>> MARK BEALL: This is Mark I was able to get in. But when I tried to use the link in the Adobe document. The link did not work. When I copy and pasted the hyperlink into my browser it then loaded. But when I clicked on it from a PDF, it launched a Zoom that failed. That could be part of the problem.

>> DANIEL LADNER: Yeah, that's what happened with me, too.
>> ALYSON WARD: But Mark I appreciate that problem solving.
>> DANIEL LADNER: It's hard to click the link to highlight it because it keeps wanting to open.

>> MARK BEALL: I had the same problem.
(Standing by).
(Standing by).
(Standing by).
(Standing by).

>> ALYSON WARD: Welcome, everybody, we will probably start in two to three minutes. We had some issues, as you probably found out, in getting the link on the PDF to work. So we'll just hang tight for a few minutes and let other people figure out how to get in hopefully.

(Standing by).

>> ALYSON WARD: Daniel, is it better if I save it to the cloud or to my computer.
>> DANIEL LADNER: It's probably easier if you save it to your computer.
>> ALYSON WARD: Okay.
>> DANIEL LADNER: I guess the caveat, though, is if your computer gets
disconnected then you lose the recording. But we've had better luck with the computer recordings than the cloud recordings.

>> ALYSON WARD: All right. I'll just stick with the computer then. Hello, everybody, we'll just wait a few more minutes since we know there's been some connection issues. So just hang tight for another minute or two.

(Standing by).

>> ALYSON WARD: Okay. Let's go ahead and get started. Hello, everybody. Welcome. And I apologize for some of the link issues for today's webinar. I was kind of joking that I was trying to make the invite cute and it appears that that came at a cost of functionality. So we're always living and learning every time we have a Zoom meeting apparently. Anyways, welcome again. And I'm going to be recording today's webinar. Just for later viewer and that should be posted up on earlyhearing.org by the end of the week. Just a couple of communication ground rules if you would just keep yourself on mute, that would be excellent. When we do move into questions and answers, either feel free to put them in the chat box. Or if you would like to voice your question just make sure you say your name before you go into your question. Also please make sure your name is accurate on the participant list. That just makes it easier to figure out who is in the meeting. And it's helpful. Then also we do have captioning available today. If you don't see your captioning automatically, you can click on the three little dots at the bottom of your screen that says more. And click on that. And then click show subtitles. And you should be able to see the captioning.

And I will turn over to our amazing presenter, Tammy O'Hollearn who is the EHDI coordinator for Iowa. We'll be hearing from Tammy about some improvement work they have done around training non-pediatric audiologists to do audiology screen and diagnoses with infants in rural areas of Iowa.

And so without further ado, I will turn the time over to Tammy. And then we'll go into Q&A after she's done with her presentation. So go ahead, Tammy, thank you.

>> TAMMY O'HOLLEARN: Okay. Let's see. I think this is the right one.

>> ALYSON WARD: Yes. So let me get this . . . oh. Back up one.

Okay hello everyone it's nice to see you all today I'm Tammy O'Hollearn I'm the director of the EHDI program in Iowa. As Alyson said, I am going to talk to you a little bit about using educational audiologists to overcome access barriers. So what I hope you take away from today is using educational audiology networks may be a way to fill some of the gaps for coverage. Especially if you don't have a large number of pediatric audiologists across your state. And then another really positive thing for us at least in Iowa is it can also improve timely referral to early intervention. So I thought I would go over a little bit of background information so you know where Iowa is. As far as meeting or not meeting goals.

As far as diagnosed by 3 months of age, we were -- we're making some progress. In the last three years, we have kind of slid back down a little bit. However, in the last
couple of years, we've actually identified some issues that we have had as far as different providers, some socioeconomic issues that we're in the process of addressing. And you'll see the same thing kind of with early intervention in regards to timeliness. So you'll see that here.

In the next slide I just wanted to show how we're doing with loss to follow-up. So while we have improved a great deal since 2009, we have kind of been up and down. We were making a lot of great progress in decreasing the number of children that were lost but then we've had a couple of blips along the way. Typically that happens when there's a change in staff due to funding changes. Or that kind of thing. Or like last year COVID hitting. Definitely affected some of those kids that were born at the end of the year.

So which all of you can probably appreciate. So some of the barriers we face in Iowa as I mentioned before we have a shortage of pediatric audiologists so we don't have that many providers. We actually have a number of folks within the state that actually live on the borders that actually have to go outside of the state to utilize a pediatric audiologist. We have some rural disparities. Regarding travel time and some of those kinds of things. We don't have a lot of the larger clinics in those areas. And then as I mentioned before, we've discovered -- and I don't think it's news. But we have actually been able to document some of the socioeconomic disparities within our state along the way.

But beyond the loss to follow-up and timely diagnosis and all of those kinds of things, the thing that we are most concerned about, too, is families' experience with these significant delays. And why are those. And we really want to decrease or improve timeliness so not only can they get answer but to decrease some anxiety around the wait time for getting those answers.

So there's a little bit about research. And I just wanted to show this because really it shows true in Iowa, as well.

So what reasons do families cite for delays when they happen? And an issue that we continue to work on and address that was also discovered in a couple of different studies is an issue with multiple rescreenings. We do ask that hospitals or -- do one rescreen in our state. Just because we would overwhelm our system of care if we referred all of those kids that didn't pass on their birth screen directly to diagnostic providers.

So we do do one rescreen. But what we have found is then sometimes providers are doing a second additional rescreen, especially if families are having to travel a long ways to get to a diagnostic provider. So that is an issue for us.

Also, difficulty in getting a timely appointment. In some cases we have some really good systems set up that really do a great job with referral. And in other places, it takes a while to be able to get into that provider because they are taking on more appointments than they have the ability for people to serve them.

Other reasons really, you know, that people cite are communications and those
kinds of things.

So a little bit more about parent perspective that goes into this is like I mentioned, lack of resources. Maybe car is unreliable. Traveling long distances is not easy. Same thing with family work schedules. In Iowa, at least, most often both parents work. Or we also have a lot of single families. So they are kind of doing it all. So definitely work schedules are a challenge. One thing we also have a challenge with right now in Iowa is with COVID. Which many of you are experiencing. But one of our largest diagnostic providers actually requires that the children have a COVID screen prior to -- especially -- well at least when they are having a diagnostic exam that's sedated. They are requiring they have to go the day before and have the screen done by them they can't go somewhere else and send the results. They actually have to be performed by them. So imagine a family who has to make two trips to get their child diagnosed. So that's kind of a challenge for us.

So what we decided to do was take on a quality improvement project to really look at a couple of different ways of addressing and improving outcomes in this area. And hopefully eliminating some of the disparity gaps.

So we looked at existing resources. How can we change the way we're using those existing resources to improve outcomes and reduce costs. What you'll see is we did a pilot to look at teleaudiology. Initially we thought that might be a solution for us. But we found that that actually had its own challenges with. So then we came up with the use of the AEA audiologists. Who also work within the AEAs and I'll get to that and explain what the AEAs are. But it was a way to increase -- or decrease the amount of time it was taking for families to get their child diagnosed. And also improving more timely referrals to early intervention.

So that was a really positive thing from this.

In Iowa, we have what's called Area Education Agencies. And they all employ audiologists on staff. And we decided what better way to use them than to also be able to provide unsedated ABRs they already do some diagnosis for older kids. So we wanted to look to see if they would be an option or -- if there would be an opportunity there.

So what is an Area Education Agency? They provide services and supports in nine different regions across the state. They partner with all the public and accredited non-public school systems to really provide special education services. So they actually serve birth to 21 years of age. And they actually have little satellite sites within their region to decrease the amount of time that families actually have to drive to services. But they also do additional things. They have teachers of the Deaf that go out and serve families in those regions. As well as audiologists providing a lot of different supports for children who are actually diagnosed with a loss at a later time.

There's about 50 AEA educational audiologists across the state. And like I say, they deliver a full spectrum of services.
So initially just to back up a minute I was going to tell you just slightly about the audiology project. I should have told you about this before I told you about the AEAs so I apologize. But we did do a pilot with teleaudiology. We partnered with the children with special healthcare needs program because they have special needs too. So we went up to northeast Iowa. Which is a rural community that doesn’t have a close diagnostic provider. We actually set it up so that the audiologist at the University of Iowa would connect then with the Children with Special Healthcare Needs Program. They had a nurse on their end that actually set up the kind of equipment and things like that. And then turned it over to the audiologist to perform the testing.

We had it there for about four years. And only a total of 12 tests were performed. There were some issues with not only it being underutilized. But also then connectivity in that rural community. Which it may have changed a little bit. Because they are really working on infrastructure in Iowa for connectivity. But at that time that was a challenge. And then reimbursement issues, having two different entities that were participating in this process.

So then we moved into a pilot.

In 2015. And we actually had northwest AEA, which is up in the Northwest Iowa actually volunteer to try this out and pilot it for us.

The children in that area that don't pass a lot of times their rescreen have to actually go out of the state. And go into either South Dakota or they go to Boystown. And be tested.

So they actually have a long distance to travel. So it was actually a great place to start.

We used the same diagnostic equipment that we had used for the teleaudiology pilot. Later on that AEA actually wrote a grant to get new equipment after they continued after the success of it. So they actually wrote for a community grant to obtain equipment. So that was a really nice thing, too. We were able to provide a letter of support and do some of those kinds of things.

In order to start we actually provided them with the equipment. We provided them with consumables to start. We provided them with training. All of the educational audiologists have done ABRs in the past. But some of them had been out of practice for a while. Because that's not something that they typically did.

So we actually provided training. We did that in the spring of 2015. To that particular AEA. And then she practiced a little bit over the summer months. And then by the fall, she started.

Again, the other thing that we provide and we provide this to all the educational audiologists is we provide ongoing coaching and technical assistance. Until they feel very comfortable in doing it. So that's something that we obviously, you know, work with them to be able to provide.

So after the initial cost, though, they took on the cost of equipment calibration every year and the consumable costs.
So just to give you an idea of what a typical ABR process is, they were referred by the hospital to the local AEA. It was scheduled. They provided some guidance to the family before they came. And then they performed the ABR.

Typically what they would do is sometimes the -- our EHDI pediatric audiologists that we contract with. Once in a while they will be available. So if they have questions, they might be able to FaceTime them to troubleshoot actually while the family is there.

Or they look at the waveforms after it's done and maybe consult back with the audiologist to make sure those results are accurate.

Typically they would give the family some basic information. And then follow up with them, either later that day or the next day to just confirm the results.

Obviously the better they got at doing the tests, the less coaching and things of that nature were done.

They also then reported the results in OZ. And that's our data system. And they already have access to that. So it was just a way that they could do the testing and put the information in our database.

So then what this project did is for those families that were in rural areas, it provided them with another resource to avoid long distance travel. It also made it more affordable for them. They didn't have to take off as much time. And then also, it increased the number of audiologists across the state that were available to provide unsedated ABRs.

So a little bit about real quick the 7 month pilot project. Because I think it's important. If you compare these numbers with the numbers that we had from the teleaudiology. We actually saved 15 families from driving 2 hours for similar services. All the children but 1 were diagnosed within a month. The family that wasn't diagnosed, there was some cancellation and some things like that. And then they were also able to provide a referral for those couple children that were directly with a loss basically the same day.

The children that were diagnosed with typical hearing or normal hearing loss were quickly removed from the system. So we didn't have to keep doing any kinds of follow-up for them. But then you know we were able to focus on those true children who needed to be connected and provided additional support. And then also, it provides a way of saving money through fewer OAE rescreens. Families get in in a more timely fashion. And can get moved onto decide what their next steps are in their child's journey.

So finally we did a quick research project just to kind of look as we started to expand this into other regions.

To look and see was this still effective when we moved it across the state into other areas.

It still stayed in pretty rural areas and one of the regions you'll see coming up actually went on the side so we looked at again did it decrease the period of travel time? Did it decrease the amount of time they were having to take off from work? And did it
also improve our timeliness? So the three regions that we moved into is Region 1. We're already in there. Then we moved onto Region 2. Which was right next to it. Again, an area that's -- that doesn't have a diagnostic provider in that area. The closest area is where they would have to go down to Ames DesMoines area or go to another state to receive diagnosis. And then we have Region 3. These are the regions that we evaluated. But we actually have another region actually in this area now that we didn't have. When we were doing the really kind of exploring how well it was going. So what we found is infants born during the QI Project in the targeted AEAs were seen significantly earlier. So during the baseline, which was the year before, we looked at the data. Then we compared it with the time during the QI Project. And we found that we decreased the period of time from 95 days to 67.8 days. So that was a really positive movement there, as far as dropping the number of days.

The other thing that happened is infants that were born during the QI Project, in those areas, received their first diagnostic exam closer to home than in the baseline period.

So on average they went from 50.5 miles closer. So they went dropping them from 117 miles down to 66.5 miles.

Of travel.

So again, that whole saving time. Decreasing the amount of travel time, especially, you know, when you're trying to keep a child quiet for an unsedated ABR and those kinds of things.

The other thing that we have decided to do real quick was to look at on-guideline care and off-guideline care. Did us adding these providers help us to better meet the JCIH guidelines as well as for on-guideline care so we came up with a on-guideline care versus off-guideline care depending on if they were following up and doing what was recommended as far as screen, on-screen onto diagnostic.

What we found is that indeed it did actually improve on-guideline care. You'll see the numbers here.

And we had a larger number. But really people were definitely decreasing the numbers of rescreens. I think it also helped some of the providers in those areas or hospitals, they knew, okay, I can refer to our local AEA. And then they will take it from there. So that was a really positive thing. Also in improving relationships and things, as well.

So finally, I'm just going to cover the pros and cons and then get onto questions.

So only one child was lost in the pilot. And that was that child that had been rescheduled and some of those kinds of things. So that was good. That was why we decided to move on.

The coaching and training I think has been very well received. By the educational audiologists. I think they feel like if they second-guess themselves, they have somebody else that's a pediatrician audiologist with lots of experience that can follow up on that. But they have actually identified a number of kids with hearing loss. Which has
been, you know, good in that we may not have been identifying them before. We would have had a larger number of kids that were actually being lost.

The assessments have improved in regards to timeliness. It's improved in regards to family travel time.

The audiologist is also employed by the early intervention provider. So they can quickly make a referral to their early intervention provider. There's less opportunity I guess for referrals to be lost in that regard. And then also the family is provided a service by their local provider.

Cons, it's a little cost prohibitive in that when you look at sustainability, Iowa does not receive any other funding beyond the two Federal grants. And so that is something that we would have to look at. Like I said, we had an area that they wrote for a grant. A couple of community grants. And we were able to get funding. But we don't know that they would be able to do that every time. And also coaching does take a little bit of time at the beginning. And they estimated about, you know, it takes a little bit more time for about the eight -- until they get out to eight ABRs under their belt and then it's very minimal time so taking that kind of thing into account.

Finally, right now the service is being provided free of charge. So if the families don't have insurance, this might be a resource that they could utilize. It is possible for them to bill. They have elected not to. They feel like with the Part B and Part C that that's not something that they want to do at this time.

The other nice thing is the family is able to be counseled right away by someone who is actually an audiologist. Not that the nurse couldn't do that. In the previous situation. Or the audiologist from afar. But that you actually have an audiologist there. And I think the families at least the families that have been interviewed have been very appreciative of it very much so.

And again if the result is normal, there's not a need for more travel or management. And then we've had both positive feedback from both the parents and the audiologists.

So I think you know if we can figure out a way for sustainability for the equipment piece, I think the AEAs are really buying into it. We did this presentation for the -- one of the directors was there that's actually on our Advisory Committee. And she was going to take this back. And share it with the other programs that are not -- don't have the -- the other AEAs that don't have the equipment in their area at this time. Who weren't, you know, declined participating initially so she's taking that back and we're hoping to hear something really positive about this partnership.

So I can go ahead and open it up for questions whenever you're ready, Alyson.

>> ALYSON WARD: Thank you, Tammy. I appreciate it.

>> TAMMY O'HOLLEARN: Yeah.

>> ALYSON WARD: So like I mentioned before, feel free to post your questions in the chat or if you do want to voice them, that's totally fine, as well. Just state your name first. I know that I have a couple of questions for you.

>> TAMMY O'HOLLEARN: Sure.
ALYSON WARD: So you did just kind of mention at the end about expanding it further. But it sounds like you're trying -- that you're interested in doing that but then funding and support from some of the other AEAs have been kind of -- have been kind of an issue.

TAMMY O'HOLLEARN: Uh-huh.

ALYSON WARD: Have you shown them -- have you shown the other AEAs this data that you shared with us today as a way to get them on board.

TAMMY O'HOLLEARN: Yeah, so the -- we just did a presentation. It was I think a week or two ago. And the audiologists -- not the audiologists, the special ed director who was on our Advisory Committee, who actually declined to participate. Even after we had a meeting with her. She was definitely interested in the information. And actually followed up with me. Because we said we would get it posted so that they could view it, the actual presentation. And she actually followed up with me on that -- we did it on a Friday and she followed up with me on Monday to say, hey, do you have that link yet? So I think definitely there could be some potential interests moving forward and stuff. Like I said, the one thing I didn't do, and I should pull that data. But is to identify how many kids we did identify. But we've had numerous kids that have been identified with a hearing loss. It doesn't say that they won't ever have to go on for a second test. Because it really depends on the area of the state where it's being performed.

They may need to do that just because there might not be a pediatric hearing aid, if they decide to go with hearing aids, they may not have that available in that community. So they may still have to go on for that.

But they actually know that they have -- they receive a diagnosis and they also can get enrolled in early intervention while they decide what the next part of their journey is going to be.

ALYSON WARD: Yeah so kind of that one-stop shop type of situation which is great.

TAMMY O'HOLLEARN: Yeah.

ALYSON WARD: Does anybody else have any other questions? I don't want to hog the question floor space. I can't see anybody's faces or hands.

TAMMY O'HOLLEARN: I can stop sharing. Here, let me stop sharing.

ALYSON WARD: I don't know, if that will help. One of the other questions I had since nobody is chiming in, so how -- has there been any type of challenges between like some of the bigger area kind of pediatric audiologists and the audiologists at the AEAs? Has there been any kind of like oh you're taking business away from us or anything like that that's been a challenge?

TAMMY O'HOLLEARN: Right. So we have had -- and it hasn't been in those three regions at all. Because people really seriously have to drive to be able to get to those providers. And like I said, in the eastern part of the state, they have more than enough appointments that they have to do. So I think for them, it actually helps them
I will say, though, we did add a new AEA provider in the DesMoines area. Which actually has two diagnostic providers now. And one of them commented that the numbers -- her numbers are down as far as serving kids.

But she couldn't tell me for sure are her numbers down because of COVID? Or are they down because this started? Because one thing that -- about the service in that area is they serve a big region. So there's kids that they are taking the equipment into a rural community for families that are having difficulty traveling. We still recommend in that area for them to go to those two pediatric audiology clinics. But occasionally, I mean, you know, there's just providers that serve high-risk families -- not high-risk families. But families that need additional support and that kind of thing.

So that's something we're paying attention to in that area. But the other three regions in the state there's not been any -- there's really not that many providers -- there's no providers. Or the one provider that was over there, they have more than enough kids to serve.

>> ALYSON WARD: Great, thank you.
>> TAMMY O'HOLLEARN: Yeah.
>> ALYSON WARD: Any other questions for Tammy. I have one more but I know that we are at the top of the hour. I was wondering, do you know if other states have a similar setup. I think a lot of people have that kind of regional approach to both -- to Part C. But I guess I haven't really heard of the AEAs in other states. So I don't know if you're familiar with other states that have a similar setup.

>> TAMMY O'HOLLEARN: I think they maybe are set up that way for their -- that they have regions. I'm not sure what kinds of supports and services they provide. So I don't really know. I can't really speak to that.

We're fortunate in our state in the early intervention any type of loss, even mild, unilateral loss, is considered an automatic qualifier for early intervention. And I know some states have different rules in regards to that. So for us that's a positive thing. For us. That those kids can be served quickly and without having to go through -- I mean they still have to go through some of the testing. But it's an automatic qualifier in our state. Where I know it's not in other places.

>> ALYSON WARD: Yeah, you're right.
>> TAMMY O'HOLLEARN: Yeah.
>> ALYSON WARD: Okay. All right. Well, we better quit for today. But I really appreciate your time.

>> TAMMY O'HOLLEARN: Yeah.

>> ALYSON WARD: And preparation and presentation. Tammy. And I hope that everybody that joined today had a couple learning points that they are able to take away and potentially apply to their own programs. Again, I am recording this. And it will be posted on infanthearing.org within the week. Until our next QI Coffee Break webinar. It was great to virtually see everybody and we'll be in touch. Thank you.
>> TAMMY O'HOLLEARN: Thank you, everyone.