So let's say they want to connect to the TV streamer plus that they've renamed as Bedroom TV. They would just tap on that bedroom TV, would then cycle down to the bottom of the list where the play button is and then when they hit play, they'll be then streaming the TV audio from that bedroom TV.

Now under the controls in the Hearmax app, your patient has some editing tools. So if they navigate to my bell tone and then click on which accessory they want to modify. So we'll say partner Microphone. If they click on the pencil, they can rename it just as they could with the TV streamer plus and the renaming will appear in your fitting software on that follow up visit. But also this is where the patient can decide to take their private stream of that lecture or speaking at wherever and open it up to be a public aura cast broadcast.

So that again, anyone that has anything ear level with Auracast availability can pick up that stream and hear the lecturer better. Because again they're getting an improved signal to noise ratio, just like our patient is when they had the multi Mic set to look at their private mode. So just to quickly recap, our new multi Mic plus has a slightly smaller but a sleeker, less glossy design with easier to use push buttons than our MyPal Pro did. The pairing process for our multi Mic plus is just like our TV streamer plus. It's now easier with that one touch pairing process and patients can lock the volume control with their multi

Mic plus when they pair their accessory to the app.

And again after they've paired it, patients can then put that into an aura cast mode and again with the multi Mic plus they have their two Microphone modes. So presenter and table mode plus. The multi Mic plus has that built in t coil, the inline or that fm receiver and again they can toggle into the aura cast broadcast mode should they want to share that stream. So that is all for today and I just want to thank all of you again for spending slightly 30 minutes with me to learn about our new multi Mic Plus. I haven't seen any questions come through over the past few minutes.

Really haven't had many questions, but if you do think of something, please reach out to any one of us on the training team or audiology support. We're happy to help you again. Please download handouts or visit us on our homepage. Take any one of our Beltone university courses if you need more information. And again, thank you all so much for spending a half hour with me and I hope to see you all again soon on another audiology online.

Thanks everyone. Have a good weekend.