

***This unedited transcript of a Continued webinar is provided in order to facilitate communication accessibility for the viewer and may not be a totally verbatim record of the proceedings. This transcript may contain errors. Copying or distributing this transcript without the express written consent of Continued is strictly prohibited. For any questions, please contact [customerservice@continued.com](mailto:customerservice@continued.com)***

## ReSound Government Services: May 2024 What's New on Contract?

Presenter: Kara Sinner, MS, CCC-A, FAAA

All right, as promised, we're going to get started at the top of the hour here. First off, I want to welcome all of you to today's course. I thank you all for taking time out of your busy schedules to join today. My name is Kara Sinner, and I am a content development and training audiologist at Resound. And today's course is resound government services, the May 2024 what's new on contract?

As we go along, if you have questions, type those in the Q and A, and I will try to either, if I, at the time, notice them, or for sure, touch base on that Q and A at the end of today's course. So, without further ado, our learning objectives today we're hoping that you will be able to identify our resound Nexia product family. Describe Resound Nexia 360 all around directionality, identify new resound Nexia connectivity features. And then we're going to describe some of the resound Smartfit 1.18 updates.

More than 150 years ago, our founder, Carl Friedrich Tietkin, envisioned a more connected world. Tietkin was responsible for the installation of the first world's first telegraph line connecting Europe and far East Asia in Hong Kong. And as you can imagine, this was the beginning of a new era, a new era that brought people closer through the power of technology. It was then when he said, the development of the world is dependent on communication. The world has changed dramatically since then, but his words are still present in everything we do.

Our purpose at GN is to bring people closer by helping people to communicate in traditional and new ways. With resound Nexia, we are starting an exciting new era of communication.

A new era that's going to make the world more hearing friendly and accessible for everyone, especially for people with hearing loss.

So I want to welcome you to this course. We're going to focus on our next era of hearing that is made for Auracast and top rated for hearing and noise, and now available in all styles. So this is our new Resound Nexia family.

So if we're looking at it from a rose perspective, we have the Resound Nexia Rix and btes, and you'll see the rose names that are listed there. So that's what you're going to be looking for in Rose. Along with the Resound Nexia customs that will be available, we are streamlining our product offerings. So what you're going to see, depart from contract are the sum of the Resound Linx quattro models. So that's going to include the 61 mini ricks, the 62 standard RiC, the 67 mini BTE, the Power 88 BTE, the mic and the Helix, and the wireless CIC.

So those are going off contract. We have a new wireless accessory, the tv streamer plus and then some other notable changes. Pearl White and silver colors will no longer be available for the Resound links Quattro or Enzoq families. We have added the desktop charger that's going to be available in rows to order for the RIC devices and for ReSound Smart fit 1.18. Some notable features that we're going to talk about later on in the presentation is the ability to disable the hands free.

So this is going to be for your patients who have security concerns. They work in secure field facilities and they can't have that hands free technology enabled. As well as some improvements in our patient and clinician reports, we have larger print option and language options, etcetera.

So just a summary slide here. Again today we're going to focus on ResoundNexia, that full family that includes the CIC non rechargeable. And we have rechargeable ITEs, itcs on contract, as well as a new micro RiE rechargeable. We have battery operated mini and standard BTE products or, sorry, RiE products. And then we have rechargeable standard and power and high power BTE options.

Now you will still see the Resound Omnia models that are listed there. They will still remain on contract as well as the Enzoq for your superpower fitting needs. And there are a few Resound Link Quattro products that are still available because they offer you a non-rechargeable option for some customs and a BTE. But again today we're going to focus on that Resound Nexia family. So before we dive in, just a reminder that we do have other opportunities for training in person.

You can find these on our government services website. So the dates and places are listed there for your ability to register for that, if you can do that.

So Rizonexia is the world's first hearing aid that works with Auracast, the next generation of Bluetooth low energy audio. And this is going to transform how we interact with the world from now on. It's going to empower those with hearing loss to hear without effort in situations that were difficult for actually everybody, not just hearing impaired people until now. So imagine if you're going to the airport or any kind of public transportation to be able to automatically connect to a sound system and hear important information about your trip directly in your hearing aids or connect virtually any device in the world. So this could be a computer, smartphones, wireless earbuds, cochlear implants, televisions at home, anything really that you can possibly imagine from an electronic device standpoint will be able to have this type of technology available for it.

So enhancing your hearing in public places, you're gonna be able to do that again in, like, conference centers, you'll be able to plug in to this Auracast technology theaters. Another neat feature for the Auracast technology is it allows for multiple language preferences. So if you're not a native English speaker, you'll be able to tune in in your native language. Those kind of capabilities are all incorporated in this technology. So

Auracast is really a very inclusive type of technology because it's not exclusive for people just with hearing loss.

Like I said, like telecoils, you have a telecoil while you have a hearing loss. Anybody, like I said, with wireless earbuds, any kind of device will have the ability to connect into this type of technology and take all the advantages from that. Direct streaming. So this is truly the beginning of a new era with Resound Nexia, the world's first hearing aid that can truly connect to auracast streams. This is our next era hearing.

So I'm gonna play a short video that kind of will review what this auracast technology is really all about. Nexia hearing with Resound Nexia made for orcas, a new Bluetooth technology that allows audio streaming from public places to your hearing aids. And it starts now. In the coming years, 3 billion devices and 2.5 million places will support auracast. Connect to the gate at the airport to catch your flight.

This is the pre boarding announcement for flight 61 c. And connect in the bus so you know the next stop on your journey. The next stop is concert hall.

Connect to the concert and hear all the nuances in the music. In its early days, this aircraft was a pioneer. And connect to audio guides at the museum to hear and share stories with those you love.

Connect to the stadium and stay close to the action. And connect to the tv at home to bring the action close to you. Open the world of new connections. It just keeps getting better with Resound Nexia.

Next era. All right, so not only is Resound Nexia our most advanced hearing to date, it is also our smallest rechargeable Rie model that we've ever made. The new micro Rie is so small that it practically disappears behind the ear and has been really well received

by those people, especially that have those cosmetic concerns, it's actually going to be much smaller than our previous Irie models. Thinner. So fitting behind the ear thinner for those people who maybe have glasses that they also have to be concerned about having there maybe oxygen tubes, etcetera.

It just fits really, really, really nice behind there. And all of this has our full features in it. We haven't compromised on any of our features, power or battery life. And it's powered by our organic hearing so that it sounds natural, feels natural, and connects your patient naturally.

So some of the other features that we have are tap control feature with this micro Rie style, to be able to answer the phone calls with just a double tap on either the ear or the hearing aid, just kind of have to be in that general area to be able to answer that streamed phone call. There's an accelerometer that's inside the micro that detects this motion, and that's how the call is answered. We also have cross and bicros wireless transmitter in this micro Rie style. So now we have a solution for those patients of yours with the single sided deafness. And that again, made for next generation Bluetooth low energy audio, which also makes possible the Auracast broadcast audio capability.

It's available in all styles. So again, we have that micro rie that we see listed right there. We have two battery operated, a mini 312 battery and a standard 13 battery RiC. That 13 standard Rie has a telecoil option available for it. We also have the custom lineups in the resound Nexia.

So you're going to get a non wireless, non rechargeable CIC option, and then we have the wireless rechargeable ITC, an ITE, and then, of course, can have that as a half shell shell option in, in that custom line. And we have the btes. So we have the standard BTE, the 77, and we have the power BTE, the 88. Now, that power BTE can be

reconfigured in the fitting software to a high power option. And that when you add a metal ear hook and you configure it in the fitting software, it gives you an additional six decibels of gain with that type of model.

The power BTE also supports a direct audio input capability. So if your patients need that technology that is available in that power BTE model.

So, resoundnexus carries on our 360 all around directionality that's top rated for hearing and noise, provides 150% improvement in speech understanding and noise compared to our previous generation product.

So our 360 all around is our newest advanced directionality option. And certainly we didn't just come out with this out of the gate. We've been having iterations of our directionality system over many, many, many years to arrive at where we are today. So we started with asymmetric directionality way back when we had resound Azure, and from there we added a band split, we added ear to ear communication, we added spatial sense to restore some of those spatial location cues. We enhanced the omnidirectional pattern with the lynx quattro product.

And then with resound one was we, when we introduced our four microphone beam former, this was the first time that we were, we really made that jump or leap in that signal to noise ratio benefit with that weighted beam former technology. And then we further enhanced with resound Nexia and resound Omnia to the 360 all around. So bringing that full capability of being able to hear all around that patient into play.

So what exactly are we providing when we're in this most advanced directional mode? With resoundnexus, we have the ability to change through different microphone modes automatically based on what's happening in the environment. So this benefit, quite simply, is that it provides patients with what they need in order to navigate naturally, no

matter what listening environment they're in. So when they're in quiet, we're going to use that least process, most organic solution, which is going to be the omnidirectional processing in both ears, then when the environment gets a little bit more difficult, where we're introducing both speech and noise sources, and they're maybe coming from different directions. So this is a typical restaurant type of scenario, the patient's going to receive the benefits of directionality.

So that really good signal to noise ratio to be able to hear the speaker better, but also maintain that ability to monitor what's going on around them with an omnidirectional pattern in the other ear in that asymmetrical mode, and be able to, you know, hear something else that's happening and then choose to attend to it if they, they want to. Then also part of this automatic system is when things get really, really tough and they're in an environment and they want to focus directly on that, that sound source and speech in front of them, noise is happening everywhere else, it will go to that bi directional listening mode for them automatically.

So with 360 all around, what we did with the improvement over our previous all access directionality was we have a wider sound environment mapping, we have faster detection and selection of adaptation to environments, and we have more precise beamforming for the best speech clarity in any environment.

So that wider sound environment mapping. What we're basically doing is removing the blind spots that are created due to head shadow effects. So when you're in those directional modes, we're using ear to ear to actually stream over that information from that omnidirectional information from that directional microphone side, so that we're getting that full picture around with that omnidirectional response, letting them hear more of what's happening around them. With the faster detection and mode selection, we've actually redesigned the brain of the hearing aid, so now it's actually making more accurate decisions and doing it in less time. So it's able to switch between modes.



And those transition times are much, much faster compared to our legacy technology. So it actually ranges from about one to 7 seconds faster, depending on which listening mode it's going into. So this is going to be really great for your patients with those very active lifestyles where they're in those very dynamic, challenging hearing environments. We need to have those microphones pick that most appropriate mode and do it quickly and accurately so they can hear their best. And then last, we have precise beam forming.

So this is going to be our four microphone beam former. How we've improved that compared to the previous technology is that we're now incorporating head and torso effects into that beam former, so we're able to improve that resolution for canceling noise, which now gives us a much better signal to noise ratio benefit than we've ever had before. Now, the nice thing is these three modes are all working at the same time across any sound environment. Again, it's just this automatic ability to change between all of these listening modes based on what's happening in the environment to give them the most appropriate pattern.

So part of this 360 all around is that we have a kind of a unique way we do things. We use a multiband split directionality, and this is going to help that patient maximize their own brain's natural abilities to help them understand speech as well as maintain the most organic sound quality in any environment. So in the low frequencies we're processing those with our multiband split, that low frequency channel is always going to be processed in omnidirectional, and this allows us to maintain low frequency localization cues, but also importantly, it actually maintains the patient's own voice sound quality, because it's just that natural omnidirectional processing that's happening in the lows, then in the high frequencies, we're going to implement independent directional patterns. And what this does, it helps actually maintain those high frequency localization cues when they're in those directional modes so that they

still have that spatial awareness going on even when they're in directionality. Then for the mid frequencies, this is where we're applying that four microphone beam former technology as a very ultra narrow beam to focus on speech from the front.

And this is what's going to improve that one to one hearing in those tough listening environments. So with 360 all around, we're able to provide that 150% improvement in speech understanding compared to our previous generation hearing aid. Now, this is the same technology that you're already accustomed to in the resound Omnia. So we've carried this great directionality forward through to this new resound Nexia lined.

So if we focus just on the binaural directional beam forming, one kind of question is how do we know that it's actually providing the intended benefits to the given patient? So, to discover this, we wanted to test how effective our directionality system was. In a clinical sound booth, we programmed resound hearing aids and other manufacturers hearing aids with two programs, the first being an omnidirectional, the second being a binaural directional beam forming program. And for the test setup, we presented a white noise signal from a speaker, and the directional pattern was continually measured on an acoustic mannequin. And we turned that mannequin around 360 degrees, and then we measured the responses for the right ear.

So kind of for simplicity, we just looked at the right ear to see what was happening there.

So we can see the spectrogram and polar plot that was measured in the sound booth. Um, and we can see in the spectrogram, we have this very narrow red region. So if we think about the intensity of the signal, the red is the most intense, the blue is going to be the least intense. So this is where we're getting this narrow beam former directionality. Now, with the resound system, we also see this other area of intense sound.

This is going to be that fixed independent directionality that's occurring in the high frequencies. So just to kind of orientate you, we have high frequencies that are actually closer to the head. And as you go out, it gets to be the lower frequencies as you move out to the perimeter.

So when we did this comparison to other brands, we can see that they look quite a bit different. So Resound again, we have this narrow beam former directly in the front. That's going to be our beam former. We also have that other directionality in the higher frequencies. That's going to help with that localization of the cues we can see in brand A and brand B.

They also show a directional response, but it is a little bit more widespread compared to that narrow directionality that Resound offers. For both those brand C, we see some directionality, and it actually kind of feeds back into the back. So that's not maybe what we would expect in a directional response for this one when it was tested. And then brand E, D and E, these two systems actually use a two microphone system. So again, you know, not quite as precise directionality as you even see with brand A and B, let alone how narrow we can get with the Resound system.

This is much more widespread with that two microphone system.

We also wanted to evaluate how well patients have access to speech that is occurring from other directions other than the front. So how much access to that awareness of the surrounding sounds when they're in this directional mode, do they have? So we looked at ResoundNexia with two other premium hearing aid brands that have binaural beam forming. And one of those brands actually used a two microphone directionality system that was combined with some noise reduction that they use to have access to

other sounds from other directions. And for each of the brands, or for all of the brands, we use the strongest noise reduction settings that were activated.

So for resound Nexia, this is going to be our front focus setting. So that's going to be that bi directional mode. We locked it into that mode. For this testing, target speech was presented from the back, so behind the listener, and that's represented by that green triangle. And then we had single talker maskers that were presented from 270 and zero degrees, and that's going to be represented by the red triangles.

So we had this competing maskers of other people speaking, and then we also had a low level speech shaped noise that was presented from a speaker at the side and the rear, and that's going to be represented by those right triangles in the image here, we use sentences that were composed of a fixed carrier phrase, and they contained two target nouns. So participants were asked to repeat the target nouns in the target sentence. So when the target speech was presented from the back with the competing noise and competing single talkers from the side in front, what we found was that the resound Nexia system allowed for significantly better access to the target speech than the other brands. So because there was no actual significant difference between these other brands, we just averaged those three, which comes out to be about 10.1 decibels signal to noise ratio for the other brands, where resound was a 5.65 signal to noise ratio. Now, in this type of test, the lower number is better.

So when you're thinking about this, what this means is that we only had to make the sound 5.6 decibels louder to get that speech reception threshold. So that 50% correct type of test, where the other manufacturers had to make it much louder to obtain that same performance. So we have that industry best ability to provide access to those surrounding sources, and all of the ability for our system to operate in this automatic way and to do the things it's supposed to do, when it's supposed to do it, is really based on our environmental classifier. And so having a very accurate environment

classifier is going to be the foundation for any kind of automatic processing that we do. We did do a test of, again, the accuracy of the different environmental classifiers in various premium products.

What we did was we put them in a test box, we looped a sound file, and then we read out the data logging to see how that sound was being classified. And we used all different kinds of sounds, including quiet, some, you know, just speech, only some speech babble conversation without background noise, and different speech and noise scenarios for these different sound files. And what we found was all of the hearing aids really do a very good job of classifying quiet types of situations, which we would expect, right, we would expect them to be able to classify quiet pretty accurately all the time. Where they ran into trouble was when we had the very complex speech and noise situations. There are a lot of differences between how the classifiers from various manufacturers were classifying these types of sound files.

And then in addition to that, the ones that had maybe the most were when some of that background noise also contained music sounds. So some classifiers out there classify music at resound, we don't. So when the sound was maybe like a supermarket and had people talking, and then there was also music playing, some of the other systems would classify that as music and put the settings according to what you would want for a music type of program, when actually it was a speech and noise program and should have been, probably should have been classified as a speech and noise program. So we were able to handle that very well. And we have that overall accuracy to classify speech in these various noisy environments at 91%.

Another study was with Marie, and this was actually studies that were, that national acoustics Laboratory did to confirm the benefits of what we found with our Marie receiver. So this is where we had found really good results that everything kind of is better when you put it on Marie and use that patient's own ear for all the pin restoration

and all of those pinocchios. So National Acoustics Laboratory in Australia wanted to also investigate this and see what they found. So the good news is they found basically the same results that we did, that 80% of listeners were better at localizing sounds. 80% of listeners preferred the Marie in background noise, and 90% of listeners experienced less listening effort.

So all in line with what we had found. And then another study looked at the Marie and its wind noise reduction. What they did was they looked at the wind noise with, in kind of an omni mode, not using Marie, no wind noise reduction algorithms. So that was all off. Then they looked at how wind noise reduction algorithms work and what kind of performance that gave, and then compared that to Marie.

So what they found was we had really good attenuation with using wind noise reduction algorithms, which we would expect, right? That's the purpose of them, to reduce that wind noise. So they found that 16 decibels attenuation, but with the Marie, it did even better. And it was all natural, not processed, just that natural noise reduction you get with Marie by tucking that microphone inside the ear canal. So good to see some external confirmation that we're on the right track with this Marie receiver.

As mentioned, we have a new solution for cross and by cross fittings for those single sided deafness patients. We know that patients with single sided deafness have trouble hearing speech from the impaired side, understanding speech noise, poor localization abilities, and of course, auditory fatigue that comes from that increased need to listen harder for those sounds that they have trouble hearing. We have a solution now with the ResoundNexia family, with the cross transmitter. The important takeaways here is that the cross transmitter is going to be available as that rechargeable micro Rie model. But you can actually fit this with any of the resound Nexia ries.

So you could use, if you had wanted the battery, or you wanted the mini BTE or the standard or, sorry, mini rie or standard Rie with a 312 or 13 battery, you can fit it with that. Now, you know, you have to say, well, you'd be using a battery on one side and rechargeable on the other side. That's kind of maybe the caveat there. Or you can use two of the micro ries, one of which is the transmitter style, and use them as the rechargeable system for either cross or bi cross fittings. The cross transmitter is going to be compatible with our surefit three LP, MP and HP receivers.

And then on the hearing aid side, you can choose the LP, MP, HP or up receiver styles. So important part here, the up is not available in that cross transmitter. The reason for that, just as a side note, is that, you know, that is that encase style. So we're not actually providing amplification to the cross transmitter ear. So to kind of have that extra, you know, sending in an impression just for that, it's really meant more for retention.

So you have these other receivers that are readily available that you can fit for that retention purpose on that transmitter side, but then the full receivers to be able to fit the hearing loss in the case of a bycross system on that hearing aid side. Also, Marie is not available for other. Because really Marie is kind of has those binaural hearing benefits, which in this cross or by cross system isn't really going to be provided in the same way. So battery life, because it's going to be the stream signal that you can expect about a 16 hours battery life when fitting across or by cross system. So that's really still a nice full day of battery in this type of product for your patients.

It's compatible with the resoundsmart 3d app. So those patients who choose to use the app, they'll have the ability to adjust the hearing aid volume or the cross balance. So depending on which side it's fit, you'll have a slider for each of those that they can adjust kind of as they need for their particular noise situations out in the world. You'll

see on the status screen that you have the cross icon that will indicate the side. The side that is has that cross transmitter.

So it's a nice little reminder there. And when charging, you'll have the cross icon along with the little charging symbol in there when they're streaming from wireless accessories. So, like our tv streamer plus, one thing to note here is that the stream signal is really just going to that hearing aid side. And so they, you'll see you'll only have the 1 bar to adjust that represents for the hearing aid side when you're streaming.

All right, so smaller than ever. We know that 70% of patients actively choose the smallest size possible when they're looking at hearing aids. Great news is our resound Nexia micro Rie is our smallest Rie. And we haven't had to compromise any features or battery life in this. It's actually 16% smaller than the previous mini Rie and 25% smaller than our standard Rie has a low center of gravity that provides stability and all day comfort.

And then that horizontal placement of the microphones at the top provides.

My animation's not working here, so provides a nice horizontal directional performance with that alignment at the top of the ear. There's my animation. All right, next up, fitting ranges. So we have custom fitting ranges here. The CIC is going to be available in the low power, medium power and high power receiver options.

And then in ITC ITE, you have all four receiver power options. Just note that actually, the LP, if you want a low power receiver, is only going to be available in that ITC style.

With the Ries, we have, of course, the Marie receiver, we have a low power, medium power, high power and ultra power option.



And then with our btes, we have both open and closed fitting options with the standard 77 BTE. And then with that power 88 BTE. This is what I mentioned earlier. We have with that standard plastic hook, you have the, the power fitting. If you change over to the metal hook and do the configuration in the software, you will have that additional fitting range for a high power BTE fitting.

The Rie and btes are available in eight colors as shown there. And then the custom hearing aids are available in the six colors. And then you also have, of course, red blue shell options and a clear shell option that you can order per your preference on that.

And of course, all of the styles are all weatherproof with the IP 68 protection rating that's inside and out. So that includes actually the receivers for the r e products as well.

Battery life. You're going to get all day battery life. So 24 hours is what we would think of as like a typical battery life for a full day. And then you will get a 20 hours battery life if you're streaming 50% of the time.

Arizona Nexia chargers. So we have a premium charger option that's going to be for the micro rie product. It has induction charging. All of our chargers use induction charging, but the premium charger does integrate that onboard battery. So it carries up to three additional charges for on the go charging, works as a carrying case and has led status indicator lights.

We have the desktop charger. This is now also going to be available for the micro Rie hearing aids. So we've added that charger option. This one is not portable. It has to be plugged into, you know, outlet with power cable for charging.

So this is kind of that bedside stand type of charger. This is also the charger you use for BTE hearing aids, whether it's a standard BTE or one of the power btes. And then we have the custom charger. So that's unique to the custom hearing instruments. It's actually going to.

The inserts are custom made according to the shell of the hearing aid themselves. In order to charge, you want to make sure that that lid is closed. And it has to be, of course, connected to the power cable for charging. Um, but that case can also offer a protective carrying case option. And those inserts are removable, so you can remove them to clean them.

You can remove them or should be removed, replaced. Like, let's say you have a hearing instrument that goes in for remake and something's changed. You're going to get a new set of hearing aids. You can swap those out so that the fit is. Is unique to that hearing aid itself.

And of course, this has led lights on it as well. Now, to distinguish between, like, you know, does my charger support the hearing aid I have? So for ResoundNexia, the micro Rie charger, if it's a. If you look inside the charger bay, it's going to be embossed with the number eight. So that is what you're looking for when it's a micro Rie.

For the BTE 77, you'll look for the number 70. And for the power BTE, it'll have an 88 embossed. The custom charger, they're just customized insert, so you won't have any kind of number indication inside that bay. They just come with those hearing aids.

As I mentioned, the micro Rie actually has a tap control feature. And this is to answer a call by being able to simply tap twice on or near the ear or hearing aid. That internal accelerometer detects motion, and then the call is answered. So this is only available

on that Resound Nexia micro Rie style. But this does include the micro Rie cross transmitter because that's that same style of hearing instrument.

So you could have this feature as well in those cross or by cross fittings. And then an additional benefit for tap control is that it actually can be disabled in the fitting software. So if you have a patient who either this wouldn't be warranted for, or you don't want them to have, they don't like it, something, you have that flexibility to decide which patients have tap control, which patients don't have tap control. And we'll look at how that looks a little bit later on. Coming up in the presentation, I want to play a quick video just to demonstrate how that tap control works for accepting a call.

So a call will come in. Um, and then what you do is you just double tap, kind of on or near the hearing aid or ear, and you answer that call. Once the call is done, you can either use the phone to end the call or you can, you know, if you push the push button and go to, you know, change the pro, it'll end a call by pushing the push button as well. So we discussed that ResoundNexia is made for Auracast. So we're going to talk a little bit more about what does that mean and what does that technology entail.

First off, we know that connectivity is important for patients, but we also know it can be very frustrating, especially when you're the one trying to support it for your patients. We know it's one of the top three key satisfaction drivers with hearing aids. So those people who are successfully using connectivity, it just increases their satisfaction with their hearing instruments. But we also know that you take a lot of time out of your day to help these people, that probably more than 50% of your patients are being connected to smartphones. And there is a bit of a, you know, curve with that and having to help with that.

And we know that because it can be frustrating that sometimes you opt not to offer some of the connectivity channels or connectivity options for your patients because it's just. It's a lot of extra things to have to take care of.

Well, with this new era of communication, we're hoping to improve how that connectivity works just overall, not only for your patients that have hearing loss, but really for everybody. This graph is really representing the complexity of what that current landscape looks like for wireless connectivity. So we can see, we know in public places, we actually still have telecoils. Right? That's kind of, you know, what's in place right now, NFM systems.

And both those technologies are really very old forms of analog technology. Right. We have telecoils going back all the way to 1938. Then the next step in connectivity came with classic Bluetooth. That was introduced in 99.

And with that was really revolutionary because it allowed for wireless communication of electronic devices within a short distance of each other. So it was really a nice new implementation back then. And hearing aid companies kind of looked at and said, oh, this is really great to incorporate, if we can incorporate it into hearing aids. But part of classic Bluetooth is that it requires a lot of power. So it's going to really eat those little tiny hearing aid batteries up quite quickly.

And then you have to have a fairly, you know, long antenna, like about 3 cm long to support this connectivity option. So that led in 2010 to proprietary protocol. So resound introduced. It's the first priority proprietary protocol for wireless streaming that used low energy Bluetooth. So what's the benefit of low energy Bluetooth?

Well, it uses less power consumption. So for those little tiny batteries, we can actually have longer battery life when we're using that versus classic Bluetooth. Also, it's a lot

faster of a streaming capability as well with that Bluetooth low energy. This actually led then to additional things like made for iPhone technology with the Apple compatible devices, and then also the Android streaming for hearing aids with the Android devices or Android compatible devices. So again, these all use that Bluetooth low energy, and these are all great solutions for connectivity.

However, they're not universal. Right. Meaning that, like, if you have a group of people in the same room and you're wearing different brands of hearing aids, you're not able to enjoy that common audio experience. Right. They're very specific to each manufacturer and how all of that works.

So because of that, actually hearing aid manufacturers came together and they approached the experts at Bluetooth with the need to create a solution that works kind of for not just all hearing aid wearers, but also just really everybody. We need to have this next level of technology, this next version of Bluetooth that's more of a universal protocol that's going to kind of solve some of the limitations of what's currently out there. So this began a new generation of technology. This is the new Bluetooth low energy audio. This is going to be for people who not only, like I said, have hearing aids, but also any kind of electronic device.

So you're going to see that with wireless earbuds, headphones, cochlear implants, pretty much anything. This is going to be also incorporated into tvs and computers and any kind of electronic device that you could really actually think of. And along with the Bluetooth low energy audio, that technology makes possible Auracast, which is going to be that broadcast audio technology where people can choose that broadcast and have it stream directly to the device they're wearing.

So the new Bluetooth low energy audio is going to soon replace kind of that current Bluetooth that you have in your smartphone and other electronic devices. Very soon,

every new electronic device that you can think of is going to incorporate this technology. And it's very likely that the next kind of phone or tablet or computer that you or your patients may have, uh, is going to be equipped with this. And the nice thing is that ResoundNexia hearing aids are ready today to connect to those. As those things start to become available.

In fact, they predict that by 2027, 3 billion devices will have Bluetooth low energy audio capability. So this is the next thing that's coming and, and is actually really here in, like I said, ResoundNexia ready to support it. So some comparisons between different versions of Bluetooth. Bluetooth classic was very good sound quality. It's widely used, those are some of the pros, but we know that it's also battery hungry.

There's some high latency, and it is soon to be obsolete, being replaced by this newer Bluetooth low energy audio. Bluetooth low energy actually covers kind of an umbrella of both that MFI and Android streaming, in addition to proprietary protocols that are out there. They provide a good sound quality. They provided low battery consumption, low latency. But the problem there is they're not really universal across all users.

So with Bluetooth lower energy audio, we have that enhanced sound quality. We have low battery consumption, low latency. This is going to kind of be that future of the connectivity experiences out there. It enables that capability for Auracast broadcast audio. Maybe the only downside here is that it's emerging technology, right?

This is brand new, so it's not broadly implemented yet, but it's coming in. Like I said, you're going to soon see it really everywhere.

So, summary of those benefits. Bluetooth low energy audio uses an improved codec. So how the sound is streamed, which provides richer sound quality, lower battery consumption. It also allows for multi stream connection to multiple devices

simultaneously. This also, this Bluetooth low energy audio enables the ability for that two way or that hands free communication with Android phones.

So that's a new feature for it. And then also the Auracast.

So the new Kodak, the audio codec used for the Bluetooth low energy audio, when it was compared to this was a Bluetooth study where they compared it to their classic Bluetooth, which is indicated by the SBC versus this new audio Kodak, the LC three that's used in Bluetooth low energy audio, we can see that it's got a higher sound quality and lower battery consumption. So if we look at the blue bars here for the LC three on the scale, five being really great, sound quality rating, zero being just horrible, we can see that the LC three performs better than that classic Bluetooth and actually even at lower bit rates. So what this means is they can send smaller packages of data. It's very fast, it's very low battery consumption, and we maintain that sound quality throughout.

So you're pretty familiar with classic Bluetooth because really, we use it every day right now. But we also know that classic Bluetooth allows for only one to one communication between devices that we show here. So the new Bluetooth Le audio connection, or audio, allows for broadcast audio, that Auracast broadcast audio, and that's going to allow for that simultaneous connection to an unlimited number of devices. So there's really no limits to how many people could connect to an Auracast broadcast audio.

And it's going to be available in both, like I said, personal electronic devices and in public places. So in personal devices, you'll be able to configure if the transmission is public or private. There may be some password protected type of opportunity there. Since this is emerging, we're still kind of waiting to see how some of this stuff works.

And then in public places, there will be a transmission, and it'll likely be just an open transmission that you can find and connect to.

So most likely what we're thinking on how somebody would join Oracast is they all have a compatible smartphone that's Auracast ready, and it'll be similar to connecting to a Wi Fi stream. So you have your hearing aids paired up with this phone that's Bluetooth, low energy audio, and Auracast compatible Bluetooth is on. You'll use the smartphone to scan for available auricast broadcasts that are in the area you're in, and then you'll just simply tap it on to tap to select it, and then it'll stream it directly to the hearing aids.

So Auracast gives the ability to be able to share audio. So let's say you're on a plane or, and you're with a colleague, or maybe you're traveling personally and you have kids and you have one iPad and they want to watch a movie on it. You know, no longer do you have to have a splitter to share that audio. If they have whatever wireless device they have, they'll both be able to get that wireless stream from that device. Again, we talked about the public systems where they'll be able to just select that Auracast broadcast and tune into it.

And then also if you think about, like, sports bars or gyms where they have the silent tvs, those tvs will be equipped with the Auracast broadcast capability, and you'll be able to select that stream and stream it directly to the hearing aid.

So if we look at an example of a conference center, this is, you know, kind of what normally would have been looped with the telecoil system. Now we will have the ability to install in small little transmitter. They're pretty, you know, easy to install, relatively inexpensive to install. That transmitter will send out that signal to everybody in the conference room. Anybody wearing whatever type of device they might have will be able to select that Auracast broadcast and stream into it.



This also, like we mentioned before, that has maybe multi language capability. They'd be able to select what language they want to stream that in. And we know that about two and a half million locations will offer this Auracast audio by 2030. So eventually this is going to replace currently those places that do have telecoil loop systems installed, it will replace it. The nice thing about this technology is they can coexist because we know it's emerging.

So for people who don't maybe have Auracast ready devices, but they're in a facility that has a telecoil loop system and an Auracast transmitter, both of, you know, people can take advantage of whichever one they can coexist side by side. So that's a really nice thing to be able to not cut people out from what they maybe used to have capability for by introducing something new. It's all going to work simultaneously.

We have a new tv streamer plus, and this tv streamer plus also works with the Auracast. So you're able to pair your hearing aids up to here. You'll have a new one touch pairing process. There's audio input for connecting to the tv for your audio cable, and then it's going to be USB C powered, usually connecting right directly into the hearing aid into the tv. There's an led that will indicate the power light there.

There'll be volume and control buttons where the user can set their initial volume setting that they want, and then the led on the front to show what's happening.

So to set up, it's pretty easy. I'm going to play a quick video here that shows that setup.

So you're going to have kind of the parts and pieces that come with your tv streamer. On the back of the tv. You have a power, you know, usb spot that you're going to plug that power cable into.

And then the other audio out cables, it could be either digital or it could be the analog, red and blue. So depending on which one you use, would plug those in there. Both of those cables have a three and a half millimeter jack on the other end that's going to plug into the audio spot on the tv streamer. And then you'll be good to go for that connection with the tv streamer. Plus you can also pair to, the tv streamer itself can pair to the app, which gives some extra capability.

So if there's an update to the accessory firmware, you'd be able to use the app to update that. It also gives you the capability to switch between stereo and mono sound, adjust audio visual delay, and then enable the tv streamer to become an Auracast broadcast audio signal. So you could turn that on. And then other people who also have or cast ready devices could connect to that tv streamer signal, all controlled in the app. So three pairing sequences.

We have the pairing to the phones of the hearing aids. This is going to be basically the same process that you're used to today. Whether it's an Apple compatible or an Android compatible, you're going to follow that same pairing process. And then if you choose to also use the result and smart 3d app, that connection process, that's all really the same as what you're used to today. The pairing of the hearing aids themselves to the tv streamer uses a new pairing thing that we call one touch pairing.

We'll take a look at that coming up. And then there's also an option, like I said, to pair that tv streamer itself to the app. And that gives you those additional adjustment capabilities. It's not a requirement, but if they want adjustment capabilities in the app, they have to pair the tv streamer to that as well. So the one touch pairing.

The great thing about this is there's no hearing aid reboot connected. So let's take a look at how that process looks.

So the important part here is you want to be within about two inches of the tv streamer during the pairing process. It has to be powered on. So whether that's connected to the tv or just like using a block to an outlet, you can, you know, power it up. That way you're going to press the pairing button on the back. It's going to find the first hearing aid within about 12 seconds or less.

Then it'll go on and search for the second hearing aid. And that'll take 12 seconds or less. So you'll see the solid green when it, when it pairs to the hearing aid. It'll change from a blinking to a solid. And then there will be a third sequence for like about 15 seconds that it searches if there's any other devices.

So if you had other devices in the area that you needed to pair, and it'll pair those as well in that same way.

Okay, so pairing the tv streamer to the resound 3d app. Let's take a look at how that looks.

So in this one, you're going to find it in the more and you're going to pair the new rile accessory. Press that pairing button, it'll find the tv streamer and then you'll be paired up. It'll give you that confirmation after it's searches here that it's founded and you're appeared.

And then we had some studies that we did on the tv streamer. We wanted to see how well, you know, compared to not using a tv streamer. We had a setup where we had individuals with moderate, severe hearing loss. We had a tv mounted in front of them. We measured the percent correct speech, and we did it from both sound coming just directly from a sound bar and then sound streamed from a tv streamer.

And we had some noise speakers on each side of the participant that play different types of what we call domestic background noises that are listed there. Our results showed that we had a much better performance, what we would expect being able to stream that signal directly to the hearing aids versus just listening it through a sound bar on the tv. So evidence of if you're not using the tv streamers to improve those tv listening situations, it's a good idea to kind of consider that.

And then we saw this across all the different noise scenarios that we saw where we had that increase for the tv streamer. So even when there's background noise, there's many benefits to having that stream signal directly to the hearing aids.

So we are ready with ResoundNexia to basically connect to any type of wireless connectivity. We're not taking anything away. We're adding the Bluetooth Le audio and all the advantages that comes with that check my fit. I just want to remind you of that, that the check my fit feature where you can ensure that patients are wearing those hearing aids correctly, is going to help them a wear them better, wear them without having feedback problems. And the good thing with this is that it's compatible with all wireless models, hands free calls.

So we have the hands free calls to iPhone and Android compatible devices. So this is now going to be available with that Bluetooth low energy audio as well. And if we look at some new features now in software, we have a new patient profile experience called first time user onboarding. So you're going to see that in the prescribe first fit, it's going to say first time user onboarding there. And what it does is it sets the gain level to 70% of the prescribed target level.

So 70% of what our first time user is. So this is for people who maybe the first time user is a little too much still. You can choose first time user onboarding and just on it'll automatically put that at a 70% of that, making it more comfortable. This actually

replaces the previous comfort user profile that was in the software. We have a new hearing noise program.

It's going to replace previous program environment names. So if your product had a front focus or an ultrafocus or a restaurant program name, you're now going to see that called hearing noise. What that looks like in the fitting software is so your second program, that environment will say hearing noise. And then where you'll find under the hearing noise program, the directionality will tell you if you're using front focus or ultra focus or adaptive directionality. It'll show you what kind of directionality option you have.

There we have the cross bicross. So just a quick look at what this looks like. You're going to assign the cross transmitter will be assigned to that poor ear and the neuro Nexia Rae to the better. Of course, choose the appropriate dome. So comfort for that cross side.

And then according to the hearing loss for the hearing aid side, you're going to run the digital feedback suppression. If you notice, you only do that on the hearing aid side since there's no output to the ear from the cross transmitter side. And then you'll adjust the gain again just on the hearing aid side. And you'll have the cross icon that's indicated there to remind you of which side is that cross transmitter side. To adjust the cross transmitter, there's a balanced icon that's located in the advanced features under the cross tab.

And this is how you will adjust how much of the sound is transmitted from the cross transmitter microphone.

And then you can assign push buttons still for the cross fitting in. The device controls manual controls area. So you'll have separate controls for the hearing aid side versus

the cross transmitter side. And then you'll finish and save that fitting. Tap control we mentioned, you can enable or disable that in the fitting software.

So this is a nice feature. You can decide who needs to have it real quick. If the check mark is enabled and the call is enabled in the fitting software, that means they're ready to use it out of the gate. So tap control is active, patients can use it. Maybe you have a patient who isn't sure that they want to use it.

If you just put the check mark in enabled and uncheck call and they're using the smart 3d app. They can actually toggle that on, in the app to use it if they choose. They want to. So they have the feature, it's active, but there's not necessarily using it right away. And then for those people that you don't want to use it, if you uncheck it, the call is going to gray out.

You can't check it and then that feature is not going to be active or it's not even available in the app at that point. So you have to, you have the control from the fitting software to decide who, who uses this feature and who doesn't.

I'm going to skip over that one. Quick and hands free control. This is what we talked about. For those people who maybe have those security are in secure facilities and they can't have hands free if it's enabled, that means it's ready to go for the hands free calls, voice pickup by the hearing aid microphones. If you uncheck it here, that disables this feature.

So what that means, like if we know, like Apple compatible devices, they have in their own native app where you could, you know, turn it on or off there, they won't even see that anymore. So this actually completely disables the feature for those patients who can't use it.

We have a new push button configuration for monorail, Rie and BTE fittings. So this, we already have this for customs. Now we're introducing this for Ries and BTEs where you can set the volume control for monorail fitting. So if you select short push for the volume up, it automatically means the long push on the push button would be volume down. And this is going to apply to anything that's a resound one or newer.

Rie or BTE.

We have new. The new tv streamer is going to be paired in the fitting software and it will appear as one of up to eight bluetooth le devices that you can see. So you'll see that along with like, if they have a phone paired, we still have compatibility with the previous generation accessories. Those work exactly the same way as they did before with resound Nexia. And then we have the new one.

That's tv streamer plus. You don't have to pick a specific channel for the tv streamer plus. And it uses a mix in streaming. So if they're in their all around program, they choose to stream from the tv streamer. It will automatically use the settings from that all around program.

So you're not selecting a different program for the specific accessory. We have the personalized improvements to the reports. This is going to be under finalize. You'll now see one reports tab and then under there you will have for clinicians, for patients, you're going to have, you can check the item that you want to appear either in a clinician or patient report. Anything with a pencil indicates something that can be edited on that report.

And then over under this print side is where you can choose what you want to print. And then there's different language options that you can select for your patient as well as a larger font box that you can check. So we've increased the font size anyway. And

then if you check larger font, you get even a larger font for the patient. We also add a print preview option and an ability to save it as a PDF for either your records or if you wanted to send that electronically to a patient.

The email button here just represents it pulls up your email that you have on your computer so you don't have to go separately to it. You can pull it up right from here and then you could attach that PDF attachment there. Smartphone compatibility. We have a QR code that is available for patients to easily scan to see if they're phone is compatible with direct streaming. And then they'll get some messages whether it is or isn't.

And then we have the veteran assistance line. This is going to be for the pairing, connecting, troubleshooting for any kind of MFI, Android, any app, any wireless accessory. So this is a huge time saver. Like I said, that connectivity can be frustrating. It sometimes takes a lot of time.

Know that we have this group that you can call at resound or that the veterans can call directly at resound for help with this. If they actually have an audiological question, we will direct them back to you. So this is a really great benefit for your veterans. Other resources that we have here are going to be our website, YouTube channel with lots of videos for either you or your patient, the Twitter channel and or I guess formally Twitter x channel and then Facebook.

All right, so sorry, I went over a bit. I'm going to check the Q and a quick here. So wanted to confirm if you can answer a call via double tap, but you cannot hang up with a double tap. That is correct. So one question in there, you answer it with a double tap, but you would end either with pushing the phone or if you push the push button on the hearing aid itself, that could also be a way to end that call with that.



So I'm sorry, we went over a little bit. A lot of information to cover a lot of new, exciting features with this resound Nexia family. There's our website and our phone number. If you have calls, please reach out to the government services team. They're always very happy to hear from you and help you with whatever you need.

Thank you very much.