- [Christy] At this time it is my pleasure to introduce Donna Sorkin.

- [Donna] Thank you so much, Kristy, and we’re thrilled to be partnering again with AudiologyOnline on this topic, cochlear implant rehabilitation for adults, and I just want to tell you a little bit about the organization and the reason that we undertook this series. We find that patients sometimes even when they are candidates for a cochlear implant need to fully understand the benefits and also address some fears that they may have, and we feel that whether you are in or outside of the cochlear implant field, as clinicians you have a key role in helping them move along that process and move into it more quickly, and we have a lot of information about that on our website which is listed there. And I will be introducing our speaker in just a moment. You may wonder why there is another organization in the field of hearing health, and we are a membership organization that is just focused on cochlear implantation and access to care, and our members are a little unusual because they include audiologists as well as physicians and speech pathologists, educators, and others on cochlear implant teams, and we also have consumers and parents who are part of our organization and they are our strongest advocates for access.

I mentioned before our website which has portals for people with different interest groups. We are highly collaborative with the other organizations in the field and of course with AudiologyOnline and we welcome your involvement, so please take a look and also join us on Facebook and Twitter and be part of our effort. Our mission is to advance access to the gift of hearing provided by cochlear implantation through research, advocacy, and awareness, and this course today is part of that awareness role that we play in the field. We want to address actors that contribute to the under utilization of cochlear implants, and right now in the United States, fewer than 10% of adults who could benefit actually have a cochlear implant. And we’re very interested in improving awareness about candidacy and outcomes, and our objective today is to share information with you to help patients who may benefit from cochlear implants and from rehabilitation after a cochlear implant, move forward with that. So this is part
of a four part series, as I said, and the topics were selected based on surveys that we had done of adults and their perceptions of cochlear implants and things that might contribute to long waits. And there was some concern about what rehab looked like and was it really complicated and was it gonna take a lot of time and was it important, and so that was one of the reasons that this particular course topic was chosen, and it is something that's of interest to clinicians in the field as well. So we're very happy to be covering that. These are the other courses in the series. We are looking at adult outcomes and what contributes to that, the whole issue of insurance and cochlear implants, understanding the surgery, which is another topic that can cause people to wait and not move forward, and then of course this current topic on rehabilitation for adults. So with that, I'm really pleased and thrilled to be introducing our speaker today. Dr. Naama Tsach is a speech-language pathologist, an educational audiologist, and she's been working in the field for a really long time. She worked in Israel for about 18 years with children and adults in various settings, including the cochlear implant program in Haifa, Israel. And importantly, Naama is the organizer of a wonderful blog that we have on our website on adult rehabilitation. So with that, I am just thrilled to have the opportunity to share Naama with all of you.

- [Naama] Thank you, Kristy, and thank you, Donna, for having me, and good afternoon, everyone. Yesterday as most of you probably know was the International Cochlear Implant Day and it was a special day for me. I thought how far this field has advanced since I started working with people who use cochlear implants, and I also remembered my first adult CI user patient. That was back in 2001. He was a few years older than me, congenitally deaf, and with Ascher’s syndrome. I remember myself sitting in the room in front of him full of concerns, looking for the right ways to help him. I was already an experienced clinician working with deaf children and their families for several years, but working with adults after cochlear implantation felt like a whole new adventure. I had so many questions that I had to try to answer on my own. Over the years, I’ve had the privilege to work with many adult CI users, and I’ve learned a lot, but what’s nice is that even today I continue to have questions, and maybe this is
why I love working with this special group of patients. I do it with the same curiosity, enthusiasm, and love, but with no fear. So my name is Naama Tsach and I'm very happy to have the opportunity to speak about my work with adult patients following cochlear implantation. The topic of rehabilitation of adults following cochlear implantation often raises the question why. Why do they need auditory rehabilitation?

There are many reasons why auditory rehabilitation is needed or at least should be considered if we want our adult patients to maximize their benefits, having an effective rehab process, and an overall good experience during the challenging time following their cochlear implantation. Spontaneous adaptation during the routines of everyday life is not trivial for adults, even for people who used to hear before and lost their hearing at a later age. It is especially relevant for a growing number of people with early deafness who have gone through cochlear implantation as adults. Auditory learning processes are influenced by various factors, such as differences in adaptability as well as by differences in skills such auditory attentiveness.

The chances for spontaneous auditory learning are also affected by a person's ability to perform several tasks at the same time. The opportunities for auditory learning as part of their daily routines, the ability to cope with errors and misunderstanding and the amount of learning required. Adult CI users are a very diverse group of people who differ in many factors, such as the age of the onset of their hearing loss, the duration of their hearing loss, the type of their hearing loss, and the auditory functioning before the implantation. They may also differ in their hearing abilities of their non-implanted ear, their mode of communication, their tendency and habit of using auditory input, their speech intelligibility, their deaf or hearing culture identity, their linguistic skills, their education and occupations. Other factor that may differ with adult CI users are the age of implantation, additional disabilities, technological competence, personality and attitudes regarding deafness and hearing, and the auditory rehabilitation they received over the years as well as the kind of rehab services that are available for them after the implantation and the support they get from family and friends. When working with these patients, we must consider all these differences that I just mentioned, however,
there are also a lot in common. Most of them experience gaps between their expectations and reality, and in many cases reality cannot meet their expectations. They have a lot of questions regarding technology and about their adaptation to the CI and auditory learning process. They may feel disappointment, loneliness, lack of patience, and frustration, while at the same time, needing support, because they want to hear better and progress faster in order to get most of their cochlear implant.

Another factor is, that in many cases, the speech perception tests done at the clinic fail to represent their functioning in real life. Some of them will do great in the tests and still feel that they are facing significant challenges in real life, while others may fail the tests but feel great, they feel that the CI contributes significantly to their quality of life, therefore, we as clinician would need to help them resolve the contradiction between their feelings and the performance at the formal tests. Working with adults requires us to adopt a rehab approach and style and to treat them differently from pediatric patients.

First will be their previous formed opinion about hearing and deafness, about hearing disability, and sometimes about SLPs and audiologists. Additionally, other expectations, hopes and dreams. Unlike children, changing is very difficult for adults. The first few months after implantation are very dynamic. CI users need to adapt to their continuously changing hearing and communication skills that are reflected in their behaviors, and affect the dynamics and interactions with family members, coworkers, and friends. While children usually become auditory attentive as a natural outcome following cochlear implantation, many adults would need to actively and intentionally learn to listen. Another point to think about is what they have to lose. Following cochlear implantation, many of them may experience some decline in auditory functioning of the non-implanted ear. Additionally, they may feel that their speech-reading skills when they're taking off their device had declined, which can be very frightening. Adult patients may experience fears, worries, disappointment, frustration, and this would add to the difficulty for us in finding a way to motivate them. Last but not least, many adult patients don't have the family support that children usually have,
and in many cases there is no partner that is present in the sessions, so they don’t have someone to help them apply insights like new auditory skills in situations outside the clinic. Family members can also pose challenges by starting to speak faster to them by expecting them to hear better than they actually can, and since they don’t attend the sessions, the clinician isn’t always able to work with family members directly. In light of all this, the clinician must constantly learn from the patient about their life as a deaf or hard-of-hearing individual. The experience of being deaf or hard of hearing is extremely complicated. Our patients are the best resource for us to learn about the different ways in which deafness impact their life so that our intervention would fit their needs. The clinician must have a solid and extensive knowledge about speech perception and speech understanding. The clinician should be able to adjust the rehab goals and materials to fit the patient’s needs. As we study the difficulties of our patients, we must also notice their strengths. We should respect them as people with many skills, interests, and talents, and get to know them.

For example, if a patient has remarkable linguistic skills, we would be able to challenge him with more difficult language materials such as idioms, quotes, and even novels. If they have a great sense of humor, we would use jokes. Jokes can be difficult material to perceive since they contain unpredictable content, but many patients will be happy to make the needed effort for this pleasure. We should feel comfortable with uncertainty. Every rehab program is individualized and dynamic, and even the most experienced clinician would find themselves surprised or confused from time to time, so we need to take time after each session in order to integrate everything and to find creative ways to examine the issues and find breakthroughs. The clinician needs to be attentive and contain the positive and negative experiences of the patient, while at the same time, needing to be assertive. Over the years I have continually heard from my patients that I’m the only person who can really understand what they’re going through. For me this means that I’m listening to what they say, but at the same time, I’m thinking about how to help them communicate with the significant people in their lives. Our patients want us to contain their difficulties and frustration while expecting us
to be able to motivate them and guide them to take actions and to push them beyond their current hearing skills. We need to take them to their uncomfortable zones. We need to pinpoint the exact place that will challenge them without discouraging them.

Three weeks after I began working with one of my patients, he told me that he hates his implant. He hates hearing environmental sounds and this is why he only use his CI for music streaming while at work without being connected to any other auditory information for almost 10 hours a day. It was already eight months following his implantation. I communicated with his audiologist who invited him to check if there is any problem with his mapping, and she couldn't find any problem.

So it was my job to help him change this habit and perspective. I explained to him that the amount of CI usage per day is a key factor to getting used to the implant and to get the most out of it and just being connected to music. It became our ultimate goal in rehab and it was difficult. After several weeks he told me, "I’m using it for eight hours a day, "listening to what is going on around me" and it was a great success. As you can imagine, this wasn’t an easy process, and I had to be very strong myself in order to help him meet this challenge. We should constantly reflect with the patients on the processes of change and progress and demonstrate their achievements. The clinician and the patient should have common terms of assessing the patient’s progress. We know that auditory learning is a multidimensional and complex process, so understanding simple sentences is not enough to deal with everyday communication. The clinician should speak with the patient about the nature of the materials they are dealing with and the challenges they are facing so the patient will be able to recognize his achievements and future goals. The clinician should also break down long-term goals into short-term ones that can be concretely understood by the patient. For example, if the long-term goal would be to understand short stories, a short-term goal can be to understand sentences with a certain number of words and increase the number of words in the sentence over time until the patient is able to understand longer sentences followed by a sequence of sentences and short stories. Another important role that the clinician may need to take with some patients is to help them
navigate the hearing world. This is especially important for people with early deafness, people who are born deaf or who have peri-lingual deafness. An example of this would be understanding what music is all about. Some facts you think of as being very trivial might be shocking for your patients, for example, that many hearing people cannot keep the tune while singing, or that hearing people need to use speech-reading in certain situations, or that hearing people can ignore some sounds in order to focus on others. There are endless example of these and many times the clinician if so. Here is an example of a wish list of an adult CI candidate. Just an example, it's not something that everybody wish, but to communicate more easily, to be able to understand people who speak fast, to participate in discussions at work, to talk on the phone, to go out with friends, to advance at work, to learn a second language.

So considering the reasons that former patients decision to go through cochlear implantation, the ultimate goal would be to help them improve their quality of life so they would be able to communicate effectively with less effort while participating in more activities and feeling better. The following should be included in rehab and we will go into detail about each. Optimal use of the implant, bilateral hearing, speech perception, speech understanding, communication in challenging conditions, acquisition and establishment of better listening skills and greater involvement and better functioning in varying listening-related activities. So optimal use of the implant is key for better adaptation and progress. Using the implant during the entire day allows the patients to apply their new auditory skills in a variety of ways in their daily lives, therefore, we need to be familiar with their habits, including the number of hours per day and also the maintenance of the CI, such as using their dry box, changing filters, and so forth. Enjoying hearing, it is not so trivial. There are people that during the first period after implantation don’t like listening with their CI. They may feel there is too much noise or may feel overwhelmed by too much auditory information or just don’t like the sound quality. We should discuss with them the sounds they like or dislike and specific situation where they feel they cannot use the CI if there are any. We would follow up on this matter and communicate with the audiologist if needed. We would
speak with our patients about sounds that they may associate with positive feelings or may be meaningful for them, such as certain songs, certain environmental sounds, sounds from nature and the voices of family members. The high level of enjoyment from hearing helps maintain the motivation for the constant use of the CI and would contribute to the overall satisfaction from the device. It may be obvious to say how important it is that our patient have the best bilateral hearing they can get, meaning, having a hearing aid that best fitted and adjusted in the non-implanted ear or a second implant. So a patient would get the maximum benefit for speech understanding, sound localization, and for listening in noisy situations. In case of bimodal hearing, it is important that the patient use the hearing aid that works best with their CI so they will be able to enjoy the options of connectivity and streaming. Regarding speech perception, we should work towards improving and establishing the ability to discriminate between speech sounds, to identify speech sounds, to identify the speech sounds by their acoustic features, and know which ones sound alike. And of course using all these skills.

For example, oh, sorry, if our patient is aware to the fact that they tend to confuse the sound B with the sound D, they can use this knowledge in order to figure out the misperceived word boots in the following sentence: Did you see my new boots? Speech understanding. Improving speech understanding should be the main goal of any rehab program. We would like our patients to be able to hold a conversation to understand short stories, instructions, and more. For some of them, we can also work towards understanding of lyrics, understanding conversation between two other people, using the telephone, listening to the radio, and so on. In order to improve speech understanding, we should practice using different linguistic materials in different tasks and with different presentation modes. So the materials should be relevant to the patients' lifestyles and interests and should represent as broadly as possible the stimuli that they are exposed to during their everyday life. They should be varied in their linguistic complexity, in their length, and in their redundancy, the amount of cues they have. Here are some examples of material that I use in many different
ways for many different tasks. I have different lists of words, lists of minimal pairs, lists of phonemes. Here is an example of a closed set of phonemes that one of my patient was able to identify at an early stage of her rehab. Of this set, I could build different words, such as the word shuk, which is market in Hebrew. So I could sh-u-k, and she would guess what the word was. We can build words in different length depending on the patient's speech perception and memory skills. I also use sentence lists, including sentences with semantic or syntactic or even phonemic errors. I use incomplete sentences, sentences with missing words, quotes, inspirational quotes, newspaper headlines, expressions, and more. I use trivia quizzes, crossword puzzles. I have a lot of different texts such as short stories, informational pieces, recipes, dialogue, dialogues, jokes of various length, stories with a lesson learned like fables, poems, articles. I also use songs that I use to sing to my patients before challenging them with the recorded version, which I'm sure sounds better than my singing, but not for some patients that are doing their first steps with their CI.

So we spoke about materials and now we will speak about the tasks. The tasks should involve different levels of auditory perception and understanding. They should demonstrate different communication challenges such as questioning and answering, understanding instructions and announcements. Other tasks can be understand the main idea if you don't perceive, even if you don't perceive all the details, just to understand the main idea. A different task would be to listen carefully to understand the details. These are two different tasks representing a different situation in life. While sometimes you can be okay with understanding the main idea, such as in certain social situations, other time, you should insist on understanding each and every word, such as in a doctor's appointment. I would just like to add that following conversation while you don't fully understand it can be very frustrating and many hard-of-hearing people will just stop listening. So this is something that worth practicing on. Other tasks may require reasoning, generalizing, et cetera. The tasks should require thinking and communication rather than passive reactions such as imitations. We want to improve communication skills of course. Presentation mode can vary in many ways, such as in
the amount of provided visual cues and the use of acoustic highlighting. Presentation mode can be varied in the speaking pace as well as in stimulus duration, intensity, number of repetitions. It can be also varied by the continuum between a closed set to an open set. It can be also, we can also present the task in quiet or noisy conditions. It can be presented by a familiar or unfamiliar speaker, by man, woman, child speaker, or by a single speaker versus several speakers. Presentation mode can also include speech perception through the telephone and understanding speech while being occupied by other activities. So different combinations of materials, tasks, and presentation modes enable the clinician to create complex practices at different difficulty levels which are suitable for different stages of the auditory rehab process. For example, in the initial phase of the auditory rehab process, the relatively complex tasks of answering questions can be combined with simple materials, such as simple and very short everyday questions which are presented in a closed set of three or five questions.

Changing the presentation mode by enlarging the set to 10 sentences or simply presenting them at a faster speaking pace would increase the challenge faced by the patient. The clinician should recognize the patient’s auditory skills and should have the ability to manage or to change three dimensions of a given practice assignment. These professional skills would allow the flexibility needed in order to perform the right adaptation in real time during the rehab sessions to make the practice both challenging and relevant. The speech understanding of many adults with hearing loss may be limited by a short auditory memory span, therefore, expanding the capacity of auditory memory is essential in helping to cope with longer speech expressions. So they will not stay in like one word. They would be able to perceive one word, but not a whole sentence. In order to understand conversation, we should also work on raising awareness of different strategies that can help to understand speaking based on incomplete sample section. We are talking about strategies such as using linguistic knowledge, general knowledge, and using prior information. Our patient already know them and use them on a daily basis regardless of the CI, but we can guide them in
using them more efficiently. For example, asking a person you're speaking with "what are we going to talk about?" would provide you with a topic of the conversation and would help in using relevant prior knowledge. Another important aspect is to improve dealing with situations of misunderstanding. You can talk to patients about certain people they find difficult to understand. Try to figure out what characterizes their speech, or what exactly hurts their communication, and define the reasons for the difficulty in understanding them, and then discuss with the patient how to act or how to deal with these situations. It may be a too fast pace of speaking, or the tendency of a person to be very intuitive and like jump from one topic to another which makes it very too difficult to follow. It can also be a teenager who does not bother to approach her CI-user mom when talking to her and her mother is unable to understand what her daughter is saying.

We can help our patient find the right ways to communicate this and minimize the misunderstanding they are dealing with every day. We should encourage our patient to experiment and use additional technologies available including different assistive listening devices. That will help them to cope better in noisy and challenging situation. The clinician should explain the need of a quiet environment and the destructive effect of noise on communication of people with hearing loss, with two main goals. The first one is that the patient will be able to explain it to people that are part of their lives so they can better understand and be more considerate and would hopefully be willing to cooperate with a request of using ALDs. The second goal is to help the patients to perform acoustic adjustment of their daily environment. It can be for example changing the patient's seat at the open space in their working place from being located in the middle of the room with noise coming from all around him and having limited visual access to coworkers' faces to being seated in a quieter location and being able to have eye contact with more people in the room. One of the most important challenges is to help our patients to become better listeners. Listening is beyond being able to hear, and in accustomed environments like AR sessions. Many of our patients, especially those with early deafness or with post-lingual deafness who experienced a long period
of hearing loss would listen only to what they perceive as directed to them and would ignore any other auditory stimuli, therefore they would miss a lot of significant information. The patient that would get the most out of their CI would be those who become more attentive and active listeners. In order to improve our patients' listening skills, we would encourage them to listen and to identify environmental sounds, to listen to speech that is not directed at them. We will train them to listen while doing other activities. We will encourage them to listen to public announcements and to discuss, and to different discussions being held behind their back. To read more about how to help your patients become better listeners, or just to refer your patients to read more about it, you're invited to visit my blog post at ACIA website, here is the link. We would like to help our patients to use their hearing in different kinds of activities, such as using the phone, video chatting, listening to songs and different kinds of music, watching TV with full or partial closed captioning, and we would like them to join activities that were not possible or very difficult to participate before, such as group meditation.

Sounds strange, but it was a dream of one, it was a dream of my patient. There are patient that would like to learn how to play an instrument or learn a new language, or anything they wish to do but are not sure they were capable of, so we will be there to provide guidance and support. It is important to encourage your patients to implement these activities into their daily routine, so I continually ask my patients questions such as how many times did you talk on the phone during the past week? Did you speak with someone you never spoke with before? I recommend them to watch certain TV shows where I know that people have relatively clear speech and are not speaking too fast. The goal is that these activities become a part of their day-to-day life so it will be practical for them and not simply as tasks restricted to the auditory rehab sessions. To sum up, the rehabilitation program for adults following cochlear implantation should refer to optimal use of the implant, bilateral hearing, and should focus on speech perception and speech understanding, communication in challenging condition, acquisition and establishment of better listening skill. The rehab program should also
aim to support greater involvement and better functioning in varying listening-related activities. So here are some final tips. Ask your patient about their experience with their new hearing. Every small story can provide you with important information that you might never have asked about. A story about going to the theater can be a great opportunity for you to talk about assistive listening devices. A story about difficulties in understanding their children can be a starter of conversations about what makes one's speech comprehensible or not and what we can do about it. Give specific feedback and not general comments, like, "good job" might not be enough. When you're testing your patient, explain them the meaning of the results. Do not mix auditory learning and testing. Don’t give your patient the experience of being tested all the time. Make connection between what is done during the sessions to real-life situation, for example I can say to my patient, you managed to listen to a whole story today, if we had checked specifically, we would have probably found a few words that you missed, but what’s important is that you understand the main message and you did, so you may be able to follow conversation even if you did not perceive each and every word.

Another example would be, you answered my questions while you were busy solving math problems, so when you're busy at work, you may be able to answer a question that someone referred you. Here are some home-training resources which I recommend you just to review and to choose the exact materials that would fit your patient's ability. For a patient that can practice at home with a family member or a friend, I like to have them come and join a few sessions so I may explain and demonstrate the way they should work with their CI-user friend. And for specific instruction, you can go to my blog post, and here's the link. The manufacturers provide many computerized programs and apps that can be used to practice the perception of environmental sounds, speech sounds, words, sentences, music, and telephone use. In addition there is Angel Sound, a comprehensive computerized self-auditory training program, and there are other popular computerized program, like Hearoes and Hear Coach, and there are more. There are special moments when your patient tells you about an exciting experience or a new insight they got or when you get a text message
that warms your heart telling you basically how happy they are with their hearing. So I show you some examples of three of my patients. All of them are congenitally deaf and all have studied in mainstream education. They had good pre-implantation speech intelligibility and their main mode of communication is spoken language, even though one of them is using sign language with her deaf friends. They were implanted at an older age and we worked together for about a year, beginning 10 to 12 month following their implantation. So I wasn’t there at the beginning. The first sentence is the one that I usually wait to hear, it’s a very important one: Yesterday I noticed that I was hearing without even trying.

So this is a milestone for me. I was cooking dinner without my sound processor on. Suddenly it bothered me that I couldn’t tell what is happening inside the pot because the lid was covering it. I can sometimes understand the PA on the bus. I need to stand close enough to the loudspeaker. This week for the first time ever, I picked up the phone at the office and it wasn’t so bad. I even managed to understand most of it. I asked the woman who called me to email me just in case. I started going to Pilates classes this week. It is still difficult but I can understand most of what the instructor says, regardless, I still need to find an assistive device that will help me to hear better. My family told me that I no longer get up from the table once I’m don’t eating. I sit and stay with them and talk with them. I can sit in my desk at work and still know what’s happening in the hallway without even looking. It’s an amazing experience. I feel like I have eyes in the back of my head. This is funny, but I hear it all the time. I didn’t know that people argue on the radio. My mom was listening to the radio and she was amazed that I asked her a question about what they were talking about. She didn’t know I was even able to understand the radio dialogue. I didn’t know music could be so fun. I really like listening to jazz. This is an interesting music. It sounds like humming to me and I love it. We would like to refer you to the ACIA website where you can find a lot of interesting and useful materials. There are three blogs. The first one is of 82-year-old Bruce Sloane sharing his experience from being a CI candidate until 18 months post implantation where he helps other who are going through a similar path by
advocating, writing, and teaching. Bruce is a gifted writer and reading his posts is not just educating but also a real pleasure. Another blog is written by Miranda Meyers, a talented young woman who was a college student and graduated lately. She was implanted in early childhood and received her second cochlear implant at the age of 18. In her blog she provides a young adult perspective. Her way to deal with challenges at school and fulfilling her dream is inspiring. There is also my blog on adult rehab following cochlear implantation where you can find 33 pieces referring to many aspects of candidacy, rehabilitation, and life with a cochlear implant, although, this resource is designed for adult CI recipients readers who don’t have too many similar resources if you compare it to children or parents. From time to time I get emails from professionals who are finding it useful as well. In addition on the website you can find many interesting stories of CI recipients. We hope to see you next month on special afternoon workshop at the annual ACIA conference. It would be a great opportunity to learn more and receive answers to your questions and also to speak directly with cochlear implant scientists and clinicians. Thank you very much. Discuss. Let's see here. There are, just reading.

- [Donna] Naama, you had some wonderful questions here. The first is from Laurie and she asks, if an adult is a new CI user and is able to communicate with their family, would you still suggest that they see an SLP for oral rehabilitation, and should a patient decide to do AR, how would you suggest finding an SLP that specializes in AR with CI users in a patient’s home town?

- [Naama] Wow. Thank you for this question. I'm not sure I have an answer for the second part of it, but I do have an answer for the first part of the question. I see the rehabilitation or auditory learning after cochlear implantation as a very long process, and when she says that she can’t communicate with her family it depends how much she wants to do better. I will be in touch with her, and I'll meet her from time to time. I know that you can always push it further. You can do, they always can do better, especially at the beginning, at the first period after implantation. As long as she is
happy, she might not need it, but I would suggest to be in touch with her, to follow up, and to see, or to find the right point where she would be ready or she would be, she will want to get some extra, to learn more. I cannot see--

- Donna. Can I make a suggestion about the second part of the question?

- [Naama] Yes, of course.

- [Donna] Where to find someone to help an adult patient that's looking for adult rehabilitation. I find that a lot of the cochlear implant centers do have a sense of people in the community who provide that outside of the CI clinic setting, so I think that's a place to start. The other place someone could seek help is there are therapists who work with children who also are interested in working with adults, and we have found that at ACI Alliance that there are people that like having that ability to work with people of different age groups, and so you can go to some of those AVTs and see if they also work with adults.

- [Naama] There is another question that I would like to try to answer. Laura asked that, and the question is, can the auditory health program you listed, can it be used for hearing aid users also? So I must say that most of my patients except one at this moment are cochlear implant users, but most of the principles are very applicable with a patient who use hearing aids also. What I can see, the thing that I can see with my hearing aid user patient is that she's not, I'm working with her on speech-reading as well, and she's not progressed so much as the cochlear implant users that I'm working with. But still, I'm working with her on using assistive listening device and doing all kinds of adaptation through her working environment and the communication in family, and yeah, we do that and she get more and more, she become more happy with her hearing aids. She trusted, she trust them more now. So it's a kind of a progress. There are, I can't really see. Oh, a question about a specific assistive listening device. I'm trying to understand what are their needs. Sometimes it has to do with the kind of
cochlear implant they have, but most of the time, most of the people can use every assistive listening device, and I think the best thing is to get the, you know, I don’t want to name a brand but I would not, but this is a very important thing to insist on, because it really improves their life. I think that’s it. Donna? Oh, there is another question. If there is grad school or any internship that I know that can provide the, that can actually provide the knowledge, what is that? Oh, I don’t really know a special school that can teach how to work with adults, but this is a certainly important field that should be, should be, yeah, be more strong. I think most of the SLPs work with, were more focused with working with kids, and yeah.

- [Christy] Thank you, Dr. Tsach. We are very, very appreciative of your time and expertise, and thank you again to Donna Sorkin, the executive director of ACIA. This concludes our webinar today, and we hope that you guys enjoyed these wonderful resources. Have a great day, everyone.