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Wed, April 20, 2011 HLAGR presents: **Ask the Audiologist**

Juli Wiseman: Can you hear me? No? Can you hear me now? There we go. Hello, welcome and thank you for coming. This is our first program of the year and it's called Meet the Audiologist. I am Juli Wiseman and I am a board member here. I would suggest that if any of you have a loop connection on your hearing aids you turn it on; this room is looped. Tonight is your night to ask questions of this wonderful group of people.

I want to introduce these people; they all have some things to talk about. Before I do that, if all the board members would stand, I want to introduce you. Way in the back is Marilyn Knol, then Nancy Cluley and daughter Hannah, Vic Krause, Bill Hop, Chris Jacques, and Sanford Freed. Sandy wanted me to let you know there is a bi-monthly magazine put out by the national chapter; we have a couple copies here. It highlights the convention this year.

Also a local school, Shawnee Park, will have their golf outing and a fund raiser for the school. I have brochures on that over here by the refreshments. Feel free to help yourself to the refreshments. The Walk4Hearing is October 9 and last year we raised \$25,000. Our goal is \$30,000 this year. Please join us as a team member or sponsor. Go to the website: www.hearinglossgrandrapids.org for more information. We will be sending out mailings as well.

One more thing. We usually have four programs a year but this year we will have two. The next one will be in November and will feature Bill Barkley and HARC will talk about technology. Look for e-mails and mailings on that.

What we will do is have each of you introduce yourself and tell us who you are with. Then we will start. Anyone who has a question, we will come into the audience and let you talk. Please talk one at a time so the captionist can capture it.

Susanna Love Callaway: Hello. I work with Susan Haveman-Kruef at Hearing Resources. I am originally from Copenhagen, Denmark, and moved to Michigan in 2005. I have a masters in audiology from Denmark and got a doctorate in audiology from Western Michigan. Then I had a baby and took some time off, but I am back full time. I do a lot of hearing screening and diagnostic work from babies to adults. I also do a lot of hearing aid fitting.

Susan Haveman-Kruef: I have been in audiology for a long, long time. I started with the United Way Hearing and Speech Center and moved to the Ear Nose Throat Center. I work with surgeons and audiologists on staff at Hearing Resources. About 20 years ago we started the part of the practice with hearing aid fitting. I am happy to be here.

Karen Jacobs: I am from AVA Hearing Center. I have been in town for many years. I am busy on the national level and served on the executive council. I work with HLAA and the AAA. I have time on my hands right now, but next year I will be the chair of the American Audiology Conference. Come to Boston for that. There are a lot of ways to experience technology.

Dr. Harold Hollander: I work here at MetroHealth Hospital and I have had an interest in audiology and have worked with the ear for a long time. I am pleased to be here.

Pam Keenan: I have two small kids and, unlike Karen, am very busy right now! I do not have a lot of time on my hands but I love to volunteer my services here. I am happy to be here; I have been an audiologist for 18 years and completed my doctorate in audiology as well.

Juli Wiseman: we are open for questions that you may have. Don't be shy.

Guest: can you make comments on Bluetooth, whether it's coming as a standard for hearing aids. I wonder if it's a passing fancy or what is the future of Bluetooth?

Karen Jacobs: it's available and standard on the new product lines. There are several different interface methods. Some use a radio signal, but the T-coil is still a standard. There are better wireless coupling systems now than in the past though.

Susan Haveman-Kruef: we fit a lot of hearing aids with the technology. The last couple years we have done the Bluetooth. It's nice for the connection to computers and cell phones; you can even do it with home phones. It feeds the audio to the hearing aids and gives nice clear reception without background noise.

Guest: is the Bluetooth and T-coil...are there plusses and minuses to each? Where do they stand?

Susanna Love Callaway: I am not sure, but I think the T-coil has a limited frequency response? I think Bluetooth is a very good thing, especially for the baby boomer generation that is technology savvy. You still need the savvy for it. The T-coil still requires less technology. The Bluetooth has more questions that need to be answered.

Guest: more can be done with Bluetooth than T-coil?

Susanna Love Callaway: we can connect more with Bluetooth. We have iPods and phones and all these devices. People want to connect more and more through a hearing aid and T-coil cannot do that as well.

Pam Keenan: I think there are a couple things to add. There is a lot of confusion out there. You have T-coil, wireless and Bluetooth. You still need something to convert

the signal to talk to the hearing aid. It does not go directly to the device. Recently there are devices that you don't have to sync; you have a device that talks directly to the device that attaches to the television where there is no coil or cord around the room. As of right now, every hearing aid device has to have a converter. My patient here has one around her neck. It converts the hearing aids to the cell phone. I don't know if that is clear.

Karen Jacobs: the reason I don't think T-coil will go by the wayside is because it's still very inexpensive to do that. The T-coil does that very well at a lower cost. Many instruments do use Bluetooth. As patients drive the market, manufacturers are more responsive. Some still don't produce certain models with a T-coil and for us that is limiting. We want to utilize the T-coils in the area. With the initiative, that T-coil is an easy way to do that inexpensively.

Susan Haveman-Kruyf: I also ask if people use the loop and T-coil. People often want that as a part of the hearing aid that they purchase. That will be around for a while.

Dr. Harold Hollander: the only concern that some of us had with that is the range. If you look at the Bluetooth and try to sync it to the car, it's proximity dependent. The T-coil is less so. It may have a better use for groups of this sort. My question is what about the cross aids?

Susan Haveman-Kruyf: those are FM wireless.

Pam Keenan: I don't know about that. You run into radio frequency.

Sanford Freed: to move away from the technology to the human interface, I talk to a lot of people who are not happy with the hearing aid experience. When you dig into it, much of that frustration is due to expectations. You are all starting to nod. Please talk about how you address the expectations so they can have a positive experience.

Karen Jacobs: a lot of the problem is that as we age, our brains that have not had normal hearing for a long time so we don't process the information as quickly. Even from when I was in my 20s my brain has slowed. How quickly can you process? You will see that it's not just the hearing aid; the hearing aid can bring in the sound but the brain has to interpret it. No one wants to hear that their brain is slower. We put the blame on the hearing aid. We have to provide them with reasonable expectations.

Dr. Harold Hollander: I talk with my patients about this all the time. A hearing aid is like a condom. When you put it on it may work but it's up to the user. It will fail if not used correctly. I have patients with arthritis, or *otitis externa* or other medical problems that impact their experience with hearing aids. I think that maybe we don't take enough time to explain this as well. I try hard with this. You have to understand that there are underlying problems medically and they need to understand how that impacts the hearing aid use. We have to sit down and explain that or their expectations

remain at that level.

Susan Haveman-Kruijf: you think maybe hearing aids will make everything perfect, but there are a myriad of other things that come in play. A damaged ear does not process in the presence of background noise like a normal ear. Almost everyone can be helped by a hearing aid but not to the same degree. We try to explain from the beginning that this is not perfection.

Susanna Love Callaway: you can tell people about hearing aids not being like glasses that correct for vision. When you see someone with hearing loss you have a product in mind for the patient. In my case I fit a lot of behind the ear devices. Those are not for everyone. They are versatile but don't necessarily meet the expectations of all my patients. I have to dig deeper and see what their needs and expectations are and then fit them for the most effective product, even though it may not be my favorite.

Susan Haveman-Kruijf: as audiologists we hear this, “my neighbor has this hearing aid and they never have any trouble”. They may be a different age or not have the medical issues that the another one has.

Guest: the neighbor could be lying too!

Dr. Harold Hollander: I also see my patients who have had surgery and they come to me without their hearing aid. I ask about it and they say it's at home. They give all kinds of reasons for not wearing it—it's uncomfortable, it hurts, etc. I ask if they brought it back to the audiologist or told anyone. They say they don't want to waste someone's time. Your doctor is there to make sure that you get your money's worth; hearing aids are expensive. If you have a problem, tell someone. You may be embarrassed, but go to the audiologist or doctor if you have a problem.

Pam Keenan: patients think there is a silver bullet out there. Sometimes it can be better with one audiologist than another, but no matter who you see make sure you take the time with the audiologist to see that it's best for you. Make sure they know what your lifestyle is and what your most important situations are. It's very individualized, no two are alike. Make sure you match your needs to your instrument.

Guest: okay, I have a question. I know quite a few of you here. I think I remember you. I went to the place on Burton and ... My question is that I have a sheet here from the Hearing Planet online. There are eight hearing aid types or makers on here. Phonak, ReSound, Starkey, Opticon.... My question is which one is the best and which is the cheapest? My hearing has changed, my hearing aids are older, and I have to replace them. I don't have a job right now and am on Social Security. How do I replace my hearing aids?

Karen Jacobs: all those brands are available in the city and all have comparable solutions to the same issues. But no two brains or ears are the same. It depends on what your needs and expectations are and what your hearing loss is like. There are

programs in town to help you if you cannot afford to replace them. If you are working, you can go through Michigan Rehabilitative Services. They look at your financial situation. If you are retired, they cannot help. Deaf and Hard of Hearing Services had a grant for that. There is a program that you can do on your own, and Lions Clubs run lifetime loaner banks. There are resources out there and the HLAA chapter is a great place to get information. I know you have that information. Those are places to check.

Guest: I have the forms for McDonald as far as making payments.

Karen Jacobs: each company has a payment program. There are resources; no one should go without a hearing aid because there are resources. It's finding the right resources for you. If you have some resources, save these programs for someone who does not. There are programs out there for everyone.

Pam Keenan: did that answer all of your question?

Guest: I have had experience with Phonak. These hearing aids I have now were very special and high tech at the time. They were like \$6,000 because I needed them for my job. Now I just need to hear. Most of the time I can go up to someone and go....[*gesturing*] I can speech read very well, but you have to *want* to hear what someone is saying. If I don't look at you and you say something to me, I have to turn and look again and say, excuse me?

Pam Keenan: you bring up Hearing Planet. The word of caution here is that you cannot police the internet. Be *very* careful what you get and where you get it. A big part of it is the audiologist. If you go to someone who looks at your lifestyle and the health of your ear, there is a trust there. To make you successful with the instrument you need to have a local person to rely on to keep the hearing aid working for you and to make sure you know how to use it. I would caution people about the internet part of that. Make sure you go to a qualified individual and get the whole care, not just the device.

Guest: what about rehabilitation training and things like speech reading and doing your best to hear in situations, especially if I want to learn how to speech read better?

Karen Jacobs: Deaf and Hard of Hearing Services has classes on occasion. There are some online speech reading courses that you can take as well. An oral rehabilitation program that I like is the LACE [*Listening And Communication Enhancement*] program. It's online or on DVD; it helps you make the neuro connections in your brain. You do it every day for 30 minutes for three weeks. I tried to do it and it's difficult. If you stick with it, you will get benefit. It's all about learning how to use the signal from the hearing aid and retraining the brain. Speech reading is great but look into the LACE program at www.neurotone.com You can look into that online. Do it for 21 days. It's hard though.

Susan Haveman-Kruef: they used to have community education classes. At Western they had speech reading classes they did twice a year. I don't know if that is still part of the program but it should be. The students ran it when I was there. It was very good.

Guest: where were the speech reading classes available?

Susan Haveman-Kruef: through Grand Rapids Community College. To reiterate, we do have that type of training that you can do through the computer. Some find it too difficult but some find it very helpful to go through a plan like that.

Vic Krause: One of the real benefits that I get is through the telecoil. I have a hearing loop installed at home around the television so I can really hear the dialog over the music. My church has a hearing loop too. It amazes me that there are so many people that have hearing aids but don't know about telecoils. I don't know why. I don't know if the hearing aids are too small for T-coils or what, but what is your idea on providing information on them?

Susan Haveman-Kruef: that is one of the questions that is always asked at the first visit. We have loops in the office and know many who can install them. Many audiologists I know are real promoters of T-coils. There are more venues here in West Michigan that are looped than anywhere else.

Pam Keenan: that is one of the big initiatives of the current president of the national audiology board. I am a liaison to the national looping task force. A lot of audiologists are copping out. You have to talk about technology. What the task force has done is try to simplify that. They give the information to the audiologist. We have a PowerPoint presentation and all kinds of other information available. They also try to streamline things. You get some faulty installations and maybe that makes people resistant to get on board with the idea.

At the national convention there were many courses to advantage of learning about it. We are very lucky in West Michigan to have what we have because the audiologists in other states just don't have that information that we have. Many audiologists in other states want nothing to do with it. If you have a provider that does not know about them, you need to find someone else. That is how strong I feel about it.

Karen Jacobs: I also wanted to say that the manufacturers drive that. Some have yet to put the T-coil in the product style. We are unique in this area because there is an awareness and demand for telecoils. This chapter has done well in getting out information here, but when you go to Atlanta, Georgia they have no venues. Many audiologists don't talk about it because they don't have it in their area. They don't want to discuss it because so many don't have a loop for the car, the home and community spaces. If you do go somewhere and say you want a tiny style but also a T-coil, if they make you choose between the smaller one or the bigger one with T-coil,

get the bigger one with the T-coil.

Guest: I just purchased new hearing aids and I got them because they are smaller even though they don't have the T-coil. C'mon, I am a teenager! They don't have a T-coil but they work well. I went back into the office and I asked, "are there a lot of other programs out there?" How do you feel about that as opposed to T-coil?

Susan Haveman-Kruef: do you mean different settings for different environments?

Guest: the one I have has a program where the microphone rotates in the car so you can hear everyone.

Susan Haveman-Kruef: some people like that but some find it difficult to use. You are young and in a ton of different environments and have a lifestyle need, but any hearing aid that you get you want on a trial basis so you can use it in different places. It depends on the patient, but the technology is amazing.

Susanna Love Callaway: I had one patient who was an engineer and wanted all the latest features, programs, bells and whistles, and pointed at the hearing aid he wanted. It was an interesting experience. Programs can be great. For most people we give them an all around use program and after that we give or take a bit. Maybe someone has something for the phone or the television or the car; it depends. I have a lot of patients who say they don't notice a lot of difference but prefer one program over the other and use it all the time. Many times you have a lot of different programs and hone in on one or two. If you want four or five, that is okay too. It depends on how complicated you want it to be.

Karen Jacobs: does your hearing aid have Bluetooth? If you don't have a T-coil you do need a second coupling program.

Nancy Cluley: As a hearing person and a parent of a hearing impaired person, we are at the age where we dialog. Up until now I decided what device she would have. We are looped at home and have reaped the benefits of that. With the downside of that old program, she did not hear me at all. It's hard to get her attention anyway, but the Bluetooth I am getting on board with. We are trying to get more information from our new audiologist. We will go down this path. The appeal of a smaller device is very compelling because of her age. I have not had to repeat anything since she has been sampling this new device.

Karen Jacobs: an educated hearing aid wearer is the best patient I can have.

Chris Jacques: that is not what you told me!

Nancy Cluley: when I did start with hearing aids and an audiologist, Hannah was 2 years old. It was very difficult. For one thing I could not relate to what they said because I did not experience it. I always felt I was an inconvenience to the audiologist. Now I don't care who I inconvenience. I hope Hannah will be a pain as she grows too

because I won't always be there for her.

Karen Jacobs: your audiologist should give you choices. I don't like the philosophy that says this is the only hearing aid that will work for you. There are always many different solutions to the problem. I encourage questions.

Susan Haveman-Kruijf: if the audiologist acts as if they are irritated by your questions, they should not be an audiologist. I like to hear what people say but it takes patience. If you don't want to hear from the people you work with, you are in the wrong profession.

Guest: three phases. First, I have been wearing hearing aids through childhood as well and they are tons better now than they used to be. My first ones were huge. Whatever technology you can get, get it.

In response to the T-coil, you remember when we started the group there was almost nothing in the city that was looped. Now that is not the case. New York City is hardly T-coiled at all; it's awful. My question is this, in new technology with T-coil, since the mid-90's there was closed captioning that was mandated by legislation. Is there anything mandated now about T-coil compatibility for television, movies, etc?

Karen Jacobs: there was some legislation presented by Representative Ross. He was one of the cosponsors of the bill. It's tied up with the initiative to keep the volume of the commercials the same as the volume of the television program. It does not solve it all completely because now you have the manufacturers dealing with the product. There was some legislation that said each company had to make a hearing aid compatible phone, but that does mean each one of their products must.

The digital signal is a tough thing. I know that many more people have trouble with the television signal now that it's digital. Maybe Vic Krause can talk to that because he is the legislative watchdog.

Guest: since we moved to the digital I can hardly hear the television anymore. Thank you for my hearing aids, I got them from you, but since going digital I have had to rely on the closed captioning.

Juli Wiseman: my comment is that hearing aids are not like glasses. If I put on glasses and don't like them in two years, I get new ones. But with the hearing aid it's different because they are so expensive. What suggestions do you have for that? Even if you have a lot of money it's very expensive. I am looking for information. What do you tell people?

Karen Jacobs: does someone else want to talk?

Pam Keenan: That is a big question. Actually it goes back to what we said all along. You need to analyze the whole issue. If we understand your physical restraints and

lifestyle we can put it all together. I like to give more than one solution and I find that people usually come to the same conclusion in the end on what is best for them based on the features of the aid.

I like to think into the future so the product can last as long as possible. Generally, the smaller the aid, the shorter it lasts. If we do our job up front, you end up with the best product and the right features. It's not just one company or hearing aid that works for everyone. We need to guide you through the products. You should not have to try all kinds of products if the process of selecting is correct. Understand that they will wear out with time. You do wear them each day and they will deteriorate over time. Technology and time also warrant changing the product. I want to make sure changing the product is in the best interest of the patient. It's very individualized.

Karen Jacobs: you will want to trust the audiologist as well. You cannot know everything about every hearing aid. We will probably know more about what best fits your lifestyle and needs. It takes chair time and staff people, but that 30 days of trial wear is important. We cannot see all the problems down the road. You will not be stuck with something that you stick in the dresser drawer. We don't want you to go through each product on the market because it's very expensive for you and for us.

Most people did not have their hearing change overnight. If you need to take information and read about it, do that and then call. We want to help you make the right decision the first time.

Susan Haveman-Kruyf: I agree. That is why we don't handle 20 different brands of hearing aids. We have five that we are very comfortable with and know all about. Generally from those you can pick something that will work. There are patients who do say upfront that they want something that is tiny, but we ask what they expect from this. If it's the first one, or you want something that will last a long time, we steer you toward fitting range, T-coils and other features. Now if your hearing gets worse we can make the adjustments on the product. That adds to the longevity.

Susanna Love Callaway: you cannot go through all the manufacturers on the product, but make sure you work with someone who knows the brands. I have had a few patients who just don't like the sound of one or it did not suit them. You try something else with a different system, and it works. Work with someone who is willing to make the change with you.

Guest: what happens if I have a hearing aid with a T-coil with a three position switch? I listen to the conversation but don't pick it up. Is there anything that senses the loop system and automatically switches to that?

Pam Keenan: not automatically. It would need to be 3-5 inches away. The T-coil is in the receiver of the phone. For a T-coil that is not going to happen. You can have some hearing aids that have a T-coil and microphone on at the same time. Some even allow for multiple memory. Some of my patients do the microphone on the side

where the spouse is and the T-coil on the other side.

I had a comment along with longevity. There is a two way street. The care of the hearing aid has a lot to do with it. If people come in and throw their hearing aid on the counter, 90% of the time the problem is wax or humidity. A dry and store box that pulls the moisture out is very helpful. The care you give the hearing aid adds to their longevity. If the receiver and microphone are gummed up, you have a different problem. Be proactive and make sure you have the correct tools to dehumidify the instrument.

Guest: I never hear certain vowels or sounds like "t" or "k".... What is wrong?

Karen Jacobs: if the hair cells are gone, no hearing aid in the world will recuperate those sounds. There is no signal to the brain. Some people will never hear those sounds normally. You may have dead regions of the nerve endings.

Dr. Harold Hollander: also I go over the audiogram and take a look at the slope, curve and discriminations. The cochlear hair cells can be destroyed or injured. A lot of times there is not a lot you can do. Is it from the cochlear hair cell or something from the brain or acoustic nerve that is causing the problem? In addition, did you talk about tinnitus? It's common for people with noise injury to their ears to experience this.

These cochlear hair cells produce spurious signals. It's often interpreted as howling, ringing, or buzzing. Again, it's the same sort of problem. If you make use of a hearing device, it can be problematic. Even with the best instrument in the world, it may be difficult.

Guest: is there research ongoing about regenerating the hair cells?

Dr. Harold Hollander: there is but don't hold your breath. There are a lot of different things out there but none is close to being useful yet. There is something I wanted to add. If the hearing changes suddenly, let's say you are pleased with your aid but all the sudden you don't hear well, or all the sudden your ear is feels full, at that point go to the audiologist or doctor and tell them. There could be fluid pressure, trauma, a problem in the nerve, etc. The quicker you deal with it, the better. Even with fluid in the ear, don't wait.

Juli Wiseman: I have a question for Dr. Hollander. I am glad that you started to talk; I know how it is to try to speak when surrounded by a group of women. I had all sisters! My question is that my daughter who wears hearing aids had an ear infection. She swims. She also likes to do things like lie in the tub and get her ears under the water. That is when she gets an ear infection. Is that common and what can be done?

Dr. Harold Hollander: there are different types of infection. The part that is usually infected in this scenario is from the pinna to the tympanic membrane. This is due to any number of things, including Q-tips. I love them because they keep me in business.

Without that I would be a beggar.

Once you differentiate the problem, in this case is it the swimming? Other times it may be that people are over-cleaning their ear. Stop cleaning the ear! You need the wax. If that is removed by repetitive swimming or cleaning, you need to stop that. There are drops that you can use as well. An over the counter product I like is StarOtic. The common thing is using vinegar because it acidifies the ear. There are drying agents like boric acid or glycerin for a coating agent. I like StarOtic because it's simple and available over the counter. After swimming put it in the ear each time. I scuba dive and put it in my ear each time I get out. If you have a drainage problem, you need to see someone. You don't want further damage. Keep the ears clean but don't mess with them unnecessarily.

Guest: I have a lot of ear wax and it tends to irritate my ear because of the hearing aid. Is there anything I can do to eliminate the wax?

Dr. Harold Hollander: Otorrhea, or weeping discharge from the ear, is one thing and wax is another. Go to the doctor or audiologist to diagnose the problem first. If you do have wax, it will affect the performance of the hearing aid. First find out the problem and don't assume that it's wax. If you see it, you know. But drainage can cause bacteria as well. Make sure you have the right diagnosis.

Karen Jacobs: how do you feel about some of the over the counter ear wax softeners?

Dr. Harold Hollander: I hate them. That is the third thing that keeps me in business. Often I see people with a draining ear. With the over-the-counter softeners most of the time you don't know what you are rinsing out. People also don't follow the directions. The hydrogen peroxide bubbles up so they think the wax will vaporize. You need to rinse it out if you don't want chemical burns. If you have to use it, maybe use it up to three times a year.

What about ear candling? I want to sell ear candles because I need the money. They are bogus. What you see is a gauze tube that is covered in wax. You light it and put it in the ear and it's supposed to suction out the wax. Those globs that you see are not wax but strictly the paraffin from the coating of the gauze tube. Plus, it's against the laws of physics for this to work. You cannot suction out the ear that way. I had someone who came to me after using one of these things and the hot wax dripped into his ear. He had a paraffin burn on his eardrum. I had to reconstruct the entire tympanic membrane.

Guest: is there any danger to the ear by using neti pots?

Dr. Harold Hollander: I love irrigation of the nose. The neti pot is a high flow irrigation through one side of the nose, into the sinuses, and out the other side of the nose. There is one disadvantage of that. You can reflux fluid up the Eustachian tube.

That is not good. Can you injure your ear with it? Probably not, but it can reflux up the tube. But I do like them.

Sanford Freed: not because they are good for business.

Dr. Harold Hollander: right. One other thing. Several years ago there was a push on for surgically implanted hearing aids in the middle ear. They were designed to augment the hearing in the bones and ossicles. With the original ones you had to divide the stapes and the incus. I tried it and did not like it. It disrupts the function of the bones. You assume that it will scar into place and it did not happen all the time.

Others are put into the mastoid and have probes that move the ossicles. I don't think those have come out well. It's hard to stimulate the bones for hearing. You can get injury to the bones themselves. The ones I worked with had poor reliability and frequency. There was a lot of distortion.

A third one I tried was almost cylindrical and was implanted behind the ear and came out the ear canal. It was designed for people with certain types of hearing loss. You put it behind here and it increased the volume of sound directly into the ear. Patients had clogging problems and they were not all that effective. They are coming, but they are not that good right now.

Sanford Freed: there has been notoriety to the Lyric. A couple issues from the HLAA magazine had articles on this. It's a carry on from the surgically implanted hearing aid.

Dr. Harold Hollander: I am not familiar with it.

Susan Haveman-Kruef: we have it but many patients cannot use it. Only 20% can use it. There is some discomfort with it because it's left in the ear for 10-12 weeks. Those that do well with it like it because you can hear at night, shower with it, and turn up the volume. Most of those who have it have worn hearing aids before and they like the sound quality. It sits that close to the ear drum and has to be installed by an audiologist. You can take it out by yourself but not put it back in; an audiologist must do that because of the danger of injury to the ear. It's for a small percentage of the population.

Dr. Harold Hollander: where is the microphone for it?

Susan Haveman-Kruef: the unit is this long. The microphone is on one end.

Dr. Harold Hollander: the one advantage to the entirely in the ear system is that the whole system is designed to maximize the pinna. The ones in the ear should give a better quality of sound.

Susan Haveman-Kruef: the people that are successfully wearing it make comments that they don't have problems with the background noise like they did with other types of hearing aids. The pinna acts as a buffer for the noise. They just don't have the

trouble in big groups.

Karen Jacobs: it's not for people with severe hearing loss. It's deeper than CIC. Few ears are candidates for it. If your ear canal is straight enough . clear enough, and big enough you may be a candidate.

Susan Haveman-Kruyf: because of the great convenience some people really like them.

Guest: I just wanted you to comment on this new book, *100 Sounds to See*.

Pam Keenan: this is a book written by someone that I and Karen Jacobs had the privilege of meeting, someone who had severe to profound hearing loss. She wrote a book called *100 Sounds of Life*. I was very impressed with it and wanted to share it. The pictures are so beautiful and it helps those with and without hearing loss to understand the sounds associated with the pictures. One picture is a boat rubbing on a dock. These are things that people with hearing loss can see and experience. The foundation supports people with hearing loss and hearing aids. You can order them on Amazon or any major bookstore. I have it as a coffee table book in my office and give it to my patients. I just wanted to make people aware that it's available.

Juli Wiseman: it's 8:30. Are there any other questions that cannot wait?

Karen Jacobs: what happens to the money that is raised at the Walk4Hearing?

Juli Wiseman: who wants to address that?

Bill Hop: I will do it. First of all, thank you for all your efforts and knowledge and for passing it on to us. We learned a lot tonight. I have a question for the doctor first. I went to an audiologist once and came back and my hearing aid was plugged and they said I had a lot of wax. She asked if I was a diabetic. I am and she said that all the diabetics have extra wax. I have asked others but have never heard of that before.

Dr. Harold Hollander: hearing loss is associated with diabetic neuropathy. Do all diabetics experience this? No. The only thing I can think of is that in some people with diabetes the way the body reacts with fungi is different. It's weeping material from the ear that diabetics have. Think of it as a foot that you cannot allow to be infected. In the same way you cannot allow your ear to become infected or impacted. Malignant *otitis externa* is an infection of the ear canal and it invades the tissues and skull base. That is very rare but it can kill you. I have only seen one case and that patient died. Extra ear wax? Nah.

Bill Hop: to answer the question, the monies taken in at the Walk4Hearing are divided up. 50% goes to the national organization in Maryland. They do lobbying and provide a lot of materials for meetings like this. 10% goes to the state chapter. We are unusual in that we have a state officer here. 40% comes to our chapter and we

use that to put on programs like this, to print educational materials, and so on. That is basically the ratio. This is all after expenses. Does that answer your question?

Karen Jacobs: I am glad to see so much of it staying local. You have some nice resources here.

Juli Wiseman: we will wrap up. Thank you all so much for being here. I am glad you brought up Walk4Hearing. We have a sponsorship package that we want each of you to bring back to your offices. Pam last year won the audiologist cup challenge. I am challenging all of you to beat her goal last year. She was awesome! Thank you so much for tonight. We also have something else for you. Have a cup of coffee or scone at Starbucks as our way of thanking you.

Please come back in November for our next program. Check our website for details on that and the Walk4Hearing, and don't forget about the refreshments.