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Foundations of Bone Conduction Systems: Candidacy and Counseling

Presenter: Lori Davidson, AuD, CCC-A

- [Ginger] Hello everybody. My name is Ginger Grant, and I am an audiologist and professional education manager with Cochlear, and I'm really happy to be joined today by Lori Davidson to introduce candidacy and counseling for Cochlear's Bone Conduction Solutions. Lori's an audiologist and clinical technical project manager with Cochlear, and she's been with Cochlear for over 11 years. So with that, Lori, thank you so much for being here.

- Thank you, Ginger. And hello, everyone. I'm looking forward to discussing candidacy and counseling for our bone conduction solutions here at Cochlear. So let's go ahead and get started. So first, we gonna just kind of review the learning objectives of this course today. Beginning with participants, we're hoping that you'll be able to list the candidacy criteria for bone conduction solutions, and that's both for single-sided deafness, SSD, and mixed and conductive hearing loss. We also hope that you'll be able to outline considerations for selecting a treatment within the bone conduction portfolio and, finally, being able to identify important points for counseling a candidate and list the resources that are available to support both you, the professional, as well as your candidates.

So here at Cochlear, we're very proud about our mission, and really with the goal of helping people hear and be heard. And I think as you hear conversation throughout this session today, you're really going to understand how, through our bone conduction solutions, we really aim and focus on helping, empowering, transforming, and innovating hearing loss and how individuals are able to hear with our product portfolio and the services that we can also provide. So let's take a look here at our agenda. Here are the things that we're gonna focus on in this session. We're going to look at why bone conduction. We're going to look at who might benefit, how do you demonstrate bone conduction solutions, and what else should be considered in the counseling process. So let's jump into why bone conduction. So in addition to chronic otitis media, or COM, there are many other common etiologies or situations or conditions that can cause a conductive or mixed hearing loss. And they very well may be uniquely suited to be addressed through a bone conduction solution. Some of these other conditions are otosclerosis, microtia atresia, and otitis externa. For each of these etiologies, there are unique factors that contribute to the likelihood of a bone conduction solution meeting the patient's needs. So let's look at some stats for each of these different conditions. First of all, with COM, 21% of patients will still need some sort of amplification even after middle ear

surgery to restore their conductive hearing loss. With otosclerosis, we see in a systematic literature review of 25 publications that 29.12% of ossicular chain reconstruction and/or tympanoplasty surgical patients still are experiencing a post-op air-bone gap of greater than 20 dB. With microtia and atresia, we all know that the earlier a bilateral and unilateral patient can receive a hearing solution, preferably before one year of age, the better their speech and language development. And finally, with otitis externa, the irritation or the allergic reaction that could be caused in the ear canal by a ear mold make it challenging to wear hearing aids, and a bone conduction solution can bypass that and leave that ear canal open. Because of all these factors, we're here today to discuss the hearing treatment pathway considerations for these types of patients.

Often, these patients enter the medical channel first to have their disease treated by an ear, nose, and throat physician, but lots of them could be in a treatment pathway to treat the disease, but they might still struggle with the hearing loss related to that condition. And we know that not only is bone conduction not top of mind when treating these type of patients, treating these patients' hearing loss at all is not always top of mind throughout the disease cycle. But considering the significant impact the resulting hearing loss from these diseases can have on a patient's quality of life, offering a bone conduction solution should be an ideal supplement and next step in the treatment pathway to various disease conditions and etiologies. By treating their hearing loss while also treating the disease, we can improve patient satisfaction and quality of life. So we know that there is a global challenge. There are many potential causes of hearing loss, as you know. The World Health Organization estimates that there are over 1.5 billion people worldwide who are living with some type of hearing loss. They also estimate this number will continue to grow. If we just look at United States numbers, approximately 15% of American adults, those 18 and over, report some trouble hearing, and that is about over 37.5 million individuals. And even with these statistics, we know only some patients receive treatment. The numbers of people struggling with chronic otitis media really is staggering. And although it is a global issue, it's also a North American issue. Prevalence surveys uncovered that the global burden of illness from COM affects between 65 and 330 million individuals across the globe. An estimated 200 million of these individuals suffer from significant hearing impairment. This means that COM may contribute more than 50% to the global burden of hearing impairment. And this prevalence did differ substantially between countries where there are poor access to healthcare. When we translate the same equation to

hearing loss in the United States, we're looking at a number between 800,000 and 1.7 million people, patients that are potentially suffering from COM-related hearing loss. So for example, let's take a little bit closer look at this typical cycle for a patient that has chronic otitis media. In this cycle that you see here on the left-hand side of the screen, we can see that there is a significant challenge to a patient to achieve reliable hearing. Reliable hearing is one of the challenges faced by patients with active chronic otitis media. So we see here, the patient comes in, and they're seen by the audiologist, they're seen by the ENT, they may be fit with a hearing aid, but then that hearing aid is blocking that air circulating into the cavity, the ear cavity. The middle ear then maybe gets reinfected, drainage develops, and then the patient's unable to wear that hearing aid, and we're back to seeing the audiologist or the ENT. We also see the need here reflected in our registration data at Cochlear. We know from our patient registration that over 60% of bone conduction patients that suffer from conductive or mixed hearing loss from COM, which is a larger percentage than any other etiology you can see here reflected on the right-hand side.

So there's been a lot of discussion with ENT surgeons, and that's revealed that the standard, there is a standard of care for treatment of COM. It does exist today, but hearing loss is often not addressed until after a revision surgery. And bone conduction may not even be offered as a solution. Many patients will suffer for years with variable or unreliable hearing before they are introduced to bone conduction. And why might that be? Well, one reason is a lack of focused research where there are gaps between comparative treatments and clinical outcomes that are only illustrated on certain patient groups. A second consideration is the lack of standardization on the definition of hearing loss severity, treatment categorization, and how clinical outcomes are reported. And finally, often healthcare professionals are unaware that bone conduction could be an effective treatment in conjunction with COM-related hearing loss. So what about the benefits of bone conduction? Let's take a look at these. Why would we consider a bone conduction solution for our patients with conductive or mixed hearing loss, or SSD? We know that bone conduction solutions can provide consistent hearing. We know that they can provide improved hearing performance, even in noisy situations. In addition, to improved subjective sound quality and speech understanding over traditional air conduction hearing aids. We also know that it has the benefit of leaving that ear canal open, and we have predictable hearing outcomes and we have good long-term results going forward. So when you look at your schedule for today or tomorrow, or next week, who is on it? Is it the gentleman you

and the ENT also saw two weeks ago with a draining ear? Is it your patient with a large air-bone gap whose power hearing aid just isn't strong enough? Is it a patient with microtia? Is it the woman with otosclerosis? Or is it the patient with SSD? As you know, consistent and reliable hearing is key for meaningful communication and interactions. For these patients that you're seeing each and every day, it can often be challenging to achieve this without some type of intervention. And so all of this really leads us into our discussion on why bone conduction. So now we're going to do a very brief, high-level overview of our bone conduction solutions portfolio. For more than 40 years, we've been leading the bone conduction industry, innovating to help more people hear and be heard. We were the first to bring a bone conduction implant to the market and the first to offer a balanced electromagnetic transducer with our Baha device. We were the first to offer direct connectivity for streaming and the first to offer a benchmark 55 dB fitting range without daily soft tissue maintenance with our Osia System, an active system driven by Piezo Power. Cochlear is very proud to offer a wide portfolio of systems that can be used to treat individuals with hearing loss through bone conduction tailored to what's right for the patient and their hearing journey.

This represents the next level of choice for a patient deciding which system will work best for them. And this really depends on the indications for, the indications for the patient, their lifestyle needs. It could depend upon insurance coverage or other surgical and medical needs. But deciding on which system they should receive, it should come after deciding on bone conduction. After the system choice, we might choose a particular connection type. Let's first take a look at Baha Start. Many of you have likely worked with a Softband or the SoundArc, which, paired with our Baha 6 Max Sound Processor, is our non-surgical options to use bone conduction and for demonstration purposes. Then there is the surgical option with the Osia System. This option provides a powerful through the skin connection. For patients for whom the Osia System may not be the best choice but still would benefit from a surgical solution, we also have the Baha System. It uses a percutaneous connection that goes through the skin to connect to the sound processor. Another thing to consider is that patients may not always stay in one system choice. There may be a pathway, often from non-surgical to surgical options such as Baha or Osia. This is definitely true for the pediatric population, who may start with a non-surgical option and move to a surgical option as they get older. But this could also be true for adults. For more details within our foundations of bone conduction curriculum, these are some other courses that will be available through AudiologyOnline. We really encourage

you to take the opportunity to view these courses at some point, and they will take a little bit of a deeper dive into the technology that we've just highlighted here. Now let's take an opportunity to look closer at the candidacy and indications. So these are two terms that are often used interchangeably, but they're in fact very different. Note that indication is not the same as candidacy. And here is how we use these terms. We want you to think of indication as the rule or the guideline, and that's based on the audiometric data. It is included in our package insert as our FDI guidelines for use. The concept of candidacy is different, this is more about the whole patient, all the additional factors that may be equally, if not more important, than simply following an indication for a device. It's much more than just the audiogram. Candidacy is about the whole person, and this is where we would consider those areas discussed earlier and the importance of demonstration, knowing hearing health history, doing some goal-setting, and being aware of any other health concerns. So let's take a look at the cochlear bone conduction solution candidacy. These are the indications for bone conduction solutions, and you can see here that there are indications for both mixed and conductive, as we've mentioned previously, as well as for single-sided deafness. The indication states for mixed and conductive losses that the pure tone average bone conduction thresholds should be 55 dB or better. And this is across an average of five, one, two, and three. We also then have our indication for single-sided deafness.

In this condition, we look at the poorer ear having non-functional hearing, so a significant profound hearing loss, and we look at the good ear or the better ear of having a pure tone average air conduction threshold of 20 dB or better. In this image with the fitting range, you can see our Osia 2 device and our Baha 6 Max. Again, both of these processors have a fitting range up to 55 dB. I will note very briefly that we do have another bone conduction solution, that is a superpower device that can fit up to 65 dB. So I'd like to call that out just so that you're aware when you see 65 mentioned, our superpower device can fit up to that. But we're gonna continue to focus on Osia 2 and Baha 6 Max being able to fit up to a 55 dB loss. So what should we really consider when we're thinking about candidacy? We've already discussed some of the sample etiologies, but also thinking about daily interactions and asking our patients where they might be struggling. So maybe they're unhappy with their hearing aids or they're not able to wear it consistently to provide that reliable hearing. Maybe they're struggling to tell the direction or localizing where a sound is coming from. And then certainly, if it's impacting their ability to participate in social events, if they're needing others to repeat

themselves, those might be some good things to find out if they're struggling with any of that in their day-to-day interactions. Another important tip here to point out is that there is research that shows that patients with an air-bone gap greater than 30 dB will experience significant advantages with a bone conduction system compared to an air conduction hearing aid. So when we think about conductive and mixed hearing loss, we know that the greater the air-bone gap, the more a cochlear bone conduction system will outperform hearing aids. We also know that hearing aid prescriptions for conductive and mixed hearing loss require more gain than for sensory-neural hearing loss. And we know that a hearing aid fitting can be difficult for these patients if there is drainage from the ear, ear pain, malformations, or mastoid cavity. And what about for single-sided deafness? We know that the Baha and Osia systems bypass the outer and middle ear and send a clearer, more crisp sound directly to the inner ear. We know that individuals with SSD and a bone conduction solution can see improved speech understanding in noisy environments. It helps to lift the head shadow effect so they have awareness of sound from that poorer ear, and it will reduce psychosocial consequences associated with that hearing impairment and let them participate more fully in their daily interactions. And as I mentioned before, we see long-term patient satisfaction and hearing benefits both in the SSD and conductive and mixed hearing loss categories.

So this is what a typical treatment pathway may look like for someone at different points across their lifetime based on their age and their lifestyle needs. For those not old enough or not ready for a solution, the best choice would be to start by providing amplification through Baha Start. Again, this is the Baha 6 Max Sound Processor on a Baha Softband. So how do we think about kind of the right candidate when we have this journey that they may go on? And as I mentioned, Baha Start might be the place where we start with demoing the device and wearing the device for pediatrics. For example, it may be someone that, a child born with aural atresia or, potentially, we have a young child with Down syndrome who has a conductive hearing loss that was developed very early in life due to recurrent ear infections. So what are some things we wanna consider in that checklist for these patients? We wanna determine are they the right candidate. So we're looking at age, we're looking at lifestyle. We wanna make sure that their hearing loss fits within that fitting range that we described specifically for Osia and Baha 6, less than 55 dB. We have that window up to 65 should it be needed. And then also thinking about insurance, insurance coverage, and knowing what that would be for these individuals. So that's a good starting place. And then, potentially, as they get older, we may

move on to our Osia System. So this could be, for example, maybe a teenager who has chronic otitis media or a young adult with Down syndrome or a young adult that has had a sudden single-sided deafness. Here again, we can see the patient checklist is very similar, and really looking at the age of the patient, do they meet those indications. It's important to keep in mind that with our Baha Start, our non-surgical option, any age individual is able to take advantage of those solutions. Please keep in mind that for the Osia System, in the United States, the Osia surgical system is approved for those individuals 12 and older. In contrast, we have our Baha System with our Baha 6. Again, you can see some example cases of an adult maybe that has chronic otitis media and they have a greater degree of hearing loss, potentially with that 65 dB fitting range, and we're needing to meet that indication. Or potentially, we have an adult with SSD that maybe has limited insurance coverage and they require a percutaneous, the Baha System. Again, in the United States, it's important to note that the Baha System indication is approved for individuals five years of age and older. So keep in mind that the non-surgical options, the Baha Start program is a good option for younger individuals or for individuals who may not want to proceed with surgery right away. So we wanna think about the right solution for the right patient.

There is not one solution or system that's right for everyone. So we're happy to be able to provide a portfolio of options so that you and your patient can decide what's right for them. Here's just a nice summary of those three categorizations again. So we have our younger children, who may start off with our Baha Start program. They may not yet be old enough for a surgical solution. We have our adults then, who have, depending upon their etiology, depending upon their hearing history, depending upon their hearing loss, they may be a better candidate for the Osia or the Baha System. And with this portfolio, not only can we offer them the processors, they will also be able to take advantage of our wireless accessories and direct streaming capabilities. So what might you be hearing from some of your patients that might help uncover the need and identification of being an appropriate candidate for a bone conduction solution? Again, they might be unhappy with their hearing aids. They might be struggling in their day-to-day activities or interactions. They might be withdrawing from social events or really requiring people to repeat themselves. And so these are things again to keep in mind when you're talking with your patients and you're counseling to uncover some of these needs to hopefully know if a bone conduction solution would be appropriate for them. So let's talk about demonstrating and evaluating bone conduction. This is a key benefit of bone

conduction solutions. Demonstration and evaluation with bone conduction is strongly recommended. It allows the patient to experience bone conduction as part of the counseling process while also gathering valuable outcome data to help determine the treatment pathway. In short, a demonstration is done to reveal to a candidate how bone conduction amplification works, and an evaluation is a more formal process that will capture unaided versus aided hearing outcomes. Using both can lead to a better-educated patient and provide the confidence to know that your recommendation will result in a positive outcome. So, as I mentioned, a demonstration shows a candidate how bone conduction amplification works and how bone conduction sounds. The evaluation is a bit more of a formal process that will capture more of their hearing outcomes. With the Baha 6 Max, we have a couple ways that we can perform a demonstration. One is a simple demo. This is quick, it's simple, and it gives them just a very quick impression of the sound quality and function for the candidate using out of box, using out of box settings on the test rod that you can see here on the far left. Then the other options that we have for more of a thorough demonstration and evaluation would be to use the Baha 6 in conjunction on a Softband or a SoundArc using either preset programs or doing an evaluation using the individual's unaided thresholds.

These are some really important demonstration and evaluation tips is first we wanna fit the patient early. Let's do it at the beginning of the session. Let them listen with the demo device throughout the appointment. You can choose any of those demonstration methods that I just showed on the previous slide. You really will come up with what fits your clinic's protocol. Again, the most important thing is that there is an opportunity to do a demonstration. You wanna use the demo as a counseling tool to explain and show what bone conduction sounds like. Again, as it important to use both subjective and objective methods to determine benefit. So take a look at some patient qualifications and what solution might be considered and recommended for them. So we start here on the far left. When we think about the Osia System, we think of those individuals again that have a conductive or mixed loss bone conduction threshold of PTA of 55 dB or better. They meet the age requirement. Again, as I mentioned previously, in the United States, the current indication for Osia is 12 years old, and they're motivated to proceed with a surgical hearing implant solution. Now what if we have an individual with SSD? They again meet the age requirement, and they are motivated to proceed with a surgical hearing implant solution. We have a couple options here. One would be the Osia System, or they could also be a candidate for the Baha 6 System. Another thing to keep in

mind would be that they could go through a Cochlear Implant Evaluation, as there is approval for CI for SSD. The other condition and qualification would be looking at conductive hearing loss or a mixed hearing loss where there's no age requirement and they're motivated to proceed with a non-surgical hearing. They're motivated to proceed with a non-surgical hearing solution. So those individuals with conductive or mixed or SSD that would like to try a non-surgical hearing solution, there the recommendation would really be around the Baha Start program again, the Baha 6 Max Sound Processor worn on either a SoundArc or a Softband. So before you can make any treatment determination, it's important to really understand your patient's needs, as you're aware. We want counseling to be goal-oriented. What does the patient want to achieve? We wanna evaluate the patient lifestyle and what options or accessories might be helpful for them in their daily life. And the counseling session should include basic information about bone conduction systems and how they are different from other treatment options.

Here are some key points to a good counseling session. First, as we've mentioned previously, we wanna demonstrate bone conduction early and throughout the counseling session whenever possible. Then we wanna consider and counsel on the optimal wearing option best suited for that patient, and that may be surgical versus non-surgical. We wanna clarify the advantages a surgical option will have compared to the demo experience. I'd like to note here that when we discuss demo, all of the demo evaluations and trials will be done using the Baha 6. However, we know that even if the individual is going to proceed with an Osia, it is important to demo using the Baha 6, and we expect outcomes to be equal to or better when the surgical procedure has been completed. And finally, we wanna ensure that you establish the importance of treating the hearing loss regardless of the solution chosen. Untreated hearing loss could be the worst outcome for these individuals. So hearing with a demo versus hearing after the surgery, I just kind of touched on this a little bit. The Baha Start can be used to predict outcomes with bone conduction devices after surgery. An exact demonstration with Osia does not exist, but differences exist in the output of the Baha on the Softband or SoundArc versus the Osia System, especially in the higher frequencies. So with Baha, it is more predictable, but with Osia, a bone conduction demo gives them a good idea of what it will be like. The data shows us that hearing, especially in the high frequencies, is much better with Osia than any demo on a Softband. So there is definitely benefit in doing the demo. Although it is not a direct prediction of how someone will do. It's important to counsel patients about the expected

improvement in sound quality that they can receive with a surgical bone conduction solution like Osia compared to a demonstration with a non-surgical solution using the Baha 6 Max on a Softband or SoundArc. A surgical solution has direct access to the bone conduction pathway with no skin attenuation to overcome. And additionally, Osia technology is uniquely suited to transmitting the high-frequency sounds to help patients hear better, especially in those challenging situations such as a noisy environment. So many times, one of the key reasons a patient does not move forward with surgery is a fear of surgery. We wanna help relieve that anxiety and reinforce with them that bone conduction device surgery is a very safe and straightforward procedure. In many cases, it is much quicker and much less complex than other surgeries that they have made, have had previously, and the recovery is very quick. So we wanna make sure that we address this concern head-on, especially if the patient does mention it. A couple other important points to call out too is the other services that we can offer to these candidates and then future recipients.

So we really wanna get these candidates engaged, and how can we best do that? We can do that through our consumer team, that supports candidates and recipients first starting off on the side where they're going through their candidate journey. So they're gaining awareness about bone conduction solutions. They're exploring what these options might be, and that's where our engagement managers can come and play a role in helping have that conversation further with them. Maybe even connect them with a volunteer who has a device or a lifestyle or hearing loss similar to theirs. Post-surgery and activation, we can then engage our recipient solutions manager. This will help them then on the recipient journey part of their pathway. And this helps them learn more about their device, learn more about their accessories, and really empower them to be successful and confident with their daily device use. So now I'd like to take the opportunity to share with you a few case studies, kind of pulling all of these points together that we've discussed so far. So I'd like to introduce you to some of these fictitious patients, Krish, Mia, and Layla. And all of these individuals are struggling with their hearing, and we're gonna follow them on their bone conduction journey to find out how their clinics handled evaluating them for candidacy, counseling them about their options, and then eventually what decision was made. So first, briefly, I'll introduce you to Mia. Mia is a 26 year old. She has single-sided deafness, and she's had this hearing loss for about five years. They did try a steroid treatment with her, but there was no improvement in her hearing unfortunately. She's been counseled about CROS aids, but she's really not too interested in

trying those at this point. She's active, she's young, she works at an insurance company, and one of the parts of her job requires that she's frequently on the phone. And remember, again, that she has SSD and she can hear well on the phone with her good ear, but she's very discouraged that she can't hear colleagues or other noises around her when she is on a call. She also feels much less safe walking and running with hearing in only one ear, and she really is interested in some type of a solution. Then let's look at Layla. Layla is a two-year-old with a bilateral conductive loss. She has a history of bilateral atresia. And then we have Krish. Krish is 67 years old, he's recently retired, and he's had a long history of COM with several attempts at surgical reconstruction in both his ears. He has used hearing aids off and on, but he continued to struggle with drainage from his ears. So it really wasn't the best option to ensure that he had reliable hearing day in and day out. So let's take a little bit of closer look at each of these individuals. So we'll start with Mia. Let's think about which candidacy criteria to look at first. So we can see here that she fits within the SSD indication with her nice normal hearing in her left ear. Pure tone, air conduction thresholds of 20 dB or better. And we can see then a significant, profound hearing loss in her right ear.

As I mentioned, she had a sudden loss about five years ago. Now, in order for her to be a candidate for both Osia and Baha, we know she checks the age box. She's older than five for the Baha and older than 12 for the Osia in the United States. Her air conduction thresholds in the good ear should be 20 dB or better, and we can see that they are, so Mia is technically a candidate under both the Osia and the Baha criteria. She was seen at a large medical center for a bone conduction candidacy appointment. In this situation, the audiologist programmed a Baha 6 Max Sound Processor and attached it to the SoundArc for her to wear throughout the visit. It's important to note that Mia's goals include hearing better when she's on the phone at work and hearing better in noisy situations. So let's see where Mia ended up. Mia received her Osia System, and she chose the Aqua+ accessory since she loves 5k races, rain or shine. The Aqua+ will help keep her device waterproof in those conditions. Also Mia loves using the direct to iPhone streaming at work, and she can hear much better in her fast-paced office environment. Next, we'll look at Layla. Layla, again as a reminder, is two years old, and we can see here on her audiogram that she has a bilateral conductive loss. Again, a history of bilateral atresia. Layla was seen at a pediatric center for hearing solutions appointment to discuss bone conduction options with her parents. The audiologist fit her with a pre-programmed Baha 6 Max Sound Processor on a Softband while she was discussing options with Layla's parents.

Layla's parents have expressed concern with her speech and language development. She is currently home with her grandma during the day, but the parents would really like to enroll her in a preschool program as soon as she turns three years old. So their family goals include meeting speech and language development targets and developing Layla's social skills and comfort in social situations with her peers. After learning about bone conduction solutions, Layla's family would like her to be fit with a Baha Start Solution using bilateral Baha 6 Max Sound Processors. Layla is covered under her state's Medicaid program currently, and her family has some concerns about how long this approval process will take.

So I'd like to introduce you to our Lend an Ear program at Cochlear. We recognize the importance of providing early access to sound to promote optimal speech and language development. And so, therefore, we created the Lend an Ear program. This program allows faster access to sound for children that are 12 years old and younger that are candidates for a bone conduction solution. Clinics will simply request a Baha Start Solution that consists of the Baha 6 Max Processor and a Softband or a SoundArc loaner while waiting on the reimbursement insurance approval process. This means that your patients can have access to critical sounds as early as possible to help them hear and learn, and develop those essential communication skills. This unique program is a loan-to-own concept where we provide early access to bone conduction equipment with the intent to transfer ownership to the patient after insurance approval has been obtained. So Layla has now been fit with the Baha Start Solution using her bilateral processors on a Softband under the Lend an Ear program, and those processors will be hers as soon as insurance approval is obtained. Her parents really like having access to the Baha Smart app. This enables them to control and monitor her devices. When it comes to accessories, her family loves the Mini Microphone 2+. They use it in the park, at the park, in the car, and other situations where there may be more background noise. And they anticipate that when she's old enough, Layla will love the direct streaming feature as she gets a bit older. Layla is now enrolled in preschool, and she will start in the next few months when she turns three years of age. Now let's look at our final case with Krish. First, we can see here that he has a mixed hearing loss in the left ear. So if we consider him as a candidate under a mixed conductive loss, we know that to be considered a candidate for Osia, we would want his bone conduction thresholds to be better than 55 dB. This is actually the case in his left ear, so it does seem that he falls in an Osia candidacy range for that ear. He was seen at an ENT clinic during a busy clinic day, and his audiologist immediately thought of bone conduction for

him and fit him with a preset Baha 6 Max on a Softband while discussing options with him. Krish made his goals known that he would like to converse with his grandchildren on the phone and communicate better while he and his wife are traveling. So Krish went home with several brochures and some contact information for his local Cochlear volunteer and engagement manager, and he was scheduled to return to the clinic in two weeks to further discuss his options. After discussions with his clinician and the Cochlear representative, he decided to move forward with an Osia System. He chose a Mini Microphone 2+ to help him when traveling and eating out, and he loves the iPhone feature with the direct streaming that helps him connect even better with his grandchildren. So hopefully, looking at those three cases, pooled everything together as far as the indications, candidacy, considering the whole patient, and the importance of the demo experience for all of these individuals.

Cochlear is very focused at providing solutions across a lifetime. We started asking the question why choose bone conduction, and why choose Cochlear for bone conduction? We are proud to have been providing recipients, candidates and recipients our bone conduction solutions for over 40 years. And as you're able to see today, Cochlear offers a full portfolio of bone conduction solutions with a broad fitting range to help treat more patients. We are committed to our recipients, and we strive to provide the most options possible to help you and your patients on their hearing journey. And our innovation continues. As our innovation continues, we design our products to be backwards compatible whenever possible. As we mentioned previously, we want to be able to have resources that support both you, the professional, as well as your candidates and recipients. We have additional resources that our customer service team can share with you or your local representative can share with you. This is a newer brochure, a newer resource that is very, very helpful, and it really guides you along the journey from candidacy to evaluation and a fitting, providing important tips along the way. In addition for the bone conduction portfolio, we do have some remote care supporting resources that our local team would be more than happy to talk with you about. Some Getting Started guides for the patient as well as some Getting Started guides for you, the professional, as well as implementation and support along the way. This will help ensure that your patients have all the information that they need. So let's sum everything up here that we've talked about today. So we know that bone conduction solutions can help patients with a variety of common etiologies. We took a look at many of those earlier. They treat the hearing along their treatment journey for the disease. We also know that the bone conduction portfolio offers patients with

conductive, mixed, and SSD more choices than ever before. Bone conduction demonstrations, coupled with thoughtful counseling, will ensure your patients receive the best solution possible. Again, the importance to highlight here is that counseling is a critical component to ensuring your patients receive treatment and the right treatment for their lifestyle. No matter which solution is best for them, treating their hearing loss and connecting them with the world is the best possible outcome and one that Cochlear is proud to support. I thank you for your time and attention today. Please reach out to Cochlear and your local representative at any time for additional information. Thank you.

- [Ginger] Thank you so much, Lori, that was great. I wonder if you'd be willing to answer some questions?

- [Lori] Sure.

- [Ginger] Well, that would be great. Thank you. Okay, so some questions have come in, and one is talking about deciding between Baha and Osia. So can you tell us a little bit about why you might choose one versus the other? I think the case examples were more about Osia.

- [Lori] Yeah, so that's a great question, and certainly one that we get asked often. So one thing I'll mention just from the get-go is when we go back to strictly the indication, keep in mind that for Baha, for the surgical option, individuals must be five years of age and older. For Osia, the current indication is 12 years of age and older. So that in and of itself, depending upon the age of the individual, may be a deciding factor at that point in their hearing journey. Secondly, I would say, we wanna look at the candidacy aspect of it. So depending upon their lifestyle, depending upon maybe other health needs, if they have other conditions or etiologies that potentially could make them a better candidate for one device over the other, knowing that one does not have the abutment through the skin, whereas the other one, you just have the skin-to-skin contact. And so I think it's both looking at the indication itself but then also looking at the candidacy factors that may make either the Osia or the Baha on an abutment a better option for certain individuals.

- [Ginger] Okay, that's really helpful. Thank you. Okay, next one. You talked a little bit about single-sided deafness and the fact that you can get a cochlear implant with SSD as well. So why would you choose bone conduction over a cochlear implant for someone with SSD?

- [Lori] Yes, another great question, Ginger, and there, again, can be many, many factors involved. This is one where, depending upon potentially their etiology, the status of the hearing nerve, et cetera, they may be a better candidate for a bone conduction solution versus a cochlear implant. Another thing that we see is the research looking at the length of the duration of hearing loss. So there are a lot of different factors that need to be looked at from a bigger perspective when deciding if a bone conduction solution or a cochlear implant would be better for an individual. With SSD, there is definitely some overlap, and that's why it's important in those counseling sessions to get a very thorough medical history, imaging, understanding lifestyle, understanding expectations and goals, and understanding what the rehab process may look like with one device versus another.

- [Ginger] Okay, thank you. How about what are the options for someone who might need MRI scans?

- Yeah, so with the Baha device, the individuals are able to have an MRI 1.5 or 3 Tesla without any removal of the device. I think it's important to note whether it's the Baha device, an MRI indications or whether it's the Osia device, and indications there can be some shadowing in the image. So this is very important for consultation with the physician or the surgeon, depending upon where in the body that MRI is being done. With the Osia, we do have approval to.

- [Ginger] Lori, it looks like we just lost your audio there.

- [Lori] Oh, there. Can you hear me?

- [Ginger] Yes.

- [Lori] Okay, apologize for that. Yes, so we do have MRI options with our Osia device as well, and most recently, have received approval for MRI without magnet removal for MRI with that device. So depending upon the generation of the Osia System, MRI indications may look a little

bit different, but we are excited that we have just launched our newest Osia implant that does have MRI compatibility without the need for magnet removal. The magnet can be removed if necessary, but that is our newest indication for the Osia device. So again, it's important to determine where that MRI is going to be, what part of the body it's gonna be taken on. And if somebody is going to have frequent MRIs, serial MRIs due to a certain condition, that should all be part of the counseling process in deciding on device.

- [Ginger] Okay, perfect. Next one. How soon after surgery can someone start wearing a bone conduction processor?

- [Lori] Oh, that's a good one. Yeah, so we go back to our indications, and when we look at the Baha System with the abutment, the fitting time for that device is 12 weeks. We wanna ensure that the implant is fully integrated in the bone, and because the abutment does come through the skin slightly, we wanna make sure that everything is healed nicely before we go ahead and fit that Baha processor. So for the Baha processor, we look at a 12-week window post-surgery. For the Osia device, we look at a timeframe of four weeks. Again, with the Osia, remember there is nothing protruding through the skin and so we can ensure that that skin is healing a little bit faster and we're not dislodging any of that soft tissue. So 12 weeks for Baha, four weeks for Osia.

- [Ginger] Okay, perfect. Thank you. Okay, the next one is going back to the demonstration versus the evaluation. Can you talk a little bit about what kind of equipment an audiologist would need to have to be able to do both of those?

- [Lori] Yeah, so as far as a demonstration, really we have the three options. We have a test rod, we have the test rod, we have the Softband, and we have the SoundArc. For a very quick demo out of the box, depending again on your clinic's protocol or if it's a busy ENT day, using the test rod with those out-of-box settings can be done. For a little bit more of a thorough evaluation, and it makes it much easier than having to hold the test rod against the skin, the Softband or the SoundArc are really ideal. If you have the capability to program the Baha 6 device with the individual's thresholds, that's going to customize the experience even more for these individuals. So we think of demo as kind of a quick process, and then evaluation is going to be a little bit more thorough, including incorporating their thresholds, even potentially

incorporating some testing. So we mentioned subjective and objective are both important, so if you have the capability to do that evaluation, takes just a little bit more time, but it really reinforces for that individual what kind of benefit they may get from the device. And you can do subjective, you can do questionnaires, or you can just kind of ask them some questions. We certainly encourage that, as well as being able to put them in the sound booth and doing some aided versus unaided both for thresholds but even more importantly, for speech perception testing. So that, again, you can show them pre-op what benefit this bone conduction solution is giving them. And that, as we stated, we know that if they're getting benefit or perceiving benefit in that non-surgical demo or evaluation condition, we would expect even better outcomes when they have the surgical option.

- [Ginger] That's great. That speech perception, Lori, is that typically in quiet or in noise?

- [Lori] So it really can be done either way. I think the most important thing is that if it is an individual with SSD, and I will tell you that in that brochure that I showed a few slides ago, there is some wonderful guidance on whether if it's a mixed conductive or SSD on ways to set up that evaluation experience. I always think that, especially if it's an individual with SSD, who if you've uncovered, especially as you're asking questions and goal setting, you uncover that they're struggling in those more challenging, noisy listening environments, then it really is helpful for that individual and kind of validate a bit their concerns and where they're struggling by being able to do that in noise.

- [Ginger] Okay, perfect. Thank you. Okay, back at the beginning, when you were talking about candidacy, you talked about a 30 dB air-bone gap. Can you tell me more about that again?

- [Lori] Yeah, so for those mixed losses where it's a greater than 30 dB air-bone gap, we can see and the data shows that individuals can do better with a bone conduction solution, and a couple factors play into that. One is that we know with traditional amplification that if you're providing, you may have a greater risk of feedback, right? You're trying to provide more gain. We are trying to overcome that or counter that sensory neural component, where with a bone conduction solution, we're just trying to overcome that conductive component. And so with a bone conduction solution, the amount of gain may look different, may look less with the bone

conduction solution versus a traditional hearing aid. So we have less risk of feedback potentially, and we're able to just drive and deliver that direct signal to the better hearing ear.

- [Ginger] Okay, perfect. How about a comparison of bone conduction to CROS aids? I'm not sure if we talked about CROS at all.

- [Lori] So again, I think these are all, we wanna. You know, one thing that I mentioned earlier is that we just wanna ensure that patients know that there are solutions. We don't want any hearing loss to go untreated. So it's important to let them know of the different options that are available for them. It's also important to give them kind of the pros and potentially downsides of that device. If they're an individual, again, kind of looking back at the whole picture, the candidacy part of it, if they are an individual that potentially has draining ears frequently or they have some kind of allergy, or there's something that's precluding them, they have atresia microtia, certainly that wouldn't be an option then. But just something that maybe would make one solution more ideal than another. I think it's important that they're aware of the solutions out there that would be appropriate for their hearing loss, giving them the opportunity, again, going back to the demo, really giving them the opportunity to hear what bone conduction sounds like, even in contrast to air conduction, and hopefully noticing that more natural direct transmission of sound.

- [Ginger] Perfect. Okay. And then I think the last question is about the engagement manager you mentioned. How would I connect with an engagement manager if my patient had questions?

- [Lori] Yeah, so please reach out to Cochlear. If you know who your local rep is that comes into the clinic, that supports you or supports your surgeon, you can ask them. Otherwise, we encourage you to reach out to Cochlear directly. Let us know where you're located, and we can make sure that the local rep and the local team get in touch with you and can get in touch then with any of those candidates that may wanna discuss solutions further.

- [Ginger] Okay. Great. Okay, Lori, I wanna really thank you for your time and your expertise today. You gave a lot of really great information, and we look forward to hearing more from you. Thank you so much.

- [Lori] Thank you, Ginger. Thank you, everyone.