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Managing the "Earie" Canal –
Tools for Cerumen Removal
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- [Moderator] Hello everyone and welcome back to the Classroom. Thank you for joining us today on AudiologyOnline. We are so excited to begin part two of this exciting series with Dr. Rita Chaiken. She's gonna be presented Managing the Earie Canal, Tools for Cerumen Removal. Dr. Chaiken is a private practitioner in Atlanta, Georgia, and an adjunct professor of audiology at Salus University, as well as the past president of the Academy of Doctors of Audiology. She has traveled in the U.S. and internationally for over 20 years to provide cerumen management training to audiologists and AUD candidates, and she was honored by the Audiology Foundation of America with its Professional Leadership award for her work in this area. Thank you so much for Dr. Chaiken to be coming back with us today, and at this time, I'll hand the mic over to you.

- [Rita] Welcome everybody, welcome once again to Part Two of our three part series on cerumen management. I want to go ahead and thank AudiologyOnline once again for inviting me to present, and for all their help in preparing this webinar. Last time we talked about important rules for cerumen management, getting ready to perform cerumen management. Today's presentation will bring in some of those rules. It's about lighting and magnification. It also is gonna, I'm gonna talk about products to enable safer removal of the wax, and finally I'll end with some infection control thoughts. Before I go on, I'm gonna talk about several products now, and I want to reiterate what I said at the first session, where it's really best to try to use or to practice on this equipment with some supervision before you purchasing it. So try to go a convention where there are several vendors or to a hands-on class, because there might be something satisfactory, a product that you find, perhaps you purchase online, but wouldn't it be better to actually compare it to something that would be better and something that you can get some supervision in using? Lighting and magnification, if you're gonna use best practices for cerumen management, here's where you wanna spend some money, really a key to successful and safe cerumen management is good lighting and good magnification of the visual field, and here's one of those rules for you. If you can't see it, don't do it. If you can't see it, you can't do it. If you can't see

the end of your curet or suction tip, syringe or whatever, it's in the ear, then you can't do it. You have to be able to visualize and see where you're going in the ear or it can be very dangerous. Some audiologists use otoscopes to remove cerumen management. This is what I used for many years, and it was also many years before I knew why there was a swing-away monacle on the otoscopes. The swing is a way so that you can look through part of it for magnification, and then you can insert the curet inside or your suction tip inside. I didn't know that for a very long time. On this side, we have an operating otoscope. So there's a lot more room with that one, a small, very small monacle, and again, it takes some practice. There's an art to learning how to do this, but there are people who use this all the time. The thing to remember on these otoscopes is that you wanna use with them the largest size speculum that you can in the patient's ear, to give you the most amount of room and to give you the best visualization of the ear canal.

This in the middle is a Heine otoscope, wonderful lighting. It uses lead lighting, light emitting diode, like 12 o'clock noon on a sunny day. However, one of the issues I've found with it is that the speculum are not as large as you can get with the Welch Allyn style, like this. Here's a demonstration. This is Dr. Manning and his wife, Sue, Dr. Robert Manning. He is bracing the head, he's got the otoscope in his nondominant hand. That's very important. You're gonna put it in the hand you're not used to holding it in necessarily, nondominant hand. Usually you'll have to hold it up at the neck of it, and he's holding the ear pinna laterally and superiorly to place the otoscope in the ear. He's about 10 to 12 inches away, and then he's gonna let go of the ear once it wraps around the speculum and he has the impaction in view, and then with this hand, he'll pick up his curet or his suction tip. Some audiologists and some providers use video otoscopy to remove cerumen. We have one model here that is one that comes with attachments for the camera at the end of it. I prefer that over using a camera in one hand and an instrument in the other hand. I get a little nervous about having to look up to, at a monitor, and not so much in the ear, and having something in each hand, you need really one hand to brace and to help move the patient's ear and so on. So I

prefer, if there is an attachment onto the camera itself. The only one I found so far is MedRx. There may be some other, there may be some other manufacturers also who have that. I wanna comment that, and I think I said this last time also, that using the video otoscope is really a great way to document what you've done, what you saw, why you're doing cerumen management, and then what the outcome was. Here are a couple pictures of a setup using video otoscope. In this case, you see that the patient is looking at the monitor, and he is looking here at the monitor, and the clinician is adjusting it in his ear, and then is gonna have to turn her head to look at the monitor.

That's fine if you're doing otoscopic examination. When you get to cerumen management, you can imagine, you really need to have the patient parallel to the, his face parallel to the monitor, so that the clinician, and she should be really more eye-ear level with him, so the clinician could look right at the monitor and doesn't have to turn her head. She can glance from the ear where she's adjusting to the monitor. So he would be turned a little bit more and she would be a little bit lower, and you wanna be sure that you brace the head. If you have a foggy picture while you're doing cerumen management, that's because of the moisture of the wax. Use a cotton swab, an alcohol swab to wipe off the camera and that'll take of it. One other little side note I'll tell you. If you show a patient before, you show him his ear before you do cerumen management, they're gonna want you to show them afterwards. So I would, in my instructions to them, or in my counseling in them before I started, I would tell them that you're gonna leave some wax. That's of course unless you're fitting extended wear hearing devices, but you're gonna be leaving some wax in their ear. Why are you gonna do that? If you remember from last time, it's because wax is their friend, right, remember that? So you wanna be sure. Otherwise they'll look at the monitor and say, "Hey, you left a piece there "and you left a piece there," and so on. So you wanna make sure they understand you're not necessarily looking to remove every bit of the wax. Another product that's available enables you to attach your suction tip to the camera, and it's called Earview. It is distributed by a company called Hal-Hen Warner Technology. You can see, he's looking at the monitor there, I don't know whether you

can see or not that that's the tip of the suction, and he, again, is sort of leaning over to see it. He really needs to be more eye-ear level so he can glance up at her and have the camera in a position where he can just glance over to it. They do have some, also some attachments, not like the last one I showed you, but some plastic attachments that you can put onto there to remove the wax manually. All right, we're gonna talk about hands-free magnification and lighting, and when we do that, the big guns are the operating microscopes or the otomicroscopes for our purposes. Otomicroscopes are lighting and magnification. You can be stand alone as this is, or you can be wall mounted as this one is. They give you a lot of magnification, up to about 15 times magnification, and they're superior lighting, they're hand-free. You can change the magnification so that you can zero in on a small area like physicians who are doing some surgical procedures do, or you can orient to the entire canal.

The downside of them is that they're big, they're bulky. Although this is on wheels, it's really hard to move it from room to room, so they're not easily mobile. They're expensive, there's a learning curve. But once you learn it, even though it's a little intimidating at first, once you learn, you get that spot that really works for you, it's a really beautiful magnification and lighting. The microscope, just to give you a little understand of how they work, they have a lens system. You're looking through both eyes through two different lenses, but they converge the view of both eyes through a common lens. That's gonna become interesting to you a little later when you we talk about head-worn microscopes. There are several companies who distribute these. Seiler is one of them, Prescott's is another, and there are other ones as well. A couple of important points to remember when using an otomicroscope. I wanna really stress this, 'cause again, also, when you're using head-worn microscope or head loupes, you have something similar that you'll do. If you're looking at the patient's ear and you're seeing double, what you have to change is the interpupillary distance, the distance between your eyes, the distance between your eyeballs basically. It's the width between your eyes. Sometimes it's called the interpupillary distance. If the patient's ear is blurry, which is more often what happens, don't try and adjust anything. You need to

move yourself and the scope forwards or backwards, closer to the patient or farther away until you get to that sweet spot that is clear to you. I'm gonna show you a video in a minute, and there are a couple of points I want you to gather from this. First of all, he's suggesting, as I said earlier, that you be about 10 to 12 inches away from the patient's ear, the equipment be 10 to 12 inches away from the patient's ear. He's gonna talk about equal vision between the eyes. That's your pupillary distance, and the area that you change is right here. The lens is between your eyes. He's making them closer or farther away. He'll talk about correct focus, and that is your clarity. That is, you move the entire equipment towards the patient or farther away, and you're coming along with it, 'cause you're right, your eyes are right at the lenses to find that clear spot. So let's go ahead and we'll show the video.

- Here's a demonstration on the basic operation with a patient. With your patient seated, position him or her at height where you can comfortably view the ear. Take the Omni-10 handle and adjust the microscope's arm so that it's approximately one foot away from your patient's ear. If the arm moves or drifts, tighten the lock. It also helps to tilt the patient's head slightly away from you. Turn on the fiber optics light, and adjust the amount of illumination to your preference. Then without looking through the microscope, position the light on the patient's ear. New users tend to look through the scope while trying to find the ear, and it's not always easy to do this. The better way is to position the light without looking through the lens. Now with the scope positioned correctly, look through the binocular lens, and stabilize the patient's ear, and adjust the gross focus by moving the microscope in and out until you achieve the correct focus. Once focused, make sure that the binocular lens have equal vision between eyes. At this point, it's a good idea to look at the video monitor to make sure it's in focus since it may be different from what's seen through the microscope. Now you see, and the patient sees the same thing. Now begin the ear examination, and if necessary, cerumen removal, and you'll notice that after the microscope is stabilized, your hands are free to pull back on the patient's ear and secure their head position while using the other hand to insert and manipulate your instruments. If you're not using a speculum,

and you don't need to, you can push back on the tragus with your instruments to provide an adequate view of the ear.

- [Rita] One thing I wanna say, I am not a great advocate of having the patient watch while you do cerumen management. I think they'll get jumpy, I think that you don't need them to see what you're doing at the time. The video, otoscope part of it, the monitor is nice, particularly for teaching, and you're really not gonna look at it, because you need to be looking in the ear at what you're doing. So that is just an added extra that he used on this particular video. Next, we have head loupes and head-worn microscopes. Great magnification and lighting, my preference, and best practices as well along with the microscope. Now, on a head loup, or the head-worn microscope, you have your magnification. It's preset, it's preset to certain magnification, 2.5 times, 3.0 times, or 3.5 times.

Usually physicians who are doing surgery will use the 3.5 to really zero in on an area. Generally for audiology, for our purposes, we're gonna use 2.5, maybe 3.0. Sometimes it's, you know, you order it with the setting you want, and sometimes you can adjust the interpupillary distance, as in this case, and sometimes you can't, as in the VDC by JEDMED over here, where they have an average interpupillary distance that they've set these at. So you, on this one, you can't change the magnification or the pupillary distance. Back over here, you can put your refraction in glasses and have these attached to them. The downside of course, is when your refraction changes, when you have a different prescription, you have to send the glasses off and you won't have the use of the magnification. I'd like to suggest that you try one that is set on some glasses already without having your magnification on it like this, and see. Because it is magnification, and you might very well, I know you know you need to use your glasses 'cause you have in other instances. You might find with the magnification, you're doing just fine and you're seeing well. On the bottom, we have a headband style. This is more for people who have challenging visual problems, so they're, have to wear their eyeglasses. It's adjustment at the top, it's adjustment in the back to make it tight and

set it correctly. You can move the lenses in the camera up and down, you can move the lenses the interpupillary distance, you can move the lighting as well. So there are a lot of adjustments to this, and again, once you try one without your glasses, you might find that's all you need. Now on the loupes, as I alluded to earlier, a little bit different than on the microscope. On the loup, you have magnification in each eye, and it's that magnification, it's gonna be the same in each eye, 2.5, 3.5, or so on, that's going to be what you see when you look in the patient's ear. For some people who have challenging vision, then you have, you're not able to see as well, so you have to, perhaps, go with the head style, as this is. The other style that we have is the head-worn microscope, and the head-worn microscope is, looks like these. This is an O Scope by Vorotek, and the O Scope is a head-worn microscope in that, like the microscope, you have converging the eyes to one lens. There is a strap. You can see, this is the spec style, there's a strap in the back. Very important that you tighten that behind your head, else it will not be fitting right and your eyes, your vision will not be in the correct place.

We have the headband style as well. On either of these, you can flip up the magnification so that you are able to see with your naked eye, and I'll demonstrate that to you in a little bit. Similarly to the microscope, you're gonna wanna focus on the object 10 to 12 inches away. If there is blurry vision, you're gonna want to move yourself, your body, 'cause you have the equipment on your head, forward or backwards for clarity so that it's clear. Don't start trying to move something on the equipment itself, because it's really a matter of your distance to the patient. If you have double vision, then you change the interpupillary distance if you can. You'll move it laterally or towards your nose, away from your nose, until one vision, one image is viewed. Again, this is hands-free, best practices, using this in good lighting and magnification. Here's a slide just showing you how to put a head loup on. You're gonna stand or sit 10 to 12 inches away, you're gonna put the set on your eyes. This style does not have a, the ability to move the lenses at, the change the interpupillary distance, so you're going to, and if it's not clear, you're gonna move yourself closer or

farther away. You'll turn on the lighting, and then you can adjust the lighting as you need to to see in the ear. When you're using the head-worn microscope, similarly as I said to the head loup, you may need to adjust the pupillary distance, you may need to adjust the distance that you are to the patient. The biggest difference is that the lens systems, as I said, converges the view of both eyes through a common lens, similar to the regular microscope. So we can go ahead and show this video, and you'll be able to see how it fits over my glasses, I've opened it up, now I'm tightening it in the back. This one does not have an adjustment at the top. You tighten it in the back so you're fitting. I turn the light on and I'm adjusting it to my finger, about 10 to 12 inches away to make sure that it is clear and that I don't have double vision. This is the part that you can flip up, and I'll show it to you in another slide as well, if you just wanna see through the glasses or through your naked eye.

This, again, is the O Scope, the head-worn microscope, and a couple of things I want to show you about it. One is that in order to change the interpupillary distance, you have to move the tab side to side, and that will change the interpupillary distance. Your goal is to have your pupils, your eyeballs, in the middle of the lenses, in the middle of the frames. You can see this by looking in a mirror, or if you have a partner who can take a look sitting eye-ear level or eye level to you, they can see whether the pupils of your eyes are right in the middle of the frames, in the middle of the lenses, and then you'll be in the right place. You can adjust where this fits by raising it or lowering it, and there's also a little screw set in the back that can raise and lower it as well. As I said, the optics flip up from here, so you can see without the magnification. You will want your eyes and your light to be at the same plane. I showed you last time a cross section of the ear canal, and it was a very straight ear canal. This is more likely the way ear canals are. They're rising or they're S shaped. So it's difficult to see right in the ear, or right down the ear canal. What you do see is the canal wall. You may see some features, but you may see a little bit of the TM or a little bit down the ear canal, but it's really hard when you're using magnification particularly, to see right down the ear canal. So what you may need to do is adjust the patient's head. You may need to tilt it,

you may need to turn it. If you want to straighten an upward sloping canal, you may wanna bend the head away from you, the ear towards the shoulder, and so you'll place your hand on the top of their head and a hand on the bottom, and you do the manipulation, so you can guide the head to the right direction. Or you might have to turn the head to compensate bends. So you may have to turn it one way or the other. If you're trying to look at the front wall, you may turn the head away from you. If you turn, if you're looking towards the back wall of the canal or wanna see the back wall, turn the head towards you. Don't move yourself, move the patient. You sit eye-ear level, and it's really important that you don't start tilting your head to try and see it or bending to try and see it. Just get on the right level and adjust the patient's head. You'll be much more successful that way and you'll see more clearly.

One of the things I like to do, and you heard a little bit, Dr. McCue, when he was showing you the microscope, talked about using a speculum. I like to use, particularly, a metal speculum, with a patient, when I'm trying to remove cerumen that's not too lateral, something that's a little bit deeper, so that I can zero in on it. There are several different kinds of of speculum. You have this style, which is called Gruber, this style is called Hartmann. You have over here, here's the Gruber and here's the Hartmann. You also have plastic. Sometimes the reflection, which is one of the reasons why you wanna use metal speculum, a chrome, perhaps a chrome speculum, is because you want some more reflection of the light. Sometimes there's too much, so you can use a plastic one. You wanna make sure, if you're ordering these, that you ask your vendor if they will tarnish when you sterilize them, 'cause you wanna get a material that is either stainless steel or chrome or whatever, that's not, that won't tarnish when you are sterilizing them. I mentioned reflection is a reason, protection of the ear canal as you're putting instruments in their ear. It protects the canal wall, it zeroes in on the impaction, and using a speculum of course also might be needed with a patient who's got very intense hair growth in the canal, or somebody's who got a very strong bend in the ear. Now, if the wax is lateral, if it's near the canal opening and you could see it anyway, you probably, you know, is not necessary to use a speculum just because it'll get in the

way. This is showing you, in order to see down the ear canal, that you would have to place your hand over here in the tragus, you'd have to pull, laterally and superiorly to straighten the ear canal. Well, now you have nowhere to hold your instruments, so what I recommend is that you hold the speculum with your fingers around the edges, you don't wanna block any of your vision, you pull laterally and superiorly on the pinna, and then place the speculum in the ear, and you wanna be sure you're bracing with these fingers, and being able to see down in the ear canal, and when you can, then you can let go here and use your instruments to remove the wax. This is Dr. Jennifer Stinson, and this is a procedure I have my classes do, on my hands-on classes, to look down the ear canal with their head loup or head-worn microscopes and a speculum.

So we're gonna go ahead and I'll point out what's happening as we watch the video. So I've, I'm wearing my head loupe. I'm tilting her head so I can see the canal, and adjusting it, also turning it. I have my speculum in my fingers, around the edges so I'm not occluding any of the vision, pulling up and laterally until I can wrap it around her ear, and now I'll pick up the instrument and work on removing the cerumen. Lastly, in terms of lighting, I talk about the headlight. I use this for years, and this is, this bottom slide is actually one the one that I use. It is a headlight, it looks like a third eye or Pinocchio nose. He's a eye-ear, when he's eye-ear level, the light will shine right in the ear. Of course, you don't have the depth perception that you do with a loupe or a microscope, and you can use the very same equipment, as I pointed out earlier to you, but this has no magnification, 'cause that's the difference between a headlight and the head loupe or a head-worn microscope. I put this slide in here just to ask the question of you about what you think, how's it look? How successful will she be? How effective is it, and what would you change? If she's trying to look in the ear canal and she got eye-ear level, 'cause she can't possibly see it now, the lamp would be in her way, and I think that it just shows you that it's really important that you have head-worn lighting when you do cerumen management in this way. Actually, the one good thing about this picture is her manicure. That's about all I can find that would be helpful for us.

Furniture, we're gonna talk a little about furniture now, and clinician seating, provider

seating. I urge you to use a pneumatic chair so that you can raise and lower yourself, and that it be on rollers so you can move yourself around the patient. I prefer to have arms on my chair because I find that's, I can rest on them a little bit as I'm doing. It doesn't really matter, as long as your eye-ear, your eyes are on their ears and you're eye-ear level. You can use a desk chair that you have. It doesn't have to be upholstered and matching furniture. As far as patient seating, this is a setup, this is an electric chair, I guess it's an electronic chair, and as you can see, you can raise or lower the patient, I believe you can turn them as well. I see here that you can stand while you're looking in the patient's ear or you can be sitting, just to be eye-ear level. Sometimes you have to lie the patient down, particularly if you have maybe a wall mounted microscope and that's how it's set up in your practice. I like the arms on the chairs, and I don't particularly care for the headrest because it gets in my way when I'm trying to brace the head. So I like the arms because it's someplace for the patient to hold on to, you know, not me, and I, again, there's some people who like to have the patient lying down. I find that your orientation is different with superior, inferior, and so on, is different, and I prefer a patient sitting up in some way.

Here's another example of a chair. This isn't quite as fancy. You pump it up here, you can actually recline the back of the chair here. It does have nice arms. The seating size is pretty large, and it does turn around. Seating size is large would might be good so that your larger patients can fit in there. The one thing I would suggest to you is that you not have a seat that rolls. You can roll but not the patient, because if they start to move away, or they move, or you push, or you tap them or push them by accident, that could really be harmful or dangerous. You should keep your tools all in one place. You can have an area, a counter area with perhaps a cabinet or so on in it. Doesn't have to be a separate piece of furniture, but you should have all your instruments and tools and equipment in one place so that you don't have to get up and say, "Oh, I need to get some ear drops," or, "Excuse me, I need to go get some, head loupe," or I might, or an otoscope or whatever. You want everything to be together. In this case, this is custom made piece of furniture, in the bottom is the suction pump with a hole I'm sure here for

the tubing to come out of. In the middle drawer, probably they keep some of their paper products: paper towels, four by fours, tissues, cotton balls and so on. In the top are the instruments that they use, and at the very top might be some of the liquid things that they might need, some earwax softener, some alcohol, some Afrin. We'll talk about all that at a later date. You see it's all on rollers so they can move it from room to room. I initially, and even later in my practices, went for something a little bit more economical. I went to, I guess it was Office Depot and got a cabinet, a filing cabinet. It's a metal filing cabinet, it could be wood, it doesn't really matter. In the bottom of course is my suction pump, and I would recommend that you put a towel under the suction pump for the vibration, because once you turn it on, it makes a lot of noise, and that'll help attenuate some of that vibration. I call this my crash cart, and in the middle drawer of course I had those paper products I talked about. In the top, I'm gonna show you in a minute, is my cutlery divider with my instruments and other things that I need.

On the top, at the time, 'cause I didn't have room in the drawers, I much prefer hiding some of this, I put my gloves, I put a cup of warm water. That's not to drink, we'll talk about that next time. I was visually challenged and I, this was before I had magnification so I had some extra glasses and tissues, and then here is my headlight. So this is a long time ago, but you get the idea, and they're all on rollers. My husband had drilled a hole out the back for the power cord, all on rollers so I can move it from room to room. I think this is a colleague's of mine from Ikea. I also in one of my offices used a basket setup from Ikea. We did move the, Sarah, she did move the suction equipment down so the patient wasn't right in line seeing it. But all the equipment, all the instruments were stored in these baskets. Here is a picture of that cutlery drawer. Here are my specula, here are the instruments. I have forceps and suction tips here, I have some scissors, some wax guards, and some other things I need here, and on the side I have, these are some ear drops, and I'm about to talk to you about that, and I'll come back to this picture in a minute. This is a syringe to use with the ear drops. As I said, everything was right there and I had it all easily available for me. Last session, last

time, I talked about softening the earwax instead of trying to take out wax that was dry or irrigating so that you can protect the ear canal. I generally use, and what's very popular, is using a combination of 6.5% carbamide peroxide and glycerine. You can, the carbamide peroxide breaks up the wax, the glycerine softens it, and there are several companies that make this. You can use Debrox, you can use Murine for the ear. I'm sure CVS or your pharmacies have their own brand. I happen to use Audiologist's Choice, and I use it in the office. I also would recommend it for patients to use at home. I'm a little careful and, about recommending the bulb to irrigate it out of their ear, to flush it out of their ear, because I get a little nervous about patients who might occlude their ear, and who might not use it appropriately. So if they're gonna use it at home, I generally tell them to put the drops in, let it stay for 15, 20 minutes or so, and then flush it out in the shower. That's my preference. Now, I showed you that, and I'm gonna go back and show you again, now I think it'll make, have a little bit more meaning to you. I showed you the syringe, and what I do, you know, you can get the syringes at your pharmacy.

They usually have some behind the counter there that they've fallen out of a box or that they may have for one reason or another. Of course you don't want a needle at the end of it. It could be a 2cc syringe, it could be a different, little different size, a small syringe. I put a piece of number 13 tubing or other size tubing at the tip of it, about an inch, maybe less. I'll fill this syringe with the drops, I'll sit eye-ear level. Sometimes I'll use a speculum in the ear so that I'm shooting this through the speculum because it zeroes in right on the impaction so that I can saturate the impaction. You wanna be able, it's very important that you can see the tip of this. Remember, if you can't see it, do don't it. So you wanna see the tip of the syringe 'cause you wanna see how far it's gonna go in the ear. You'll ask how long, probably, I keep it in there and it really depends on, really how impacted the ear is. If I'm looking to just disengage some wax from the ear canal, it may not be as long as if I have a large impaction. So what I do is I'll fill the ear with the drops, put a cotton ball over the ear in case some drips out, and in maybe 10 seconds, I'll take a look in the ear again with my otoscope to make sure

that I've saturated the impaction, because it's very frustrating if you leave and you come back to the ear some minutes later and find out that you never really saturated it and have to reapply. After a few minutes, I'll touch the wax to make sure that it is loosened, and then I'll either start suctioning or remove it with an instrument, or I'll have to leave it in there a little longer. Sometimes I have to add some. And, you know, you want to do something while the drops are working. Sometimes I will tell the patient that it's cooking in their ears, and I'll go write some notes or I will see another patient or I'll clean their hearing aid or so on and then come back. Another product that's used is Docusate sodium. Docusate sodium, if you don't know what that is, is Colace, and Colace is stool softener. There are some articles that are written that talk about docusate sodium in its liquid form being more effective than the carbamide peroxide and glycerine. I, that may be. I would say to you like I say in my classes, "What you gonna tell the judge "when you say you put what in their ear?" So it's not FDA approved for the ear, and you may or may not use it. It depends on what setting you're in.

I also want to mention that last time I talked about not flushing the ears out if they don't, if you don't know if they have a perforation or wearing tubes in their ears. I find that I can, on an impaction, I can use drops, because the drops are absorbed by the impaction. It's not a constant flushing. You're applying and you're filling the, only laterally to fill the ear from the point of the impaction. Another product that's very popular is MiraCell. MiraCell is really a great product. It is good for abrasions, for cuts, it's good for burns, it's great on your hands if you have chapped hands in the winter, and it also softens wax. Lots of audiologists I know use this. It is not FDA approved for the ear, but lots of audiologists use this, and you can use this in the syringe as well. I do hear, and I'm told that people use oils, and sometimes physicians recommend oils, oils like sweet oil, olive oil, mineral oil, et cetera. You still have to flush it out. You can't leave it in there, and you wanna make sure, if you leave it in there, it'll macerate the ear, make it really tacky. So you wanna make sure you flush that out. I prefer to use over-the-counter Audiologist's Choice or one of the other products. Lastly, I wanna talk

about Bicarbonate soda. A few years ago, I read an article, and it talked, it was an article from Great Britain, I believe, where some physicians were use Bicarbonate soda to break up the wax, the ear wax. I thought that was really interesting. I wasn't gonna mix up anything and start using it in my patients. Lo and behold, a couple of years ago a product called Earwax MD came out, which Bicarbonate soda and some other ingredients, and it works. It works on impactions and I'm hearing some really great things about it. It's the big guns. If you have a really tight impaction, you use the, you can use this. You need to follow the directions. I tried not to, but you really need to follow the directions, which means that you need to keep it in the ear for 15 minutes, and you, if you have that time, you can go and do some other things, but when you come back, very interesting, it's softened, it's much more pliable, and in some cases, it's really dissolved the wax. So this might be something that you might want to try as well. I said I was gonna talk a little bit about infection control. I mentioned this several times in the last webinar, and how important it is for you.

There are courses that I'm sure AudiologyOnline has and books that are in depth about infection control. I know that AU Vancitus does some classes on it. I am just gonna give you an overview of how this affects you with regard to cerumen management. The first question is, is cerumen an infectious agent, and how do we know? So is cerumen an infectious agent? I don't know. If it has blood or mucous in it, it's an infectious agent, or can be. Does the cerumen have the blood and mucous in it? Don't know that either. So in our case, we probably wanna treat it like there is blood or mucous in it, and in that case, what's the single most important thing that you can do to protect you and the patient? I know you know this. It's hand washing. Hand washing is so important. It's not so much which soap or de-germer you use. What's really important is that friction, is that you rub vigorously for 20 seconds. 20 seconds is a pretty long time. 20 seconds is you singing "Row, Row, Row Your Boat" twice, or "Three Blind Mice" twice, or "Happy Birthday Twice." I bet that you don't normally rub your hands when you're washing for 20 seconds. To demonstrate how long 20 seconds is, I'm gonna give you 20 seconds. You can sing if you want, you can go wash your hands,

but I'm gonna let, I'm gonna count out 20 seconds for you so you'll know how long that is. There you go, that was 20 seconds. It's really a pretty long time, and I wouldn't recommend, necessarily, that you be singing in a public bathroom when you're washing your hands or if you're in your office and the door's closed and people are walking by if you're in the bathroom in your office. You know, they may look a little strangely at you. But definitely take the 20 seconds. The other thing I recommend, and you've seen them on some of the demonstrations that we've done today is to wear gloves. I recommend you wear them during the procedure. This is a treatment, it is a procedure. It sends a message to the patients, it protects you from anything that might be on the patient's ear and the wax, and it protects the patient from something that you might be carrying. I prefer Neoprene or Nitrile gloves. Those are non-latex. If you don't use those or if you use latex gloves, be sure in your case history to find out if the patient is latex intolerant. I get these gloves at Costco. They're pretty inexpensive. I prefer non-powdered gloves because I wear black a lot and powder gets all over everything I find.

These are two different sized gloves, and I'm gonna go ahead and talk while we show you the video. I'm picking up that first glove and here's a little trick. Blow into it to open it up. Usually when they're in the package, they're all stuck together. So if you blow into it, it opens it up, makes it easier to get onto your hand. You're gonna see that this glove is really loose. There's a lot of gaps in that, there's gaps at the tip. So now I'm gonna try on the white glove, because a glove, you can't really say it's supposed to fit like a glove on your hand. It's supposed to fit like your skin so that you can feel everything and you don't get anything caught in anything. So you see, this is a better fit, fits like skin. Here is a picture, this is Dr. Manning again, and he is performing cerumen management using his otoscope 10 to 12 inches away, he's flipped up the monocle a little bit, he's bracing the head. She's way too happy than any of my patients are usually when I'm doing cerumen management. But what do you see? You see that perhaps visually, this isn't what you'd wanna see on somebody's hands who are working in your ear. As opposed to, here he is wearing the gloves, and it's really a

different perspective. Doesn't that make a difference to you, just visually? So besides the fact that it protects you, you should be wearing gloves just for the image that you give to the patient and their families. So how are we going to manage these instruments that we're using, and there's three areas you need to think about in terms of infection control. You need to think about cleaning, disinfecting, and sterilizing. You clean to reduce the gross matter, the gross contamination, and you do that before you disinfect or sterilize. You disinfect to kill germs, all right, to destroy bacteria, vegetative bacteria. It doesn't necessarily destroy the bacterial spores, though, and you can use the different types of disinfectants, like hospital-grade disinfectants. Finally sterilize. If you sterilize, you kill 100% of the vegetative microorganisms, 100% of their endospores, 100% of the time. So when do you clean? Always, 'cause you always have to get the wax out of the suction tips or off the specula or the, in any of your other instruments that you use in the ear. I've always used an ultrasonic cleaner. I lay my instruments down in ultrasonic cleaner so the water goes through it, and I've also always used a product like Audiologist's Choice which, ultrasonic cleaner, which is a disinfectant, and I, the disinfectant you're gonna use to clean items that don't touch blood or other infectious substances, and so I don't really need to, with most of my instruments, I don't really need to disinfect, but they're in the cleaner anyway, and so I use product that disinfects them.

You can use CaviCide as well, there are several other hospital-grade disinfectants you can use. But the big guns are sterilizing, and you wanna sterilize the items that may contain blood or mucous. I really sterilize all my cerumen management instruments. I, going back to the disinfecting and the Audiologist's Choice, it's pretty economical, you can put a capful in a gallon of water and it lasts for a long time. Sterilization, some people use an autoclave, heat under pressure. I'm told by some that sometimes the intensity is great for some of the instruments, but you find out in the setting that you're at. More than likely you're using cold sterilization. You're either using glutaraldehyde or hydrogen peroxide. You're using glutaraldehyde, which is something like Wavicide or Cidex Plus which is 3.5% glutaraldehyde, or MetriCide, which is glutaraldehyde. The

problem with glutaraldehyde is that it's more toxic, it is toxic to touch and smell, so you have to be sure that the tray you use stays covered, and that you don't touch this, whereas the hydrogen peroxide, granted, it discolors your skin or it eats into plastic and wood and so on that you may have. But if you use the Sporox, I think it's safer, and that's what I recommend, for using the 7.5% hydrogen peroxide for your sterilization. Then after you sterilize your products, you want to rinse them out and put them somewhere where they'll dry, 'cause you wanna rinse this off of it. Well that brings us to the end of this session. Next time we'll talk more in depth, give you a lot of information on cerumen management techniques and protocol. My address is on here if you have any questions. If you want some information about any classes that I know of in the future, I know that there's a few around the country in the future, I can help you with that. Otherwise, I will see you next time.