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EHDI

Mineral D/E

Achieving Full‑time Use of Hearing Technology through Datalogging and Family Counseling

Casey Judd

4:20-4:45p MT

March 20, 2018

CART/CAPTIONING PROVIDED BY:

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>> Hello, everyone, hopefully you enjoyed the presentations so far. I'm the room monitor if you need anything. Each table, we have evaluation forms, please fill those out when we're done and put them at the back table. Enjoy your soon to be final presentation. Thank you.

>> Hi, everybody, first I'd like to give props to the interpreter in the purple sweater that pronounced our names correctly. Welcome to the last session on the last day. Y'all are the dedicated, brave ones of the bunch. Thank you so much for coming. I'm Marcia Foster. I'm one of the audiologists at Sunshine Cottage School. A listening and spoken language outcome school in San Antonio, Texas. This is my 14th year there and this is my buddy.

>> Hi, I'm Julianna Wanek. I'm one of the parent infant advisors at Sunshine Cottage. I haven't been there quite as long as Marci, I'm working on my fourth year right now, but... hope to be there just as long.

>> First thing you all should know about me, I'm not fancy and I'm not formal. I work with little kids all day, so I'm just a big kid. I'll probably say silly things, it's the end of the day, I think you can handle it.

My portion of the chat is to talk about datalogging. Just for giggles, can I see how many audiologists do we have in the audience? How many speech therapists do we have in the audience? Okay... parents of wonderful children? Okay... and... early interventionists? Teachers? Okay... did I miss anybody? Okay... thank you!

So... datalogging and I apologize that a smidge of our wording may be a little cut off. So... for those who don't know, although I'm pretty sure the audiologists in the room do, datalogging is a tool that we use or is supposed to be used to give us an idea of what's a kiddo's actual usage time or approximate amount of usage time that they're wearing their hearing technology? Datalogging for each hearing technology company can look real different, can be real different. We'll go into that, for some of the companies it can actually analyze the datalogging tip can analyze the environment that the equipment is being done in. We'll take a peek at that too. My portion of today's take home is, you'll hear me say it again and again. The reality is, datalogging from one company to another is not the same. Not the same, not the same, please interpret with caution, okay?

So... I'm not going to name companies, I'm just going to do generalities. So... Pediatric, behind the ear hearing aids. What might datalogging look like from that piece of equipment? It could just be one singular number. Here's the number of hours... or it could be like the picture shown here. The number is at the bottom of the graph. There's actually a little more analysis attached there. With, on average, the number of hours, broken up into columns that the equipment's being worn. So... if that number's going to be really correct... that number, which is real tiny and I apologize, it says 6.4 hours per day, so... really, if that number's correct, you see my four to eight column... it needs to be the tallest. Okay? When those don't match, not accurate.

Okay... bone conduction hearing aids. The bone conduction part is missing, but the pictures you can see. So datalogging for bone conduction hearing aids, multiple companies make that technology as well. So... it could look like the previous picture we just saw... or datalogging could look something like this. You're already beginning to catch the theme today that has anything looked alike from slide to slide yet? The answer is no. Okay...

So... datalogging for this particular bone conduction device, there's an average number of hours listed, but there's this thing called scene analysis with it. So... that circle there, which I tried to write in bigger writing so you guys could see, is basically just different environments that that datalogging chip is picking up that the technology is being warned in and basically percentage of time of how often are we in those different scenes. Making sense so far?

Okay... I saw some nods, we're pressing on. Now you wouldn't know it from this slide because you can't see the words, but it also says Pediatric cochlear implants up there. This datalogging can be any combination of what we chatted about so far, friends. Or it could be something completely different. Like... what you see here. Which is how many hours a day has the equipment been used, what environment has it been worn in, all the way to battery life.

So... datalogging can give us a lot of information. All right... again... words are gone. That says datalogging is not one size fits all. Okay? None of the pictures you've seen from slide to slide yet look anything alike. So... since none of the companies have datalogging that's exactly alike, I feel like, you guys can make your own opinions. I feel like comparing datalogging measures from one kid wearing one manufacturer's brand of technology to another kid wearing another manufacturer's brand of technology... it's not quite a fair comparison. Okay?

All right... some quirks that I'd like for you guys to know about. Since there's a chunk of audiologists here in the room, you may know this and I could be preaching to the choir, but things you should know are in this age of we can stream, an accessory for this and that, all of that is wonderful, but for some companies, when we attach those devices or use those extra‑cool parts, it turns off the datalogging chip.

So... then our datalogging number just became less accurate. Or... as I kind of mentioned before... if datalogging is just a singular number... I load up the hearing technology, attach it to a computer and on the screen appears a number, no other analysis, just a number... well... how accurate is that? Without a little more analysis with it? The example I'm going to use here is real life. I know it's not going to sound real life, but it's real life.

What if the equipment is actually turned on but... it's in the toy box? Or... what if it's turned on in a case in mommy's purse? So... kiddos technically getting credit for those hours because we didn't have any analysis to go with it. You get where I'm going, datalogging can be useful, but there's quirks to know about.

So... another quirk. Lots of our kiddos these days have a main processor and back‑up processor. Per ear. So you have boat loads of equipment you're dealing with. If the kid goes back and forth from one processor to another... maybe they had an equipment break down or maybe just like to switch throughout the day for fun, I don't know. That totally throws off the datalogging, then when we go to connect one processor and it says two hours a day and the mom's like "no! We went full‑time." Then you have to ask questions like "have you been using a back‑up lately?" So... other things to know. And un‑‑ unfortunately, I just want to put those two sets of datalogging numbers together and come up with a really big number total that sounds really great. But... one cochlear implant company I spoke with said, in fact, no, you can't do that. My hope is a little bit dashed there.

So... I wanted to share that with you all.

So... what are we supposed to do? I just want you all to become good friends with an audiologist. And based on the number of hands in this room, if you all don't have a friend already, there's plenty here. To choose from. And... for the audiologists in the audience, again, we say, please interpret the datalogging information with caution. Okay? It's not the be all, end all. Another real life.

If the datalogging says we wear ten hours a day, we don't have any other scene analysis, hours analysis or anything like that to go with it, but in a parent infant session mom says "he's constantly taking equipment off, I've found it under the couch, here, there and everywhere." That can point towards the accuracy of that number as well.

Or... if datalogging says we have worn the equipment eight hours a day, but the environment analysis that went with that datalogging says that 90% of the time the equipment is environment of noise, unless the kid is standing next to a white noise speaker all day, it's probably not on on, it's on, but not on their ear, where we like it, okay?

All right... so... now that I've told you quirks... I have to give you a positive datalogging example. I can't let you all think that datalogging isn't a positive experience. So what the words actually say above datalogging that's helpful is a teachable moment. This just happened for me a couple weeks ago. So... I'll give you guys some background. This is a young teenage kid who's a rock star, in my opinion. I'm easily swayed because the kids are all cute and fabulous in my opinion, but... anyway, he comes in and he is telling me, hey... I think it's time for mapping. Particularly on my right side because... I just feel like things ‑‑ I'm having trouble hearing on the right side. So... we're going to take that and now we're going to look at this lovely picture.

I don't expect you all to be able to see the fuzzy pictures... of details up there. Basically what we're looking at is two horizontal rows there, the top horizontal row is the right processor. The bottom horizontal row is the left processor.

Now... I want you to jump over to the far right circles. You see the one on top, the right side? There's some blue, for most of the circle and then yellow. And then... the left side is all yellow. What the blue and the yellow corresponds to there, on that right side, the blue is his music program. The yellow is his every day listening program. And that's his right side. This is the side he's telling me he needs mapped. So... I said to him... 75% of the time you're living in the museum practical on that right side. He said "oh my gosh, no... okay here's what happened." He tells me that at night he has a bed time routine where he has a music player on the right side of his bed that he connects the right processor too, jams out, does his music thing, takes off his equipment, goes night night. Next morning, wake up, a fresh battery on the right side assuming it went back to program one, which is the every day listening program.

Puts a battery on, good to go. Well this was a teachable moment. When I got to say "no, no, friend... no, this processor doesn't go back to your main number one program. It goes back to the last‑used program."

Now, I promise I've told him that before. But... this is for datalogging, was huge and helpful to me. This told me exactly what was going on. We changed them to P1, his life got better. So... I don't want you to walk away from my portion of today's piece of the pie thinking datalogging is bad. We need to have knowledge about it, we need to be informed. It's a good tool, needs to be interpreted by an audiologist. If you have questions about datalogging for a kid you're working with, talk to your friendly audiologist, particularly one that's a Pediatric audiologist. And really, just encourage these munchkins and their families. I tend to use datalogging, just a piece of information and put all the other professionals that have their hands in the cookie jar with this kid. I put their report with datalogging to help give me a better accurate picture of truly how much are we wearing the equipment?

One such wonderful professional is this really nice girl here.

>> Okay... so, I'm going to try and be as entertaining as Marci. No promised, we're halfway through, almost there. We didn't expect with it being the last session of the day to have as many of you lovely folks in the audience, so... we had some handout. We have a handout for people that are interested, if you don't get one, we will make sure that it is on the handout section of the EHDI website so... don't be discouraged but I'm going to talk about that now.

So... Marci talked about datalogging, why is that so important? Why do we care about datalogging? Because... we want to know that the child is wearing their equipment all waking hours. Development of listening and spoken language for a typically‑hearing child is ‑‑ it's crucial for them to have 20,000 hours of listening work by the time they are 5. To develop listening of spoken language and be academically ready for kindergarten.

Naturally, we would assume that a child with hearing loss that we expect to develop typically, is going to need those same hours, but they must have their technology on. There's no listening and spoken language outcome without all waking hours.

So... we came up with ‑‑ we wanted to know what does all waking hours look like? That's different for every kid. Depends on how much they're sleeping, how much they're awake. Age can play a factor. Other disabilities can play a factor. So we created this handout that you can pick up afterwards. We intended to have it for you all to look at, sorry for that.

But we looked at how many hours a day is a child sleeping? Are they awake and what is our goal for a child of this age? What is the minimum all waking hours?

Sadly, research tells us that a child, birth to 5 with a hearing loss, who is wearing hearing technology, the national average is about four and a half to five and a half hours a day.

By age five, that gives a child 10,000 hours of listening work. That's half of what a typically‑hearing child gets. So... we wanted to know, how can we counsel parents with that? That's where our handout was born.

But to counsel a family effectively, we have to establish an open and honest relationship with that family. Those crucial conversations, that's been a keyword this week. It can't happen if you're not comfortable with each other and if there's no trust.

Using datalogging as a tool for this, we must first and foremost recognize this isn't an easy task. Parents are undertaking a huge responsibility and... a lot of times presenting this information and datalogging can be a delicate subject.

Especially if that number isn't so good when you have .3 hours a day, 1.5 hours a day. We've seen it all, trust me. And as professionals, that's why it's so important for us to recognize that it's not an easy task and we are in a judgment free zone because the purpose of datalogging is not to act as a big brother or try to make the parent feel guilty, but to use it as a way to achieve our ultimate goal of all waking hours.

So... from there, once we established all that, we can help a parent to determine attainable, realistic goals. For that family that I mentioned that was that .3 hours a day, we can't expect them to go from that to 11 hours a day in a week. That's just not feasible. So... what we want to do is set checkpoints, and help them to determine their goals because... if they determine them, they're going to be that much more motivated to reach those and more intrinsically motivated to do that.

Along with that... we can work to help the parents identify barriers that they face throughout their day and come up with solutions to help them get through that.

So... some of the most‑common barriers that we have seen, which are also on the back much the handout that you will receive, these are the ones that we see most‑often. And... so, first one being that a lot of times, we work with working parents. That's just a fact of life. And... when you have working parents that you're dealing with, they're most likely, their child is most‑likely with someone else during the day or whenever they're at work.

So... a lot of times, we've seen grandma, aunt, daycare worker, they're not on board, they don't understand why it's so important for this child to be wearing their hearing aids or their cochlear implants or whatever technology the child is wearing. And so... we've done things to help the parents have that conversation, we've given them resources to help to understand why that's so important.

We've also encouraged families to log their own wear time, so... datalogging can give us so much, as Marci said, if we have just that number, we don't have that analysis to go with it. And... this can actually be part of that analysis. Like she was saying, a mom who says they're constantly pulling them off and hiding them somewhere. So... sometimes this can identify parts of the day that are especially a struggle. And also, to compare to that datalogging number, to kind of say, or to point out some of those times where maybe they were streaming, maybe they were wearing a different processor.

This can also lead to establishing new routines. To encourage technology use. So... one of the things that parents often tell us is that they packed the hearing aids in the diaper bag for the morning and they're ready to go, but then they're missing out on the bed time routine or the wake‑up routine. So... even just changing the location of where the hearing aids are kept can make a big difference.

As I mentioned, as a child gets older, their sleep time is going to become less and less. And... they're waking time is going to grow. We want that all waking hours to grow with them. So... we need to continue pushing and raising the bar.

Sometimes the simplest solution can be retention option that can make all the difference for some families. We actually included a slide on the PowerPoint which, again, will be available on the EHDI website. Just listing a bunch of different links to places that we found to provide families with retention options. Etsy is a big one that we found that parents love. Then they're cute and not so funky looking. That'll be on there as well.

And finally, just helping the parents remember the sense of urgency that comes with water main break the technology. We've had several families, and I'm sure everybody can say they have, that... seem to be complacent with how low the number is. And... when we have that, it's okay to remind the parent, this is an investment in your child's future, you cannot make these numbers up. You can't come back later and try to add up all those numbers, it doesn't happen.

So... to kind of wrap up our discussion today. We have a video of a family that has used datalogging to try to reach [indiscernible] ‑‑ Marci actually worked with this family. And so you can see that she really loves datalogging. It's been a great experience for her, but... we'll go ahead and show you their feelings on it. [No sound].

I don't know what all that is, and I'm not sure how to get back without messing up all the ‑‑ there we go. Okay... to wrap up, maybe... there's no listing in spoken language outcome without full‑time usage. That's our ultimate goal. That's what we need to strive for. It's imperative to form an open and honest relationship with all your team members, especially the family member. But also your handy dandy audiologist.

And datalogging should be used as a tool for counseling, not as a tool for judgment. I can't emphasize that enough. As you can see, they thought they were getting scolded. They felt it was big brother watching out for them.

And finally, as we all know, every child, every family, has different needs. And we have to treat those needs accordingly and help them to meet those needs.

So... this is the slide that we included with the retention options and then... of course, our references. So... thank you guys so much. Does anybody... I don't know if we have time for questions. But if we don't, you're more than welcome to come up and ask us ‑‑ I know some of you are probably rushing out to get to the airport. Safe travels and thanks for a great EHDI conference.

>> Thanks, y'all.  
[applause]

[Presentation concluded at 6:46 p.m. ET/4:46 p.m. MT].

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