Boosting Patient Care with Digital Tools: Practical Solutions for your Clinic

Presenter: Lori Hambrick

Well, thank you all for taking time out of your busy work days to join today's webinar, titled, Boosting Patient Care with Digital Tools. Practical solutions for your clinic. I also need to review some housekeeping items before we get into today's topic. Here you see... whoops, sorry, I went too fast. Here you see the learning outcomes for today. And on this slide, you see the risks and benefits of today's learning session. We have some very experienced professionals with us on today's call. So, I'd like for each of you to introduce yourselves. Let's start with Dr. Brownlee.

Um, good afternoon, my name is Ariel Brownlee. I am a clinical audiologist in Central Florida. I currently work at AdventHealth Medical Group with Dr. Michael Seidman. And I'm very excited to be here today.

Thank you. All right, Blair?

Hi, I'm Blair Richland, I'm a speech-language pathologist, and listening in spoken language specialist at Mass Eye and Ear.

Dr. Reed?

Hey, my name is Megan Reed. I am the Director of Clinical Audiology at Maasai and Ear in Boston, overseeing a large department of both audiologists and... soon to be two speech pathologists.

Great, thank you. And Dr. Dornhofer.

Hello, my name is Jim Dornhofer. I am a neurotologist and surgeon at the Mayo Clinic in Rochester, Minnesota, and I'm fortunate to work with a very skilled team of cochlear implant audiologists and therapists.

Great, thank you all for being with us today. So next, we have disclosures for all of us. Um, thank you again to all of our guests for joining us today, and I am Lori Hambrick. I am in the education and training team at Advanced Bionics, and I'm your host for today.

Now, it may seem a little odd for me to ask you to open up a survey at the very beginning of a training. However, we really value your feedback, and I have found that if we go ahead and ask you to open it, or click the link that will be pushed out in the chat, that it will help you remember to fill it out before you close things out at the end of today's session. So if you'll go ahead and open that, we'd really appreciate your feedback at the end of the session.

Now, before we get into today's content with our guests, we'd like to learn more about you. So we want to send out the first polling question of today. What kind of hearing care

professional are you? Are you a speech-language pathologist? An audiologist who works only with CIs? Or an audiologist who works with CIs and hearing aids? So we'll give you some time to respond to that. All right, we'll close down that poll and take a look at the results. All right, we see that we have some speech pathologists on the line, so thank you all for joining. Some audiologists who work only with CIs. And the majority of you on this webinar today are audiologists who work with both cochlear implants and hearing aids. So thank you all again.

All right, our next poll to learn a little more about you and what you do clinically, is how frequently are you using digital tools for patient care services in your clinical practice? Maybe that's an app, maybe that's some kind of remote service. Are you doing this every day? Are you doing this a few times a week? Using these kinds of tools a few times a month, um, just on occasion, like, a few times a year, or never. All right, we'll give you just a couple more seconds to answer the poll. All right, so we can close down that poll and see what your responses are.

Oh, a wide variety here. Let's see... the highest majority of 27% is sometimes. And often. Rarely, every day, and only one person never, so we've definitely got a mix on the call today.

Well, when we think about digital tools and technology, I want you to think about a technology that you were reluctant to use at first, but now you rely on it every day. So think about that for a second. And after you identify something, go ahead and type that into the chat. And Dr. Dornhofer, I'd like to ask you, what technology were you reluctant to use at first, but now rely on daily?

Thanks for the question. Um, I kind of have two answers to that, one kind of on a personal level, one kind of on a professional level. Um, on a personal level, I'm hearing impaired, so I wear hearing aids. I had to start wearing them when I was in high school. As you can imagine, any teenager is always a little reluctant to have to start wearing a new device. Um, but, you know, nowadays, if the moment my battery dies, I'm off to go get a new one or get a new rechargeable. Um, I think sometimes you don't understand how much you need something until you actually start using it. And unfortunately, that's sometimes hard with a lot of our patients. Um, the more professional one, however, is, uh, things like Zoom, telemedicine. I was finishing up my training right at the beginning of when COVID hit. So, all of a sudden, we changed practices very dramatically from an almost completely in-person practice for everything to doing a lot of telemedicine. And, um, as a stubborn person in general, it was a little challenging to kind of get used to that. Nowadays, however, once I had an opportunity to use it and see how kind of helpful and useful it can be, and how it can help me in my practice, nowadays, I very frequently reach out to my patients and to my schedulers and say, hey, make sure you offer this as a telemedicine visit. I live in a remote area, relatively speaking, in Rochester, Minnesota, and I love it here that it's a ways to get here. It takes a while to get here. So it helps both me and my patients to kind of use that technology. And simply put, I want to really realize it if I hadn't actually just started to use it.

Great, those are really good examples. I also see some answers in the chat. I see that Ashley said the iPhone, Blackberry. Jenna said backup camera in my car. I agree. I thought, well, gosh, I need to really look back there and turn around and do what I've done for the past however many years I've been driving. Um, someone else said, let's see, Valeria said, my Google Smart Assistant, yep. Yep. Um, calendar on my phone as opposed to paper. Thank you, Blair. Um, Nicole also said, backup camera for sure. And James said, uh, Apple Wallet. Yeah, and then, oh, also interesting, professionally, ESRT! Um, at some point, um, saw poor responses, forcing good ones, didn't know what he was looking for, and now he finds it very valuable. And then, what about you, Blair?

My answer is also on a personal level. I was terrified of the air fryer. And now I use it daily. I don't really cook that much, don't worry.

Hey, that air fryer can cook so many things, though. It's a very... I agree with you, it's a really great tool to have in the kitchen. And so, thank you all for sharing those examples. Digital tools are of many different kinds, whether we're talking about professionally or personally, they're a big part of our daily routines these days. And at AB, we want to make sure that you and your patients have access to digital tools that can enhance their cochlear implant experience. At AB, we have Advanced DigiCare tools, and these are digital tools that make it easy for your patients to access information and also support, which can free up some of your time in the clinic. These tools are important because of different types of challenges, especially time constraints that are faced by, um, you all in your... cochlear implant centers. So I'd like to have... ask you another question, and ask you to type your answers into the chat. What are some challenges that your cochlear implant recipients face related to attending in-person appointments? And that's whether we're talking about for audiology appointments, or for oral rehab appointments, maybe, um, even a follow-up surgical visit, um, after implant.

And let's see, Michelle said transportation... Nicole also said transportation, getting time off from work, finding childcare, Christina said overcoming distance, Margaret also said distance. Let's see, do we have one more coming in? Oh, another one distance, so yes, time, transportation, distance. Kelly also said, understanding the importance of being there. Oh, Blair said, mapping appointments being at different locations than oral rehab services. Beth mentioned cost. Someone else said probably related to cost, parking, and valleting at the hospital, like, that can be... a little overwhelming, and it can also be expensive. So thank you so much for your answers there.

Dr. Brownlee. How can remote programming overcome some of the challenges faced by cochlear candidates and recipients, some of which were just mentioned by the answers that were provided in the chat?

So, remote programming is a great solution to some of those challenges that patients and patient family members are facing, um, such as the distance traveled, transportation, cost of

childcare, or if a patient has one of their children as their caregiver, and they're having to take off of work. Um, remote programming allows us to meet the patient's auditory needs while they're at home, or maybe taking care of their grandchildren. I see mostly an adult population, uh, which is why I say that. Um, and it allows them to... stay at home, we can be in the office, so, it shortens their... their appointment time, and it also allows them to not have to reserve maybe a whole morning to drive into the office, find a parking spot, and then walk into the appointment. Having those shorter appointment times, then, of course, allows us as clinicians to get cochlear implant evaluations in sooner, or maybe fit a patient in, um, if they have something urgent that is needed. There are lots of benefits to remote programming, definitely with overcoming some of those challenges that were listed in the chat.

Great, thank you. And I see that Leanna posted in the chat that she wanted to say that yesterday, she did a 5-minute remote programming appointment for a patient who would have had to take 2 hours to come to the office, and she typed in the chat, it's a game changer. So that's a big difference for the patient, being able to do a 5-minute remote programming appointment in their home, or wherever they were, versus taking 2 hours to come to the office. Dr. Dornhofer, did you have anything to add about how remote programming can overcome some of these challenges?

Yeah, I think, um... For us, on a big... picture, kind of, um, look, it helps deal with a lot of issues with patient transportation. As I alluded to earlier, you know, Mayo Clinic's joking nickname is a hospital in the cornfield. It takes patients a while to get here. And even at other centers, you know, the average catchment basin for most CI centers is on the order of 200 or 300 miles. So on a big picture standpoint, it means that a lot of patients don't have to drive hours in, and that means they're going to be more likely to actually come to their appointments, because rather than a 3-hour drive, it's a 2-minute walk to their computer. Um... And I've... on a smaller scale, I find, oddly enough, that some of the patients who are most excited about it are actually even some of our patients who are local. A lot of our local patients just... they might be in Rochester, but they don't want to have to deal with parking. They don't want to have to go through the actual waiting room and clinic and everything. So, kind of like Dr. Brownlee already kind of alluded to, it turns, um, what could be an hour or two appointment into a matter of minutes. And in fact, I don't have, unfortunately, have numbers to show you, but, you know, anecdotally, I'm getting reports from my team that with the introduction of more telehealth options, we are seeing, actually, fewer no-shows. We're seeing more on-time arrivals, quote-unquote arrivals, because I think it's just made it easier for patients to get in. And I think that's very important for a lot of cochlear implant patients who are, you know, doing okay, but might still warrant, you know, frequent follow-up and programming or therapy.

Great, those are really good points, thank you. So, AB's remote programming allows our recipients to experience real-time programming from the comfort of their own home, which

we have had both Dr. Brownlee, Dr. Dornhofer, and then Leanna shared her experience in the chat. And that allows them to have access to the care that they need without a lot of these challenges, and Dr. Dornhofer, I appreciate that you mentioned that it's not just for those patients who live far away, or who have significant transportation issues. There are patients who, like you said, they're coming to Rochester. Maybe they're going to acute restaurant, or want to go, um, to a fun boutique with their friends, and not have to make their healthcare appointment part of that trip. So, it's definitely more convenient for patients. So, Dr. Brownlee, what do you consider when deciding to offer a remote programming session or not to your ABCI recipients?

Well, I would say that we... virtually offer remote programming sessions to every patient. I can say there's a very, um, very select few cases where we were not able to perform remote programming, and those reasons may be because they didn't have internet or Wi-Fi at home. Um, they like to live a little more of a rural lifestyle, which is fine. Um, that's why we have in-person appointments. Um, or if there was a case of someone who maybe had, um, severe facial stimulation, or something else going on with their internal device that we need to monitor more closely. But other than that, we offer remote programming to every patient. I think that a lot of times, um, professionals look at the age of a patient, and if maybe they didn't grow up with technology, they think that patients might not be able to handle those remote... remote programming appointments. Um, but that is definitely not been my experience, um, doesn't really matter the age. Like I said, I primarily work with an adult population, 60 years or older. Mostly older, and they are very much capable and able to participate in remote programming.

That's great. I think that early on, we did hear more people being hesitant to offer it to the older population. And I have heard over and over, and actually heard from an 86-year-old recipient, and he said that if you're able to FaceTime with your grandchildren, you can do this. So, I'm happy to see that many older adults are successful with this as well. And what about you, Dr. Dornhofer?

Yeah, so our institution has pretty much, you know, thrown a lot in with telemedicine in a big way. So, to the point that, um, I actually, full disclosure, I don't do programming myself, but I did chat with our audiology team prior to this panel, just to confirm, but we pretty much offer remote programming to all patients. Similarly, to what Dr. Brownlee was mentioning, there are some limitations with respect to, you know, some of our patients don't necessarily have, you know, good computer access, or if there's any cognitive or special programming needs, we, um, that might dissuade us. But I've actually been encouraged by the number of even very elderly patients, how computer savvy they are, whether it's just a shift in demographics, or they just have family members who are allowed, um, help them. Most people... the vast majority of people we offer to are willing and able to do it.

Fantastic. Dr. Brownlee, after you learned about remote programming, I know you made

changes to your clinical practice. Will you share some of those with us?

Absolutely. Um, so we were able to make some pretty exciting, um, changes to our, uh, clinical practice and protocols. One of which being, we were seeing so many remote programming patients and sessions that we actually started to condense those appointments to one day, um, which allows our implant audiologists, including myself, to be able to work from home one day, uh, which was a very exciting, um, feat that we were able to achieve. Um, that's one. Another change that we were able to make is for new cochlear implant recipients, we now have their one-month follow-up after their activation as a virtual appointment. That allows us to have a shorter appointment time, and again, to maybe move up some cochlear implant evaluations or other patients who maybe have some urgent needs. And then as far as maybe a more established patient, uh, maybe a cochlear implant recipient that has been implanted for a year or longer, we've been able to offer them remote programming sessions, rather than having them come into the office. It doesn't replace their in-person visits that we do like to do annually, or every two years, depending on their experience level, so we can run the full test battery, but it is an opportunity for them to get what they need. If it is a small tune up without having to come all the way back into the office.

So it sounds like you've made some pretty big changes to your clinical practice. How did you decide to make those changes, and how did you feel confident that it was the right thing to do?

Well, I think, like, most clinicians, um, really anyone providing any healthcare services, our appointments we're booking out for several weeks, months, and we know that there's a need to help these patients, and, you know, breaks our hearts, seeing them be booked out so far when we know that we could potentially help them now. So we were trying to figure out a way to shorten appointments and remote programming was definitely the solution to that, because our in-person visits for cochlear implants are about 60 minutes on average, but our remote appointments are actually 30 minutes, and I would say that most sessions I can finish well... well under 30 minutes, and that's even if I have to call and remind the patient what app to use, uh, or if they need to... repair their devices to the app, or something like that. So, it is really quick and efficient, and we saw we were able to get other patients in sooner when we made that shift. And as far as... condensing appointments to one day, it offers our implant audiologists, um, a better work-life balance, um, different, you know, change in scenery, being able to maybe be at home, and also work on some admin tasks and things like that. And, uh, for the patient as well, just like most areas, we have patients that travel from a far distance, um, multiple hours away. And so, being able to help those patients without having them travel in gives them better, kind of, doctor life balance, so they're not having to drive in for doctor's appointments constantly. They can, you know, enjoy their lives, enjoy their retirement. Without having to plan a whole day for a doctor's visit.

Thank you for sharing all of that. Change is difficult, whether we're talking about change in

your professional life, or change in your personal life. And so I think that's probably helpful for people to hear what you thought about, and all the ways that you're finding it beneficial for both you, other clinicians in your practice, and then also your patients. So, you mentioned working from home, uh, which definitely seems exciting for many professionals who also are having to make the drive, park, walk through the big hospital settings, or into the big centers, or... Walk through the snow, or the wind, or the rain, um, to work every day. So, what steps did you take to make your remote programming work from home day happen?

Well, we did have to take several steps and, um, you know, it was a lengthy process, but it was definitely a worthwhile process. So, the first thing that we needed to do, um, is adjust our templates, um, on our schedules. So we work with Epic as our EMR system. And we were able to create a telehealth-only template on those specific work-from-home days. So other in-person visits wouldn't accidentally get scheduled during those times and those days. Now, as I had already mentioned, we have patients that are booked out several months, so as you can imagine, there were already in-person appointments scheduled on those work-from-home days. So, I did go in personally into the patient's charts to see if it was something we could switch them to, uh, telehealth or remote programming, or if we just needed to move their appointment to a different day altogether. Um, most of the time, we were able to transition them to remote programming, which was very promising to see. Now, we also had to train our patient care coordinators who schedule our appointments on when it is most appropriate to schedule an in-person visit versus a remote programming visit. So working with the other clinicians in my office, we created kind of a flow sheet to help them determine when someone can be scheduled in person versus remotely. Um, those were some of the major changes we made, and as we continue going through this process, we continue to refine this protocol that we have for those remote programming appointments, and how to get them scheduled. Um, we've even started using, if anyone uses Epic, you may know what I'm talking about, but there's a little blue sticky note that when you open the patient's chart, um, it pops up, and it's just for providers to see. The patient can't see it. But that is something we've been using to indicate whether a patient is eligible for remote programming or not eligible. And that's just a quick check for us clinicians, and then also our patient care coordinators.

Great, thank you for reviewing all that. So, what steps do you take to ensure your patients are set up for success with remote programming?

Well, I think first and foremost, you know, we need to make sure that their processors have the updated firmware for remote programming, which most do at this point. If a patient does not, we call them, bring them in for a quick appointment to update the firmware, and then we orient them to the AB remote support. Now, if a patient already has updated firmware, we like to hook them up with the Advanced Bionics Success Team. Um, so that AB success team can help them with downloading the remote support app, pairing the processors and instructing them on how to navigate the app and how to use it most appropriately. Um, when we're not

able to get a patient in touch with the AV success team, because sometimes patients, uh, don't respond to phone calls or emails. Um, we usually take the initiative, and I'll call the patient or our patient care coordinators will call a patient to go through the same steps that the AV success team would, but we do prefer to use the AB Success Team for those, um, to prepare for those visits.

Great, I'm glad to hear you're utilizing the AB Success Team with your recipients. Um, for those of you who don't know, the AB Success Team is available in North America to provide support for your patients who've chosen AB. I can absolutely do what, um, Dr. Brownlee was just mentioning, to help your patients prepare for a remote programming session. They will also explain equipment that comes in their cochlear implant kit. They'll explain connectivity and help recipients connect to devices like Bluetooth and Roger. They'll provide education on AB's rehab resources, and also offer troubleshooting support. So, Dr. Brownlee, you have been offering remote programming for a while now. What do you think are your patients'... are the biggest benefit that your patients experience?

I mean, there's a lot to choose from, to be honest, um, but I think... number one would be how easy it is for them. I would say 95% of the patients that we do remote programming with at the end of the call, they're like, oh my gosh, this was so easy and simple, I'm so glad we did this. No offense, but this is better than driving into the office to see you.

I take no offense, I think it's better as well. So, um... it amazes me when some patients are a little hesitant to try new things, that when they do, they're amazed at how easy and convenient it is. Now, from something more from a personal standpoint, I love how it builds confidence in our patients, which are an older population, and encourages them to not be afraid to try new things, and not to be afraid to experience that new technology. I think, um, they feel really good about themselves when they're able to accomplish something like remote programming. Which, you know, to our generation may seem small, but to them, they are constantly told by maybe media and things like that that it's too advanced for them, or, you know, they didn't grow up with it, so they may not understand it. But when they're able to participate in something like remote programming, it gives them a whole new outlook, and they feel much more confident moving forward and using technology.

Yeah, that's really great. Thanks for sharing that piece about confidence. I think that's really important for the... I mean, all of your patients, of course, but especially those older adults and those with cochlear implants. Um, so not only have we heard from programming audiologists like Dr. Brownlee, heard from Dr. Dornhofer about what's going on at Mayo Clinic, and about how great the remote programming experience has been for both clinics and patients. There's data to prove its value, too, and so I just wanted to take a moment to share some data from the Multicenter Pivotal Clinical Trial that was conducted at 5 centers in the U.S. With MarvelCI on remote programming. And on the left, you see that clinical outcomes with remote programming are no different than in-person programming, and of

course, I know that that's really important to you, to your patients, and of course to us at Advanced Bionics, that patients are still getting optimal programming, but in a way that is much easier for them to access. And then here, you can see that remote programming offers patients increased convenience and increased ease of access to care. So, with AB's remote programming, the clinical outcomes are the same, and you're able to save your patients time and money. And increase convenience related to the management of their cochlear implant.

Now, something we get a lot of questions about related to remote programming is whether or not the sessions are being reimbursed. So, Dr. Brownlee, is your center receiving reimbursement for remote programming?

So, yes, we actually looked at this fairly recently, just to make sure we could, um, provide the most updated information and answers. And yes, um, we are being reimbursed what is very comparable to an in-person cochlear implant mapping, which is... Fantastic to see.

Yeah, that's really great news, and Dr. Dornhofer, what about at Mayo? Are... is your clinic being reimbursed for these remote programming sessions as well?

Yes, we do get reimbursed for my audiologist. There's a 95 modifier, which needs to be added to the code to make sure it's appropriately coded, but yes. Obviously, laws and everything change as we go, but right now, things have been going well.

Great. Um, in just a moment, we're going to push out two different resources for those of you on the call, if you'd like to learn more about coding and billing related to remote programming. One is a link to an AB website that has information about reimbursement. The other is an audiology online course that we recorded last year, where you can find information that was provided by some of the audiologists at the University of North Carolina about billing and coding as well. And Dr. Brownlee, what would you say to audiology clinicians, or multiple clinicians at a clinic who are hesitant to incorporate remote programming into their clinical practice?

I would just encourage clinicians to try it. Um, I think, just like patients are, I think you will be surprised with how easy it is. Um, and if you are hesitant, that's what our reps are for, so contact your Advanced Bionics rep and have them come in, and you can practice a session in office. You can even bring a live patient in and practice that in office until you start to feel confident using remote programming, but I... guarantee you will be amazed at how easy it is. And you know, I think as clinicians, audiologists. Us being dedicated to continuously learning and adapting and embracing new technology, I think we definitely owe it to our patients to try something that may make us uncomfortable, like remote programming. Because it does have multiple benefits, and like, we had already said, it's maybe not for everyone. But it is definitely a tool that we can utilize, and it will help your clinic flow, and then also help bring in those other patients who maybe have more urgent needs, or... we need to get in sooner for

cochlear implant evaluations.

Great, thanks for all those different ways to encourage others to incorporate remote programming, or at least give it a try. Um, I love the idea of practicing with a clinical specialist, maybe with another clinician in your clinic prior to doing it with a patient, just to help you feel more confident in doing it.

Now, cochlear implant programming, whether it's conducted via remote programming or in person, is just one part of the cochlear implant journey. When a recipient gets a cochlear implant, learning to hear with that implant is like learning a new language, which I know all of you on the call are very familiar with. So it's important for those CI recipients to practice, to improve their ability to hear and understand. As part of their protocol, Mass Eye and Ear offers oral rehabilitation with a speech-language pathologist for their CI recipients. So, Blair, will you provide a quick overview of what you all offer at Mass Eye and Ear for the CI recipients?

When we think about AR, oral rehab, there are several areas that are outlined pretty well by Booth Royd in 2007, and that's what inspired this set of graphics that you see on the slide. Um, but there are many areas that fall underneath this umbrella term. So sensory management, which is depicted by the devices you see here, that's most commonly associated with an audiologist's role. The diagnostic testing, speech perception measures, device programming, and the device itself, and instruction, what is the device, what's it used for, how do you use it, also is primarily handled by the audiologist. Uh, but SLPs should be instruction collaborators. Slps should also understand these things. Troubleshooting, again, an area that's more familiar to an audiologist role. However, SLPs are, again, necessary collaborators. We want the equipment to be working for therapy. Slps can and should have the knowledge and skills to handle basic troubleshooting. Counseling or support, that's a shared area. There's a level of rapport that comes naturally with sensory management. Audiologists give patients and recipients connection. They give that back to them. And it's huge. It leads to a trust that's built very quickly, and if you're an audiologist on the call, you definitely understand this, because maybe you're thinking of a recipient who you provided that connection through some of these areas of oral rehab. And that trust, it's built for life. Um, the oral rehab for that support and for that counseling, that can evolve beyond access. It isn't just counseling on the expectations of the cochlear implant, it's an SLP reinforcing that a recipient actually understood a phone call. Or that a recipient was able to attend their grandchild's graduation ceremony. Maybe they used an FM while they were there. It's also a guided European bike tour that they took after they retired, and they heard their tour guide. That's a true story. And the perceptual training, uh, which is commonly known as auditory training, that involves working with the auditory hierarchy, or Erber's hierarchy. So that's the triangle in the bottom right corner of your slide. Slps are specially trained to understand language skill development. For adults who already have acquired language, they certainly

don't need to build language, but principles for eating... for... not eating, for meeting each level of language using the auditory hierarchy, they're necessary. So when we think about spoken language, we're thinking about sounds, words, phrases, sentences, conversation. And in auditory training, we're targeting each unit of spoken language with the hierarchy. And that also applies for pediatric recipients, except you're building language. Auditory training, in this sense, becomes embedded into strategies to ensure language is being developed. For children who receive a cochlear implant after language has developed, think school age and beyond, maybe SSD or sudden hearing loss, you can apply more traditional approaches to auditory training, similar to adults. And the support and instruction in troubleshooting for pediatric recipients, that's going to be primarily focused on the caregiver. Caregivers who are working with SLPs, they see their providers much more frequently than they see their audiologist. So as a result, the SLP may be coming weekly to the home for therapy, or, um, connecting with the parent, uh, from therapy at school, they'll be the point of contact.

Great, thank you for sharing those details. Um, will you share some additional information about what a typical protocol looks like at Mass Eye and Ear?

So we wanted to ensure that recipients who receive a cochlear implant would receive care as soon as, as early as possible. With pediatric patients, it's often part of the protocol to receive a speech-language evaluation by an SLP during candidacy. Megan and I felt it was important for adults to receive the same level of support. So we created our adult CI protocol for oral rehabilitation. Uh, the pre-cochlear implant evaluation, so this occurs during candidacy, and this is when the adult meets with the SLP, establishes baselines, pre-cochlear implant, and it establishes an expectation for oral rehabilitation. What's involved and what's going to be expected of them after they have their device. Then they will have a follow-up evaluation that occurs no sooner than one month post-activation. So at Mass Eye and Ear, our cochlear implant recipients have their activation appointment with their audiologist. They have a one-week post-activation appointment with their audiologist, and a one-month post-activation appointment with their audiologist. So they are meeting with the audiologist 3 times before they see me again. And at that one-month post-activation appointment, they're establishing new baselines this time with their new cochlear implant. Adults also have the option to participate in therapy sessions. We offer both virtual and in-person appointments, although our adult appointments are primarily telehealth.

So you mentioned protocol for both pediatrics and adults. At Mass Eye and Ear, are you seeing more peds, more adults? Like, what does your population mix look like?

This graph depicts the appointment breakdowns from calendar years 2023 and 2024. At Mass Eye and Ear, we offer. Uh, AR evaluations and therapy. We kept it simple for scheduling and billing purposes, but what goes into the evaluation, what goes into the therapy, that's where we get specific and we individualize for the patient. Adult appointment types are on the left-hand side of the screen, so the short bars and the tall bars that are to the left, and

then pediatric appointments are all the way to the right. Um, the adult appointments... On the left-hand side, the shorter bars are evaluations, so those are the volume of evaluations for each 2023. That's the purple color, and 2024, which is the pink color, and then the taller bars are therapy appointments for adults, uh, in terms of volume. The pediatric appointments all the way to the right-hand side of the graph, the shorter bars, again, evaluations, and the taller bars are therapy appointments. And when we look at volume in this visual, I think it's a great representation of the population at Mass Eye and Ear, because we do see patients across the lifespan. And maybe you were one... I don't know, if you're wondering this, but if you are wondering why are there more than double the volume of therapy appointments to evaluation appointments, that's because it isn't a one-to-one ratio evaluation to therapy. Both adults and pediatric patients will have one, or if they're adults, hopefully more than one, evaluation, they'll only have two, though. And then they'll begin therapy, which occurs, hopefully, on a consistent basis. And another trend that I thought was interesting was the adult therapy bars. You'll notice there's an increase in therapy appointments from 2023 to 2024. So we believe that this is due to the establishment of the adult AR program, while pediatric therapy is more commonly offered across cochlear implant centers, adult AR is an under-established service, and we built this program in 2023, and we obviously grew it. Once we established the protocol, we also needed to build in referral networks. So we needed audiologists, we needed otologists who also know to refer their recipients for oral rehab. And we also needed to make sure that the patients, the recipients, knew why and how oral rehab would support their cochlear implant progress.

This is really great data. You all have seen really nice growth in this program over time, and, um, as Megan mentioned earlier, are adding a second speech-language pathologist. Dr. Reed, is Mass Eye and Ear being reimbursed for these oral rehabilitation services?

That's a great question. Um, I think there's a lot of fear, or we've heard a lot of fear from other centers or other programs of this belief that you can't get reimbursed for oral rehab, or you can't, um... It's not a financially viable service. We're showing our year one information, because I think it's really applicable to growing and developing a program, and then once you build it to a point and work out some of the kinks, um, really, it's a matter of maintaining and hopefully continuing to grow, grow that program. Um, we are finding that, uh, oral rehab is reimbursable. Um, at our program, we are primarily using codes 92523 and 92507 as our billing codes for our evaluation and therapy. And in our first year, 78% of claims paid out as expected. Um, that remaining 22% of claims that did not, there was a variety of reasons. Um, primarily, um, the largest area was related to missing prior authorizations, um, and we worked diligently with our pre-certification team to try to address and resolve that issue, which we have successfully done. Um, and then also in year one, there was some billing issues related to Medicare of ensuring the correct provider and referring provider were on the claims. Um, there is a small percentage of, um, claims that were non-covered at about 4%, but overwhelmingly, um, they were covered. Um, we've been learning about the financial

particularities in our first year, and have begun to apply the... have applied those in year two and now year three of this program. So I think it's helpful to see, um, you know, what our expectation is for AR evaluation of reimbursement versus... and revenue evaluations, um, looking at charge versus revenue. And I just want to point out some of the particularities. Um, for this plan MGBHP, they're actually. Charges in pink, and revenue is in purple, and for this particular payer, we're actually getting paid more than our charges, and that's because of the specific agreement we have with this payer. Which is not, um... which is not... But it's likely for most payers, but it certainly depends on your contract and your agreement. But overwhelmingly, the goal is to try to get about 50% reimbursement of your charges. When we look at therapy, um, in our first year, we noticed a few things. Um, one of the payers, Aetna in particular, was denying and not reimbursing. Um, and so then we had to look at that and figure out why is that? And it turns out that Aetna, um, was not reimbursing the, um, CPT codes, the 92507 for adult CI patients. So we didn't get paid, um, for most of the therapy done in this cycle. Um, we had to change our workflows and are currently billing 92630 and 92633 instead for Aetna. Which is resulting in a successful reimbursement and payment for these services. Um, we also, in this first year, in this first cycle, you'll see a gross difference between Medicare charges and Medicare reimbursement. Now, in general, Medicare does reimburse at a lower level, um, but this... big difference in Medicare. A lot of that was due to, um, the problem we were fixing based on the billing provider and the referring provider.

Thank you for sharing those details. What tips do you have for other clinics related to billing and reimbursement for oral rehabilitation from an SLP?

Absolutely. Um, you know, I think... what we found most successful is simplifying your billing process. There are a number of codes, like I said, 92507, 92533, and the 92630. 6'3 CPT codes you could bill. Generally, simplifying it reduces any confusion. We also, in some instances, could have expected to bill 92626 with some payers, but. Given that many of these services overlap with audiology services who might be using those same codes, it wasn't, um, the best process in order to get reimbursement for both services, so separating those out, if there are overlapping services on the same day. Getting the most comprehensive information from the payers, getting a, um, basically an insurance verification to get an idea of what the expected benefit is, is very important, and we found it very helpful to create a sample script. And a form that allowed our pre-certification team to really comprehensively gather the information we needed for, um, insurance coverage. And being able to convey that to patients, um, ahead of their therapy and ahead of their valuations is important, too. Checking payer policies, checking the differences between payer policies, referencing back to Aetna in this example. Where, um, checking that. Different policy of what codes they accept and what codes they don't accept, um, was very important. Um, and confirming those CPTs. And I always like to stress the importance of negotiating with our payers and really knowing what your practice's payer mix is. If you have a large volume of Medicare patients, then yes, the reimbursement might expect to be lower. Um, we know that Medicare reimburses at a lower

level. But maybe your practice really... you know, has a good, broad mix, especially first and secondary payers, and so negotiating, once you know your payer's mix, going back to your payers and negotiating those contracts and those payments amounts is really helpful. Um, when you're evaluating the success of your program and the financial success of your program, you know, what we found here in 2023 and 2024. 2023 revenue was about the same level as expense, so it was financially neutral program. And then 2024, when we worked out some of the kinks of that reimbursement, and, um, payer... payer codes. Um, we actually have sound to be a profitable, marginally profitable, profitable program.

Great, thank you so much for sharing those details. Um, like you mentioned, we do often hear people saying that they either haven't figured out a way, or are finding it challenging to make, um, the billing and coding work appropriately so that they can become a profitable center when it comes, or make a profit when it comes to offering the oral rehabilitation for their cochlear implant recipients. So this should be really helpful for many people.

Now, while oral rehab conducted by a speech-language pathologists, like what Blair does at Mass Eye and Ear is ideal for cochlear implant recipients, many recipients encounter challenges when participating in clinician-directed sessions, and I even saw in the chat where Sarah said, um, that there are no... ListL certified individuals in her area, or at least within 2 hours, that work with adults. Also, no SLPs that are able to add on adult rehab services and no telehealth providers. So, what is available, um, for her recipients. So before we address what might be available and helpful to her recipient, I'd like to ask you, Blair, what are some of the challenges that your CI patients have related to participating in the oral rehabilitation that you offer?

Well, I was considering the barriers that the patient or the recipient might be experiencing, and from my perspective, I found that its initial frustration after the cochlear implant that the patient is experiencing. So regardless of the counseling recipients, they want a light switch. They want automatic understanding, and it doesn't always matter how much they're counseled ahead of time. Uh, so they want immediate clarity, they want immediate comfort with the quality of the sound that they're now processing. So, the barrier for AR in that sense, is that they come in and they feel as they're valid and allowed to feel frustrated with their current experience, and that's why counseling and support is under that umbrella term of AR. And another barrier that I've witnessed is. This is more likely based on long-term hearing loss and the need for compensatory strategies, but I found that patients want an easier route to AR, meaning they want to rely on residual hearing, or they may want to use their bimodal technology to participate in AR exercises. And so sometimes making that shift to doing the hard work, to doing the exercises with the cochlear implant only, that can be a little bit, a slight barrier.

Those are really great things to point out. I think we all want to fastest, easiest way to any outcome, and so to sometimes have to put in that hard work can be a bit of a challenge. One

of the rehabilitation tools that AB offers is Sound Success that you see on the screen here. And Dr. Dornhofer, I know that you're doing some research with AB Sound Success Rehab, um, program at Mayo Clinic. But before we talk about your research, will you describe Sound Success?

Sure, sure. So, um, as with Sarah, I'm also stuck in the situation where I have a very talented team of people I work with, but I do not have any speech-language pathologists who are really very enthusiastic about auditory training, and then as some other people pointed out, sometimes billing with respect from the audiology side can be confusing, especially if you have a high government payer mix. So, um, you know, we've really bought in, or not I say bought in, but I've seen work a lot with various, um, computer programs. Um, a classic one people used to know was, like, Angel Sound, which is kind of a free, uh, take online. And more recently, we've done a lot of work with Sound Success. Sound Success is what we term a computer-based auditory training program. The best analogy I have for it is if people are familiar with Duolingo or Rosetta Stone, it's like that, but instead of different languages, it's speech and environmental sounds. And, um, like Duolingo or Rosetta Stone, if you've ever used one of those, it has kind of ascending levels of different tasks for patients to, um, work on. Those can range from simple environmental sound awareness, speech and pitch, and, uh, understand, um, recognition, two very complex topical questions about, um... sentences or conversations. Um, importantly, and one of the reasons we've used this for our own, uh, current research is. This is, um, free, online, available, um, to all implant types, and it obviously requires enrollment and a, um, email address, but, you know, we recommend this to many of our cochlear implant patients. They can get to it for free, and it's available in many different languages, not just English, which we have a large number of different languages in our practice. Um, and it's very patient-directed, but it offers a lot of, um, it offers a lot of depth in different sort of skills people can do. So, you can put... make it very challenging or very easy, and it provides them with feedback over time, hopefully providing some encouragement to continue to do with it. Because as, uh, Blair mentioned, I oftentimes do find that patients don't like homework. Um, but if we can sometimes show that they're doing better over time, that does have... and there's some studies behind it, more in the physical therapy literature, that if we can show that they're doing better, they're more compliant with it.

Great, thank you for that review, and also, um. Reiterating some of the value of this type of tool. Will you provide a summary of what you're evaluating during your research on the computer-based auditory training at Mayo Clinic?

Absolutely. So we, uh, full disclosure, we're looking primarily at adult implant recipients. This is the majority of our practice. Um, and we're seeing patients, new patients, enrolling them actually before their implantation. And they are... it is a true randomized controlled trial, so they're being randomized either through the Sound Success platform, or they're being randomized to the, uh, control group, which is kind of our most common option, which, in our

case, and unfortunately in many. Co-clamp centers based off surveys we've done, the most common form of auditory rehab given to many patients is just a list of exercises to try. And that's what we did. Still do for many patients, so we either have that versus the sound success platform. These patients are randomized. They are asked to... if they are randomized to the Sound Success platform, they are given a special login, that is not any different from what is currently available online. It just simply tracks our usage, so that we can see if there's any dose-dependent effects without being some undue influence. Because ideally, we want some data showing that, hey, recommend this to your patient, and we have some benefits. Because, you know, we can't necessarily, you know, be tracking them and bugging them constantly throughout their journey. Um, so, right now, our goal target enrollment is about 60 patients. We're about halfway there, um, favoring, um, and... We have some preliminary 3-month data that we can share with you. Um, so far, things have gone well. Of the patients who have been, um... we do actually have a few more, I apologize, this is the very last part of this is a little out of date, but. Of the patients enrolled in the Sound Success platform, all of them have used it and do use it pretty consistently, especially over the first 3 months. Um, averaging almost 20 hours over the first 3 months of use, and averaging about 3 hours, uh, per week. Um, and then, when we looked at the different patterns of, kind of, what exercise they're doing. About half were able to do the whole platform, and we're really doing really nicely by the end of 3 months, and about half had gotten about halfway through. Um, overall, though, everyone seems to, uh, seems to be able to access it easily, and we've found that, uh, you know, access technology or comfort with technology has actually not been as much of a barrier as we would have anticipated. Um, and in fact, one older gentleman, who actually is our first to actually finish their whole year, um, in this trial, because that's what our trial period is. We're following them for their first year after activation. Actually asked if you could keep using the program. So, regardless of the data that I'm about to show you, I think that's a very reasonable, um, thumbs up from the patients if they ask to keep doing it, even once they're done with the program. Um, so speaking about data, though, because that's what we're here to talk about, you know, does this sort of thing work? Um, so our primary outcomes for this are our speech recognition and quiet, and our, um, quality of life metrics. And looking at 3 months, and bear in mind, this is not final data, this is just 3-month data with about a half of our final cohort, we do see some trends for greater early improvement in speech recognition scores, as measured with CNC and AZA Agbio and Quiet. The patients in blue on that right side are a sound success group, and the patients in orange are a control, namely. Have at it, here's a list of resources you can try. Um, and, um, looking at quality of life, we see, um, a very similar trend. Again, the trend for greater improvement in all quality of life metrics. And even though we're at a calf cohort, we are reaching significance on a couple of those domain scores, namely, uh, emotional and entertainment scores. And this does match up with prior observational data we've, uh, I've presented before, and so it's encouraging to see this panning out in a true randomized controlled trial. And I, you know... I think it answers the question of, well, I don't have a speech therapist or an audiologist interested in this. Do I have an option to offer my patients? And while it's probably not necessarily as ideal as someone

being able to coach someone through offer feedback, this is... still works pretty good, as evidenced by this data here, and evidenced just by, you know, patients seeming to be... find enjoyment and success with it. Um, full disclosure, though, this is only with adult patients, so I know there is some chat in the... about pediatric patients. Um, that's a can of worms that is outside of my current area of expertise in this study. But we're very encouraged by what we've seen so far. And for those of you who don't have access to a good speech therapy team, this is something to consider.

Thank you, Dr. Dornhofer. The data is very exciting, and I'm looking forward to seeing your final outcomes. If someone is considering recommending Sound Success to their cochlear implant recipients, what would you say to encourage or inspire them to do so?

Sorry, could I apologize? My computer cut out right at that moment. Do you mind repeating that question?

I'm happy to. If someone, like maybe Sarah, is considering recommending Sound Success to their cochlear Implant recipients, what would you say to encourage or inspire them to do so?

I would say, um, two main things. First off, there's... this is a no-risk scenario. Yeah, the worst case scenario is they spent a few minutes signing up. And they don't like the program. This is no cost, there's no real risk associated with this, and they can come and go as they will. And then, the other side is, there are some possible benefits. Demonstrated here with, um, some of the preliminary data we've shown, and some patient testimonials, we've been able to, um, obtain so far. So, if we're looking at, you know, the risk-benefit ratio, it's very certainly positive.

Great, thank you for sharing that. So, Sarah, I hope this information that Dr. Dornhofer shared, and obviously others of you on the call too. Um, it gives you some, maybe, encouragement or insight into some tools that may be beneficial for your recipients, and you can go in and sign up for Sound Success and take a look at what it has to offer as well. To wrap up today's session, I want to ask you this. How would remote programming. Or a tool like Sound Success, improve your patient's experience if you offered it at your clinic? Or, if you were able to... hire a speech-language pathologist, like Blair, who is able to provide those live clinician-facilitated sessions. So think about one of those three options, and if you'll type into the chat, um, how that might benefit your patients. I'm gonna go ahead and... move forward to the survey. Qr code, and then we'll put the link in the chat as well, as you all are answering that question that I put... just pushed, uh, just. And, uh, let's see, we have Sarah saying, um, that. Absolutely, hopefully sound success will be beneficial for her patients. Ashley said daily practice with a therapist. And having that input into the session is helpful. Um, let's see... We have Don saying it would be helpful for more SLPs to see AR for adults. It's so important, and it transfers the knowledge of the auditory teaching to expand the outcomes for adult patients as well. Completely agree, thank you for that. Also, like, with

remote programming, greater access to care and help to improve outcomes. And then Beth says remote programming would be helpful. Blair says attendance rate to appointments would increase, especially if all services could be provided on the same day. And so you all have provided some great responses to how some of these tools and resources could impact your patients, and ultimately your clinic and the services you provide. And I thank you all for taking time to spend your morning, afternoon, depending on where you are, maybe even early evening, with us, and just think about some of the... different benefits that your colleagues just typed into the chat that I shared. A couple others are. Some sound success can increase patient commitment and instill more confidence. Um, someone else said, patients need reassurance outside of the CI clinic, and sound success gives them support that. Um, James cannot. So, just think about all these things, and if you aren't, um, utilizing remote programming, or encouraging your recipients to do oral rehab, whether it's via a platform like Sound Success or a clinician-directed session, what are you waiting for? We've talked about a lot of benefits, so if you have questions about any of the tools offered by Advanced Bionics, please reach out to your regional representative. And finally, I will leave you with this. We have a quote here from a recipient whose clinician offered her the opportunity to do remote programming. Uh-oh, I went too far. Let's see. There we go. And she said, I had the opportunity to reuse the... to use the remote mapping feature today. Wow. I love the convenience of being able to get mapped at my kitchen table and have adjustments made while I'm in my normal environment and can evaluate how things sound. It's a game changer. And I think, um, someone earlier in the session was saying that they had an experience with their patient that was also a game changer. That's definitely a term that we're hearing a lot related to this live synchronous remote programming that is offered by AB. So, thank you all for attending today's webinar. Thank you so much to our guest presenters and for you sharing your clinical experience with these different tools. And everyone.