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Clinical Practice Insights from Large-Scale Databases of Consumer Ratings about Hearing Aids

Recorded February 10, 2023

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- Welcome to today's course. It's my pleasure to welcome back Dr. Erin Picou. She's going to present to us some surveys on the clinical practice insights from large scale databases in the consumer ratings about hearing aids. And so we're just so delighted to welcome back Dr. Picou as part of this Innovation Summit. It's been said that innovation is seeing what everybody else has seen but thinking what nobody else has thought. So this month in February on AudiologyOnline, we're celebrating just that: innovation. In our hearing industry, this will be our third summit, third unit we've held this summit. And we're just so glad that you're joining us today. We hope that you catch any of the recordings in the AudiologyOnline course library and the remaining summit courses throughout this month. We'd like to thank our title sponsor, CareCredit, and for the rest of the presenters who've participated thus far. Thank you, and at this time, I'll hand the mic over to you, Dr. Picou.

- Thank you, Christy. And thank you for the invitation to be here. It is really just an honor to be part of this Innovation Summit. Thank you all for tuning in. I'm really excited to talk to you today about some clinical practice insights from consumer databases. This is part of, my favorite part of my job is looking at data and figuring out what it means and how it could help us as clinicians and scientists. So that's what we're gonna talk about today. I do have a couple of disclosures. I am receiving an honorarium for today's talk, and I do research that is funded by a variety of industry and federal sources. I'm not really gonna talk about most of that research today.

What I'm gonna talk about today are data and insights from big databases of consumer ratings. So these are ratings provided by people who are hearing aid users or potential hearing aid users. And they're not really my data. So I didn't collect these data. They belong to, so one of the sources of these data is MarkeTrak. So MarkeTrak is supported by the Hearing Industries Association and by AZ Marketing Research. Another source of data that I'm gonna talk about today is from HearingTracker, so

Abram Bailey is the CEO there, and all of these folks have been very kind in letting me look at and analyze these data, and talk to you about what I see in the data today.

But like I said, they're not mine, which means that I also can't give you permission to use them, so please don't, you know, take these data and use them as your own. But if you do have questions about reusing the data or the slides or about how the data were collected, please contact these folks. So I have three stated learner outcomes. So by the end of today's talk, I hope that you'll be able to talk about at least one source of big consumer rating databases. Talk about why hearing care professionals are important in the hearing journey and the hearing aid experience for people who have hearing loss. And describe at least one factor that can differentiate a hearing aid user from hearing aid non-users, and what we can do about transitioning people into hearing aid users.

Now, I have three stated learning objectives, but I really wanna, this talk is structured a little bit differently than focusing on those three things. I have been, let's say, influenced by some social media activities. So there was a trend for a while, at least on one of these social media video platforms where people would say things like, oh, I do this for my job, and these are five things I would recommend based on whatever. So it might look something like, hi, my name's Such-and-so. I'm a registered dietitian, and as a non-vegan, these are five things I would eat every day: broccoli because it's good source of iron, blueberries because they're full of antioxidants, brown rice because it's a complex carbohydrate, baked chicken because it's a good source of lean protein, and chocolate because it's delicious.

So I've always wanted to sort of hop on this trend, but I don't have a social media following. On at least one social media platform, my dad is my only follower. So that's not very big platform for me to talk. Also, I can't say much in only 60 seconds or three minutes. So I really prefer a 50 to 60 minute time course. And finally, if I'm gonna make recommendations and say things like that, I really wanna have the data to support it.

So here we are. Today, we're gonna spend the next hour talking about six things I would do as an audiologist who spends time reviewing large-scale databases of consumer ratings. So the six things that I have and that I wanna talk to you about come from, like I mentioned, these two sources of data, so HearingTracker and MarkeTrak.

They're different, and we'll talk about the differences in just a minute, but they also share some important similarities. So they're big sources of data, so we get, or they're sources of big data, so there's lots and lots of participants and survey respondents. So they're really good about giving us insight into general trends. They're also all electronic, so everybody's completing these surveys online. It's important to keep in mind that these are all also self-report. So these are people who are self-reporting hearing difficulties and self-reporting hearing aid benefit, for example. We're not measuring anything in the laboratory or in the clinic. It's also de-identified. So we have to just trust people's self-report and believe them when they tell us their gender or age or income or that sorts of thing.

And I am gonna focus only on adults. So we're not gonna talk about any kind of pediatric big databases. It's just these two that focus on adult hearing aid users or hearing aid candidates. So the first one I wanna talk about are the MarkeTrak data. So the most recent MarkeTraks, MarkeTrak 2022 and there was a special issue in "Seminars in Hearing" that was published at the end of last year. But MarkeTrak has been around for a long time. Like I mentioned at the start, this is supported by the Hearing Industries Association. And the idea is to give the field a window into consumers' behavior and perceptions. So we're looking at and tracking hearing difficulty, hearing aid use, and hearing aid adoption rates in the United States over time.

It gives us some insight into the patient journey and how people who are hearing aid candidates and hearing aid users think about their hearing aids and their hearing aid

experience. The data collection methods have evolved over time. So early in the MarkeTrak series, they were mailing surveys, and now they're all electronic, as I mentioned. The most recent one had a sampling of over 200,000 households that are representative demographically of the United States population. And in each household, there's one person who responds. And the questions are, there are questions related to hearing difficulties and hearing aid use but also general health so that it's not entirely clear from the person who's taking the survey that it's only focused on hearing aids or hearing loss.

I'm gonna show you a bunch of data from MarkeTrak looking at satisfaction. And the satisfaction ratings, so people are given lots and lots of questions, and they're asked to rate their satisfaction. And their potential options range from one to seven, where one means they're very dissatisfied, seven means they're very satisfied, and a four would be neutral. So rather than looking at a range of satisfaction ratings, sometimes it's easier just to look at people who are satisfied versus people who are dissatisfied. So I will talk about satisfaction ratings but also the top-three box score. So these are people who scored in the top three boxes. So their satisfaction ratings were five, six, or seven on any particular question.

We could also look at the bottom three-box score. So those would be focusing, those are people who are not satisfied, or they're dissatisfied with their hearing aid or their health care provider. Couple of things, caveats I wanna note about the MarkeTrak data that I'm gonna talk about, when the survey was completed, conducted, and when we analyzed the data, there was no over-the-counter category that had been officially and formally established yet. So there was no over-the-counter category. We did have some data from people who got hearing aids from different channels. So by and large, people in the MarkeTrak survey were fit by a professional in a face-to-face appointment. So that professional could be an audiologist or a hearing instrument

specialist, but they were fit by a professional in your sort of traditional kind of service delivery format.

There were also people who were fit remotely, so they had a professional on the other end, but they weren't in a face-to-face meeting, so something like a Lively. And there were people who acquired their hearing aids through self-fitting, for example, with the Bose instruments, so no direct professional contact. Briefly, I'm gonna talk about and compare some of these hearing aid data to people who reported using something in the PSAP category, or personal sound amplifier. So these are things that people purchased directly from the manufacturer. It's not really the focus of this presentation, and they're not hearing aids. They tend to be people who have self-reported minimal or maybe, self-reported minimal hearing loss or maybe even normal hearing.

So they could look like a hearing aid, or they could not, but they're not things that we would necessarily consider hearing aids. So that's the MarkeTrak data. HearingTracker is the other source of data that I'm gonna talk about. So HearingTracker.com is an independently-owned information resource for hearing aid consumers and potential consumers. So the motivation behind HearingTracker is to help consumers find out more information about hearing aids and hearing professionals. HearingTracker doesn't sell any hearing aids, but they can help guide consumers to additional information. So for the purpose of today's talk, there are two ways that we got data from HearingTracker.com. One of them was through this Help Me Choose tool.

So people who are shopping around for hearing aid information online find themselves on HearingTracker.com, and there's this tool where they can indicate what's important to them, what kind of features or what kinds of listening situations they really need help in, and whether cosmetics or price or what's really driving them, or what are they interested in when they're shopping for hearing aids. And then the result of that is a hearing aid recommendation or a series of hearing aid recommendations. So those

tend to be people who are hearing aid shopping. So they might be established hearing users, or they might not. The other mechanism here is surveys. So you can sign up to be on the mailing list of HearingTracker.com, and sometimes they mail you surveys, and those surveys can be targeted to particular populations, so for example, established hearing aid users.

So I'm gonna talk about surveys from both of these mechanisms today. So that is a backdrop. Here are six things that I would do as an audiologist who spends time reviewing large-scale databases of consumer ratings, particularly MarkeTrak and HearingTracker. So number one, have confidence. So I just wanna, I think this is super important, and sometimes it gets a little bit lost when we're talking about clinical practice, but the data suggests that most hearing aid users report that their hearing aids are beneficial. So this is HearingTracker.com data, and we're looking at the just percent of people who reported a limited benefit, good benefit, or vast benefit. And we see by and large most people report that their hearing aids are providing benefit.

So hearing aids are helping them hear better. Benefit is different from satisfaction. So I'm gonna talk about satisfaction also. So hearing aid benefit is how much better they can hear or communicate or function with their hearing aids. so how much the benefit. Satisfaction you can think of as, like, the overall appraisal of the situation. So are they happy with this device or with this experience? Does it meet their expectations? And hearing aid satisfaction is also related to brand and customer loyalty. So how likely are you to recommend a hearing aid, or how likely are you to recommend a particular hearing health care professional? So benefit is how much the hearing aid is helping, and satisfaction is, do they feel pretty good about the hearing aid?

And good news, also in this have confidence category, most people are satisfied with their hearing aids. So 65% of people are very satisfied with their devices. So this is percent of respondents answering the question, how likely are you to recommend a

hearing aid on a scale of zero to 10, where 10 means they're very likely? We see most people, 65% of people, are very satisfied with their devices. So that's good news. So the hearing aids are doing a good job of not only providing benefit, but people are really satisfied with them. And if we look at what would be equivalent to the MarkeTrak top-box score, we see that 82% of people are top-box satisfied, which is, yeah, so 8 out of 10 hearing aid users are satisfied with their hearing aid.

And that 82% is remarkably consistent with what the MarkeTrak data show. So this is hearing aid satisfaction rates over time, so 2015, 2019, and 2022. We see real stability in these satisfaction ratings, and they're very high. Again, 8 out of 10 people are satisfied with their hearing aids. Notably, I say that it's stable over time, but in 1989, only 58% of people were satisfied with their hearing aids. So we see that, you know, in the last, what's that, seven years, satisfaction rates have been pretty stable, but they're dramatically higher than they used to be. Hearing aids are also improving quality of life. So in that MarkeTrak data, the MarkeTrak questionnaire includes questions about how often the hearing aids improve quality of life. And what I'm showing you here are the percent of people who say that the hearing aids regularly, occasionally, rarely, or never improve their quality of life.

And we see, here we see a pretty big increase in quality-of-life improvements over time. So the blue is the most recent, and then the greens are the older MarkeTraks. And we see that 64% of people say that their hearing aids are regularly improving their quality of life. So the hearing aids are doing a great job. They're beneficial. People are satisfied with them. They're improving their quality of life. And I also think that we should have confidence in what we're doing as audiologists, because people are satisfied with their hearing care professional. So these are hearing care professional satisfaction rates over time, again, remarkably stable and also very high. So 91% of people in the most recent survey were satisfied with their hearing care professional.

And we could break it down, if we wanted, to look at the kinds of professional services that people were and were not satisfied with. So this is, these here are listed in descending order of satisfaction. So the things at the top, people are most likely to be satisfied with, so the quality of service during the fitting, the quality of service after purchase. People are a little bit less satisfied with the quality of counseling provided throughout or level of organizational efficiency, but still very satisfied, really high satisfaction rates in terms of the services that the hearing care professionals are providing. So number one, have confidence, hearing aids are helping, and you're doing a good job, right? If you've tuned in to listen to me today, you're probably doing a great job, and your patients are satisfied with the work that you're doing and the quality of the services that you're providing.

So very closely related is number two, which is know your importance. So the second thing I would do, as an audiologist who spends time looking at these databases, is know your importance. So satisfaction with hearing care professional is associated with hearing aid adoption rates. So what I'm showing you are partly data you've already seen. So this is percent of people in 2015, 2019, and 2022, who are hearing aid users who were satisfied with their hearing care professional. What I'm adding to this figure now are the percent of people who didn't adopt hearing aids. So they are hearing aid candidates, but they don't have hearing aids, who were satisfied with their hearing care professional. And to me, this difference is pretty striking, especially if we look at the most recent MarkeTrak 2022 data.

Only 73% of people who didn't adopt hearing aids were satisfied with their hearing care professional. So to me, that means that satisfaction with the provider and the services that the provider is offering is related to hearing aid adoption rates. So if you're not satisfied with your hearing care services, you're less likely to pursue and go through with hearing aid purchase. So we just looked at these categories just a minute ago, and now it's broken out into hearing aid owners and hearing aid non-owners. And

we see kind of the same thing, and kind of across the board, people who don't get hearing aids are less satisfied with these particular aspects of their hearing care professional services. So one of the biggest differences on this chart is the level of organization efficiency.

So 90% of people who have hearing aids are satisfied with their hearing care professional's organizational efficiency. And that number is only 73% of people who don't pursue hearing aids, suggesting that just the professionalism and the organizational efficiency might be a factor contributing to hearing aid adoption. So also in this category of knowing your importance, devices that were fit with a hearing care professional are more likely to improve the quality of life. So what I'm showing you here are the percent of people who report that a hearing aid or a hearing device regularly improves their quality of life. So it's 64% of people who wear their hearing aids say that a hearing aid regularly improves their quality of life. That number's only 39% for PSAP users.

So those are the instruments, they could look like a hearing aid, but they're some they bought directly from the manufacturer. And they help, they just are less likely to be providing those important quality-of-life benefits. So there's something that hearing care professionals are doing that is helping improve quality of life and helping people use their devices better. And that help and the benefit of those services are evident not only in these benefits, quality-of-life benefits, but also when you ask people how helpful the hearing care professional was, they're likely to say that the hearing care professional was very helpful. So what I'm showing you here are answers to the question, how much did a hearing care professional help you in your hearing aid fitting journey, among people who were fit in a traditional face-to-face service delivery model.

And let's see, 86% of them said that the hearing care professional was either a great deal or moderately helpful. So almost everybody says yes, having those services was

really helpful, which isn't surprising. What is a little surprising to me is when you ask people who got their hearing aids through a different mechanism, so self-fit or remote fit, when you ask them how important or how helpful do you think a hearing care professional would have been had you had the opportunity to interact with one, and three quarters of them, so, or almost three quarters, 70% of them said a hearing care professional would have been helpful. So these are people who have gone through the whole experience and are saying, oh, wait a minute, actually, those services would have been helpful.

So not only are hearing care professional services helping people get the most benefit out of their hearing devices, but also the consumers are noting that hearing care professionals are helpful as well. So number two, know your importance. By providing good services and helping people be satisfied with their services, you can increase hearing aid adoption rates. Satisfaction with a hearing care professional is associated with hearing aid adoption. Your services also increase the likelihood of quality-of-life improvements. So those devices that were fit by a professional, people are more likely to report that the devices regularly improve their quality of life. And finally, most people think that the hearing care professional services are important. So whether or not they were fit with a full-service delivery model or a more limited service delivery, most people say, hey, having that professional is helpful.

So be confident and know your importance. So before we get into number three, I want to introduce the idea of a net promoter score. This is a score that is a calculation of the number of promoters, so the number of people who say yes, this is a good thing, divided by the number of detractors who say no, this is not a good thing. So for example, the number of people who would recommend a company or a brand divided by the number of people who would not recommend a company or a brand. So these scores, higher scores are better. A score of zero is neutral and maybe not great. And then a negative score is bad. So it suggests that more people are saying, no, no, no, I

do not recommend that company, brand, or experience, than who would recommend it.

Why is a net promoter score important? Net promoter scores have been tied to market growth and brand loyalty. So when lots of people recommend a particular brand, model, company, they're more likely to go back to them for repeat business, and they're also more likely to tell their friends, and they're more likely that those friends are also going to try out that particular brand. So having a high net promoter score is important. Not only is it an indication of satisfaction, but it's also potentially an important indicator of market growth and brand loyalty, which brings me to my number three thing that I would do, which is provide services people can't get online. So net promoter scores are much higher for in-person fitted hearing aids than for other channels.

So this figure is from the MarkeTrak, the most recent MarkeTrak data. We're looking at net promoter scores. I've calculated the net promoter score on the right. So we can see that for all hearing aid owners, that score is 24.6, so that's above zero. That's a positive. That's a positive thing. But that big picture score of 24.6 kind of hides, well, definitely hides the differences between the hearing aid fitting channel. So people who were fitted in person with their hearing aid, their net promoter score was 30.4. So you can see that more, many more people are recommending or would likely to recommend their hearing aid than not recommend it. Those scores are much lower for remote-fit hearing aids and self-fit hearing aids.

So the remote-fit hearing aids, the net promoter score is negative, suggesting that people are more likely to not recommend it than to recommend it. And it's just a little bit better than zero in the self-fitting hearing aids, so it's about the same. So we see that about the same number of people are recommending and not recommending remote- or self-fit hearing aids. So like I said, this is really, these, the comparison

between these three things, I think, is really important, so you've got a pretty good score for in-person fitted hearing aids and not-so-great scores for remote- and self-fit hearing aids, which is interesting. So the net promoter score is calculated based on the question, how likely are you to recommend the company that made that hearing aid, or how likely are you to recommend that hearing aid?

Interestingly, satisfaction rates are pretty much the same across those channels. You can kind of see it in this figure, but if you look at just the top-three box, they're almost identical. People who have self-fit hearing aids, remote-fit, and in-person fitted hearing aids report the same level of satisfaction with the device. So hearing aid fitting channel isn't related to hearing aid satisfaction, device satisfaction, but it is related to overall satisfaction with the experience. So because satisfaction rates are similar across hearing aid fittings channels, that means that hearing aids themselves aren't, in general, perceived to be better or worse, but the net promoter score differences indicate that it's the services or the manufacturer of the hearing aid overall that is driving those recommendations, suggesting that people are satisfied with their hearing aids but maybe not with the process of getting the hearing aid or some kind of follow-up care.

These net promoter scores are remarkably consistent with some published work looking at net promoter scores for hearing aid users. So those who were fit, in the study, published in 2022, those who were fit with the traditional hearing health care services, the net promoter score was 22. But if a family member was involved in the care, that net promoter score went up to 83. So when we're looking at the MarkeTrak data, and we've seen that promoter score of 30, that's pretty consistent with, like, traditional, in-person hearing aid fitting service delivery model. And this idea that we can involve a family member and have a net promoter score go up to 83 suggests that there's something about the services and that service experience that are really driving net promoter scores.

I think I've already mentioned this, but the implications of low net promoter scores aren't really good. So if we have neutral or negative net promoter scores, we can have less market growth, less brand loyalty, or less provider loyalty. So patients might not go back to the same brand or the same dispenser that they went to the first time if they keep their hearing aids. So if we really want to grow a market, grow your practice, and keep your patients, we need to really think about improving the experience in addition to the device. But the devices, we'll come back to in a minute, but really think about the experience. So what are some things that you could do to increase patient satisfaction if you are a service, because you are hearing healthcare professionals?

Simple tips, so I mentioned earlier this idea of organizational efficiency. And when you look in the literature, it turns out, so having an efficient, professional organization is important and so is, part of that is reduced waiting time. So the longer patients wait, the less satisfied they are with their their fitting appointment, or, I'm sorry, with their appointment with their health care provider. You might also think that, well, I could just make up for that by spending more time with my patient, right? If I spend a lot of time with my patients, they'll be more satisfied with my services. And it turns out that it's not necessarily the amount of time that you spend with an individual patient that's related to satisfaction with hearing care, with health care professionals.

It's the amount of face-to-face time relative to how much time they waited. So you could spend, you don't have to spend a lot of time with any particular patient if they didn't have to wait very long. But if they had to wait for a long time to see you, then you should spend more time with them, all of that from just a satisfaction, organizational efficiency perspective. I recognize there are lots of things that affect the amount of time that you spend with the patient. But the point here is that it's not necessarily just spending more time with them is gonna make people more satisfied. So running an efficient organization, reducing wait times is important, also, while you're in those

appointments, using clear, simple language that patients can follow easily and understand what you're saying.

And then patient-centered care is a big deal. I just showed you some data showing that involving a family member and making that family-centered care increased the net promoter scores in that study from 22 to 83. So the kind of patient-centered, family-centered care, moving away from a biomedical model, I think, can increase satisfaction rates with hearing care professionals and hearing care professional services. So those patient-centered care, family-centered care, more time, less waiting, those sorts of things are easier to do not online. So in order to improve those net promoter scores, my suggestion is to provide services that people can't get online, patient-centered care, et cetera. We can also think about particular tasks that are better suited to in-person or direct, you know, patient-to-provider services.

So what I'm showing you here are the percent of people who say they're pretty comfortable doing particular tasks, and then the different colors are the different channels. So the yellow bars are people who got their hearing aids in person, the light blue are remote-fitted hearing aids, and the dark blue are self-fit hearing aids. So we see generally people who were in those more limited service delivery models were more likely to feel comfortable doing tasks across the board. But we also see that there are some tasks that people feel less confident with generally. So cleaning, maintaining the hearing aid, people in all three service channels feel okay, right? So 75, 80% of people feel okay doing that.

But there are some tasks that are much more difficult, perceived by the patient, including selecting the appropriate hearing aid and assessing their hearing loss. So people are less likely to feel good about doing those things. So those are the sorts of things that you might wanna take offline in order to get the most out of, so in order for the patient to get the most out of the hearing care professional services that you're

offering. And also, don't forget about troubleshooting, 'cause apparently people are having, in all three service channels also having some difficulty troubleshooting. So my number three tip, to summarize, is to provide services that are not available online. So many people are not comfortable performing some tasks, including hearing aid selection and hearing assessment.

So those are the sorts of things that we should probably be doing not online or the sorts of things, providing services that people can't get from Amazon or Walmart or Best Buy. And importantly, those sorts of services that people can't get online or directly from when they purchase things directly from the manufacturer, those sorts of services can increase net promoter scores and increase your brand loyalty and market growth. So it's not necessarily about the hearing aid itself but those sorts of services that you're providing that people can't get elsewhere that are important for satisfaction and net promoter scores. Okay, so the number four thing is focus on the fitting quality. And of course, of course, you are probably focused on the fitting quality, but I wanna contextualize that a little bit.

So the HearingTracker data, one of the things that was really cool in the surveys, so we sent out a survey for established hearing aid users and asked them to complete some demographic information, self-report audiologic information, some device-specific information, and then fitting quality metrics. So how good is the sound quality? How comfortable is the hearing aid, et cetera? So in this part of the study, people were mostly older than 55. They were retired. They have moderate to severe perceived hearing loss. And the hearing aids in the study I'm gonna talk about, were mostly around \$4,000 each, fit bilaterally, from a clinic, and not covered by insurance. So we looked at drivers of hearing aid benefit and drivers of hearing aid satisfaction.

Focusing on benefit, we found that benefit was related to degree of hearing loss. So people with more hearing loss report more benefit. Hearing aid experience, so

experienced hearing users were more likely to report benefit. More expensive hearing aids were also more likely to be beneficial. But importantly, really big drivers of benefit were the quality of the fitting. So their ratings of sound quality, fit comfort, and battery life were really highly related to their ratings of benefit. So what I'm showing you here are, on the x-axis is sound quality rating, and on the y is percent of respondents who reported vast or a limited benefit. So if we look just here at people who said, oh yes, my sound quality of my hearing was very good, 62% of them were also reporting vast benefit.

And a small portion of them were reporting limited benefit. But if the sound quality was poor, if they said no, no, no, the hearing aid sounds terrible, then they then most of those people also said, oh no, no, the hearing aid's not helping me. Same kind of idea with rated fit and comfortable, so if the hearing aid is comfortable, people were also likely to report that it was beneficial. And if it's not comfortable, it's not beneficial. I'm saying focus on the fitting quality because ratings of benefit were not related to gender, income, employment, duration of hearing loss, insurance coverage, the person who did the fitting. So it wasn't, we asked whether it was a hearing instrument specialist or an audiologist.

It didn't really matter who did the fitting. Didn't matter if they had one or two hearing aids. Didn't matter what the hearing aid brand was. And it didn't matter what the level of technology was. So these things that you might think are going to affect benefit really didn't. It was really about degree of hearing loss and also how good the sound quality, comfort, and battery life were. We saw the same kind of thing with satisfaction. So people who were younger were more likely to be satisfied as were students who were in this survey. There were three specific brands that people were more satisfied with. I'm not gonna tell you what those three brands were, but there were three.

But really, again, the big drivers of hearing aid satisfaction were sound quality, battery life, and fit and comfort. Same kind of figure here, except now it's satisfaction instead of benefit. Sorry. People who rated their sound quality as being very good, 90% of them were also satisfied with their hearing aid. But if the sound quality was poor, they were all, 64% of them were likely to be not satisfied. So I know that that sounds like it might be intuitive, but I just wanna remind you that it's not, that it's really not the brand or the level of technology or those sorts of things. It's really about the quality of the fitting. So you can get a good quality fitting with good sound quality that's comfortable using many different brands as long as you are using your audiologic skills to fit the hearing aid well, make sure that it's comfortable, and making sure that you're focusing on those sorts of things in the fitting.

This is just kind of an aside because I think it's interesting, and I'm not gonna dwell on it. But just because somebody is satisfied doesn't mean that they're noticing benefit. And just because somebody's noticing benefit doesn't mean that they're satisfied. So in this figure here, we've got benefit rating on the x and percent of people who reported satisfaction on the y. And if we look at vast benefit, so they say yes, the hearing aid helps me a lot, 84% of them are also satisfied, but some of them aren't. So the hearing aid is helping them, and they're still not pleased with the overall experience of that, of that hearing aid. They aren't satisfied. The hearing aid's not meeting their expectations.

It's, I think, maybe more interesting when we look at limited benefit. So if we look at limited benefit, almost a third, 28% of people who say, ah, the hearing doesn't really help me, are very satisfied with their device. So the importance of sound quality, comfort, and battery life for benefit and satisfaction is, to me, very clear in those HearingTracker data. But we also see it in the MarkeTrak data. So when we look at people who are not satisfied with their hearing aid, so their hearing aid is performing worse than expected, so their satisfaction is low, really common themes include not

hearing well. So 38% of people who aren't satisfied say it's because, I don't hear well enough. I'm not hearing any better.

I'm not getting any benefit. Or 19% of 'em say it's a sound issue. So it's too noisy. There's feedback. The sound quality is poor. Or it's a product issue. It's uncomfortable. It's ugly. The app doesn't work. So these are really fitting quality metrics that are affecting satisfaction ratings. So when you're thinking about doing fittings, make sure that the fitting is good, the sound quality is good, it's comfortable, there's not feedback, the battery life is good, because those things are really driving benefit and satisfaction. And it's really not who the person is or what the brand is or how many they have or which level of technology it is. One thing that came out of that HearingTracker data is that people who reported good benefit were also more likely to pay more for their hearing aids.

So that leads me to my fifth thing, which is the fifth thing I would do is fit hearing aids with features. People who reported vast benefit paid a little bit more for their hearing aids. Why would they pay more for their hearing aids? It could be because more expensive hearing aids have more features, and those more features are helping them get more benefit. So switching back now to the MarkeTrak data, there have been some changes over time in particular features. So this is a table showing the percent of people who report having a specific feature in 2022, 2019, and 2015. And I've highlighted in gray the ones that I think have changed most dramatically. So rechargeability we've seen come up considerably.

So in 2022, 52% of people had it, whereas that was only 15% three years ago. Streaming from a smartphone, also dramatic increase in the number of people who have that feature. And then related to that, apps, Bluetooth streaming, TV streamers, and companion microphones, all seeing this increase. And those things might be more expensive, and it might be that those features are more expensive, but they're also

providing more benefit. So that might be the cost, the fact that people who have more benefit, report more benefit also report paying more for their hearings might be related to the fitting of these features. I just showed you how some hearing aid features have increased dramatically over time since 2015. Interestingly, I've already shown you this slide, but I wanna show you again within the context of features how we see the same pattern in quality-of-life improvement.

So the percent of people who regularly report that their hearing aid is regularly improving their quality of life is also increasing dramatically since 2015. So you know, without a cause-and-effect study, we don't really know, but when we see these trends increasing in both places, we might think that these features are improving quality of life. When we ask people what the most impactful features were for them, in the MarkeTrak data, they said volume control, rechargeability, and streaming. So those are the three features that people really say make the biggest difference. And two of those are also features that have increased in fitting pretty dramatically. More reasons that I think you should fit hearing aids with features are that there are some features that are related to increased satisfaction.

So in this figure, we're looking at the dark blue is the hearing aid, people who said, satisfaction rates for people who said, my hearing aid has this feature, and the light blue is satisfaction rates for people who said, my hearing aid does not have this feature. So rechargeability, directional microphones, streaming with an accessory, and streaming from a smartphone are what I've got boxed here. And we see that satisfaction rates, people who have these features are more satisfied with their hearing aids than people who don't. So my number five thing, fit hearing aids with features. Features are expected to be beneficial. We see that in the lab studies, and we also see that in these consumer data studies.

I don't really think it's a level-of-technology thing. You probably have heard that level of technology is not related to outcomes. So there have been a couple of studies in this area, field studies and our own consumer data studies, showing that it's not, level of technology doesn't make a difference in outcomes. I think it's really specific to the features. The levels of technologies aren't the same across clinics. They change over time. So I like to think about levels of technologies in the context of which particular features are changing or different across levels. It also might be that we don't see levels of technology affecting hearing aid benefit and satisfaction because it matters, the importance of particular features depends on your population.

So what this figure is showing is percent of people who say that these things are important, for different ages. So the gray bars are younger folks, so less than 35, and the red are older than 65. First of all, everybody says that comfort and sound quality are important. So we could put this back in the focus on the fitting quality, just more evidence that sound quality and comfort are important, but also, having the latest features and having access to wireless technology is more important for younger folks. If you are gonna fit hearing aids with features, make sure you counsel on the feature use. So some people but not all people are comfortable using their features. Some of these features take counseling.

So if you are gonna fit hearing aids with features, don't forget to counsel. So to summarize my fifth thing, fit hearing aids with features. Hearing aid feature use and quality-of-life benefits have been increasing dramatically since 2015. I think these two things are related. The most impactful features are rechargeability, volume control, and wireless streaming. And these things are also related to higher satisfaction rates. And finally, features might be more important for younger patients. So the sixth thing, sixth and final thing is address telephone listening. So this is kind of a side, pet area of interest of mine, but I don't want us to forget it. Some people are still struggling on the

telephone. So I've highlighted in yellow here this, important parts, I think, from this table or the relevant parts from this table in the MarkeTrak 2022 study.

And these are hearing aid owners, in that first column, who say that they are satisfied with their ability to talk on a cell phone or a traditional phone. Most people are satisfied with their ability to talk on these phones but not everybody. So let's not forget about the people who aren't. So that's almost a quarter of people aren't satisfied with their ability to talk on the phone. And the ability to talk on the phone is important. These are data from the Help Me Choose tool. The boxes, the ones that I think are important I've put little black boxes around. I'm not sure if it's helpful or not. But what we're saying is lots of people say physical comfort's important, hearing my friends and family is important, and almost as important as hearing my family and friends is the ability to talk on a mobile phone.

How do we do that? How do we help our patients talk on the phone? Two big solutions, one would be a telecoil. So relatively low tech, also helps in looped rooms, provides individual amplification, and I learned recently, I think Google Maps is now implementing this thing where they put the telecoil symbol on places that are looped, so trying to get more accessibility to things in places that aren't just telephones. Wireless streaming, so you know, direct from a smartphone, not sensitive to positioning constraints, can work on a bunch of different things, not just the telephone. And this technology and our skills as a culture are dramatically improving. I do wanna note, I just read this article on HearingTracker about how these solutions aren't necessarily mutually exclusive.

So there are people who are like, oh yes, wireless streaming is how I handle the phone, or people who really focus on telecoils and think that wireless isn't ready yet or whatever. But I don't think that these two camps are in opposition. I think we can have both at the same time. These are from the 2020 data. And the point here is that almost

everybody has a smartphone. It's not until we get into the 85-plus where people maybe don't, not as many people have access to a smartphone, but by and large lots of people have access to a smartphone. So we should be able to get wireless streaming into a smartphone if that's something that, because most people have that.

Good news, I think, is that we're seeing both telecoil and streaming are on the rise. So this is people who report those particular features in 2022, 2019, and 2015. And we see telecoils are increasing and a super dramatic increase in wireless streaming. So both of these things are on the rise, and that might help improve our satisfaction with telephone listening in the next MarkeTrak data. Also, having these things, either telecoil or wireless streaming, is related to hearing aid satisfaction. So people who have either one of those are more satisfied than people who don't. So the sixth, sixth and final thing I wanna say is don't forget about the telephone. So telephone listening remains problematic for many hearing aid users, about 25% of them.

Many people report that hearing on the telephone is important, as important as, almost as important as other things like hearing their friends and family. Use of both telecoils and wireless streaming is increasing, although the rate of wireless streaming is increasing faster than telecoils. Many people have access to smartphones. So I think that's a viable option. But they're not mutually, not necessarily mutually exclusive. And the use of either telecoils or wireless streaming is related to hearing aid satisfaction. So. Sorry. Okay, so I told you I had three learning objectives. So here they are. I wanna make sure I did it. So objective one was describe the source of at least one large scale-database of consumer ratings.

I've got two. You could pick one. The HearingTracker data, those are surveys completed by people who were seeking information online or who got on a mailing list because they were seeking information online. So they're either hearing aid shopping, or they were hearing aid shopping, and HearingTracker sent them a survey, and they

answered questions about their demographics and self-reported audiologic information and their hearing aid information, benefit satisfaction, et cetera. The other source of data that my talk focused on today were the MarkeTrak data. So those are surveys completed by people who are invited to participate based on a targeted sampling of household representation, so they're representative of the US, general US demographics, and it was supported by the Hearing Industries Association.

So the second objective was to describe the consumer perception of the importance of the hearing care professional. I showed you lots and lots of data, and I think there are lots of ways that you could think about the importance of a hearing care professional. Some of the ways I saw were that, one, satisfaction with hearing care professional is associated with hearing aid uptake. So people who are more satisfied with their hearing care professional are more likely to be hearing aid users. Also, most people, whether they went through a full-service, traditional hearing aid, full-service, traditional hearing aid acquisition channel or a remote-fitting or a self-fitting channel, most people report that a hearing care professional would've been helpful or was helpful.

So the consumers feel like and see the benefit of having a hearing care professional, or many of them do anyway. There are some things that people are really less likely to be comfortable doing without your help, and those include hearing aid selection and hearing assessments, so those are things that are really valuable skills and places that you as hearing care professionals can help. And finally, services are important for net promoter scores. So these net promoter scores reflect consumers' overall experiences and might indicate market growth and penetration. And people who go through these more limited service delivery are less likely to promote or recommend their device or their experience to others, which could actually slow the market growth or even shrink these sort of limited service delivery options.

And really, to have satisfied and big net promoter scores, we need to be thinking about our services and maybe, and patient-centered care. And we talked about organizational efficiency, so reduced wait time, those sorts of things. And finally, the third objective was to describe one factor that differentiates hearing aid users from hearing aid non-users, and the big one, maybe the only one that I talked about today was the hearing care professional satisfaction rate. So hearing aid adoption rates were affected by the satisfaction with the hearing care professional. People who adopted hearing aids were more likely to be satisfied with their professional than were people who did not adopt hearing aids. So my recommendation here based on all of these data and trying to pull these things together is to really think about the services you're providing, and also think about incorporating patient-centered care, patient and family-centered care.

So the advantages of patient-centered care is it increases trust and satisfaction. It's related to net promoter scores. It could increase hearing aid adoption rates. And we know that hearing aid adoption rates and hearing aid market penetration is pretty low. And if there's anything we could do, I'm sure we would do it. And I think patient-centered care might be one of those things that we can do. So I don't know if I can do this in 60 seconds or not, but here are six things I would do as an audiologist who spends a lot of time looking at data related to hearing aid satisfaction and benefit. Number six, I would address telephone listening. Some people still have trouble.

There are a couple of solutions that we have. Telecoils and wireless streaming, I don't think they're mutually exclusive, and I think they're both good options if you can work them in for a particular patient. Number five, fit hearing aids with features. Hearing aid features are related to benefit, satisfaction, and probably quality-of-life improvements. Number four, focus on the fitting outcome. So level of technology, brand, cost, price, who does the fitting are much less important than having a fitting where the patient likes the sound quality, fits comfortable in their ear, and that the battery life lasts.

Number three, provide services patients can't get online. These include sorts of things like counseling, also hearing aid selection, hearing assessments.

Yep. Number two, know your importance. Consumers think that you're helpful. Hearing care professionals can increase hearing aid adoption rates. And there are some things that people just don't do very well without our support and our services. And number one, don't forget, have confidence. Hearing aids are beneficial. People are generally satisfied with them. In general, people are satisfied with hearing care professional services, and hearing aids improved the quality of lives for many people. So you're probably already doing a great job. Keep up the good work, and have confidence when you go out there. And I guess my seventh thing would be eat chocolate, if that's your thing. Okay, that's all I've got. I do have a couple of time, couple of time, a couple of minutes for questions, if anybody has questions.

So the question is, "Is it more important to engage in patient-centered care than to spend more time with them?" I think the patient-centered care bit is more important than spending more time with them. At least the data, the scientific data suggests that it's not the amount of time, but it's the quality of time that's more important. Yeah, it's not just a matter of spending more time. It's about making good use of the time that you have. And patient-centered care is one good way to make use of that time rather than just spending more time with them. I hope that answered your question.

- [Christy] Thank you so much, Dr. Picou. I don't think there are any other questions in the queue, and I'd just like to thank you for your time and your expertise and just being part of this third annual summit on AudiologyOnline. We hope that you all have enjoyed this presentation. If you have any other questions for Dr. Picou that you can think of after the fact, she has left her contact emails there. And of course, we hope that you've enjoyed this course, and thank you so much, everyone.

- Thank you. Thank you, everybody.