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## Examining the Potential Applications of Pediatric Telehealth and Remote Fine Tuning with ReSound Assist

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- [Megan] My name is Megan Quilter, and I work at GN Hearing in the Global Audiology Department. I've been with the company for almost four years now, and it's been an interesting ride to see where some of the technology has taken us. Today's topic is going to be, our title is going to be "Examining the potential "applications of pediatric telehealth "and remote fine tuning with ReSound Assist". I think we can all probably agree that given the situation we're at at the moment, in a global pandemic, that this is a fantastic topic to cover. Anything telehealth, I'm sure you're seeing in the news, I'm sure you're seeing in articles, and we've seen this, it's not new, but I think it's important that we discuss this topic, and we get our hands and heads wrapped around it, because this is part of what is going to be, what I would imagine is going to be part of the new normal. Let's go ahead and get started. Couple of objectives for you today. After this session, you're gonna be able to list four benefits to the hearing healthcare provider, and or the patient caregiver, families, et cetera, for using remote fine tuning. And throughout the presentation, you may see remote fine tuning abbreviated as RFT. You'll also be able to list at least five adjustments that could be made through remote fine tuning, in our software.

And last but not least, you'll be able to state the difference between, excuse me, a synchronous and an asynchronous remote fine tuning, which we'll cover here in just one or two slides. So let's go ahead and get started. Thank you Melissa for the introduction, and again, just a note to everybody, if you have any questions, please type them out in the bottom left hand corner. I will do my very, very best to address those as they come in. I know sometimes you have something you want to say quickly about the slide that we're looking at, so if you wanna do that, I'm happy to address those as they come in, so thanks. In the wise words of Bob Dylan, and unfortunately I don't think anyone logged on today to hear me sing this little caption. But you'll notice towards the end of it is "For the times they are a-changin'", and I think that is super, super appropriate, given the situation that we're in right now, in the middle of a global pandemic. Things are changing quickly, and they're not just changing weekly or

monthly, but some of you will notice that sometimes things change overnight. I think what's important in this industry is to be able to pivot at any point in time. I think that this is a huge lesson for us all to learn how to do that, and the people that I've come across in this industry have been fantastic at it, to date. As things are changing, we've often thought about technology changing, but now I think it's time for us to look at ourselves as hearing healthcare professionals, and figure out what we need to do to change and change quickly, not just to keep up with the technology that's changing, but to keep up with patients, and to be able to keep up with healthcare in general. So with that, times are definitely changing. Teenagers are here, and I wrote that specifically because usually you see this phrase that says "Boomers are here". I think it's important to take into consideration that teenagers are here, and they're giving more of a voice now in what works for them, and what doesn't work for them, and how they wanna use technology at their fingertips.

Teenagers are a funny category, funny population to work with, because as a pediatric audiologist myself, I really enjoy pediatrics because sometimes it's nice when you don't have to deal with people that have such strong opinions. Babies can't tell you "It sounds really tinny" or "I don't like the way my voice sounds", or "I don't like the way my neighbor sounds". Sometimes it's nice to sit back and know that you're doing the best that you possibly can for them, by setting them to target and letting them go, and letting them explore this technology that you've just put on them. Adults, on the other hand, totally on the other side of things, may come in with complaints all over the board. They may also come in with some compliments as well, we shouldn't forget that. Teenagers are a really funny, different category because they're almost a little bit awkward. They don't know what they can ask, if they should ask, maybe the type of verbiage they should use, but they know that they have an opinion, and they know that they want to get that through to you. So they do have more of a voice, and I think now that we see technology in their hands, whether it's smart phones or video games, I think that they're giving themselves a little bit more of a voice than what they have

before, and that's fantastic, because when I come across teenagers that have strong opinions, or that want to voice their concerns, it makes me feel like they are confident. It makes me feel that they have accepted their hearing loss, they are accountable, and they want to continue moving forward what works best for them. So I really appreciate when teenagers have a voice. Theories are out there at support that the less involvement they have required by the participants, required by this teenager, the more likely that they'll use the technology regularly, and I think that's pretty true. I can't say that there's any sound science behind that, but I know in my experience that when you harp all over teenagers, and even some young kids for that matter, it's almost like they put a wall up, and they just wanna maybe figure it out themselves. So theories do support that the less involvement required by them, the more that they'll use it regularly, and that's the name of the game here, is to make sure that kids and teenagers are using the technology that would be best for them.

We're seeing an absolute explosion of mobile devices and apps, that's just a given. You can't go anywhere these days without seeing a smartphone connected to someone's hand. You see them in the cars, you see them on public transportation. People are walking around with them. They're everywhere, and that's going to be good, because we can use that to our advantage, in order to get teenagers and kids excited about technology that's on their ears. If we can link the technology that's on their ears to the technology that they do not wanna give up on their hands, then we're almost, it's a win-win for everyone. Teenagers have this peak understanding of digital communications, beginning at the age of 14 and 15, and I actually would almost challenge that to be a little earlier these days. I can tell you that my children, it's embarrassing to say, my oldest is five years old, and she's a master at the iPad. She knows how to text her family members. She knows how to make a phone call. They see what we do, and they wanna do it also, so they have a really good understanding of digital communications at a very young age. And I think that's also something that we can put in the corner, in our corner as audiologists and healthcare professionals,

and use that to our advantage, make this fun for them. So let's start off with just a couple quick things about what is telehealth. Well the World Health Organization defines telehealth as the use of telecommunications and virtual technologies to deliver healthcare outside of the traditional healthcare facility. And I noticed yesterday when I looked up the World Health Organization, and how they term telehealth, it's still pretty similar, but I did notice that they enter in a new statement saying that distance is inevitable, and should be preferred. I thought that was just an interesting little side note that they have there. Telehealth is not new to us. This has been around for quite a while. Major health insurance companies use it for a number of things, consultations with specialists, medical questions, minor evaluations, paperwork and medical records. I hope that everyone is doing well and staying healthy during this time.

I can tell you for one, I've had to make one doctor appointment related to an ankle injury, and one of the first things that came up on the screen was "Are you interested in a telehealth appointment?" And I thought that was really interesting, and I had assumed it was on there because of COVID-19, and things that are centered around that, but I did notice that as my state opened up, and that people are actually seeing other professionals, and seeing healthcare professionals, and they've kept that statement. And so I can tell you and promise you that a year ago, that statement was not there. So I hope that continuing forward, we'll continue to see statements that ask "Is a telehealth appointment something you're interested in?" because that's where medicine is moving, not just because of the global crisis we're in, but I think it's just a matter of where healthcare is bound to go. ReSound has you covered every step of the way. We've got two options with solutions for telehealth. One is called live assistance, which is a face to face video appointment, in the comfort of your own home, in your backyard, wherever you can access your telephone from. We also have remote fine tuning, which is what we're gonna talk about today, so that you can request adjustments to your hearing instruments at any time. And we'll go over in the next few slides what the difference is between those two types of technologies. So with that, I'd

like to introduce you to ReSound Assist. First off, I want to promise you that this is not designed to replace the hearing professional. I know when telehealth first started to make its rounds in the audiology industry, a couple of years back, about five, five, six years back, people start thinking that telehealth was going to be like a robot who was going to take the place of everything. ReSound Assist is not replacing the hearing professional, and I can promise you that, because the first fit for ReSound Assist, the first fit must be done in your office. So you can bank on the patient being in your office to start. The first fit must be done in your office, because the instruments have to be set up to your computer, hardwired or wirelessly programmed through the computer, and we'll go through a few slides that will show you how to do that. ReSound Assist is not by any means required on your end, to the patient. This is an enhancement to what you're doing. It is not by any means required, but with that said, I do try to tell people that I would set the patient up with this, I would set every patient up with this if possible, just for the sheer fact of just in case. I think that given the situation we're all in now, that just in case has already approached us.

You get to choose who you wanna use it with, how you wanna use it, what you wanna make out of it. Again, it does not have to go with everybody, it's just something that I would stress would be important. Just because you set them up with the technology and this type of feature doesn't mean you have to use it, it just means that you're set up for the future. So remote assist, also remote fine tuning, are the same thing. It's a telehealth option or a solution. We work this solution as an asynchronous process. On the next slide, we'll go through what's synchronous versus asynchronous. I personally think the asynchronous process brings a lot more to the table, but towards the end of this presentation, I'll let you guys decide that. It does offer a very big convenience for both the patient and the audiologist. Requests can be generated from the patient to yourselves through the ReSound app. They can also give you a phone call, they can also email you, they can also text, if that's the route that you are taking with your patients. So there's a couple different ways requests can be generated. Requests are

then answered at the convenience of the audiologist, and I'll go through the convenience factor on the next slide, when we talk about synchronous versus asynchronous. The patients then download the settings at his or her convenience, through the smartphone, or through the smart 3D app, and this will make a little bit more sense as we go along. What is downloaded and uploaded is all stored in a cloud based server system, that's available any time, so we don't have any strict hours of the cloud is only available from nine to five. If you are the audiologist that likes to get ahead of the game, maybe you wake up at four o'clock in the morning, check your emails, check your work computer, check and see if anyone's requested anything, you can do this at all hours of the day and evening. So when we think about synchronous technology, synchronous means that it must be online, done together online at the same time. So if you remember a slide or two back, you saw a picture of the smartphone. Just imagine looking at your smartphone and being able to look at your patient, and vice versa. You have to have a set time in order to be online together. So this is done in real time. An appointment is best to be scheduled. I do know some people that don't schedule appointments, and they just try to contact the audiologist, or try to contact the patients themselves.

That would just be through a simple phone call or a Facetime set up, but appointments are stressed to be scheduled. You must also have a really stable, fast internet connection, because you're taking up a lot of bandwidth when you are looking at the patient through the telephone, through a video connection. So you do need to have a good, stable, fast internet connection, that's definitely important. And you can use any device with a camera. Now when we think about asynchronous, which is what remote assist, remote fine tuning is, the requests, like we said, can be generated via phone, email, text or through the app. It's called a store and forward model, and what that means is you put in your request. Let's say the patient puts in their request. They get it all down and out, and then they forward that to you, so it's called a store and forward. Requests are answered at the convenience of the audiologist, whereas if you have

appointments set up, it's obviously convenient because you've scheduled that appointment, but you can think of an asynchronous process as more of checking things off your to do list. Yes I have to go to the grocery store, yes I need to order something online, and yes I need to get my request into the audiologist through the smartphone app. So requests are done at the convenience of when that person has the time to do it. They store that in the app, and they forward that over to you, and the same thing happens on your end. You may be seeing patients all day, but you'll notice maybe in the bottom corner of your computer, you'll get a couple of requests. It doesn't mean you have to stop what you're doing at the moment, it just means that you have to make time for that later.

So again, it's a store and forward model. Patients can download the settings at their convenience, and you can answer their requests at your convenience. You must have an iPhone, iPad or iPod, or a compatible Android. And again the information is stored in a cloud based service available any time. Like I said, the remote assist is an asynchronous type of communication. In general, this is the process of how it works. This would be assuming that number one would be from the patient. They open up their smartphone, they open up the ReSound app, and they request assistance via the app. That, in return, goes up to the cloud. That cloud stores that information and then sends that information down to the hearing care professional themselves. You receive that request, maybe it's to change a program, add a little bit of gain, take out a program, take out some beeps. You do any changes that you need to make, and you send the updated settings back up to that cloud. The cloud then transfers that information down back to the patient, and they receive an alert on their telephone, just like you'd get an alert that maybe you have a new Instagram message, or just that you have a new email. They get an alert through the ReSound app that tells them that they have new settings. They open that, they update it, and viola. After you perform the initial fit on your computer, with the patients hearing instruments, and only if that patient consents, we do have to have a consent in place, the fitting data is stored in a

cloud. This can be retrieved at any time by the audiologist. You can go in at any time and do this, and take a look at this fitting data. The patient downloads the changes at any time. Remember this is an asynchronous process, so if you get to your messages quickly, and you change your settings for that patient, almost a minute or two after they send it, it doesn't necessarily mean that they have to stop what they're doing and to upload those changes. They can do this again at any time. That's the convenience factor that we're talking about with an asynchronous process. So to me, it just reminds me of checking it off the list. I for one have a little list going, and then as I complete tasks, I check them off, and then that's it. Then as things come back to me later, I go and I attend to them again. So what can be adjusted through the remote fine tuning? We could take a couple of minutes and go through this entire slide, but what I can tell you is that anything that can be adjusted in the software can be adjusted through remote fine tuning. However, you cannot run the feedback calibration so you can make adjustments once it's been completed.

So you definitely wanna run that the first time, when you are setting your patient up. But you can adjust anything through remote fine tuning. They can call you with gain changes, compression, although I don't know a single patient that would call and have compression complaints or requests. But you can change compression, any advanced features. You can add and remove programs. You can rename programs, adjust accessory ratios, turn on and off indicators, tones. You can delay things. You can do anything in the software, and you can do that through remote fine tuning as well. So let's go ahead and see it in action, and I apologize, this slide looks a little small and it's hard to see. If you want, after we're done, you can log on to ReSound and you could also get these quick guides that are available. If you have any trouble getting those, please feel free, reach out to me, I'm happy to send you these as well. I believe you'll also have a copy of this presentation too. So let's see this guy in action. In order to activate the remote fine tuning, let me get my pointer here, here we go, you wanna be in the patient screen. So it's a little hard to see right here, but we're in the patient

screen, and this patient's name is Michael Drew. From that patient screen, you're gonna wanna select ReSound Assist, which is gonna be on this lower navigation bar, near this green arrow here. On the right here side, you're gonna see a remote fine tuning, and you're gonna see it say on or off. You're gonna wanna go ahead and toggle that on, in order to activate that. Another important factor is to turn on the remote hearing aid update, to activate patient receiving remote updates. This will allow that patient to turn on their phone, check the alert, change and then upload the settings that you've already implemented. These two items do have to be toggled on, and again, that's gonna activate your remote fine tuning, and then remote hearing aid update as well. Excuse me.

The patient consent. This is extremely important. We need all patients to consent to this. As a matter of fact, if they don't consent, or you don't have this filled out, and initialed by them, it does not let you proceed with the remote fine tuning actions. So the patient consent is very important. From the menu button, underneath the fitter's name, here we go, and underneath the fitter's name up here, you'll notice it says "Patient consent". You wanna hit the menu button under the fitter's name, and then click "Patient consent". That patient consent can be filled out online. It can also be printed out and signed, they can also sign this through the software as well. But nonetheless, you do have to have the patient consent, because if you don't get that in place, it doesn't allow you to proceed. This next part is super important for you guys. You wanna move the cloud icon that's on your computer to your taskbar, and you may or not have seen this in the past. If you go under, each computer's a little bit different, but if you go onto your computer, in the bottom right here corner, there's a utility button, click that. Similar to where you would hook into your VPN, or similar to where you would go and click into your internet connections, you'll notice that there's a little orange cloud icon, that should be visible there. You're gonna wanna click that cloud button, and bring that over to your taskbar. Excuse me. The window's gonna appear, which contains the orange cloud icon, and this is the GN Online Service cloud. This is

the cloud that when you open up your computer in the morning, you'll see the little orange GN Online Services cloud, and it will have a number, or it may not have a number. If it has a number of say three, four, one, two, three, four, five, et cetera, that means that you've got that number of requests that have come in for patients for setting changes. So moving that cloud over to your taskbar will allow you to easily see that when the computer is open. Once the assistant request is initiated, what the patient sees as they opened up their ReSound app on their smartphone, and they click "My ReSound button". They'll see request assistance selected here, and then an overview of the assistance procedure is shown for them on their smartphone. So they do have a little bit of an understanding of how the process works. To start, questions are asked by the hearing and the hearing aid status, and these are pretty general questions. Has your hearing changed? Do you have ear pain? Is there anything clogged or damaged in the hearing instrument? And the reason why they do that is they're trying to field out a few different angles. If they have ear pain, the next screen will tell them to actually call the audiologist and make an appointment. We don't wanna take away from something that is a situation where the person should actually be in the office. So they do go through a small series of questions that gauge how serious this situation is, and whether or not they're just looking for some quick changes to the hearing instrument.

Choices are presented for possible sound quality complaints as well, so then they start to target what's wrong with the hearing instrument? Is it too loud? Is it too tinny? Is one broke? Is one not broke? Are you hearing only out of one ear? Et cetera. So they start to narrow down some of the more obvious types of answers and questions, in order to get a better feel for what exactly is going on, and again, more importantly, whether or not that person needs to be actually seen in the office. So continuing to narrow down things, patient also has the ability, got my clicker here, the patient identifies the environment, or the specific types of sounds that are contributing to their problem. And all they're doing is basically again narrowing down what exactly is

happening, and giving a better picture to the audiologist, so the audiologist understands what's going on. The patient specifies the severity of the problem. One ear, is it two, is it severe, is it mild, et cetera. So you get a better idea of what actually is happening, rather than the person just coming in saying they want game changes. It gives you a little bit of background on that. Once the assistance request is finalized and sent, a summary screen shows exactly what they can review, and what they typed in the answers to the questions that were asked. There's also a field where they can physically type things in. Once they feel comfortable with that, comfortable sending that request, they go down here to step two, and they press "Send request". At this point, it gives you a "Thank you, "your request has been sent", and now almost instantaneously, you'll notice that the cloud, the orange GN Online Services cloud on your computer will pop up with a new message. That's indicating that a patient of yours has sent a request to have change assistance. The number of requests received will appear in that cloud. This particular one says three, it's a little bit hard to see there. But you'll notice that when you come up, and you open up your computer, it will say one, two, three, four, five, et cetera, and then you can click on that, and it will tell you the patient name, and that they have a request.

You can remove that from the list. You can also open Smart Fit as well, in order to address that. In order to review it, you do need to click on "Assist questionnaire" "View patient's assist questionnaire", and then this gives you a rundown of all the answers that that patient has supplied to the questions that were originally asked, whether it's one year, whether it's two years. You'll see hopefully it will say that there is no ear pain, they're just having a problem with the instruments. This may also tell you that your patient is going to be calling, or you need to call them to click an appointment, to schedule an appointment, because remember, if they filled out "Are you experiencing ear pain or drainage?" the audiologist will see that immediately, and know to take an additional step. At this point, once you're in the patient software, you can make any changes that you want. Let's say you go ahead and change some programs or two.

You would just do this as you naturally would if they were sitting right in front of you. And then you're gonna send that data package back to them. So you're gonna save it in the fitting screen, and then you're gonna click "Send settings" down here in the bottom right hand corner. Send settings, lower right hand corner. And then a text screen will appear. This allows you to actually compose a message to the patient. You don't have to necessarily type anything. A couple of people have put in their company logo. It would be totally up to you, if you wanna say anything, otherwise you would just send settings again, and then the patient then receives the settings through their phone. As the patient receives the settings, a notification's gonna appear on their smart 3D app, similar to if you had an email, or if you received a notification from Instagram, or Facebook.

What they're gonna do is they're gonna click install on the notification. In the active list, the new settings are gonna be available for them to install. Remember, you've already set them up for hearing instrument updates, so this allows that to update any settings that you've changed. They click install, the app displays the message that perhaps you had written them, and then they click continue, and that's it. Settings are now imported into the hearing instrument, and they are well on their way. Let's talk about what kind of candidates this would be useful for. Number one, teenagers, especially given the topic that we're talking about today. I think it's also important for people that are busy, people that are on the run, people that are traveling. This particular picture here obviously is someone getting on a public transit system. Anyone that takes vacations, although it's hard to take a vacation now, I suppose, but you know where I'm going with this. People that have a hard time getting scheduled. People that take vacations. People that live in one part of, you have snowbirds, whether they're teenagers, or kids, families. I know one particular family that lives in the US for six months, and lives abroad six months. You've got those types of people. You've got people that have busy calendars, and when I say people that have busy calendars, I don't just mean teenagers, or even perhaps the patient's families that are busy, but people that have a

hard time scheduling in order to get their child to the audiologist. For that matter, two working parents, maybe one's out of town and travels for work. It's extremely hard for the one single parent to take time off work in order to get their kid over to the audiologist. So anyone with a very packed busy schedule. People that have disabilities. It's not always the easiest thing to get transportation for people to get in. They have to schedule this. They have to schedule it well in advance. They have to schedule it around the transport time, versus your time. Inclement weather. I personally live in Chicago. This particular winter, this last winter was pretty bad for us, so having things shut down in the city due to inclement weather doesn't necessarily allow for the easiest way for me to get my children into the audiologist. People that live in remote areas. We sometimes don't think about the people that have to travel 90 minutes to get to the audiologist. Not everyone lives in the metro areas.

Some people live in very remote lands. And of course we almost have to mention the situation we're in, in a global pandemic of being COVID-19. I'm not sure where everyone lives. I live in Chicago. We've been shut down for quite a while. If my children needed assistance with their hearing instruments, I would not be able to get to the audiologist to get them seen. That's one benefit we talked about earlier is having, you set up your patients for the just in case type of situation, this is that just in case situation. Getting to the good stuff. Myself and a colleague of mine, Kate Pick, looked at potential applications of pediatric telehealth and remote fine tuning in 16 children that were teenagers, mostly teenagers, ranging from 6 to 18. Their mean age was 12 years old. They were known as the Volunteer, and what we did was we fit them with ReSound LiNX 3D, or ReSound Enzo 3Ds, and we wanted to be able to have them use remote fine tuning, in order to avoid going to the audiologist, but be able to address the concerns and issues that they had that arose. What we did was we used three to four remote fine tuning sessions initiated on a monthly quarterly basis. Now first we started out with each and every one of these 16 children, and we waited a little bit, and we waited, and we waited, and actually the first fit, the first one or two fits with all them

went so well, they didn't feel that they needed any changes. So then we had to go back in, and we had to figure out plan B. So what we did was we took out a couple programs, we deactivated a few things, we basically set them up so that they needed to ask for some remote fine tuning from us. The requests were initiated by them, their care giver, or the audiologists. Couple different requests that they included were program additions or deletions. For a couple kids, what we did was we deleted their DAI program on a Friday, and then we had them first thing Monday morning request the DAI program to be put back in, for the start of school. Couple other ones we had deactivated the beeps, and then I think just a few of them we changed some gain at their own request. So what we did was we set up these 16 children, and we set them into a situation where they needed to ask remote fine tuning, because again we originally set them up, and nobody was asking for any requests, because they were happy with what we had given them.

We're looking for a couple of different trends, not just from the teenager, the Volunteer for that matter, but from the audiologists and parents as well. We were interested in seeing whether or not they had easier access to care for difficult to schedule patients. If traveling long distances were being taken into consideration. If they were home bound, they had limited transportation, inclement weather. Some of those things we already talked about on the other slide. We also wanted to see if there were any trends with faster response time to patient requests. It's not unheard of for patients to want to change something with their hearing instruments, that then maybe they can't get in to see you guys, maybe for a week or two, and then maybe in that week or two, maybe they're already leaving to go out of town, or maybe in a week or two they have a packed schedule with sports, and camps, et cetera. We wanted to also monitor faster response times to the patient requests. We wanted to look at adjustments to certain features in between appointments, whether or not those teenagers were happy with the features that we gave them, or if they wanted to make any adjustments, feedback management, et cetera. And one of the more important things for families was looking

at cost effective solutions for their families, as well as the audiologist looking at cost effective solutions for their practice. Were they able to see more patients? Were they able to attract more patients with this type of offering? So a couple of insights here into what we found. When we look at the Volunteer, or the teenagers, for that matter, the kids that we fit, we did this over the course of six to eight months, and 92% of them stated it helped accept and enjoy their hearing instruments faster, and wore them longer periods of time. 92% felt more responsible for their hearing instruments, or for their hearing needs, and that to me was a huge marker. That to me, I thought, was the best thing I could hear. 46% felt embarrassed for being taken out of class for an audiology appointment, and missed homework assignments and class lecture, because a lot of times these kids, they're taken out really quickly by the audiologist. It's not unheard of for the educational audiologist to interrupt a class real quick, "Hey, can I see little Billy? "It'll just take five or ten minutes." Well, if you've been in audiology enough, you know nothing takes five or ten minutes.

Sometimes the computer glitches. Sometimes something stalls. Sometimes the child is trying to express what's going on with their hearing instruments. Nothing generally takes five or ten minutes. So 46% of them felt embarrassed for being taken out of class. 69% felt that they used their hearing aids more with the connectivity options that were available to them. They thought this was the coolest thing around. Now the caregivers, patients, families, for that matter, 72% claimed to have waited over two weeks for their child's hearing aid appointment. Now that's not to say that it was difficult to get into you for two weeks, but we also have to keep in mind that it's not always easy for mom and dad just to stop what they're doing and put in for a paid time off, in order to get their child over to the audiologist. 100% stated that it reduced their travel time, that's almost a given. 100% stated it reduced the anxiety of their child not having to get into the audiologist. 100% appreciated not having to miss work or events to take their children to the audiologist. What speaks volumes to me in this slide is the 100% that stated it reduced the anxiety of their child, not having to go to the

audiologist. That was really interesting to me, and I started to talk to parents a little bit more about that. A couple of things they were able to highlight. A couple of them said straight out, my child is not shy. When they get in front of the audiologist, it's like they just buckle down, and they don't speak. They're not able to voice their concerns, that maybe they voiced at home. They had anxiety waiting the day before getting to the audiologist. So for me, what really stuck out was that it reduced anxiety. My heart goes out to children, especially young ones, that are too young to be experiencing anxiety, just to have a hearing aid looked at, or maybe have their hearing aid checks. In no way what we should be doing should provoke anxiety for children, so if this type of feature is available, and parents believe it reduces anxiety, then I say green light it and go. From the audiologist's point of view, 81% felt it facilitate faster response times to their patient's needs. You know when little Billy makes an appointment, they can't maybe see little Billy, they'll look on the books, and they'll see, oh Billy's gonna be here in a week.

But when they open up their computer, and they see that little Billy has requested a change, they may know, hey, Little Billy's hearing instruments are set up pretty easy, I can just see what he needs real quick, and make that change real quick there too. So 81% felt it facilitated faster response times to their patient's needs, what I think is really, really important. 75% felt it would lead to better goal achievements, and hearing aid outcomes for patients. That's fantastic. 75% also stated that they felt remote assist offered an enhancement in level of care for their patients. We can talk more about that a little bit later, but if you own your own practice, being able to enhance in level of care isn't necessarily something you always wanna offer for free. It's very nice to be able to enhance your level of care, but you'll also notice that something like that is also a chargeable item. So if you do own your own practice, these are some of the things that you also do wanna take into consideration. 100% felt it was important that we, as hearing healthcare providers, find creative and cost effective ways to deliver hearing healthcare, to continue to exist in the audiology space that we're in. And I 100% agree

with that. I think it's really important for us to find creative and cost effective ways, especially right now in the middle of the global pandemic. This type of feature, this remote assist, remote fine tuning, adds value almost instantly. From the patient's point of view, in pediatrics, there's no need to coordinate between parent's work schedule, a child's academic schedule, any of their extra curricular sports schedules they have going on, whether they're playing basketball, or volleyball. You don't have to interfere with that. You don't even have to leave the house. Clinic availability for simple adjustments. There's many, many of us who, at the end of the day, we go home and we think to ourselves, gosh, I don't know if I activated that DAI program for their new hearing instrument, and they start school in two weeks. Such a simple adjustment, and we may not be able to get that person back in for two or three weeks. So if we can make simple adjustments like that through a feature like this, I think it's a win-win for everyone. From the patient's point of view, you can add or remove programs or features to increase comfort and compliance.

I know many kids who just get centered and focused on that one thing. I just need this one thing, or I need a music program, I need a music program, I need a music program. Well, they can't get in to see you for three weeks. If you could just give them the music program, they might just be really happy. Kids are pretty easy to please with small little things like this. Quicker response times for small adjustments. Turn indicator tones on and off, louder or softer. Some children don't realize how much they don't like those indicator features, until they leave the office, and then think it's too loud, or it's too many. If something that small makes them that happy, and that will allow them to wear that instrument more, then I say go for it. It also involves shy or less talkative patients in his or her own hearing care. Again, I came across a number of families who said gosh, my child is so outgoing, but when they're in the office, they seem to shutdown, and they just don't want to talk. So this is a nice way to involve shy or less talkative patients. Let them do this at the comfort of their own home. From the clinician's point of view, they have more time in their daily schedule for new patients, or

patients who need to get in quickly. Some patients actually have to be in your office real quick, but some of those real quick appointments can't happen real quick, they happen in three weeks. Increased revenue for more available or new evaluations business model dependent. This would be more in that being able to see new patients, take the place of those that you can take requests through online. Reduced cancellations and more consistent follow up care. And again, as we talked about a slide or two ago, an added layer of service. I've seen people label this as a concierge type of care. That would be up to you on how you wanna work that type of model, but I know that model exists. Something you may wanna explore, if you do own your own practice. It allows you to free up time in the schedule to see those who prefer face to face appointments. This is really important, because there will always be the people that don't wanna do something online, or don't wanna do something remote, and that's perfectly fine.

Like we said in the beginning slides or two, it doesn't have to go with everybody, and there will be times that people won't want this type of model. There are a number of people that sometimes come to you as the audiologist, or the hearing healthcare provider, because they just wanna talk. They just wanna get out their story. They just wanna express their frustrations, whether it be with their family members and their hearing instrument, or just that they can't hear the darn TV. There definitely will be people who want to have that face to face appointment, and that's great. From the clinician point of view, they may also find their patients becoming more accountable for their hearing loss. Like we said in a couple of the earlier slides, having less involvement sometimes you see people become more involved, or more accountable. In this particular sense, they'd be more accountable for their hearing loss, or for their technology. Couple other insights we've found. 100% believed that it was important that we as hearing healthcare professionals find creative cost-effective measures. 62.5 said that they're likely to continue using remote fine tuning for patients. 37% couldn't decide. Now I should say that would be an interesting number to see, or to review,

because this all took place before the pandemic. It would be interesting to revisit some of these numbers, and see if those things have changed. 100% thought that telehealth should be covered by insurance, private pay or assistance. Right now there are a small portion of insurance that does cover telehealth. That's something that you would need to contact your insurance for, or the patient would have to contact their insurance to see, to check on. But again, that's another number I think that would be interesting to see if that's changed, with pre and post pandemic. 81.25% thought that teens appreciated the remote fine tuning experience. This reminds me of one of the kids that absolutely loved this. I think he actually started to think of this as a little bit of a game. Later on, we talked him through a few things, and he just flat out said to us, "I just really like to be able "to change my hearing aid up a number of times "to see exactly how I want it", because we were fielding requests from this gentleman, from this kiddo three or four times a day. After four or five days of that, we thought we need to contact them and see what's going on here.

This was just a kid who was looking to explore what his hearing instrument can do, how he could change it, what he couldn't change and what he wanted to change, and he was just getting a better feel for the instrument in general. And that right there is the type of person that is set up for success, or set up to become more accountable for their loss and their technology. And I thought to start, gosh this kid has a lot of requests, and then when I finalized a lot of things and talked things over with him I thought, good for that kid. Good for him to explore the technology that he has, and he's gonna be a better user with that, and with this experience. 100% thought remote fine tuning will allow them to do other things, than to see the audiologists. You know it's funny, because when you talk to audiologists about remote fine tuning and telehealth, not everyone wants to do it. "I have plenty of time in schedule to see people." "I like to see people face to face." "My patients never wait more than two "or three days to get in to see me." But I think what's interesting is to put ourselves in the patient's shoes for a moment, or even in the family's shoes for a moment. Yes we may

be able to get them into our office, but how many of you have actually asked the families, do you like coming to see me? And I don't think it's anything to take offense over, I just think that people are really busy, and they don't always have time to come in and see even the best audiologists out there. So I think it's an interesting question to raise, or to think about of how many of these people want to come and see you, and stop what they're doing. Generally children wanna go and have fun. They don't wanna miss soccer practice to go to the audiologist. Now the families want them to, because they want things to be settled with the hearing instruments, and they want their children to hear better, but a lot of times people wanna do other things, and that's perfectly fine. A solution like this allows people to do other things, and not just your patients, but you guys as well. 93% claim they would prefer to have hearing aids programed from the convenience of their own homes.

One of the kiddos in this particular study insisted on always doing this from his bed. I don't know why. But he really took it to heart that he didn't have to leave his bed, and any of the requests that he made, he always made from his bedroom, and he always told us that. So he just thought this was awesome. 100% claim convenience with having their hearing aid remote fine-tuned. 100% said it was easy to set up, and apply all the new settings. And for me, this particular, all these different claims equals 100% success in what we were doing. We really reached out to these teenagers, and to these families, and we changed their lives, and gave them a new solution that they wrapped their heads and their minds around, and totally embraced, and it made them better users. I wanna leave you with a couple of findings for remote fine tuning for all ages, not just teenagers and kids. But approximately, when you look at technology and telehealth as an emerging driver of consumer's healthcare decision making, again this particular survey was done pre-pandemic. Approximately 86% of the respondents saw value in incorporating telehealth into their healthcare regimen. More than a third of the 55 plus community is very or somewhat interested in incorporating this into their healthcare regimen. Now again, these are numbers that would be really interesting to

go back and review post-pandemic. Of those with a wearable device as part of their daily health regimen, 30% wear an activity bracelet, and 30% use a smartphone. So these people are already being set up for this type of feature, and for this type of telehealth industry. A couple of other findings. The future hearing aid wearer can be expected to choose a brand that offers telehealth. Out of the 35 to 54 year old age group, 20% answered that they were very likely to change their hearing aids or other hearing assistance devices to a brand that provides telepresence function that links them directly to their healthcare professional. I am one of those individuals that now, since I've had to see a doctor in the middle of COVID, I will now probably only choose a doctor that I know has a telepresence function. 40% of that same age group answered that they were somewhat like to change their hearing aids, or other hearing assistant devices, to a brand that provides telepresence function, leading to a total of 67% in this age group being positive towards a brand with this type offering. 30% of the 35 to 54 year olds answered that telepresence is the future of healthcare industry, and again, I can't stress enough, I'd really like to go back and see these numbers, review them again, because I believe these will increase. Users expect their healthcare professionals to be flexible and on the forefront of technology, of those not satisfied with their audiologists.

This is a couple of reasons why. 30% answered that it was due to the HCP not offering the most recent technology available. So not offering maybe something like remote fine tuning. 23% answered that it was too hard to schedule an appointment. I know for me, when I get into the dentist, which obviously is not gonna necessarily be a telehealth type of appointment, but I can't stand scheduling the dentist, because I know that I can't get in for a month. 28% answered that the doctor was too expensive, and 31% felt the doctor's office was too far away, and that they're all in that 55 plus age group. So times definitely are changing, from what we've seen in the past, and I think that time has sped up quite a bit, given the situation that the world is in at the moment. I wanna leave you with one or two things here. All of the information is in the cloud, and

a lot of times people ask, I don't understand what the cloud is. The cloud is everywhere. What I do wanna really stress out to you guys, because I know this is some of the number one things people ask, is about patient's privacy, and healthcare providers ask about patient's privacy, and more importantly, patients ask about their privacy. We are HIPAA compliant. Confidential and secure while transferring all that information, the data received and shared. We use an Azure cloud. It meets this ISO certification standards across the globe, and the EU General Data Protection Regulation, so the GDPR. Everything that we have transferring from the cloud, whether it's from the smartphone over to your computer and vice versa, every single step of the way is kept private. I think it's about time that we embrace technology, I think especially for children and teenagers, we wanna make it fun. You wanna make it fun, educational, engaging and rewarding, and by doing all of those things, you also definitely want to make it accessible to them. And making it accessible means having some type of technology that allows a telehealth presence. Thank you very much for spending this last hour with me. I really appreciate it. I don't see any questions below, but I believe you will be getting a copy of the presentation. My name is Megan Quilter, and I am at ReSound. Feel free to reach out to me. Feel free to email me, if you have any questions that come up later, and I look forward to the possibility of talking to any of you. Thank you very much. Have a great day, and stay well, stay healthy, and stay inside, as long as needed. Thank you.