

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

Conversations Shine with Sky Lumity

Presenter: Nicole King, AuD, CCC-A

- [Nicole] Hello, my name is Nicole King and I am one of the Phonak Account Managers and I specifically support children's hospitals and schools. Today I will be discussing our newest pediatric product, Sky Lumity. Today you will be learning about our new Lumity products. You'll be able to know which Lumity product to recommend for a patient, as well as which Lumity technology to recommend for a patient. So before I dive into product, I wanna lay some groundwork on a concept of well-being or well-hearing is well-being. Well-hearing is well-being takes a look at the social-emotional, cognitive, and physical impacts of hearing loss and hearing aids have on an individual. At Phonak, we do not just talk about product, but the research and studies that go into the development of our products.

As a quick refresher, let's look at some key messages from some of our previous presentations and how well-hearing relates to the well-being of our pediatric population. When we look at the social and emotional development for children and teens, we are not just talking about those with hearing loss. This applies to all children and teens, but it is especially important for those that have hearing loss to be able to hear in all of their listening environments. We know that strong relationships set the foundation for developmental outcomes, including things like self-confidence, motivation to learn, achievement in and out of school, as well as communication and other social skills. Research from the center of the developing child at Harvard University shows that strong relationships are developed through serve and returns.

Their research shows that the serve and returns are the most powerful tool for promoting not only speech and language development, but are critical to developing social and communication skills, stimulating the formation of neural connections and building and strengthening neural networks. It is clear to see how these strong relationships are pivotal to both cognitive and social emotional development. Physical development is a vital part of growing up as children learn to master control over their bodies. It could be as obvious as sitting, crawling, standing, and walking. As children

grow and develop, these changes are easily noticed and they are viewed as milestones along life's journey. Early cognitive development comes into play here, the young child making sense of their world.

Now up to this point, I have talked about the developments in infants and young children, but how about teenagers? We know from the World Health Organization guidelines all about the health benefits when we stay active, and that's regardless of age. It also makes sense that participation in physical activity is associated with greater social integration among children and adolescents, such as building friendships and enhancing social skills. When we talk about cognitive development in young children, we can reflect on Carol Flexer's statement that the ears are the doorway to the brain. And for those of you that were with us when Sky Belong launched in 2018, you may remember that this was our theme. We know that infants and children must have access to intelligible speech and meaningful auditory information as early as possible.

This is necessary in order to fully develop and connect all auditory areas of the brain and to optimize their spoken language, literacy capacity and intelligence. In order for a child's brain to be both a hearing brain and a listening brain, attention and working memory must be fostered and training needs to occur in favorable listening conditions and hearing aids are important in this. In turn, the National Deaf Children's Society tells us that good language and communication ability are associated with better emotional wellbeing. Once again, associating that link between cognition and social emotional characteristics of wellbeing in children. Now, when we look at teens, we can also reference Chris English's publication on the Amazing Teen Brain. Here she talks about the teens brain and how it is open to novelty, change and experience.

Advanced conversations, adult language, and challenging others' perspectives, for example, help that teen develop further along this path and have the potential to support emotional and social learning, as well as cognitive understanding. Studies

have indicated that there's long lasting changes in our brains, and this is even through venting to a friend, a family member, or a colleague. I know I do a lot of venting. If the individual offers some really useful insights or even just listen, we often at times not only feel better, but our brain's neural network is changing in the process. As audiologists, we not only think about providing hearing aids so that a child can have access to speech, but we can take it to the next level and think about their entire wellbeing.

And how do we do that? Well, we may all answer that question differently, but I wanna focus on two answers that come to my mind. Building trust and providing the best pediatric hearing solutions. So let's first talk about trust. Think about the times that you have had a child's parent or caregiver sitting with you. You've diagnosed their child with hearing loss, you recommend amplification, and you begin discussing solutions. Why should they trust that the solutions you are presenting are the best for their child? Whether you are an experienced or a new audiologist, your education and knowledge of what goes into choosing and fitting hearing aids makes you an expert, along with building a rapport with the family and the child adds to a trusting relationship.

Why should you, as the pediatric audiologist, believe that Phonak's pediatric solutions are the right choice to offer these families and children with hearing loss? Well, let's start with Phonak's commitment to pediatric solutions and how trusting in our commitment and products can in turn help build trust between you and your families and patients. So why should you trust Phonak? Well, to start with, this is Phonak's 50th anniversary in the pediatric hearing aid industry, and that, I'd say makes us experts. During the past 50 years, Phonak has created far more than hearing aids for pediatrics. We have created an entire pediatric ecosystem, which includes 25 years of collaboration with key opinion leaders in the pediatric hearing industry, hearing aids that are designed specifically for children, research done with children.

So not just using research done with adults and applying it to pediatric solutions, a dedicated pediatric fitting workflow in Target via Junior mode, 10 years of connectivity with Roger and resources for parents and teens. With this strong background and experience, trust is built. So let's talk more about our pediatric ecosystem in more detail. So I am excited to introduce to everyone the newest additions to the Lumity portfolio. Let's start with this general overview and as we move on, I'll be sure to cover each of these in more detail. So we know that children have different needs at different stages throughout their life. If they're in need of a robust solution that copes with their rapid growth, their rough and tumble activities, or to express their individuality, Sky Lumity is the hearing aid of choice.

If they are older and would like a more cosmetically appealing option, then Audeo Lumity is a great solution for a sleek design and now has the addition of three fun colors. For those with a unilateral or asymmetrical hearing loss, CROS Lumity is available and compatible with both Sky and Audeo Lumity and is also available in those three fun colors. With RogerDirect available in both Sky and Audeo Lumity, access to the benefits of Roger technology is seamless. For your patients with existing Marvel and Paradise devices and now Lumity, connectivity to the myPhonak Junior app allows a family to join an appointment through remote support. Or, when a tween or teen is ready, gives them independence and control over their listening needs in challenging environments through adjustments through noise reduction or speech focus.

With Lumity, it's not just a colorful hearing aid, it's a suite of solutions to meet the needs of babies, children, and teen. So let's take a look at a product over five years in the making. Currently, Sky Lumity comes in two form factors. Sky Lumity-PR, which has a rechargeable lithium ion battery and Sky Lumity-UP with a 675 zinc-air battery. Sky Lumity-UP also has a telecoil. Sky Lumity operates on an updated automatic operating system designed specifically for pediatrics, and that's called AutoSense Sky

OS 5.0. AutoSense Sky OS 5.0 has the newest advanced features, which include StereoZoom 2.0, Speech Enhancer, SpeechSensor, Dynamic Noise Cancellation, and Motion Sensor Hearing, and I'll explain each of these in detail in a few minutes.

RogerDirect remains a dedicated streaming program. When looking at the Sky Lumity-PR it is compatible with CROS Lumity rechargeable and also has the unique function of tap control. Both Sky Lumity-PR and UP can be connected to two active Bluetooth devices with eight total paired devices. And this allows for greater ease of connectivity between the multitude of devices a child may be paired to, at both home and school. The myPhonak Junior app is designed specifically for pediatrics and has a new design, so no more Leo, and allows for visualization of wearing time and remote support. Both the PR and UP models have the pediatric extras that we have come to rely on, which is robust and reliable housing, choice of colors, options for tamper proofing, LED for easy indication of hearing aid status, and of course ease of Junior mode for programming the device in Target.

As you can see, we continue to provide three performance levels for our pediatric patients. One thing to note is that Windblock is now available in our 50 level technology. So those kids that are out riding their bikes, running around with friends or playing a game of soccer can now have an improved listening experience with reduced annoyance when it comes to wind noise. Sky Lumity continues to excite kids with fun colors for both the body of the hearing aid, the tone hook, and why not add our new metallic colored ear molds? What a wonderful way for children to express their individuality by putting together unique color combinations. Worries about hearing aids getting wet is always a concern when it comes to pediatrics.

With the continued protection of the IP68 rating, this means that Sky Lumity hearing aids are designed to be reliable and robust to stand up to the wet and wild world of active kids, or just the crazy weather. With the IP rating of six eight, that means a

child's hearing aids spend less time in repair and more time on their ears. The tool to open the Tamper-Proof UP battery door is the same black tool that you have used for Marvel devices. And additionally, both the PR and UP models have a tamper-proof ear hook option. Sky Lumity-PR is easily charged using the updated Charger Combi BTE 2. Because Phonak is dedicated to improving charging reliability, the updated Charger Combi BTE 2 is designed with a booster that's inside the charger for better voltage distribution.

Don't forget, the power pack is an option to attach to the bottom of that charger for charging on the go. Even with the advanced features in AutoSense Sky OS 5.0 and increased connectivity capabilities, Sky Lumity-PR hearing aids have maintained the expected battery life of 16 hours. These calculations are based on 10 hours of streaming, such as Roger, it's a lot of streaming, and six hours of hearing aid use. Although a full charge will certainly get a child through their school day, we know that the reality is sometimes not every child shows up to school with a fully charged battery, so it may not be a bad idea to add an additional charger at school to remedy those situations.

For the UP, the 675 battery will need to be changed approximately every 10 days, and this is based on the assumption of a 16 hour day of use. As we know, battery life can be influenced by lots of factors, like the brand of the battery being used, the degree of hearing loss, how much output is required, and how the hearing aid is being used, such as streaming time and connectivity. Let's keep that excitement going and let everyone know some updated options that we can offer teens and tweens with Audeo Lumity. I am sure that many of you have witnessed your pediatric patients become concerned about what their peers think of them. The cosmetic appearance of their hearing aids can significantly affect their self-esteem and their willingness to wear their hearing aids, whether it is at school or out socially.

As a consequence, they may decide not to wear their hearing aids, which can impact their social interactions and social wellbeing. As audiologists, we want to provide a solution to boost confidence and encourage them to continue to wear their hearing aids. If they come in wanting a less conspicuous design or something that's a bit more grown up, you can offer them Audeo Lumity in the R, RT, or RL, also considered Audeo Life. What I'm excited about is that those teens and tweens that still wanna have a fun color option are now able to choose from Precious Pink, Electric Green, and Caribbean Pirate. Audeo Lumity R and RT are charged in the Charger Ease, which is shown here on the slide, and that has a secure magnetic retention for the hearing aids and a lid for closure.

Now how many times have you had an active teen that plays sports or enjoys going to the pool or the beach, but is concerned about getting their hearing aids wet?

Remember, with the rigorous water testing conditions, Audeo Life is a waterproof rechargeable device that allows those teens and tweens to feel more confident while sweating around and in water. Audeo Lumity Life is compatible with the Charger Case Go and kind of like the name implies, Charger Case Go allows for charging on the go. So there's no need to pack up the charging cable or the power supply when heading over to a sleepover at a friend's house. And drum roll please, you have shared your feelings about CeruShields and Phonak listened.

So we now offer options for receivers for your patients and for you. So the current system for CeruShield wax protection, which is SDS 4.0, is still available, but now you can choose SDS 5 with the Cerustop option and that's the wax protection that comes on the stick. When you're ordering your new products and replacement receivers, you will be able to request the SDS 5 with Cerustop and that allows you to provide that Cerustop wax protection to your patients. Also shown here up on the slide, not only is that receiver option compatible with Lumity, but it's also compatible with Marvel and

Paradise Rick devices and it's easy for you to be able to tell the SDS 5 versus the SDS 4.0 receivers as the five receivers have that little white stripe on the receiver box.

I'm now going to switch gears a little bit and talk about those that require a solution for an unaidable hearing loss in combination with either a normal hearing ear or an ear with aidable hearing loss. So let's talk about CROS Lumity. So we know that patients with unaidable unilateral hearing loss face their own unique set of challenges. Difficulty hearing in noise, difficulty localizing sounds and difficulty understanding speech can cause greater problems like reduced socialization, increased listening effort and fatigue, and selective attention and reduced productivity at school and at home. Fortunately, these students can now benefit from Lumity technology. With a CROS Lumity system, patients benefit from advanced binaural features like StereoZoom 2.0. Although CROS does not stream Roger and Bluetooth signals, the CROS mic is deactivated in those streaming programs and it does not compromise the hearing aid side from receiving those signals.

Additionally, CROS can be used with the myPhonak Junior app and the myPhonak app to give the individual control over their listening environments. Now, if I think about a situation where a teenager might benefit from StereoZoom 2.0 with their CROS Lumity system, it's when they're in one of my favorite places and that's a coffee shop. So I think about that teen working as barista at a popular coffee shop on a Saturday morning, taking orders. The background noise of the machines grinding and brewing, along with the buzz of conversation of the patrons can make quite a challenging listening environment, especially having to concentrate on some very specific and sometimes complicated drink requests. With all of the features of AutoSense Sky OS 5.

0, and most specifically StereoZoom 2.0, the Lumity hearing aid and CROS Lumity are working together to beamform towards the speech in front of the teen, allowing to better hear in background noise, providing increased confidence that they have heard

those customer orders correctly. When considering a CROS system, Phonak recommends that the Sky Lumity PR and CROS Lumity combination be used for those patients six years of age and older. When a patient is eight years and older, this can also be recommended, but they also may be a candidate for the Audeo Lumity, CROS Lumity combination. If they would like a telecoil, then you can do Audeo LRT and CROS L combination. Remember that CROS Lumity also has those options for Precious Pink, Electric Green and Caribbean Pirate.

The CROS LR battery life is 12 hours and that's similar to Audeo R and RT. And the CROS Lumity is compatible with the Charger Ease. We have all had those teens and tweens tell us about the latest TikTok videos they're watching, music they're streaming, or game that they're playing on their smartphones. Connectivity at home and in the classroom is a critical component of a child's day. At Phonak, we ensure that your patients have ease of access to any of their devices. Not only are they able to connect to their Bluetooth devices, but connecting to their Roger devices and their app is equally as important. All Phonak hearing aids, including Lumity hearing aids, have direct compatibility with Roger Direct.

For those of you that have been fitting either Marvel or Paradise on your patients or students with Roger, the installation process is the same with Sky Lumity. Regardless of whether the child is at home, at school, out playing their favorite sport, or socializing, there is a Roger solution that will help them hear well in those environments. For toddlers, the Roger On or Clip-On Mic can be used at home, at daycare, out on walks, and in the car. Once connected to Roger Receivers, both are easy clip and go mic solutions that require minimal instruction for parents to easily use. When children start going to school, the Roger for Education portfolio is the perfect solution. The Roger touchscreen microphone is designed specifically to address the versatility of a classroom with touch and swipe technology to allow for easy use.

Connectivity to other Roger devices in the classroom, like the pass around mic and multimedia hub, ensure that the student is receiving access to their peers responses and audio streaming from smart boards, which is vital to learning. And although the Roger touch screen can be used in high school, most teens sometimes gravitate towards the Roger On for its more sleek design. Continued Roger use throughout high school and into college and the workplace better ensure social and emotional wellbeing by being able to engage with peers and colleagues in the variety of listening situations they may encounter. Along with connectivity comes the myPhonak Junior app version 1.2. Some updates to the app include a new user face that allows for teens to change the theme and remove Leo.

You know, we got some feedback that Leo was a little too baby-ish for some of our older kids. Leo is still there, but you can make him disappear if you want to. Besides the new look, there is additional compatibility by adding all of the hearing aids in the Lumity portfolio, wearing time and goal setting is available, as well as other increased personalization options. The operating systems on the phone need to be at least iOS 15 for Apple and OS 8 for Android. There are many options for children at various stages of their hearing journey and at times it can be overwhelming trying to determine what solution is most appropriate and whether or not a child is ready for an Audeo, a CROS or the app.

At Phonak, we wanna assist in that decision-making process, and so we have created an age consideration guideline and resource. The intent of this resource is to provide information as needed to assist with discussions you have with families, building that trust with them that you are the expert and guiding them to the best solution for their child. This new guide is a fantastic resource, especially since Phonak provides such a broad portfolio of solutions on the Lumity platform. It helps keeps everything straight and is a great go-to reference for the busy hearing care provider. With the Lumity

platform, Phonak provides the most advanced technology to maximize speech understanding. So why is maximizing speech understanding so important for children?

Well, when thinking about children with hearing loss, we need to provide a solution that has the potential to help them get through their day. A study from Hornsby et al. showed that children with hearing loss experience greater levels of fatigue compared to children with normal hearing. The research attributed this fatigue to the difficulties children experience in noisy environments. Additionally, a study from Cruckley and Scollie showed that almost 90% of a child's day in elementary school is spent listening to speech in the presence of noise. To help with the challenges of a noisy day, children need an operating system that's fast enough to adjust to the environment around them, and that is designed to classify the unique environments found in a child's day.

With AutoSense Sky OS, Phonak provides hearing aids that offer over 200 unique setting combinations to reflect the sound environments of active children and teens. It does this by scanning the environment 700 times per second. AutoSense Sky OS 5.0 uses machine learning to accurately identify those unique environments experienced by children during their day. As a result of this accurate classification of speech and noise, AutoSense Sky OS 5.0 is able to provide a greater listening comfort. By experience less fatigue this gives children the potential to access more resources for learning, for physical activity and for socializing. So how did Phonak get to AutoSense Sky OS 5.0? Well, there's quite an evolution of technology by our engineers, as well as with a collaboration of studies that was done with Dr.

Jace Wolfe at Hearts for Hearing, as well as our own Phonak Audiology Research Center to first design an automatic operating system specific to pediatrics and their listening environments and then continue to build upon it by resulting in our current AutoSense Sky OS 5.0 and that's found in Sky Lumity. So I'm gonna touch on a couple of those studies. Additional information can be found on our evidence section of the

website. So first, a study was conducted to look at whether or not AutoSense OS, which is technically the adult operating system. And it wanted to, it looked at that operating system in comparison to real ear sound, which functions like an omnidirectional mic mode and as well as a manual program for speech and noise that provided directionality.

So the hearing aids used at that time were Audeo V90s and the participants were aged nine to 13 years old. So old enough to understand when to press that manual button. When comparing speech intelligibility between the three programs, real ear sound is represented by those gray bars. That manual speech and loud noise program is represented in the blue and AutoSense OS is in the green bars. And it was found that there was significant improvement in speech recognition in both the manual and automatic speech and noise programs when comparing it to real ear sound, that gray bar. And this was a great result, as it showed that an automatic noise program was able to provide this improvement and that a manual noise program was not needed for kids, right?

And we know that that's certainly, we don't want children having to push a manual program. So another test that was conducted is to see if AutoSense OS was classifying a child's day accurately. Again, this used Audeo V90 hearing aids. And the results showed that the automatic operating system was classifying noisy environments and yelling and screaming and processing them in a music program. So you know, certainly that was not classifying them correctly. So the operating system was retrained using machine learning and included updated environments to better reflect a child's day. And as a result, AutoSense Sky OS 3.0 was developed and it was found to be 30% more precise in correctly classifying noisy classroom activities and 39% more accurate in recognizing yelling and shouting as unwanted noise.

And that with better classification that resulted in children wanting to wear their hearing aids throughout their school days and also did not need to press any buttons.

AutoSense Sky OS has matured over time and now it's AutoSense Sky OS 5.0. But what is different with this updated operating system? AutoSense Sky OS 5.0 includes SmartSpeech technology and there are several features that are part of SmartSpeech technology. These include Dynamic Noise Cancellation, Motion Sensor Hearing, Roger, Speech Enhancer, StereoZoom, and SpeechSensor. While AutoSense Sky OS came about as the world's first pediatric operating system, we actually found that adults also preferred how the pediatric operating system classified sounds. Because of this, now the classification system for AutoSense Sky OS 5.0 that was designed specifically for kids and AutoSense OS 5.

0 for adults are the same. What differs is how the features are set and which makes things appropriate for children compared to adults. So let's take a look at some of those SmartSpeech technology features. Speech Enhancer is an adaptive feature designed to provide up to 10 dB more gain for the peaks of soft speech and speech from a distance in quiet situations. And this results in less listening effort. This feature is available in 90 level technology of our Lumity devices. So is the use of Speech Enhancer something important for kids? Well it sure is. Or the baby who is on the floor playing with their toys, maybe their parents are across the room chatting with big brother. A baby with normal hearing is able to overhear that conversation even though the family is chatting at a distance with softer speech.

Speech Enhancer allows that baby to overhear that conversation by allowing access to that softer speech. What about the child whose friend is whispering during seat work that she has a crush on the new student? Speech Enhancer allows that student to not miss the gossip from her friend. So whether it is overhearing a distant conversation or a soft conversation in the classroom, Speech Enhancer helps children understand soft speech. But how do we know that Speech Enhancer benefits children? Although we

would assume that children might benefit from having Speech Enhancer activated, Phonak wanted the evidence. A recent study was conducted by the audiologists at Hearts for Hearing with results revealing that activating Speech Enhancer does help children with mild or severe hearing loss understand more soft speech than without using it.

So as you can see from this graph, word understanding improved between Speech Enhancer turned off, which are the gray bars, versus Speech Enhancer turned on with a moderate setting, which are the purple bars. And then of course, Speech Enhancer turned on with a strong setting are those green bars. Now, although there was even more of an improvement with the moderate setting to the strong setting, it was not found clinically significant. And so by default, Speech Enhancer is set to moderate for all of our pediatric age ranges. Dynamic Noise Cancellation is another feature that is new to Sky devices. When the conditions are met this feature automatically reduces background noise from the back and sides, allowing for an improved signal to noise ratio of up to four DB when in a noisy environment.

This allows for children to hear speech in the front of them with greater ease, thus reducing listening effort. This feature is available in 70 and 90 level Lumity devices. Now something different you will find when fitting a device in Junior mode is that Dynamic Noise Cancellation is turned off for both new fittings of Paradise and Lumity hearing aids. And the reason is because our pediatric patients are not small adults and may require a different setting. So you as the provider always have the ability to change anything in the software. So if you wanted to turn on Dynamic Noise Cancellation for a patient, you would go into the fine tuning tab, and here you'll see speech and noise and speech and loud noise programs.

You're gonna highlight those and go into program options. And then from here you can enable Dynamic Noise Cancellation and you have the ability to change the strength

from weak, to moderate, to strong. Now we need to remember that if teens are using the myPhonak app, which is the adult version and Lumity hearing aids, they will have access to Dynamic Noise Cancellation via the noise reduction slider. With the app, the slider still allows the user to adjust the strength. Now this slider is not even available when those patients are using the myPhonak Junior app. Our next feature is Motion Sensor Hearing, and this is available in all of our rechargeable devices. It detects whether a child is standing or moving and adjust the microphones to optimize the patient's ability to hear in noisy environments.

So think about a teenager who's walking from one class to another and listening to their friend talk about what color and type of dress she's gonna wear at homecoming dance. And this is available in our speech and noise and speech and loud noise programs for all performance levels. Now, let's get into the new Lumity features that are available for Sky. As a reminder, the original StereoZoom was designed to focus on speech coming from the front when in a noisy situation. StereoZoom 2.0 continues to provide automatic access to the person speaking in front, but now it does this smoother and faster. StereoZoom 2.0 is automatic at an 90 level and can be added to a manual program in a 70 level.

Directionality can be controlled via the speech focus slider for those using the myPhonak app. And then there's one other new feature that is available in Sky Lumity. And that new feature is SpeechSensor. SpeechSensor optimizes the child's ability to hear speech from the sides and the back when in noisy situations by accurately detecting the direction of the primary speech signal. And that's gonna improve the signal to noise ratio when speech is coming from the sides and the back, which is gonna help reduce listening effort. So let's take a look at how that is accomplished. So SpeechSensor is constantly on in the background and monitoring factors like noise level, speech to noise ratio and the direction of the loudest speech sound.

So let's imagine that we've got a teenager who's attending a Friday night high school football game with his grandfather. So before the start of the game, the teen turns to face his grandfather and they're talking about the new quarterback and how the team's gonna do this year. In this situation, the teen is facing the grandfather, so is easily able to hear him amongst all the background chatter in the bleachers. But what happened when that teen turns to face the front and start watching the football game? When in the presence of noise, SpeechSensor optimizes that teen's ability to hear speech from the sides and the back. So it does this by monitoring the environment in each of the hearing aids of a binaural fitting, and it allows those hearing aids to talk to each other via data exchange.

And for those of you that are familiar with our QuickSync technology, it's similar to that. And this provides a 360 degree picture of the sound environment. In this case, when grandfather talks SpeechSensor has determined that the loudest voice is grandpa's voice, and that's coming from the right hand side. SpeechSensor allows access to the grandfather's voice, which then allows that teen to be able to hear him when he asks if they wanna go, if he wants to go grab burgers after the game. Now with all of these new features that are available in Sky Lumity, let's take a look at how those pediatric defaults are set in Target. Speech Enhancer is set to moderate and this is based on the Speech Enhancer study that was conducted at Hearts for Hearing that I discussed earlier.

Dynamic Noise Cancellation is set to off. Currently research is being done with Dynamic Noise Cancellation and we are awaiting those results as that may change the default settings. Motion Sensor Hearing is set to wide and that's gonna provide the widest beam for accessing speech. Other options are mixed and narrow. StereoZoom 2.0 is an age dependent feature and this means that it's off by default for all ages from zero to 12 and is on for the 13 to 18-year-old age group. And we also have a study underway on this feature. So again, this default setting may change in the future

depending on those results. Now Roger is also considered a feature that's part of SmartSpeech technology. And Roger allows for direct streaming from Roger microphones to provide better hearing and noise when at a distance.

Just like with our Marvel and Paradise devices, Lumity devices allow for a Roger to receive or to be installed directly into the device. Now, traditionally Trial devices have been available to our clinical audiologist to allow for in-office demonstrations of hearing aid technology and also sometimes allowing those patients to do a trial with those devices outside of the clinic and in their daily listening environments. Demonstrating hearing aid technology and allowing a patient to go in their environments is sometimes not as common with pediatrics, but it is an option that should be determined between the audiologist and the family. Now there are two great addition to our Trial devices and if you're not familiar, trial is kind of a new term for what was previously called as our demo devices.

All Sky Lumity Trial devices come with a Roger installed inside of that. And the benefit to this, it allows the audiologist to quickly do a first fit through Target and then connect a Roger microphone in the office to the hearing aids to begin a live demo of Roger technology right there in the office. So there's no need to wonder whether or not the receivers have been installed of these devices. They come built in there. Previously in our Marvel and Paradise hearing aids, the length of the trial period was set or fixed at six weeks and at which point the hearing aids would turn off and they would need to be reconnected to Target in order to reset the trial period.

Now with all of our Lumity Trial devices, that trial period could be adjusted and it can be set for 1, 2, 3, 4, 6, or eight weeks in length. And this is easily done in the save and close portion of the fitting session. So now with the permanent installation of Roger technology in Sky Lumity devices, Trial devices and the ease of our first fit, demoing Roger in the office is easier and faster. What about allowing parents to hear what their

child is hearing through Roger? Well you can utilize a Roger neck loop and plug headphones into it and connect the Roger microphone and that also allows the parent to hear the benefits of Roger for their child. Please reach out to your account manager if you're interested in Roger microphone and Roger neck loop demo devices for your office.

The addition to having a Roger receiver permanently installed in Sky Lumity Trial devices is great as it's now even easier for clinics to demo Roger technology. And there's so many proven benefits when using Roger. Roger provides improved signal to noise ratio and better access to both quantity and quality of words and conversations. Children had 32% better speech understanding compared with hearing aids alone. Research has also showed that when using Roger, they have access to 5,300 more words per day compared to hearing aids alone. They can access as much as 12% more child directed speech. According to their parents, children appear more alert, more engaged and attentive in daily activities and conversations. And children with using Roger at home have significantly better receptive discourse when compared to children with similar hearing loss and socioeconomic backgrounds who do not use Roger at home.

So as you can see, there's so many benefits to using Roger. So how does the new extended trial period in Sky Lumity Trial devices help the family and audiologist? Well, there are several ways this can help everyone. So now you as the audiologist can set how long that trial period should be. After talking with the family, you can choose the length of the trial period based on the lifestyle and what would be convenient for them. So you can select up to the maximum of eight weeks, which calculates to about 56 days of use for a child that's having one nap per day where the device is being turned off. This flexibility is a benefit to the audiologist as it minimizes the need for the family to come in as frequently to have the trial period adjusted and allows for scheduling of other patients that need to come in.

And lastly, if the trial period does need to be adjusted and the family is unable to come into the clinic, the audiologist can consider using a quick remote support appointment to reset that trial period. So we know connectivity is important for today's pediatrics and that is why we have full connectivity in all of our Roger hearing aids. Whether it's the child's connectivity in the classroom, streaming of music or movies, maintaining social connections, or simply catching up over a video call, connectivity is an expectation in today's world. And that is why we continue to have a universal Bluetooth connectivity in all Lumity hearing aids. But how does this connectivity affect the wellbeing in teens? In the UK, teens between the ages of 13 to 17 were surveyed.

70% of them said having a connectivity made them feel closer to their friends and peers with 30% strongly agreeing. 80% of them said they used online services to find support for their wellbeing, which is really great. Online videos were another important source. When streaming the audio with videos, 68% reported that this made them feel relaxed, while 66% reported that streaming videos made them feel happy. So overall, using the internet to socialize with others online is considered to have a positive impact on wellbeing. Connectivity is also related to empowerment. Psychologists have proposed a model of personal empowerment, which states that true empowerment cannot come from merely a feeling, but it must involve real world evidence in order to have an impact on our relationships and social surroundings.

With a connection to the myPhonak Junior app, teens and tweens can take control of the challenging situations they are in and personalize their noise reduction in speech focused settings in the myPhonak Junior app. Now you may be asking, is this a good thing? Do they make good decisions? And what impact does it have on speech intelligibility? Well, earlier this year, a study was completed at the University of Mainz in Germany with children ages seven to 17 years, with mild to severe hearing losses. And they were wearing Sky Marvel 90 hearing aids and they were connected to the

myPhonak Junior app. So the graph here on the left shows that when the participants relied solely on AutoSense Sky OS 5.

0, they performed well. Now, when they were given access to adjust noise reduction and speech focus in challenging environments, they performed relatively the same as they did with the automatic operating system. So these results show that speech intelligibility was not compromised when children adjusted noise reduction in speech focus via the myPhonak Junior app when they were in challenging listening environments. So with this graph, let's orientate ourselves a little bit. So along the Y-axis we see greater subjective difficulty hearing in challenging environments. And as you go up along the X-axis is the number of each participant. So the gray bar represents hearing aids alone and the green bar indicates hearing aid plus the myPhonak Junior app.

And this part of the study looked at how children as young as 11 years old rated the difficulty of hearing in challenging situations with their hearing aids alone versus with their hearing aids and making adjustments using the app. So when looking at the green bars and how much lower they are than the gray bars, we can see that the majority of participants found less difficulty listening in challenging situations when they used their app. This result gives us comfort knowing that there is no detriment in allowing these children to use the features within the app. Now all of this is awesome, but if the hearing aids are not programmed and fit well, then the outcome is just not going to be optimal.

There are some new features in Target to assist with pediatric fittings, and I'm gonna review those next. Target continues to have Junior mode for our pediatric patients. Junior mode provides us with pediatric settings for noise reduction and directionality in most programs. There are some new features to help with pediatric fittings. So fitting ranges are now displayed in DSL Pediatric when DSL is the chosen fitting formula. So

previously the fitting ranges are, I will say the fitting ranges themselves have not changed at all, but they've been adjusted to reflect that more gain is applied when DSL pediatric is selected as compared to APD, the Adaptive Phonak Digital, or NAL. And so all of our fitting ranges previously were utilizing that rationale.

And now once you put a pediatric age in your Noah or Target, it will default to the DSL fitting rationale and hence what the fitting range will be reflective via DSL. And so this makes it a more reliable guide when the fitting range is appropriate for the hearing loss. There is now an additional step required when connecting hearing aids for children who are less than 36 weeks, I'm sorry, 36 months of age. You will need to acknowledge that the hearing aids should be tamper proof before you proceed to the fitting. Client view is a great counseling tool, as this allows you to show parents the difference between audible live speech, when aided versus unaided, how much speech is audible when close to the child compared to a distance and how audible individual speech sounds are with and without sound recover two turned on.

And if the feedback threshold needs to be adjusted, you can now adjust this in three dB steps instead of one dB steps. We had a lot of requests from providers asking and sharing it took too long to increase over tuning when using a one dB step, as you were just clicking a lot. And so now we've streamlined that process by adding the three dB option to streamline the fine tuning process. So Sky Lumity is a solution designed with young patients in mind. Sky Lumity continues to provide the robust and reliable housing that you are accustomed to, as well as offer the variety of color options, tamper-proof, battery door and tone hooks, and an LED visual indicator.

And all of these things give peace of mind, not only to families but caregivers, teachers, and hearing care professionals, continuing to keep that trust that the child's hearing aid is functioning, safe and easy to use. But more than that, we provide a solution which incorporates a dedicated pediatric app, which provides additional support for parents

with wearing time, remote support options, and an opportunity for teens and tweens to personalize their hearing aid settings in challenging listening environments. When we are considering which hearing aid solution is going to provide the child with the hearing that's going to allow them to develop cognitively, strengthen their social emotional connections, or to facilitate their physical connections to the world, Phonak's pediatric ecosystem has a solution for all.

Okay, so I am just gonna go ahead and pop myself into the Q and A and see if we've got any questions that have come in while I've been talking for the past oh, 53 minutes. All right, actually, one of the questions that I received is, how many Bluetooth connections can you have with Lumity? And so, there are eight Bluetooth memories in Lumity devices and there's, and within that you have two active Bluetooth connections. With those two active connections that's just going to allow for ease for connecting or, you know, changing from streaming from an iPad and watching a movie, to when that cell phone rings and being able to easily answer that cell phone and not have to disconnect and reconnect.

So that's the difference between two active, or that's what two active Bluetooth connections allow. But there are eight Bluetooth memories built into that Lumity platform. Let's see here. Another question that we've, I received is regarding Roger. So yes, if you are working with a school or you're a school audiologist, our Roger installer pad is going to be what you use to install that Roger receiver from the Roger X into the body of that Lumity device. That process has not changed. It's the exact same process you're familiar with. So that will allow again, you ease, and being able to use your, you know, the current stock of equipment you have for your Lumity students. All right, I think I answered everybody's question.

Thank you all so much for your time joining me today and learning about how conversations shine for everyone with Lumity. Please do not hesitate to contact your

Phonak account manager or your Phonak clinical trainer for more information on our Lumity and Roger devices. I wish you all a great rest of your day.