
"This text is being provided in a rough draft format. Communication Access Realtime Translation [CART] is provided in order to facilitate communication accessibility and may not be a totally verbatim record of the meeting."

MARLA: Hello. You have your T-coils on? You have T-coils on? The room is looped. Thank you, Bill Rouser, spending the energy and almost falling. We're glad you didn't. We're going to wait a few minutes. We think our speaker is coming by motorcycle. It's raining. He might have a bit of a traffic problem getting here. We're going to wait just a few more minutes for him to arrive. In the meantime, there are refreshments. Thank you, Mylene, you brought refreshments. Thank you. Help yourselves. There's also materials over here on the materials table. Thank you, Gail and Randy. From now on you won't need to do that. We have a container in that cabinet over there. We'll put everything in there and store it. You won't have to lug it back and forth. That's great. We want to thank Saba for doing CART. We're going to have the far whiteboard for CART. Here is where the speaker's power point is going to come on the screen. Thank you, Toni, for bringing that. I should officially probably call this to order with our new gavel. (Pounds table). Jacqueline is not here yet. I hope she comes. Jacqueline is our secretary and graphic designer. She does all of our email blasts. She creates them and designs them. She helps on our post on social media. She also helped create our new information sheet. It's a three-part. We went to a new place now, and they -- we don't have to cut them up anymore. They do them on precut one-thirds. It's going to be lovely. She designed these. It's going to help get the word out. We're going to be leaving these at various hearing aid dealers, audiologist offices and things of that nature. We do have a birthday card for Jacqueline here. It's going to circulate around. Bob has it back there. We are going to circulate it around. If she doesn't make it today -- she may have had to work. Her birthday is on May 13th. Does anybody else have a birthday in May? Any other May birthdays? AUDIENCE MEMBER: Yes. MARLA: Great. Happy birthday. AUDIENCE MEMBER: Thank you.

MARLA: What date? AUDIENCE MEMBER: May 11th. MARLA: All right. Anybody celebrating an anniversary? AUDIENCE MEMBER: I am. I just remembered. I got 41 years this month. MARLA: Congratulations. AUDIENCE MEMBER: And here he is. He's home. MARLA: It's a lot of work, huh? Anyway, we've got a lot of materials over there. We have a lot of flyers for the Walk. Now, the Walk is coming up in about a month. We do have a team for the chapter. It's called Orange Crush. So far we just have three people on the team. I encourage you if you want to join the chapter team -- there's another team here, Cherity's team. She has a team as well. We have about 18 teams now registered for the walk. They've collected

about \$23,500 something dollars so far. Off to a great START. Got a bit to do before we get to the walk. It's going to be some fun stuff. They used to have a clown at the walk be with and they decided to kind of do a little different this year. We're going to have a -- various clowns, and they're going to circulate throughout and entertain. They've got extra -- face painting. We're going to have raffling of items. It's going to be fun, a fun deal. There she is. I'll wait until she signs in to acknowledge her. I also want to point out that a reminder, if you are not a member of HLAA, there are applications on the table for you to -- go online to apply and to renew. Remember, when you do apply, when you do renew, state that the City of Orange is your chapter. That is important -- a unified membership program we belong to. The chapter gets a percentage of the fees collected for membership and renewals. Last year, we got -- Over one quarter. They pay it out every quarter. What happens is anybody who lives in the geographical area zip codes for your chapter, even if they don't come to the meetings and they renew their membership, they're included within our area. It's a nice program. Remember, if you need to renew, go ahead and renew. Put City of Orange chapter. That would be great. The walk 4 hearing. It was a great event. It was at the grand in long beech. It was fun. It was great. We had some speakers who gave some very moving stories about their hearing loss. One of them was Cherity. I really appreciate what she did and what she said at the event. It was really good. We gave out a lot of materials, team packets. I a few weeks ago mailed out team packets and putting materials in various offices. It's going to be on June 10th, the Walk. Registrations STARTs at 9:00. The walk starts at 10:00. I hope you all come out. I hope you all get some of those flyers and you get donations and get them into HLAA. Last year we got \$1340. That's 40% of what we raised, got back for the walk. It's very helpful for the chapter. It helps pay CART. We have rent now.

AUDIENCE MEMBER: I'll stand here. MARLA: We have rent of \$40 a who here. And there are other expenses. Just recently, these are advertising promotions for the chapter. Jacqueline, I'm so glad you're here. Earlier I asked if anybody had a birthday this month, and I know you have a birth day this month. So I want to say happy birthday. I love your shirt. Please look at her shirt. [APPLAUDING] AUDIENCE MEMBER: I found it at target. MARLA: Yeah, right. That is great. AUDIENCE MEMBER: Three extra large. MARLA: We have got to think of something. If we do T-shirts. I want to know where you got that. She created that design. Paragraph (loud static). MARLA: We appreciate what you do, Jacqueline. We are getting these printed. AUDIENCE MEMBER: Oh, good. We are getting them done. Thank you, so much. AUDIENCE MEMBER: We have to pay rent, \$2. MARLA: Yeah, okay. Also, on the topic of the rent, we would ask if everybody could give -- Contribute \$2 towards the rent, help to defray the cost. We'd appreciate it. You can give that to Bob. We have a 50/50 today. If you want to get your tickets, see Bob. It's \$1 for one ticket and \$5 for 6 tickets. It might be your lucky day today. Our future meetings. On June 3rd, we're going to have Megan Crimson from Advanced Bionics. She's a consumer specialist. She's going to discuss the difference between a hearing aid and cochlear implant. She's going to discuss some of the new technology of a hearing aid that works with a cochlear implant. She's

also going to discuss oral rehabilitation, the importance. It can apply to people with hearing aids as well as cochlear implant. And then on July, we have no meeting. We are dark. No meeting in July. A lot of that is because some people are going to go to the convention, and that's right at the end of June. Some of us are also travelling. I'm going -- (Loud static). MARLA: Jacqueline, could you close the door. AUDIENCE MEMBER: Yes. MARLA: And I'm going to Colorado in June, the end of June. We're going to be dark in July. August, we hope to have a gentleman who is with the disabilities division, speaking about disability tease accommodations at L.A. airport, LAX. He's going to cover not hearing disabilities, but all disabilities. She says he's very good. We're hoping to get him in August. September, we're going to have a rap, just a general rap session, just to hang out and talk about and share with each other. October, we're going to have Dr. Christy Panek. She's a young audiologist with hearing loss. She's going to share her story and share some of her expertise. She has also been at other group's meetings and I have heard great things about her. She was very well-received. We're going to have her in October. That's what we have so far on schedule. (Loud static).

MARLA: A little technical difficulty. BILL: I think we're too far away from this unit. MARLA: I think that needs to be moved. BILL: There's interference somehow between here and you. MARLA: I'm wondering if the audio is too close. Sometimes we've had to move it away.

TONI: No. You're far enough away. MARLA: Let's cross our fingers and our toes. I had this sign-up sheet. It's going to go around every month. It's for people to sign-up to what they would like to help assist with and volunteer with.

We have like meeting set-up, meeting clean-up, greater, registration help, refreshments and no more materials. That's no longer an issue. Like, we had Rob Robin, she came up and set up. Mylene, she brought refreshments. And Hortensia also brought refreshments. We thank them very much. I'm going to circulate this around. You sign up for whatever. Also, I want to point out -- BILL: It has to be something -- some of the electronics.

AUDIENCE MEMBER: Cut it off. MARLA: I think we should stop it. AUDIENCE MEMBER: Just stop the loop. MARLA: Just turn it off. I think we will do okay with just the audio. Let's turn it off. AUDIENCE MEMBER: Just look at the captioning. If you can't hear. MARLA: I want to point out at the registration desk, you have these flyers. These were developed by Robin. Raise your hand. [APPLAUDING] MARLA: Robin, does a lot of work with newsletter. She does our press releases for our nettings. She has developed this. This is wonderful. It's got our logo, our date, our guest speaker. It's got the information about the meeting. It's got where we're going to go for lunch, if you want to join us for lunch. Paragraph it's got a blurb about the Walk and when our next meeting is. AUDIENCE MEMBER: Can I add to that -- it's not just for you guys to know what's happening at the meeting today. It's for you to say to someone who also has a hearing loss and might be thinking about coming, look what happened at our last meeting. This is publicity for our netting. A lot of people are on the fence about coming, getting involved. This shows them what we have going on. They might read it and say, wow, I would like to be

involved. Keep it in your purse. If you every meet somebody, you can introduce them to our club. MARLA: Great PR piece. Do you need for me to have the roger pen so you can hear? I want to make sure. By the way, we do have a roger pen on loan still. If anybody wants to use it, it's available. It will go back, however, in June. We need to return it. I just don't want to keep it forever. I don't think it was meant to do that. How the program works is we were given this, free of charge, for our members to use for a month at a time, then they go online and fill out a questionnaire. It's a way for Phonak to get feedback on how well the device is using it. And how you're use of it was, how it performed for you. So they gave this to us free of charge. I know when we had the meeting, what if we lose it or somebody steels it? The guy said, that's the cost of doing business. We want to do this to get the feedback. That's what we're looking at.

If that happens, well, then it happens. You will not be charged anything. It's all kind of an honor system deal. If you do want to take one out -- take it out and right, it is here and available. There are tube videos. Paragraph a good source is our speaker today, Dr. Brad. He knows all the ins and outs for the pen. We have a user here. It's a great product. You might want to try it. Now, without further ado, I want to introduce our speaker. I would refer to him as an audiologist he is an audiologist with the V A health system. He presented to us last year on it's not your grandmother hearing loss. It was a great presentation. He has done this for many chapters. Everybody loves it. We decided to have him come today and just have like a Q & A. So you hopefully have come prepared with questions about hearing loss, hearing aids, cochlear implants, music and hearing loss. Dr. Brad is also a musician. He plays a mean saxophone, which we found out last December. I can appreciate music more with -- when I use Bluetooth. It sounds so rich. I really appreciate that. Dr. Dr. Brad Ingrao. [APPLAUDING] Dr. Brad: What's our audio situation? Are we off the air? MARLA: We're off the loop. We're on the air. Dr. Brad: We're off the loop. I'm on the air? I don't hear anything. BILL: It's all off. TONI: The microphone is working. Dr. Brad: He turned the whole system off. TONI: The loop is off, the microphone is off. Hold on. Dr. Brad: I'll keep talking. Okay, now we have audio. Now we have audio. Okay. So I wonder if there's -- it's not going to make any difference. We're going to try this out and see what happens. Good morning. Thanks for having me. Thanks for not paying attention and notice you changed the time from 10:00 to 9:30. It turned out okay, because Marla was doing her thing. It's good to see some veterans here. Thank you for your service and some friendly faces and familiar faces. I have no agenda today other than to answer any questions that you have. So we'll START -- yes. AUDIENCE MEMBER: We wanted to ask two questions. Pretty much you said the example -- TONI: Okay. Dr. Brad: I degrees -- TONI: We're going to turn off the microphone. AUDIENCE MEMBER: Shut it off. Dr. Brad: Go ahead. I'll use my radio voice and the captioning, and I'll repeat questions. The screen is in the way of the captions. That will work. Can everybody see the captions? Okay. Perfect. AUDIENCE MEMBER: So the question we wanted to ask was the question she was saying, for examples. One is, so my wife has con gentle hearing loss. It's getting kind of worse every year.

What is any suggestion for like a brand of hearing aids for music? We love Karaoke. Second is when it gets to the point that it's really bad if your hearing aid is not a help, is cochlear implant the choice? Dr. Brad: I'm going to repeat the question. We're going to do one at a time. His wife has a congenital hearing loss. It means has been there since birth. And they love Karaoke. Awesome. Maybe we need to bring you guys into the Christmas party thing next year. Wondering about hearing aids and music. That's a tough thing, because the problem with music and hearing aids is that hearing aids are designed for speech. Speech has a certain loudness and pattern, and music has a very different pattern. Singing is musical speech. You're in a little bit better situation. There are several manufacturers who have put a lot of energy and time into allowing music to happen without being adversely affected. At this point, almost all of them get the idea that they can open up their processor without losing battery power. I would say look at Wydex, look at Phonak and some products from Oticon. However, I would encourage you to, as important as Karaoke is to you, remember that if you don't sing as much as you talk, focus first on the talk. Make sure you can hear speech. Make sure you can interact with your family, your friends, your coworkers and then maybe we do the Karaoke. I've seen people get so fixated on one thing that doesn't work, that they'll sometimes sacrifice the rest of it. I think that if you'll look at some of those -- again, the Wydex, has a very wide processor, the new Phonak line is open. They do a very, very good job for speech. I would encourage you to not allow your audiologist or your hearing aid specialist to say, way the automatic will take care of that. You will need some manual controls to do that, but the other thing I would encourage you to seriously look at is, can you also purchase, and maybe you don't buy the Cadillac hearing aid. Maybe you buy the -- I don't know, the Nova -- the good solid hearing aid for speech and then you get an assistive listening device. It doesn't have to be a very expensive Roger Comolli. It could be something that you could couple your hearing aids to, and so make sure your hearing aids have a T-coil. Make sure you have it enabled. And very possibly, you could -- it could be as simple as a neckloop and a cable and a Y-core that you can patch into the Karaoke system. Instead of trying to hear through the speakers, you get a direct feed up to your hearing aids. So be a little bit creative. Find out a little bit more about what the output systems of the Karaoke machines look like, and challenge your audiologist to be able to help you plug your hearing aids into that system. That may also help quite a bit. In a bar in a noisy place where the speakers are far away, you lose a lot of quality immediately. If you can get somehow tied into the system, then the hearing aid doesn't have to be that special. You have a clean line in. That's number one. The second question was, if the hearing gets to the point where hearing aids no longer help, are cochlear implants the solution? Currently, yes. They are the solution. They are a very good solution for the majority of people. Some of the things that we're noticing at the V. A. In terms of who does better and who does better faster, are people, regardless of how bad their hearing gets, who consistently use hearing aids right up until the surgery. Also, people who don't wait a long time to get their hearing aids. So we have one gentleman who was implanted five or six years ago, he's in his late 80s. He's not -- AUDIENCE MEMBER: I'm sorry to interrupt you.

It goes with his question. Because like for my situation right now, is kind of like I'm going to lose -- I'm at that point get to go to the implant, take medication, trying to boost it up. If he's, then it kind of goes down again. My question is, when is it to the point where you are a good candidate for implant? Dr. Brad: Okay. I'll come back to that in just a second. So this gentleman, gentleman number 1, waited 25 years to get his first hearing aid. And then, there were 10 years where hearing aids didn't really help him, so he stopped wearing them. He's still struggling 5 years after the implant to do well. Another gentleman got hearing aids very quickly after losing his hearing, because his wife said get hearing aids, and he said yes, wife. He wore them even until he was not -- by the barely getting any benefit, but he kept wearing the hearing aids. We activated him. A month later his wife came in and said we finally have a normal conversation. Wasn't perfect. He's about 50 or 60% understanding in about 3 months. But he was 0% before the implant. It's huge to make sure that you get sound into that brain. I'm going to jump over here and I will jump back. So when do you meet the criteria? Well, you have to get evaluated. The criteria is set two ways; the FDA, the food and drug administration, when a company says, we want to provide this implant, they must provide the research that said, if we put this implant on these people who started here, they do better. Okay. And then, the insurance companies get involved. So there are -- specific criteria for medicare, and then your insurance company may have different criteria. In the V. A. Currently our criteria are 50% or worse in the worse ear for sentences of a very specific test, called the AZ buy bio. Not your regular hearing test, and really, it doesn't matter what your audiogram looks like. We're not looking at that. We're look at your word understanding. You can't have better than 60% in the other ear. Now that criteria is a bit more open than a lot of insurance companies. A lot of insurance companies are still at around a 40% criteria, but you have to have a cochlear implant evaluation. You can't go to your local audiologist and say, am I ready yet. Most don't have experience. So if you feel like you're not doing well with hearing aids, you're struggling, you're adjusting, you're adjusting, you're adjusting and it's not getting better, ask for a cochlear implant evaluation. Get a good night sleep, because you will be very tired at the end of it. You're going to really work your brain. If you meet the criteria, by definition, the hearing aids are no longer providing adequate amplification, you are now ready, from an audiology perspective for a cochlear implant. That's how you know. You have to get tested but the right test. AUDIENCE MEMBER: Okay. Only the audiologist point of view or the medical -- Dr. Brad: So that's the audiology point of view, and then from the medical side, you have to be able to withstand approximately 2 hours of general anesthesia. You have to have a CAT scan. In the V. A., our process is we see somebody in our clinic who has been having difficulty, we do the cochlear implant evaluation. We determine that they meet the audiology criteria. The first thing that we do is we send them to come here. We give them a list of all of the HLAA meetings in southern California, and we make sure they have a T-coil program. We send them to the meetings. I say, I'm not going to said in on for surgery until you have spoken to at least two people who have cochlear implants. They go to the meeting, and they come back, and then we say, okay. You

still want to do this? From my perspective as an audiologist, you should do this, but I can't tell you what to do.

Then, if they say yes, I want to do this, we put an order in to their primary care doctor to make sure that they meet all of the medical criteria that the anesthesiologist wants, and they get the CAT scan. Then they don't need to see me for a while. They go and do all the medicine stuff. They see the surgeon who looks at the scan and talks to them and says you're good to go. Now, usually before -- when they say, yeah, I want to go, before we send them off to medicine, we talk about which product they might want. We talk about the benefits and the features of all the external stuff. I rarely give my opinion unless it's a person like somebody who didn't wear hearing aids for 40 years and they're 95 years old. There's a couple -- we have a few products that get people going a little faster. Or if they have a history of a hearing aid that they really like, we may recommend an implant that's a little bit more compatible. Generally, it's up to the patient. Ultimately, it doesn't really matter that much, because all of the manufacturers and all of the products out there, if we look at your performance a year out from the implant, they all kind of average out. There isn't a best implant. There isn't a worst implant. There are three companies that have implants that are proven by the FDA to make you hear better. Okay. The FDA is -- I don't second guess the FDA. They do a very, very tough analysis of this stuff. If somebody says I want a really, really small invisible implant, I say, okay, a cochlear called the Canso. I tell my surgeon, I don't really care what you put in this guy's head. We'll make it work. That's our job. You provide a good electrical opportunity. I will provide the opportunity for hearing, and it's my job as the audiologist, after the surgery, to make the adjustments, to make sure that we find the package of sound that works for you. That being said, everybody who gets an implant needs to understand they are not going to hear great for the first several months. I am a pretty -- I'm low-baller when it comes to -- I say if everything is perfect, if you come to me under the age of 60, having worn hearing aids consistently from 1 or 2 years since you noticed the problem right up until today, and you're willing to do some exercises on your own, and you have a good attitude about it and you use assistive technology. If you do all of those things, then I expect that you will probably get around 85 or 90% understanding of words in quiet in 9 to 12 months after surgery. You will get to about 60 or 70% in noise in around 12 to 18 months. And noise will continue to get better but never get as good as quiet. Now, if you use assistive technology, you can compensate for some of that, but we're looking at a 1 to 2 year process for the majority of people. The reason I say that is, because most people aren't the ideal candidate. Most people have had bad hearing aid fittings for a long time. They've been under-fit or gave up on hearing aids, or they waited a long time before they got their first. When I look at sort of what's the average, I'm trying to give you a realistic opportunity. Many, many people do a lot better a lot faster. You hear about those people. I don't want you to come to cochlear implants thinking you are going to hear on the phone in two weeks, and be disappointed and say I don't even bother with this thing. I want you to think -- I'm investing a year of my time to really re-train my brain. The analogy that I use is if somebody picked you up and dropped you in a

country where you never spoke the language, and no one speaks your language, in about a week you'll know where the bathroom is. You'll be able to get to the bathroom and get food. But for you to have this conversation in a completely foreign language will take you a year or two. So the happy story is we have people who do much better much faster, but we also have people who take a longer time. There is no absolute age cap for cochlear implant implantation.

It depends on your health. Now, there are some facilities who say, we don't implant over 80, or we don't -- It's -- You kind of have to deal with in the individual center, but from the surgeon's perspective, all the surgeons that I've spoken to, they just want to know that you're not going to die on the table. If you're not going to die on the table, and they can see your cochlea on a CAT scan, there's no reason that you shouldn't have that. I look at it from a different perspective, because many of our veterans come to us for implantations in their late 80s. Some of them say I might only be around for 5 years. I say don't you want to have meaningful conversations for five years? I'm not going to tell what you to do, but if you could have a conversation with your wife that you haven't had for 30 years in the last 5 years of your life, it's kind of worth it to have a headache for a couple of days and do some work. And most of them are saying, you're right. It's working. So I would say you need to get a conversation started with your regular audiologist to START to make some connections with a cochlear implant program so that you can get evaluated and at least get a baseline. At the V. A. When we see somebody in your situation, we do a baseline. If you don't meet criteria now, we see you in six months. If you are getting closer to criteria, we see you in 3 months. The cochlear implant evaluation process, no offense to anybody out there who -- doesn't need to take 4 hours. We can get all the information we need to determine if you meet the audiology criteria in under an hour. It's not hard in a clinic to say, I'm going on see you every 6 months and keep redoing this test. Once we have people who have implants, after 3 months, we do those tests again every time they come in. I need to track their progress. If you're efficient -- People walk in after having implants. They first they do is sit in chair the push the button and say the words. Before I do anything else, that's what we do. Where are you right now? Something's wrong, and then we address it. AUDIENCE MEMBER: Thank you. Dr. Brad: You're welcome. AUDIENCE MEMBER: While we're on that topic, do you -- do they test with hearing aids and see how much gain the person is getting? Dr. Brad: Yep. AUDIENCE MEMBER: And if they are not getting much out of the hearing aid they're using now, is that criteria -- do they try to get -- fit you with another aid that might be better? Dr. Brad: That is a very mushy topic. The criteria assumes something called best-aided condition, which is not defined. For 25 years I've been trying to ask people to define best-aided condition, and I -- my interpretation of best-aided condition is, that the hearing aids are set so that they meet acceptable fitting formula and can be verified with real ear measurements to allow that person to hear conversational speech at the level that we're going to test them at. So when somebody comes to me, I -- the first thing I do is we test their hearing and we set their hearing aids to make sure that they meet that criteria. And then, if they have never had this that --

they so, whoa, this is so different, I send them home for a month to wear the hearing aids in the best condition and get their brain working on it. Then they come back and we do the test. The test is very specific. It must be at 60 decibel sound pressure level at 1 meter in a sound room. And so if I don't know that those hearing aids can allow you to hear speech -- Now, some people can not get to the target values. There's just nothing we can do. Their hearing is that bad, but we have to try. Most cochlear implant programs have loaner hearing aids that are powerful, so if you don't have hearing aids that can get you there, we will loan you hearing aids for a month, hopefully. Some will just put you on them and go. If you are really out, gone, and it's a no-brainer that you meet the criteria, we know it based on a lot of other things, but we certainly try the best we can to create an opportunity for a non-surgical solution to work for you. We do that in the V. A. It's kind of a multi stage process. We see somebody struggling, we get the best now. We get them a Roger pen. We get them working on maximizing their auditory hearing. If we have to, we jump in. Yes, Bob. AUDIENCE MEMBER: There's a question Congress for over the counter hearing aids, you of any comments about over the counter. Dr. Brad: I have a lot of comments about over the counter hearing aids. My biggest comment about them is I do not see them as a threat to my profession at all. Here's why I don't see them as a threat to my profession: When I look under the hood, I'm not talking about the \$19 piece of garbage hanging on the peg board at CVS. I'm talking about the 2 or \$300 over the counter hearing aids that we're talking about. When I look under the hood of that hearing aid, that sound amplifier, it's not a hearing aid, is it as sophisticated or more sophisticated than the premium hearing aids I was selling in my practice in 2000, 2001, 2002. Now, if back then I looked you in the eye and I said, Bob, this is the best hearing aid on the planet, give me \$6,000, why wouldn't I want you to have that same hearing aid? It's the same hearing aid. Now, here's the reality, as I look at my process as an audiologist, I really don't need to know anything about audiology to fit the hearing aid so that it meets most of the criteria. I'll give you an example: In most hearing aid, Phonak, Siemens, I can do a hearing test through the hearing aid through the software. So here's an interesting concept. Imagine if you will, I go to the apple store or whatever, I buy a hearing aid. I bring it home and the instructions say find the ear -- rubber ear tip that fits your ear and they put it in your ear. Now, the hearing aid can do something called reflect Tom tree, it can send a sound into my ear canal and wait for it to buns back. Now, the average adult ear canal has a certain length. If this thing comes back and it's really short, the software could say, you know what, you might have some wax in your ear. You better go get that checked out. We're going to stop until you figure that out. We don't proceed until the computer says, I'm looking at what's probably a normal ear canal. So now we answer the question of, people are going to buy hearing aids when they don't need them. The software can do that. You're going to put these in and you're going to pair it to this thing you will wear around your neck. Now -- as soon as you pair it, that little thing will in stall the software on your computer or your i-Phone. It will say, okay, the first thing we're going to do is make sure you pick the right ear tip. They do a feedback test. I do this in my office. I click the button. You can

click the button. Then we do a hearing test. Unlike most hearing aid fittings, I can be sure your threshold and your discomfort levels so we never make sure it's too loud, and then we can say, Bob, have you worn hearing aids? No I haven't. Turn it down 20%. Bob, how old are you? I'm 65. In 60 days, we're going to -- And these things all can happen, and all are happening. The argument from a lot of audiologists is that you need me to protect you are kind of ridiculous. What about if brain tumor, everybody is worried about that. You might have a tumor. If you have a tumor, one ear is going to look like this. The other ear is going to look like that. The software is going to say, whoa, Bob, your right ear is bad and your left ear is not so bad. We're going to stop and you're going to go to the doctor and figure this out. They will give you a code. When you type in the code, we'll finish fitting you. All of that is possible. In fact, I will argue that all of that will provide a more consistent hearing aid fitting experience to more people, because most audiologists don't do all of that. They kind of do. They kind of don't. A lot of people are blaming hearing aid dealers. I used to train audiologists, a lot of audiologists take a lot of short cuts as to hearing aid dealers, but they don't take short cuts because they want repeat customers. People who have poorly fit hearing aids are not good repeat customers. I think they're the best thing on the face of the earth. With proper development and proper management, they can be as good or better than the stuff you're going to spend a lot more money. I'd be willing to bet you if it's \$30 instead of \$6,000, we might be able to provide more access. So I'm all for it. Wait until Samsung starts making it. They have a patent. They will be coming out. AUDIENCE MEMBER: One more question on cochlear implant. We heard a rumor of cochlear implant, because it's not natural, it has this kind of a robotic sound. Is that true? Dr. Brad: For the first little bit, yes. Now, here's the interesting thing about the cochlear implant, it's attached to your body. It sends information to your brain, and so when you first wear a cochlear implant -- when we first activate a cochlear implant, when I say, when the sun light strikes rain drops in the air? It might sound like a robot saying that. After 6 or 7 repetitions of that, all of a sudden, that's the new normal. So the brain learns, hey, you know what, I have a choice to make. I can focus on the fact that this sounds different or I can focus on the fact that hey, I understood all of those words, and I haven't done that in 50 years. I guess it's okay that it sounds different. I would say talk with people who have implants. Ultimately, your brain adapts to what it is, and that becomes the normal. Would you agree Toni? TONI: Yes. I wanted to point out that there are many people in this room that have a cochlear implant. So raise your hand. Marla has Advanced Bionics. She has two. Lori has MedEl. Gail has Cochlear America. Tracy has MedEl. I have a MedEl. There's lots of people here. After the meeting, talk to all of us. I can tell you right now I've had my cochlear implant since 2011. I don't hear robotic or anything. AUDIENCE MEMBER: Does music sound different? The music question? TONI: The truth, music -- when I was in high school, and I grew up with, I hear just fine. New music is something I'm just learning. I have to learn the music, but if you give me some rock or Ben son or Mick Jagger. I'm all in. Does that answer your question? AUDIENCE MEMBER: First of all, to this couple here, they have a lot of online cochlear

implant experiences, and they go on there. You can ask a question about the robotic sound. How do you listen to music? So they've got all ideas. I got a lot of ideas about music from online and from the rehab, and I love music. I grew up with music, and that was really hard for me to give that up. So I tried listening to my CDs in the car and knowing what I look at or go see a band, and it just wasn't sounding right. It just -- I was determined, so I looked at youtube videos with the implant. I tried the T-coil. And eventually, after several months, after three years, I hear great. Honestly, I could cry how wonderful the guitar riff sounds and how, again, I can enjoy music. So you got my heart, because music was a big deal to me, and it's great. I never thought I would be able to hear again. I went deaf completely. The cochlear implant -- I'm out there rocking and rolling with Toni, not the new stuff too much. My brain has to really get used to it, and I don't care for it too much. I can understand it. There's so much hope with the implant, the music. AUDIENCE MEMBER: Got it. Thank you. Dr. Brad: If you look -- Google me, or search my name on you tube, there is a video of my music talk that's captioned. Check it out. It might help. Other questions? Yes? AUDIENCE MEMBER: If you have a cochlear implant and you have a hearing aid on the other ear, won't you hearing aid help out with the cochlear implant? Dr. Brad: So it depends. There's no evidence that says that a cochlear implant and a hearing aid are going to fight each other, really. There's a little bit of a difference between how the sounds process, but when we look at the data, and this was the early data of looking at doing bilateral implants, what they found was, if you have one device, you don't do as well as if you have two devices, but the difference between a one implant and one hearing aid and two implants wasn't statistically significant. If you talk to a lot of people who have two implants, their experience is very different, because what's left of their ear for hearing aid use may be really less, and they get more with the second implant. There is one company Advanced Bionics that has a partnership with Phonak hearing aids. So what happened was, they -- they got -- both got bought -- they're owned by the same company. They took one of the hearing aid chips and they used it in the cochlear implant processor, which allowed them to create a hearing aid called the Naida link. That they modified so that it's on the same processing speed as the implant. So when you wear the Naida link hearing aid with the Naida sound processor, they are really meshed well together. Other manufacturers have agreements to share accessories. Cochlear Americas and resound hearing aid can use the same one microphone or TV device or something like that. Of course, if you have a T-coil, you can use anything. That's been Med-el's approach. We want your brain to get information from both sides. Unless there's really zip happening on the hearing aid side, I usually can't find a degradation, a loss of function. Now, that being said, it's going to depend on where you are in your cochlear implant situation. So typically what we do, when we do an evaluation after the implant is I'll test you with just your implant, and I'll test you with your implant and your hearing aid. Now, the beginning, when you're learning how to use your implant, you're hearing aid is still your preferred method. Your brain likes that ear. You might do a little better with the hearing aid side. Or the addition of the hearing aid is really big to the implant. As you're

implant becomes your better ear, which is what happens in almost every case, then the hearing aid is just a helper. So I'm strong advocate of not taking away a hearing aid in the beginning, especially for my veterans, because they're coming into cochlear implants not as children who have to learn, but they're coming in as people who have lost the ability to communicate. I want to get you back on -- that's why we do the Roger pen and all that stuff out the gate. I don't want you fighting. My approach is a little different than a lot of people. I'm not trying to prove in a laboratory exactly how fast you're going -- I want you to get back -- I want you to stop

taking the trash out when she says know mow the lawn. It's not going to fight. It's going to take your brain a little time to get used to. The biggest challenge with people who have really bad hearing is having that conversation with the surgeon, or am going to do the good ear or the bad one? One ear is usually better. My approach is a little bit controversial. If you're older, if you have had much worse hearing in one ear for a long time, I'm going to ask you to take a bigger risk and do the better ear. Here's why, if this ear has been out to lunch for 40 years, it's going to take a really long time for it to come back with the implant. If this ear has been right on the edge of being a candidate and then just starts to fall off, I want to implant that ear right now and get it back up here. Very scary, but I want you to talk to people who have done that, because your brain and your ear, that channel is in better condition on the better ear than it is on the bad ear. Yep? AUDIENCE MEMBER: If you are going to do an implant on June the 1st on my worst ear -- my other ear is pretty good. I can -- no problem with it. What I was figuring after I got the implant, and I'm using it, I figure that my hearing aids, talking to you, and with my implant, or I hear a sound, dog bite or something, this knows what it is. This one will figure it out. This one will be down -- Dr. Brad: It will figure it out. It will figure it out. If you feel like you want to give your implant a boost, take the hearing aid off a couple hours a day and just do some listening practice with the implant. Again, depending on how we do this -- Are we going to do this at the V. A.?

AUDIENCE MEMBER: Yes. Dr. Brad: You have no idea how bad -- you have no idea how bad my memory is by Saturday morning. I'm shot. But, yeah, we -- we're going to make sure that you have the right hearing aid to go with it. What we do, if somebody comes to us wearing Phonak, the Naida hearing aid, we replace it with the old one with the meshed hearing aid. It will be good. It will only cost you 2 more years of bootcamp, but you'll be fine. Yes? AUDIENCE MEMBER: I found out I have 50% comprehension in both ears roughly. I could be a candidate for a hybrid. What is their reliability, and what would be the standard that would be good for me to have one or not? Dr. Brad: Well, so -- there's two questions to ask about the hybrid, the hybrid is a hearing aid and a cochlear implant on the same ear. So it's a -- cochlear implants are really, really good for high-pitch hearing, middle and high-pitch hearing, not great for low. High hearing. Hearing aid are really good for low and middle but not high pitching. If your audiogram looks like this, and your hearing up to 1,000 hertz, I would say, no worse than 30 or 40, then maybe that's a good hybrid candidate. A lot of people look at that, and say, we've got to do the hybrid. About 40% of

people who have hybrid -- who get hybrid implants, even with steroid treatments and everything else, if we look at university of Iowa's data over 15 years, about 40% of people will lose enough hearing over the first year so that we end up turning off the hearing aid component and we turn it into a completely electrical system. There's no risk because even though the electrode is slightly smaller, we can adjust it so that it responds to the full frequency band. So if you START out with some auditory hearing plus the electrical hearing, and then that hearing changes, we just change -- we move the hybrid point over. Eventually if it turns out that you don't have enough hearing left, and we go all electric, we just unplug the speaker and you have an implant. It's really no big deal. When I look at it, I want to look at where you are right now and what your hearing has looked like over the last say 10 years. If it's been creeping down, I don't know. I also want to look at the bigger picture. If you're right at 50% for the C and C words, and you've had a really long good hearing aid history, then I think that's probably a good person to go hybrid with. If you are kind of on the border line, but you didn't have a great hearing aid history and you were older, I might advise let's do a regular implant, because you know -- a lot of people are all excited about the hybrid because it's new and different and this and that. If you have a hearing aid on the other ear, you're going to get the same overall benefit. Something to consider for sure, but I think the reality is that if you're meeting that criteria, you're not -- 50% is not very good. AUDIENCE MEMBER: Okay. Dr. Brad: That means that half of everything I say to you, you either don't hear or hear incorrectly. AUDIENCE MEMBER: That's right. Dr. Brad: Right? AUDIENCE MEMBER: Yes. Dr. Brad: An implant, either a hybrid or traditional implant has a very high likelihood that you will hear better than that a year after you get the implant. So I mean, have the conversation about the hybrid, but it's a product that a lot of people are excited about and they're pushing. Look at the long-term data. Look at your hearing loss over time. Talk to some people who had it. We have one veteran at the VA did a hybrid, because they were all excited, over the first year he lost enough hearing we disconnected it, just the ear piece, now he has a fully electrical system. No big deal. AUDIENCE MEMBER: Basically, what you are saying is if you have one hearing aid and one implant, you are kind of a hybrid anyway. DR. BRAD: Yeah, you are a bimodal person. You are not a hybrid on one side. AUDIENCE MEMBER: I have a question, the leading manufacturer of hearing aids. Dr. Brad: Yes. AUDIENCE MEMBER: Are they here in the U. S.? Dr. Brad: When we talk about major manufacturing, we're talking about the big six. AUDIENCE MEMBER: I have Oticon. Dr. Brad: Of the big six, one is a U.S., the Starkey. Oticon is a Danish company. ReSound started as a US company and got bought by a Danish company. Now they're kind of a mish-mash. Siemens is a German company. They created a new division, because it was so small, they call it Sivantos. Made a new product called Cigna, still German everything. They didn't want to be in the hearing aid business anymore. Phonak is a Swiss. Wydex is Danish. I want American made. Okay, great, Starkey is good. They have good technology. They have some limitations, as do everybody else. There's some smaller companies that are US made, that are kind of, I think that -- they're like second tier company because of the size and the access to product development. They have 5 year's

ago's technology and a good option for people who are budget-minded. They're still good hearing aids. There's a couple of them in Florida and a couple floating around. Starkey has done a interesting thing, they've created private label. New ear and things like that, that's all Starkey. Phonak did is same thing with Connect Hearing. In an attempt to basically get us audiologists to sell more hearing aids, they realized that we won't, so they're doing it themselves. So they all now have store-fronts. If I was in the private sector, I would be competing with my vendors directly. Personally I don't care. I want you guys to get good hearing aids at a good price with good service. If I have to go work for somebody, then I will work for somebody. Yes?

MARLA: My question is, I have an almost 90 year old father who has been wearing hearing aids probably for the past 10 years. 8 years. One of them just died, and he's going to need to look at something else. Now, the problem is hearing aids have become so small, and he's got these big hands, and he's so aggravated at trying to change batteries and all of that. The tubing is so much smaller than my ever was. It's aggravating trying to handle them. Dr. Brad: Sure. AUDIENCE MEMBER: I was looking at probably -- we've got an advertisement from iConnect [phonetic] to try the new Phonak rechargeables. I was thinking that would be a good option. You can't get a good sized hearing aid better for him to handle. Dr. Brad: You can. Rechargeable. They make 675 size battery hearing aids. MARLA: Really? Dr. Brad: How bad is his hearing? MARLA: Moderate. Dr. Brad: You could still do it. Phonak makes a 675 battery, behind the ear. Resound makes one and Oticon makes one. The rechargeable. We're doing a lot at the V. A. We have a lot of veterans that have injuries that preclude them from dealing with nap it's been a good hearing aid. The downside to the BR, the first one, the ADO does not have a T-coil. The Bolero that just came out has a T-coil. For a lot of my guys, I prefer a receiver in the canal, the wire in the speaker instead of the tube. The tube is a lot of maintenance. If you are good with that, then the new Bolero. MARLA: What if you have a lot of wax? Dr. Brad: If you get a lot of wax, I would probably do a standard ear mold. It's easier to keep clean. The Bolero tube and ear mold, easier to clean. Pull it off and clean it. Soak out the wax, shake it out and stick it back in. AUDIENCE MEMBER: In your experience with your patients, what is the best hearing aid brand that you would fit them for a reverse slope? Dr. Brad: Best for reverse slope? Not so much the brand. It's more about -- at this point -- It's really about the audiologist, quite frankly -- AUDIENCE MEMBER: I'm on audiologist number 9 at this point. AUDIENCE MEMBER: What is the reverse slope? Dr. Brad: So a reverse slope -- I might have a slide. Let me see if I have a slide. I might have a slide. I don't have a reverse slope. So a reverse slope, most people's hearing is -- if you were looking at your audiogram form here. It's pretty high up on the left side, and then it goes like that. That's a typical slope. We typically lose more hearing in the high pitches than the low. A reverse slope is the opposite. There's worse hearing in the low pitches than the high pitches. Here's the challenge, if we look at speech, all of the -- 67%, roughly, of the understanding of speech comes from the high pitches. So the vowels are not important at all. In fact, if you listen to a recording and you remove all of the information below 1 thousand Hz, you will probably still under

it. If you remove half the information above 1,000 Hz. You won't understand a thing. When hearing aid companies developed their way of amplifying, they put a little bit of emphasis on the low pitches and a lot on the high. The probably we have is now hearing aids of the premium side have 20 frequency bands. The low frequency bands are fewer and wider because it's less important for the average person. The higher frequency bands are more -- are more in number and narrower. So I think -- you're looking at a 20-band deal. I've had good success with both Oticon and Phonak in terms of one giving me the ability, but it comes down to the audiologist understanding that they're going to have to manually manipulate the compression in the low frequencies because your hearing is behaving very differently than the average person.

AUDIENCE MEMBER: My audiologist called Dr. Neal bow man. They locked through. They're still not -- Dr. Brad: You've got to remember -- I love Neal to best. His doctorate is in theology not audiology. He has a reverse slope hearing loss. He has a lot of experience in one reverse slope hearing loss. So -- AUDIENCE MEMBER: It's hard. Dr. Brad: It's really hard. AUDIENCE MEMBER: No matter how he set it. Because of my -- the high pitches, I was out in public in stores. Dr. Brad: Have they measured your hearing for what we call UCL, uncomfortable loudness for each pitch? AUDIENCE MEMBER: I did an uncomfortable testing with the audiologist I'm with now. She's in Corona del Mar. Dr. Brad: For every pitch. AUDIENCE MEMBER: I don't know. Dr. Brad: Ask her to do it through the hearing aid. AUDIENCE MEMBER: It wasn't through the hearing aid that we did it. Dr. Brad: Here's the thing, tell me when my voice is too loud, that's going to be an average of all the pitches. When we look at the output of the hearing aid, it's going to be very specific. What I will typically do -- I do this with a lot of veterans, a lot of veterans, because of their experience, the way their brain interprets sound has changed, and so they have a hype awareness to certain sounds. I'll measure through the hearing aid their audiogram first, and then I'll say, okay, now we're going to listen to louder sounds. I'm going to make it louder. You let me know when you are ready to punch me in the nose. You do that for every pitch. AUDIENCE MEMBER: It's not a fun test. Dr. Brad: . No, it's not. If you do that and plug those numbers into the real ear system or do the fitting from that -- what they call in situ audiogram, then the hearing aid will set itself so that you never hit those numbers. That's the challenge. In the high frequencies, you probably have to have a very, very low, that they call MPO, maximum power output. In the lower you're going to need more room. It's tricky. It's trick your. Talk to me later. I'm happy to talk to your audiologist. I think we can make this work. AUDIENCE MEMBER: Thank you. AUDIENCE MEMBER: A little confusion, hybrid, you said hearing aid low to mid because she needs help on the low side. Doesn't the hearing aid kind of cover that part? Dr. Brad: In a hybrid, yeah. From a certain frequency, it's all electrical through the implant. Below that, it's through a hearing aid -- so the speech processor is also a hearing aid. So you get -- you get electrical simulation through the coil, but you also, then, get stimulation of auditory sound through the ear piece speaker. AUDIENCE MEMBER: I just wanted to add something to the music people. I was deaf in one ear. I got the cochlear implant. What I did, I couldn't get used to like Brad said, such a different sound, the

hearing aid is from the implant side. So what I do is when I do listen to music, whether it's live or mostly through the T-coil of my cochlear implant, that's when I put the hearing aid in and I put both of them on T. What I do is get a stereo effect. If I don't have the listening device on T-coil, If I don't have the hearing aid or T-coil, I couldn't quite get used to it. Sometimes I keep it in there so I don't -- keep that nerve alive. I'm using it every time I listen to music, so I do get the hearing on that side.

There's so many options. That's something I do. AUDIENCE MEMBER: Thank you. Dr. Brad: Sir, you had your hand up? AUDIENCE MEMBER: I had a couple of questions. Steroid treatments for Meniere's Disease, is there a risk. DR. BRAD: The disease -- It's not really a disease. It's a syndrome. What's actually happening is something called -- you're going to hate me -- endolymphatic hydrops. It's the fluid of the inner ear. It is in the hearing component and the balance component. If this disorder increases in pressure -- we don't know whether you make too much or you don't reabsorb enough. For some reason there's too much fluid in that continuous loop. The coils of the cochlea, the inner ear, and the coils of the balance system are connected. If there's more fluid, it has to go somewhere. The pressure has to go some wear. Unfortunately, that entire system is encased in bone. It can't push out on the outer walls. What it does is it pushes on the soft structures inside. Now, depending on exactly her the pressure is, it pushes on the hearing portion, and because the cochlea, if you were to stretch it out is a big long triangle and the top part is narrower, if it pushes on the cochlea part, all the pressure will end up on the top where you hear low pitches, which is why with that disease, you have low pitch purchase. If more in the balance section than the hair cells and the part of the balance system that notice movement gets slammed, and you get dizzy and you fall down. Typically the steroid treatments are more for other types of sudden hearing loss. But they can do for some people with that, is called a peritympanic, they're go into the middle ear by going -- put a needle through the ear drum and fill up the middle ear with something like prednisone. The idea is reduce the swelling. It's -- long-term steroids, there's risk to them. They're tough on your body. Typically what I see is 2 maybe three injections with audiograms in between. If it's primarily a balance problem with balance testing in between. If no results happen, they'll switch to an oral steroid and wean you off. You don't want to be on high-dose steroid for a long time. That being said, I'm not a physician. Talk to your physician about the specifics. They should be monitoring why they gave it to you, is it changing and getting better. AUDIENCE MEMBER: As they're giving it. If he says three weeks, once for week. There should be testing done in between. Dr. Brad: There should be testing done at the end and also in the middle as well. If the primary report was vertigo, then you could use some self reports to say -- the problem with Meniere's if it is that, 9 times out of 10. 99 out of 100, I never see it when you're in my office. If you are having a vertigo attack, you're going to cancel your appointment. You're not going to come to a test where I am making you more dizzy. There is an AVR electrocochleography. C-o-c-h-l-e-a-o-g-r-a-p-h-y. Where, what we're looking at is the electrical potential of the auditory

system. Put some stickers on and ear phones in. There's a very small window of time, a couple of mill seconds at the very beginning of the AVR where we can see the actual beginning of the stimulation of the auditory system. There's two numbers that I'll measure there. Depending on the ratio, you'll probably have hydrops or not. There should be some monitoring going on in there. A lot of times what happens, especially if more of a general ENT, they'll do the injection. That's what the procedure is. Then they'll say are you any better? Yeah, I feel much better. Good. At the V. A. We do pre, middle and post only audio grams. If a vertigo patient, we'll do -- basically a modified balance test.

AUDIENCE MEMBER: Okay. I have one last question. The implant, the cochlear implant, once it's in, that's it, right? Or can it -- Dr. Brad: Well, a long time ago, we used to say once it's in, it's in. It was a real headache to get these in. The current surgical are less invasive and destructive. In certain cases, but very rare cases, in's a major failure of the internal component, they can explant it and put another one in right away. Very rare, because the failure rate is very, very, very low. The only other time I've seen ex-plantations is when somebody develops an infection after surgery. In order to make sure the infection is clear, they may explant the device for a couple of months, go back and do CAT scans and make sure a viable cochlea and re-implant that cochlea or another one.

AUDIENCE MEMBER: With the implant for all the three major manufacturers is pretty much the same. It's the outer device -- Dr. Brad: Not really. There's some fairly significant difference on the implant itself; however, the real magic is on the outside. The beauty of that is for most people, once they get an internal implant, they're going to be backward compatible to at least 10 or 15 years worth of external processor upgrades. Currently we have a couple of people with really early implants that the externals can't use -- they condition use some of the new externals yet, but the manufacturers are all working on it. That really comes down to power. The early implants were power hungry monsters. The newer ones are more efficient. If you have a really, really early implant, you can only go up to an external now until the manufacturer figures out a way to make that computer work and generate that much power. It may come down to bigger batteries or external batteries.

AUDIENCE MEMBER: Thank you.

AUDIENCE MEMBER: For me personally. I know we hear with our brain. Why is it that I, at least, have so much trouble when I am speaking to someone with an accent. As soon as I hear the accent, I am like -- Dr. Brad: We hear with our ears. We listen with our brains. Accent in speech is really difficult because when we are learning our language, we are learning our accent. And we're -- or the accent that the people around us. That becomes our normal. When you have your normal thing coming in, you are able to tolerate a great deal of noise, of variation. But when something comes in that's way off your normal, your variability -- you can't -- is it -- If I say, I'm from New York, or I say I'm from New York (with accent). If you're from New York or Boston, it doesn't matter because you never say R's. So I understand all of that, right. If somebody comes at me with a middle eastern or a eastern European accent, I don't know where the line is anymore, and I'm not sure is that just original variation of an R or is it something completely else. Paragraph like

people from Scotland, I can't understand them. I met a guy from Wales once, I have no idea. South Boston, the same kind of thing. It's a totally different language. If you have normal hearing, your hearing those variations very accurately. So the chances of you kind of -- there's enough of that -- there 14% R, I'm going no go with R. When you have a sensory neural hearing loss, your accuracy is so bad that you can't tolerate that. It's kind of like background noise. If I have normal hearing, I can tolerate background noise up to about 10 decibels above the level of my voice. So my signal to noise ratio can be minus 10, and I can get by. If you have a moderate hearing loss, you need a plus 24 noise ratio. The quality is so poor. Think about it listening to somebody on the radio, and they have a perfectly quiet studio, and a microphone that's good and they have a good radio voice and everything is perfect, and then the transmission gets a little wonky. You can still hear and understand them. If I'm doing a live report on the street and there's traffic and going, the source -- garbage in, garbage out. That's so hard to process. So accents are making -- they're taking advantage of every weakness of your add story system pap. All you have to do is hang out people from your hometown, or you got to work on it. Now, there's a really interesting point. I have some colleagues in the world of audiology who have heavily accented speech. And people say to me, I don't know where you're from, because you have this very neutral Midwestern accent. Because I grew up around my father from New York and my uncle from New York, and everybody else, and when I decided to have a career in audiology, my uncle from New York, the hearing aid specialist, the piano player looked me in the eyes and said get rid of your accent. People with hearing loss cannot tolerate accents. You have to learn to speak Walter Cronkite. I took that seriously. When I was mentoring students, I have somebody with a heavy accent, a frank conversation, said you can talk Southie all you want at home. When you come to work, you better talk Iowa. People with hearing loss have less tolerance for variation because the quality of their input is more degraded. AUDIENCE MEMBER: Okay. AUDIENCE MEMBER: Very good. Dr. Brad: Questions? AUDIENCE MEMBER: I feel like we're asking a lot of questions. Dr. Brad: Don't ever be sorry. Here's the thing. Self-help for hard of people became hearing loss association of America, I bet you rocky's garage was about this big. A group of people said I've been through it, what do you need to know. Don't ever apologize. That's why you are a part of our family now. AUDIENCE MEMBER: Thank you. Another set of questions is, it's -- so at what point are you considered a hearing -- a person with hearing disability? What kind of benefits are there from the government? Dr. Brad: Okay, that's going to be a little -- there's a little variability by region, but -- AUDIENCE MEMBER: Where can I find information? Dr. Brad: Are you looking for like benefits like social security supplemental security income? AUDIENCE MEMBER: Possibly. Dr. Brad: I'm really not up to date on that stuff. I think most of those -- that data is available through those websites. I would say -- I've done what were called functional hearing tests in New York, when I was practicing in New York, I was plugged into the deaf community. Every year, for whatever reason, the deaf guys who have been deaf since birth had to prove the state of New York that they were still deaf so that they could

get their free pass to go to the park and play golf. And so I had this -- I made a deal with them. I said look, here's the bottom line, I know you're deaf. You have been deaf your whole life. You are not going to get undeaf. This is back in the late 80s and 90s. If you guy pay my green fee force the golf league, I'll do your hearing test. At the beginning of every season, we all lined up in the parking lot. I turned them around. I Larry. Larry. Larry is still functionally deaf. George. George. George, turned his head. George is hard of hearing. Because I already had audiograms on all of these guys for 20 years and nothing changed. I don't know what the current regulations are. It starts out with a really comprehensive audiogram and hearing test. I would recommend that you ask them to provide you not only a traditional hearing -- or a speech test, which is through the ear phones, but if you've got hearing aids through the hearing aids, and a speech in noise test, that way you cover all your bays. Paragraph for some DOT tough, Department of Transportation, for some law enforcement, I have to prove that these people can hear in background noise. Get all of that done, and then when you make your application, you have pretty much the biggest picture that you might need. AUDIENCE MEMBER: This is where I am -- my own personal feelings on this topic. I think we make a big mistake when we call ourselves hearing impaired. I said this before. The then we're assuming the person we're talking to, normal hearing know what it means. They assume it could be, in their experience, it could be their grandma who is 85 years old and now has a hearing loss because she's old. Or it could be a million different things and we leave it out there and we get upset because they're turning around and not talking and facing us. I permanently use the term legally deaf, because I assume that most normal hearing people, who have no idea what I'm talking about, hear the word deaf, and they hear the word legal and they have an idea of where I am. Basically, by the legal definition, I am deaf. Dr. Brad: Right. AUDIENCE MEMBER: I go by that because I'm not deaf where I can't hear anything, I'm legally deaf. That way people at least have a better idea. I find they don't turn around if I am a store or sales clerk won't turn around and talk. I find that helpful for the people I'm dealing with. And that's just the term I go by. Dr. Brad: I want to see if I can find a slide -- Maybe not. Interestingly enough, the. It's my computer doing. TONI: The screen saver went on. The projector got disconnected. Dr. Brad: Okay. There's we go. It's a super low power deal. AUDIENCE MEMBER: Dr. Brad, I wrote a whole article for the hearing loss magazine and they published it, about two or three years ago. Dr. Brad: Fantastic. Let's see if I have the ABC audiogram. AUDIENCE MEMBER: Does anyone use the term beyond hearing -- if you meet somebody and you want them to know you have an issue. What do you say? I'm curious to know what other people say? Beyond I'm hearing impaired? Does anyone use any other term to describe themselves? AUDIENCE MEMBER: I have hearing loss. TONI: I just say have a hearing loss. And then I tell them how I need to communicate. If you would speak a little slower and clearer, I will be able to understand you. AUDIENCE MEMBER: That's pretty much what I do. Dr. Brad: Here's what I was looking for. All right. Here's the problem with the legal definitions of hearing loss. TONI: That doesn't work because the battery is dead. Sorry. Dr. Brad: That's okay. All right. If we use the legal definitions of

hearing loss, we have to understand that they came about after world war two when a bunch of people who got their ears blasted said I can't hear anymore. I want some help. So the lawyers got together with the audiologists, and the lawyers made us say what the top end of normal hearing was. And we agree that it was 25dB. What they ended up doing is saying you want compensation for your hearing loss. We going to take your average hearing loss, and we're going to subtract 25 from it. Because that's normal hearing. And then, because having a better ear is important, we're going to take your better ear, and we're going to count it five times in the average. We're going to take your worst ear and count it 1 time. So we take that average. We subtract 25. So say the average is 45, we're going to subtract 25 from it. Now we're at 20. Then we're going to multiply it by point 15, and that's how much your impairment is. Here's the problem with that, in 1984, a guy named Pasco started to look at kids and why kids with mild hearing loss were failing in school. So he actually measured the amount of speech information there was at different db levels. Here's is what I found out. If your audiogram, if your hearing loss is that green line, then only 10% of speech information happens at quieter levels than that, so you would have access to 90% of speech. Whether you understand it or not is a tote three different thing, but you have access to it. If you have the middle line, 50% of speech is inaudible to you. If you have a hearing loss along the red line, 90% of an average conversation at 1mm is inaccessible to you. Here's a crazy thing, when you go to your audiologist and you have that red line, you have a moderate hearing loss. However, you can only understand 10% -- you can only hear 10% of a average conversation. So the whole disability thing, in my mind, is completely erroneous, because it doesn't understand this. So there's a lot of people walking around with mild to moderate hearing losses that are functionally deaf. AUDIENCE MEMBER: Wow. Dr. Brad: So understanding more about what you can and cannot hear is a better conversation, I think, to have than that, but I think -- and tell my veterans this to. You should seek out every benefit you can. There may be some benefit there. The biggest benefit is a good understanding of your own hearing loss and what it means to you in day to day. There's a great tool that your audiologist could help you fill out called the apha. It stands for abbreviated profile of hearing aid bet if it. At the VA, it's the backside of his our intake form. It was developed jointly by the university of Memphis and the Memphis VA way back in the 90s. It's a shorter version of a 100-item questionnaire that they used to do in Europe. They found the 24 most clinically and statistic I will relevant items, and that's what we do. You answer questions like, when I'm in a grocery store talking with the cashier, I can understand the conversation. And then you rate that almost always, sometimes, half the time, and so there's a 6 or 7 point scale. You indicate the percentage of time those statements are true. And then when we score it, it breaks out and says, your global percentage of impairment is this, but then it says, in quiet environments it's this. In reverberation, it's this. In background noise it's this, and your adversiveness to loud sound is this. We get these cool graphs. Now, what's neat about the APHAB is I can look at it, and I can look at this, and I can see whether you have an ear problem or a brain problem. And quite fangly, it doesn't matter what this

says. The APHAB tells me your experience. How does this quantity of hearing loss impact your daily life? It gets better. It's also been validated for comparison purposes. You come in with a hearing aid that you're not happy with. I have you complete a APHAB assuming you are wearing your current hearing aid. We put a new one on and send you away for a month and you come back and we do it again. Then you can say I don't think these hearing aids are any better. I go I don't know, you have a 45% improve men in your difficulty in background noise. That's pretty significant. We use that as part of cochlear implant workup. We use it as part of regular daily hearing testing, because especially in veteran population, a lot of veterans have extreme difficulty with loud sound. If I see that on the APHAB, I know how to set the hearing aid. It's a tool that's available in the NOAH software platform that all of your audiologists use to program your hearing aids. It's built right in. All they have to do is walk you through it. You click, click, click and boom. It's also cool because it has normative data for different age groups. If you are 50 years and have never worn, I can compare your difficulty to other people in that same group. If you wear hearing aids, I can compare your difficulty to people who wear hearing aids. It's been around forever and very few people use it. It's an extremely powerful tool. When I was in try vat sector, three hearing aids, doing they tests, two weeks in went. There you go, there's your hearing aids. I don't want to buy expensive. Try the cheep. You tell me whether it works. Do the APHAB and come back and we will put you in the expensive one in do that. The numbers tell us. That is a different way of looking at hearing impairment. The audiogram tells us zip oh about your hearing loss. That's how we fit everything. Other questions? Time? Time? Toni is saying shut your mouth. We've got to go. So, I'm going to shut my mouth. And we're going to have lunch. TONI: I did not say that. I did not say that. Dr. Brad: You can ask questions if you want. MARLA: Thank you very much. [APPLAUDING] MARLA: I know you wouldn't accept a gift, but we have a big thank you. Dr. Brad: That works. MARLA: Thank you. Thank you so much. Dr. Brad: Thank you so much. Now I have to look over there. TONI: Lots of smiles. Okay. Dr. Brad: Okay. [APPLAUDING] TONI: Thank you. Dr. Brad: Thank you. MARLA: We had our 50/50 raffle. BOB: We got \$40 this month. We split it and \$20 -- you have a choice of \$20 bill or two \$5s and 10 \$1s. What would you like to have? MARLA: Okay. The last three numbers are 1-4-4. AUDIENCE MEMBER: Me. MARLA: Robin. TONI: Yeah! Can. [APPLAUDING] TONI: Let's take a picture. You can put it back in the jar if you want to. Picture of the winner. Show me the money. Yeah! [APPLAUDING] MARLA: Okay. I hope you all enjoyed the meeting today. We want to say another shout out thank you to Dr. Brad for coming and sharing with us and helping to answer our questions. You have more questions, if you want to meet with some of us who have cochlear implants, we'll be happy to talk to you. Again next month, our netting is going to have Megan. She will be talking about the difference between a cochlear implant and a hearing aid. She's going to be talking about oral rehabilitation. It's important if you are now using hearing aids. You are going to be doing some work if you get a cochlear implant. You will need to do rehab. Don't forget, get geared up for the walk4 hearing. If you are not on a team, we invite you to join Orange Crush. Go online. Get

some flyers over here. Pass them around. Collect donations. It will be a great event. AUDIENCE MEMBER: Are you going to meet in the same place? MARLA: Yes. We meet in this place here. AUDIENCE MEMBER: 9:30. TONI: The meeting starts at 9:30. AUDIENCE MEMBER: We drove an hour and a half to find you. AUDIENCE MEMBER: There are two roads with the same street. Did you know there are two roads named town and country? Two locations. One by the 91 and one here? MARLA: Well, if you go on our website, you get the exact map and directions here. If you go on our website, you get the exact directions that lead to this location. TONI: I take main street and turn on Town and Country. We have to be out of here in 10 minutes. The next group is already waiting for this room. Can we get some manpower to help move some tables and chairs. MARLA: We're having lunch at subway. (11:17 a.m., end of meeting)