

Episode 16: DiSogra
Duration: 34:06 minutes

00:05 D' Anne Rudden: Usually when I talked about how far the profession of audiology has come, I described the time around graduating with my master's degree, where, armed with a screwdriver, I could turn a few audiometers and an attempt to improve hearing aid sound quality. I also remember one of my undergraduate professors from the philosophy department questioning my decision to go into audiology saying, and I quote, "Why would you want to go into audiology? I mean, any monkey can push buttons for a living." Ouch! That feels great, right? To quote the late and great Jerry Garcia, "lately, it occurs to me what a long, strange trip it's been." I may have started out pushing buttons, turning dials and watching needles move back and forth, but talked to any of us who have been around the audiology block for a few years, and we'll tell you that these lessons pale in comparison to the lessons learned as we have struggled to navigate the crazy hierarchy of where audiology fits in the medical model and straddling the line with retail sales. Who would have taught back then that documenting dosage delivery and frequency for our patient's medications and being responsible for understanding drug interactions, adverse side effects, and Ototoxicity for a whole host of drugs beyond the standard "Mycin drugs" would be the norm for us?

Well, my guest on the podcast this month, has spent his illustrious career striving to make sure that Audiologists are not only familiar with pharmacology but are ready for the next era of professional practice, cause times they are a changin'.

Dr. Robert DiSogra is an independent audiology consultant in Millstone Twp., NJ. He had been in private practice for 30 years in Freehold, NJ. (Audiology Associates of Freehold, PC) prior to selling his practice in 2015. He developed and taught the Pharmacology/Ototoxicity distance learning course at Salus University from 2000-2005 and he continues to teach as an adjunct lecturer. Dr. DiSogra lectures nationally and internationally on pharmaceutical and nutraceuticals for hearing loss, adverse drug reactions and patient management and has several book chapters to his credit. His latest book (2015) is an extensive review of over 50 over-the-counter tinnitus relief products. He is a U.S. Navy veteran, serving during the Vietnam era.

Dr. DiSogra, it is so great to have you on the Hearing Journal Podcast, and it's even more fun because we have a connection. We have summed together in the fabulous AAA chorus for the past few years. I am hoping that you allow me to call you Bob for the purposes of our interview?

03:16 Dr. Robert DiSogra: You sure can. But, we are not going to sing in this interview, are we?

03:20 D' Anne Rudden: I certainly hope not.

03:23 Dr. Robert DiSogra: Okay, good.

03:24 D' Anne Rudden: We have planned to have this conversation at AAA in New Orleans, and I have this great vision of us being maybe even in the exhibit hall or someplace where there are all kinds of hustle and bustle going on. Fortunately or unfortunately, you and I are sitting in our homes having this conversation as shelter and place orders have come around. I feel that it is even more topical to have you on at this moment. I want you to give us before we jump into anything in relation to coronavirus or COVID-19, and potential drug interactions, which have certainly come to our understanding as possibly being something that audiology will grapple with. Give us a little bit of a brief history of the audiology's relationship to medications and drug interactions, and how you got interested?

04:28 Dr. Robert DiSogra: First of all, thank you and thank you to *The Hearing Journal* for having me here for the podcast. I really appreciate that. It is nice to do it this way and of course, I wish we were Live in the exhibit hall in New Orleans, but not this year. I guess we will do it in Denver next year. I got out of school in the 1970s with my masters' degree and pharmacology was something that somebody else did. We monitored hearing loss for the "Mycin drugs" as you mentioned in your very nice introduction. That's as far as I went. We were talking about medications that vestibular patients should not take prior to an ENG workup. We just let

it go with that, but we never look at the side effects of the medications as a possible player in the evaluation especially when we have to scrap and test information, where the patient comes in they are checking off all the hard clinical science of hearing loss. When the audiogram comes up normal and there is no evidence or any proof of any hearing loss at all, and then what are you going to do? You just sent them out the door? I think that's what we did. That is what we did back in the day because we did not know. Fast forward, I was teaching in an undergraduate class at Rutgers, to their Speech Pathology department. One of the students who were interested in the drug's side effects, and hearing, so let see if we can pull together a list of drugs that have auditory related side effects. We did during the course of the semester, and we found about 83 side effects in audiologists interested in. We found about 750 drugs that have those side effects. This was 1991, maybe. We got it published in *Audiology Today*. This was pre-AuD, and it was very well-received and we were grateful for that. As the AuD program started to come online as the movement that got into second gear, I was talking to the late Dr. George Osborne in Salus, and he was telling me about the AuD program they were starting up there, and he was going to the courses with me, and I was thinking about going there which I eventually did and graduated from there. I said, "Whose teaching in Pharmacology class?" I am thinking of someone that we know, maybe Kathy Campbell, or Dr. Campbell, or others in pharmacology. He said to me, "Why don't you teach it?" and I said, "George, I have no background in pharmacology." He said, "Bob if you went back to school right now, at your age with your background, what would you want to learn in pharmacology?" I have a clinical practice, I have been a clinical audiologist my entire career in the trenches, and I said, "Right, I would want to learn this." I gave him half a dozen things, and it goes great, that's the class. I said, "What?" he said, "That's the class?" and I said, "You're kidding?" He goes, "We will expand on it, and that list you had published in 1993 in *Audiology Today*, why don't you update the list?" That's where I took it to the next level. Then all of a sudden, now I am at the 1,500 drug mark, and I am at the 300 side effect mark. I sent that to *Audiology Today* again, and Jerry Northern, who was the editor of that time, said, "Bob, I can't publish this in the journal", and I said, "Well, okay." He said, "No, we are going to publish this in the special issue because this is so unique." This was 2001, and everybody got a copy of it if you were an active member, and the drugs were there. It just spring boarded from there because everybody had in their hands at the time—all the drugs that have auditory and vestibular side effects. It just started to snowball, and fast forward we have 75 AuD programs in the country right now, and 25 of them have been dedicated to oncology classes. The other 50 are using pharmacology in some of their other advanced courses or electives. When I started to see a tremendous increase in the profession's expansion of our knowledge base when it comes to patient management specially to ototoxicity, and even the non-famous drugs, like the Mycin, where these patents and the other drugs that are out there. I am excited that we are on the cutting edge of all these. We have learned a lot and we are continuing to learn a lot. I see prescriptive rights for audiology in the future, and AAA has a task force that worked for a good year and a half on this. We are looking at a change or maybe a scope of practice, but that is going to be slow change because you are looking at individual states, and changing statutes is an expensive proposition but it is going to be in our future, it is going to be there.

09:41 D' Anne Rudden: I heard you say that in the not-so-distant future, and you even said in the next 10 years, that could be a very real thing that we are prescribing medications not just understanding them but have our own little prescription pads and be prescribing them. You were talking about what value it would bring to us if you were trying to order an MRI, you would be able to refer an audiologist to do that.

10:13 Dr. Robert DiSogra: How many times do you see a unilateral high-frequency hearing loss? It is classic audiometric interpretations, this is a probable acoustic trauma. You write a script with MRI, with Catalonia ruled-out of acoustic trauma on the right, and you can't do that right now. There are certain things that an audiologist...the audiologist owns the outer ear and some of the middle ear, and the ENT's own middle ear and the brain stems and everybody else that is there. We can take possession of each and those parts of the ear, and I think the outer ear is ours. Topical antibiotics for otitis media, you can take a handful of things, and I have always told all of my students that "If in doubt be forward out." If you are going to see more of the biomedical sciences coming into the programs, and again the issue here is the 3-year programs were just queer programs. There are some queer programs drop to 3, and some are saying how much is a biomedical science does the audiologist have in coming into this arena? I think the AUD program should know how to revisit, how they get their student applications if they are going to go down that road. It's exciting, it's challenging, but it's going to happen. It happened in New Jersey with the optometrist, and it took a while. It wasn't all-hands-on-deck everybody in, it wasn't just piece, it was a handful of people who wanted to do it,

and there is no law that says you have to do it anyway. We are excited, and let's hope we will see it in our careers but the new audiologist coming up in the world, in our programs, be ready. This is going to be real, this is going to be a real situation, and I commend it for the excitement of being able to document the patients to the next level.

12:21 D' Anne Rudden: I want to change gears because the reason we are having this conversation, not in New Orleans, is because of the Coronavirus, because of COVID-19. Talk about the drug that is being touted as a potential option for treating and its relationship to ototoxicity and what we might have to be navigating?

12:47 Dr. Robert DiSogra: The drug of choice getting popularity is the chloroquine. Chloroquine is a form of quinine which we all know going back 40, 50 years. It is a drug that is used for malaria, leg cramps, and the like. They're looking at this particular drug as a possible intervention strategy for the current Coronavirus patients that are being hospitalized right now. I believed there was one study out of France, they have 20 subjects in this study and they are jumping on it, not the CDC but others are jumping on it because it is something--let's try something rather than nothing. Quinine is ototoxic, there was a talk about combining quinine with Zithromax in the Z-pack. The very common antibiotic which of course is ototoxic also and there's published data on that. We don't know if the chloroquine is going close to hearing loss in all these patients-- number 1. Number 2, it is going to exacerbate the pre-existing hearing loss. Number 3, is going to be a priority in the overall management of these patients because the benefits of the drugs certainly out-way the risk. We may see these as out-patients/in-patients might come in. These patients have pre-existing hearing losses by age, but now we are overseeing the shift in the diagnoses coming down to their younger years now when they are not at risk for this. In New Jersey, we've had quite a few deaths from the virus, and what is interesting is the comorbidity here last week, the secretary of health here in New Jersey said that of the 10 patients that had recently died, 8 of them were diabetic. The comorbidities now are a major player, so we have to be aware of that with our patients. In looking at how we are going to manage them, how we are going to counsel them if we are still in touch with them because everybody's emailing back and forth depending on the relationship that you have. The chloroquine is just one study that's out there that we know of for a similar type of virus. Clinical trials are set-up by the FDA, and there's a reason why they are taking a year, 2 years, 3 years before they even go anywhere near the approved stages because they have to look at bigger numbers. You need hundreds of patients before you realize at the end of 20 is not enough to make a general statement of efficacy and safety. When they talk about using a drug for the coronavirus such chloroquine, they might be shooting fish in the barrel at this point.

15:46 D' Anne Rudden: I'm glad you are on top of it. I'm glad there's a lot of other really smart people that are monitoring this closely and keeping us all informed, and I feel confident that we are in very good hands as a profession to help us know what we're going to need to know to help people as they move forward. I want to pause right here. I'm going to thank you for your amazing knowledge and your willingness to come on and share what you know. I hope everyone that's listening will stay tuned and come back for the aftershow as well because Dr. DiSogra is a pretty interesting character. He is brilliant and has a lot of knowledge, but he also has some side interest that you may now be aware of, and I am going to make him talk about it. Dr. DiSogra, thank you so much for coming on to the Podcast today.

16:42 Dr. Robert DiSogra: D' Anne, it's fine. It's my pleasure, I really appreciate the opportunity. We are on the cutting edge of a lot in new things with this virus and with prescription fright. The audiologist, we are on high gear right now, and I'm excited about this. Thank you for having me, and I hope that this information is helpful to those out there tuning in. Thanks.

17:02 END

