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EHDI – Florence

Capturing Hearing Results among Audiologists: Evaluating the Acceptability and Usability of Reporting to EHDI-IS

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>> Good morning, everyone, let's start ‑‑ all right, sorry... there's one minute left. Okay... good morning, everyone. My name is Maria Sanchez. Winnie Chung will be presenting as well.

Just a disclaimer ‑‑ this presentation isn't an official position of the CDC. During this presentation... you will learn the acceptability and usability of the EHDI‑IS among audiologist. You'll learn ways to join the community in state EHDI programs.

Let us start by describing how we forecast these evaluation projects and provide a little bit of the background.

Early Hearing Detection and Intervention Information System ‑‑ ‑‑ the Center for Disease Control and prevention funds EHDI programs to enhance the EHDI information system and to improve documentation of hearing diagnostic testing for infants who do not pass the newer hearing screening.

During the first of the three years, corporate agreement, funded EHDI programs conducted a formative evaluation. The purpose was to understand the willingness of the state to promote EHDI programs. The process for audiologists to report data and enter data into the EHDI‑IS, but also to identify obstacles audiologists face around reporting hearing data to their EHDI information system.

This was a one‑year evaluation started in September 2017, when CDC and jurisdiction were together, deciding the evaluation plans, beginning in 2018. A state EHDI program started implementing the evaluation plans, collecting and analyzing data and by the end of October, jurisdictions shared the evaluation finding with the stakeholders and with CDC.

Now... I'll be presenting the evaluation design for this project. Here, we have a flow chart of the evaluation question and the rest of these projects. More important is how each step will influence the next step, important to fill the gaps at the same time.

Like... how many periodic audiologist providers or audiology centers are in the state? If this is your target population, and you need to receive and collect data from them... this is a very important question.

Next... is how many periodic audiologist providers are reporting to the EHDI program? But also to assess usability and state coordinator information about how user‑friendly is the form or electronic reporting system.

In addition... web barriers prevent audiologists from reporting to the EHDI program. These tables summarize the evaluation design for this project and their data collection method column. We have that document review, surveys and interviews was the method used by a state EHDI program to collect this information.

Here... under data collection source, explain where the information was coming from, for example... to find an answer about the audiologists in the state, [indiscernible] to the state licensure list, audiologist list, Speech Language Pathology and audiology list and information from the information system.

So let's talk specifically about the acceptability of the information system. The willingness of audiologists to report and how we assess these attributes. Using the data reported by the state EHDI programs, we identified three levels of acceptability. High, moderate and low. We classify the responses according to the following criteria.

High acceptability, if more than 75% of our Pediatric audiologists in the state report data to the information system ‑‑ and is based on an official list. Sometimes, when the EHDI program mentions that they have their own list... they provide an explanation, how their list is updated. On a regular basis.

Moderate acceptability is between 50 and 74% of the periodic audiologists in this state, reporting data to the program and low acceptability, if less than 49% of the periodic audiologist is reporting data through the EHDI program. Another program was unable to determine because the state didn't provide enough information and the state used its own data list and lack of explanation, how the list is regularly‑updated.

Here, we have the evaluation design to assess usability and here we have the criteria we use to assess usability of the system. To level accessibility, identifying [indiscernible]. More than 70% of responses ‑‑ I mean ‑‑ of audiologists are satisfied with the reporting process, which is manual or electronic and few issues were identified. Otherwise, it was classified as needing improvement if a normative issue were identified to result, but also unable to determine if a state didn't provide information for us to classify this state. 34 out of 44 EHDI state funded programs completed their evaluation. 39 evaluation reports were included in the analysis. Including [indiscernible] which had just one audiologist that reported data. Reviewing categories developed to analyze quantitative data and studies were calculated using Excel.

So... let's review the evaluation findings from this evaluation. Of all 39 states, 31 has a diagnostic reporting protocol and 29 is state diagnostic legislation in place. We were unable to determine for the reporting protocol, by the state, for legislation, one state.

With information from the evaluation report, we create four categories to assess acceptability and as you can see in the pie chart, high, moderate, low, unable to determine. I gave the definition of each level of acceptability earlier. Here showed that 19 states have high acceptability. More than 75% report data to the program. 12 states have moderate acceptability and six states have low acceptability. We were unable to determine the acceptability of two states because the information were not clear in the report.

Here showed the reporting method used by audiologists to a state EHDI program. Using both electronic and minor reporting method. Eleven states use just electronic reporting methods and nine states use manual reporting methods. Here shows the usability or user‑friendliness of the reporting for audiologists. It used to be user‑friendly and 13 states reported electronic method or reporting needs improvement.

For the manual reporting, need to be user‑friendly and six states reported having issues to resolve.

So... let's discuss in specific, the barriers for audiologists report. We ask about barriers for audiologists to report diagnostic data to state EHDI programs. With the data that the funded programs we learned are, number one, technical issues. Number two... lack of time. And number three... lack on knowledge on reporting requirements.

Rest of barriers include lack of knowledge on how to report, forgot, attitude ‑‑ attitude in this context means the individual belief or values about recommended practice, and to state reporting having no barriers in reporting.

After we saw, slight technical issue is top barrier for audiologists reporting. Here, we provide a graphic that shows specific issues in detail. Electronic reporting begins with user registration, from their login ‑‑ we have seen several issues with the login, social inability to login, compatibility issues, interface issues and issues with password. After logging in, the next step is finding records. 12 state‑reported audiologists having trouble finding records in the EHDI information system.

Then... it's data entry. 12% of reporting lack of knowledge on reporting requirements. Next step is data completion and we have state reporting issue with data completion, social inability to save records, difficulty getting complete data and sometimes data were not saved properly.

Each step inhibits tracking of patient progress through the EHDI process.

As mentioned, 12 states described issues with reporting requirements, basically audiologists were unaware of the timeline of reporting and unsure if kids of certain ages need to be reported or if a kid with certain conditions needs to be reported.

Nine states reported audiologists didn't know how to report. Five states reported attitude issue. Attitude referred to audiologists assuming the kids moved through the EHDI process, regardless of audiology reporting or not. Also referring to audiologists not understanding the importance of reporting. We have state reporting that the firm is updated. It's out of date or faxes get rejected or busy.

Some states have reported that faxing is time‑consuming. Majority of audiologists want programs to make electronic reporting available. We identified weaknesses and gaps that need to be filled by those strengths to report. Keep in mind, identifying 17 state EHDI programs with user‑friendly electronic reporting systems. Where basically, audiologists reporting that EHDI‑IS is easy to navigate. Audiologists satisfied with the reporting process and audiologists would like to see more data report from the EHDI programs.

Now... I'll turn to Winnie as we'll be presenting opportunities as part of this evaluation.

>> Winnie I'll be making a bit more summary on a lot of technical data we analyzed. So... kind of sum up. So... where are we seeing opportunities for improvement to sort of like... help you track babies and help the audiologists reduce their burden? All right...

So... they obviously recall that, that the opportunities in, basically... you know... the first thing is... you recall ‑‑ audiologists said that reporting is a burden to them. Because... you know... clinical audiologists are clinical by nature and their first line of priorities always to the patient ‑‑ so... reporting is not something that is going to really pop up in the radar. It's not their first priority. As a clinical provider, all right?

So... these are some of the audiologists as we suggest a couple things that, that the EHDI program should actually, could actually help along.

For example... provide clarity on types of information that EHDI program really needs. All right? Because... as I say, some audiologists complain about the fact that they're not quite sure what type of cases are you interested in? The onset of hearing loss? How about if I have a child diagnosed at the age of greater than 3, is the EHDI program interested in knowing about that? Things like that ‑‑ little clarity, you know? To clarify the requirements for them, it'd be much‑appreciated by the audiologists because that's what they suggest.

And then, when you're doing training and guidance to audiologists, how to report, to actually have a certain consistency.

So... some other recommendations, recommended by the audiologists ‑‑ literally, the fact that it can be actually summed up, also... audiologists really appreciate that you reach out to them.

Okay... more... they really don't feel like you reach out enough to them. They really want to see you reach out to them and how to reach out to them from a very ‑‑ could have multiple different strategies and I'll show you some of the strategies that is a potential, as is suggested by audiologists and as we recall, one of the barriers, sometimes ‑‑ like, under the category of attitude, all right? They don't see what the fact that is, you know... what I'm reporting ‑‑ how are you using the data? Okay... some audiologists feel like, I don't know, when I recall the data, what EHDI program is using. How is it using within a larger framework of EHDI program? They'd like you to see more info graphics. How would you use your data to improve the process.

So... again, some of these, reaching out to the audiology community, including training video. Training video ‑‑ how to actually log on ‑‑ how to reset the password ‑‑ things like that, and how to find a patient, easier ‑‑ so that they can have a consistent training curriculum that they can fall back on.

Another great interesting idea that some audiologists asked you to do ‑‑ how about recent graduates, some of us ‑‑ lots of us are getting older. There'll be always new audiologists. Don't forget to reach out to recent graduates. Like... for example, in your state ‑‑ you have an audiologist training program ‑‑ that's a good spot to reach out to them too.

So... motivation... as I say ‑‑ remember that category about the attitudes ‑‑ some audiologists have really felt like "I give you the data, so what?" Kind of thing. I don't see much benefit. This would be a good way to potentially motivate them. You know... because... it's up to you. You have a better connection with the audiologists and the audiologists have felt like the fact that it is ‑‑ you can demonstrate how the data that I'm providing to you is going to allow you to do a better follow‑up job and two... to demonstrate them... if you don't get that particular piece of information, what kind of adverse effect or minimal benefits will come out of the fact that you don't get that data. And remember... also... the audiologists said they are very busy and they are really, really busy. I was a clinical audiologist before, so I know. A lot of them basically said the administrative assistants could be of help, all right?

So... I know that most, you know... almost that access to that ‑‑ the actual EHDI‑IS reporting module. However... the audiologists are saying that ‑‑ you know... if you could also allow... consider training, allow us to train some of the administrative assistants to help, it might actually ease their burden. All right?

One final opportunity is actually... looking beyond the audiology community, have EHDI programs ever thought about potentially training Speech Language Pathologists and ear nose and throat doctors, ask a potential reporter ‑‑ so... that's a very interesting idea, you know... coming from the audiology community, itself, right?

So... I think that ‑‑ that ‑‑ we will have like, at least four minutes for Q&A. So...

>> [Speaker off mic]. Do you think it'll be feasible to come up with some type of training video? Based on our topics (?) [Speaker off mic].

>> Hello? Okay... to repeat the questions ‑‑ just in case ‑‑ her question is... regarding whether CDC could help.   
[laughter]  
And is there any kind of ‑‑ you know... software and things like that, that we could think of that could help. Personally... I think it's best to actually ‑‑ I'd think it's best to leave to the state EHDI coordinators to actually figure out the training, more consistent training or guidelines, things like that. Because... every state... their process is a little different. For example, some states don't even have rescreen. Some states actually, sort of like ask audiologists to do rescreen, all right? So... as a result, audiologists are not just reporting diagnostic data ‑‑ every state is a little bit different. I think it is actually best... left to you. You guys are the experts.

>> I want to add that with this evaluation resource, we already identified some gaps that have to be filled. And... these, CDC will provide technical assistance around the issue we already identified. This is part of the current corporate agreement we have. Another thing I'd like to add is just that among the barriers that audiologists are reporting, that was important, one was very important, they couldn't find the record of the infant.

So... that was a big barrier for them. But... important thing to consider is that also, evaluation resource from the last corporate agreement showed that demographic information is incomplete.

So... if from the beginning ‑‑ from the hearing screening, hearing information isn't complete... these issues will show up after ‑‑ during the diagnostic.

So... it's important, also, to pay attention to completeness and accuracy of the information, just from the screening.

>> Is it just me or does it seem like the audiologists want simpler reporting mechanisms, but we're being asked to collect more complex data? How do we balance that? I'd love to make it simpler, but I'm adding more and more data elements to our system and trying to do it in a way that's user‑friendly. It's hard ‑‑  
 >> I'm going to go out on a limb, because... you know, I decided reporting that form, back, a long time ago. My experience is my reporting form is very complex. Extremely complex. Okay? And I have audiologists complain to me. All right?

I'll go out on a limb to actually suggest, potentially have, certain things like say, risk factors or rather than actually checklists, all those risk factors they have to check, to have the screens show up ‑‑ if it's a no, that entire section is skipped. Almost thinking like you're doing online surveillance. You can talk with friends. They actually created reporting from using a survey.

So... having a sequence. If they don't have risk factor ‑‑ they skip over the entire checklist on... yeah. Okay... so... it's just some of the questions.

>> I'm so sorry ‑‑ we're actually out of time. If we want to bring the rest of the conversation into the hallway, we'd be more than happy to do that so we can set up for the next session. Thank you.

[Presentation concluded at 12:26 p.m. ET].

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