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EHDI - PARIS

EXPANDING TELE-AUDIOLOGY SERVICES IN RURAL ALASKA: AN EHDI PILOT PROGRAM

3/5/19

11:35 A.M. – 12:00 P.M. CT

 REMOTE CART/CAPTIONING PROVIDED BY:

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*(This text is being provided in a rough draft format. Communication Access Realtime Translation (CART) is provided in order to facilitate communication accessibility and may not be a totally verbatim record of the proceedings.*)

>> I can't hear you yet, Samantha.

She says there's a storm and she can't go to the hospital where she's usually broadcasting, so she's doing it from home, because the hospital and the whole city is closed down right now.

And so this is tele‑audiology.

[chuckles]

If you want to do it in a remote site, you're going to have to be flexible to do this with your appointment.

Because this is what happens.

So we had a little bit of IT issue. We'll see if we can make...

Oh, that's not right.

You can't hear her yet. I'm going to turn her up.

>> Test‑test, one, two, three, four...

I think you're sending the signal to me. I'm getting an echo.

>> Microphone... try that one.

Can you hear me?

>> I think that's probably better.

>> Can you hear me?

>> Yes, I can hear you.

>> Are you not hearing me?

>> We can hear you now. I'm hearing basically what sounds like feedback echo cancellation.

>> Oh, okay.

Let me see...

>> I think it's coming from you.

>> Can you mute yourself real quick.

>> Absolutely.

>> It's coming from your side. Can you go in and put in echo cancellation on your settings?

Sorry, you're muted.

>> Echo cancellation is turned on.

>> It only comes when you're mute.

It goes away when you mute.

>> Right now it's good.

>> Test‑test, one, two, three, four.

>> Sounds great.

>> All right

>> Is it bad, the display on that end?

>> No, it's okay. I think we're good.

>> Go ahead and get started. I'll be right back.

>> ANNETTE CALLIES: Okay. Can we pull up my PowerPoint while we're waiting and I'll just go through that until she can come back and get us started.

So thank you, everyone, for doing this. We actually did a longer version of this on Sunday, two and a half hours... is this yours right here?

No.

>> What time we, 11:35?

This one?

>> ANNETTE CALLIES: So we had a little bit better connectivity and...

So I have to say I really appreciate Samantha because she has been doing this project for a while.

>> When you want to go to the videos, click on that one and...

You're good to go.

>> ANNETTE CALLIES: And so can I go to next slide?

>> You can do it there.

>> ANNETTE CALLIES: Okay.

So Samantha and I do not have any conflicts of interest to report. But I liked using this picture for doing the conflict of interest, because Samantha is actually up in the Nome region, and the mountain she's in front of is about 7,000 feet there. And I'm over there, and the mountain I'm in front of is 20,000 feet. You might have heard of it, it's Denali or Mt. McKinley. It's the third tallest in the world but you wouldn't know it because of the perspective. She's boots on the ground, playing on the ground, videoing into a remote place and I'm just kind of doing the EHDI thing for the whole state.

So are you back, Samantha? Should I give you control?

>> SAMANTHA KLEINDIENST ROBLER: I am back. I don't know if you want me to display or if you have it open, you can just control it.

>> ANNETTE CALLIES: I'll control it until we get a little further on then.

So, this is Alaska. And it's squishing down just so we can see the closed captioning.

What I want... this is actually scaled to size. So we're really big. And these little black lines are the roads in our state. So the red dots and blue dots are where people live, but the roads don't always connect to where people live. So you might have to go a couple states over, and you're just going to have to fly.

And even this is a little bit of an error because the very top black line there, it only goes to a business. It's 400‑mile dirt road. I don't know why they put it on a map. Because you can use it for tourism. There's birds up there and a lot of bugs. You can't actually go all the way to the ocean unless you pay a tourism fee.

But as far as for doing follow‑up, you're only going to use the main central roads here.

So other than that, you're really going to fly. And we also have... and we have four communities that are bigger than 30,000 people. So everything else is really small, about 66% of our communities are 500 people or less. So you're going to fly.

This is how service is delivered throughout the state. So all lines go to the middle center there. That's Anchorage region and that's where all the major medical centers are and that's where Tribal Health has their main health system and that's where private or non‑profit systems have their main healthcare systems.

So if what you need isn't super life threatening, you will go into these other little hubs, you know, spoke‑and‑wheel thing. And if they can help you there, they will. If not, then all lines lead back to Anchorage. Or if you're really, really critical, then you're going to fly over to Seattle. Other than that, if we can take care of you in our state, this is kind of how we do it.

So, okay, so we got some money to further tele‑health in our state. And we thought, how are we going to do that? Just a little bit of money, not enough to build a whole system. So, what are we going to do?

And we call it AFHCAN. And the work on this company started in the 1950s with submarine cables and stuff like this, and now it is state of the art. It is owned by Alaska Native Tribal Health Consortium and funded also by some federal dollars through federal facilities, like Coast Guard and things like that. And then it provides...

>> Guys...

>> ANNETTE CALLIES: Okay. It provides information technology, consultation, training, and support for all of those hub regions, all of those communities. And there's ‑‑ we want to ‑‑ if you want more information about it, this slide presentation is online and you can get that or you can contact Samantha or myself if you have more questions.

The other really part that makes it work is the Community Health Aide Program, which has been around 50 years now. And it consists of over 550 community health aides, and there are people who live in those remote communities and they may travel into one of our three training sites, Anchorage, Nome... I think the other one is Bethel.

So, that has also been evolving now for 50 years. So if you have a medical problem, you go to your village clinic. There's many all over the state. And the health aide has this really big electronic manual and she can kind of walk you through. Having chest pains, okay, ask these questions. Ear problem, okay, go into this component.

And so that's the other really important part that makes it work for us, because you can't just assign equipment to a community and expect someone to be competent in using it.

So we consulted with AFHCAN and with our tribal health partners to say, with this limited amount of money, what can we do? And we kind of came up with let's choose one region that already does tele‑health and let ‑‑ really beef up the tele‑audiology. They had some scopes and things like that. Let's really beef it up and see if we can create something that might possibly be scalable and reproducible in other parts of the state.

[ audio interference ]

>> ANNETTE CALLIES: As you can see, we have births all over the state, and a lot of these places aren't accessible by road and a lot of them don't have audiologists. So if you are referred, you might have to use one of these as transportation to get to the airport, to get to your pediatric diagnostic center.

So as you can guess, we might have some parents who... I mean, this one on the snow machine, that's a mama with an infant and a dad with a toddler. They have to pack up gear and go to airport and wait for the plane to come. Baby might be cold. Some don't have heaters until the engine runs. Even if you get on the plane you have to keep the baby warm until the engine warms up. In the summer you might be covered in insects or something.

So it can be challenging to get to the appointment. So we do have a lot of... we like to be reproducible so maybe can help with that.

So, our goal... expand what we have while maintaining our vision and values of the agency that we're partnering with. Identify practices that are successful. Sometimes the people, they might have other things on their mind that we're not thinking about, and maybe like salmon season, right now the salmon are running, so we're not going to go to an audiology appointment. Let's not set it up in that time. It could be something that they need to do for subsistence, and that is time‑intensive for them.

And identify technology that is sustainable in a really small village. So you're going to need something that probably can be used through the [indiscernible] because we want them to stay competent when we train them. So even if an adult has an ear infection we could use the tympanometer or things like that and get good pictures for the audiologist. So they're competent and feel comfortable with the equipment.

And then how can we reproduce it, it's always our last question.

We went with Norton Sound Health Corporation. They have a history of successful practice. They've had some articles published on their history, ENT and audiology use. And their agency is very willing to invest in audiology and to try new things.

So I'm going to turn it over to our audiologist, who was ‑‑ even though her host today is shut down and not at the hospital, she's at home, but she is such a trooper, she's going to do a presentation here for us.

There you go, Samantha.

>> SAMANTHA KLEINDIENST ROBLER: Can you hear me okay?

>> ANNETTE CALLIES: We can hear you.

>> SAMANTHA KLEINDIENST ROBLER: Excellent.

>> ANNETTE CALLIES: I can't see you, so...

>> SAMANTHA KLEINDIENST ROBLER: Yes, excellent. Am I controlling the PowerPoint or are you, Annette?

>> ANNETTE CALLIES: You're controlling it.

>> SAMANTHA KLEINDIENST ROBLER: Great. I'm flying blind here a little bit. And forgive some Internet connectivity with storm.

Basically I direct Norton Sound Health Corporation in Nome, Alaska, and I was going to talk to you about the program and then how we, you know, worked with the state and Annette to implement some more innovative solutions on our cart to help with newborn hearing screening follow‑up. Basically we're a region that is the size of Louisiana. We cover 15 communities. You have to fly or snow machine between them, and so it can be difficult for us to maintain care with our patients and for patients to travel.

In Nome we have full diagnostics despite being how rural we are, we can basically provide the same level of care if you were seeing an audiologist in the Lower 48. We have a clinic where we have a sound booth so we can do electro‑phys testing and full diagnostics and balance and we do full rehab and aural rehabilitation.

In terms of our population, I want to kind of point out that we are in an institution that deals with more medical audiology, so we handle a lot of middle ear disease. It's one of the top five diagnoses for every one of our communities. So audiology is a big part of care here and part of collaborated care because we're such a prominent issue in terms of hearing loss, subsequent to otitis media.

And just some pictures of the disease for you guys. I have a lot of this.

So I want to take a second... so what services do we provide tele‑health? We do basically this idea of asynchronous models. Video and remote desktopping, remoting into a computer, and then hybrid and also mobile. So we work with our phone. All applications are available on the phone.

What types of diagnostics are we doing? Video and a whole diagnostic battery, OAEs, medical management, hearing aid management and programming, newborn hearing screening. Some of those, some of what we are able to do on tele‑health steps a little away from best practice, but as we get more and more developed in these technologies we get close tore what best practice looks like.

And then things currently tackling is electro‑phys balance and mapping. For a lot of services provided by the corporation and all the care goes through tier management. Can they see a health aide and can they send us information and can we consult back? Does it need us to dial into the community to talk to the patient and be present for the patient or do we need to fly the patient in, or a combination of all of that? Can we do some via tele‑health and fly them in for one appointment instead of multiple appointments? The objective is reduce burden on the family and reduce for travel and cost on the system.

And then earlier access to care is really what we use tele‑medicine for. And we have been doing it for a very long time in Alaska because we depend on it so much.

And so we have been able to show quite a bit the outcomes of what it does for us. And so definitely reduces the wait time for specialty care. We've seen, for example, with ENT a drop from a seven‑month and nine‑month wait to about a four‑month wait. We've seen much improved cost effectiveness. So we're not paying for travel. Families aren't paying to have to go and stay in Anchorage for a week. They're not missing the opportunity to subsist and commercial fish and all those things at home. And so there's a much reduced burden on the family.

I'm going to give you a couple of case examples. Cases that we've been able to use tele‑medicine to both diagnose early and get early treatment would be the where you get some debris and the debris can grow and grow in middle ear space to become very dangerous for the ear, and so we were able to identify and get them down to Anchorage for quick surgery with ENT and you know, preserve a lot of hearing.

Sensorineural hearing loss, for example, instead of a patient having to fly to ENT in Anchorage and get a diagnosis and then start on paper to preserve any hearing that was lost we can get them seen immediately and within an hour start treatment on a steroid taper and trend preserve a lot of hearing. We have diagnosed brain tumors. We have diagnosed cancers where the first element has been an ear hearing‑related issue that has been the presenting symptom and use tele‑health to expedite that care and that diagnosis.

And then all kinds of ‑‑ imagine, you know, a pre‑op on tele‑medicine, only fly for surgery and the rest of post‑op care is tele‑medicine. They're flying one time for something that can create many encounters. And newborn hearing screening we got a late start to the presentation, so it's a rush, but we have high loss to follow‑up and a lot is parents not wanting to travel. We have a high rate of no‑shows for appointments for coming back in for automated ABRs. And so to deal with that, you know, the state ‑‑ we have this commitment and we want to rule it out and we want to help with loss to follow‑up, so we spent time picking out equipment that can work. And we only had six months to roll this out. So it was something we had to do relatively quickly and required a lot of build. Things we took into consideration. It had to integrate with our current tele‑health solution, otherwise it's not sustainable to us. We had to choose a manufacturer willing to work with us. They had to partner with the CART. Our tech people had to work with the equipment to interface and it had to have stuff that would help us with middle ear disease management. So we needed robust tympanometer and of course objective hearing assessment and had to be sustainable for the health aides to be able to use. We ended up choosing a path medical device, which is made by a company out of Germany. Because they were willing to open their system. For example, we started with Biologic, but there were too many firewalls and blocks for us to interface with that system. What it took after we chose this equipment... so it has an automated aniline and ability to measure Eustachian tube function. So it helped us to get information that it's important to get in the kids based on prevalence of disease here, but once we identified the equipment, it had to be configured and had to be installed. It had to be built into the AFHCAN system and the hardware had to be installed. We had to provide training and supplies and, you know, we had to roll that out. The health aides used tele‑medicine to provide the training to roll out the equipment.

>> ANNETTE CALLIES: Samantha. We have two minutes.

>> SAMANTHA KLEINDIENST ROBLER: We dispersed across the region and we're seeing good effects of that. I'm going to give you one case example to wrap up the presentation. I had a newborn male come in born at 36 weeks, no complications at pregnancy or birth. We got a letter saying he did not pass the left ear hearing, passed the right on birth. Family no‑showed for an appointment for automated ABR back in Nome. I called the family and said, can we get you rescheduled? They were like, it's summer, it's subsistence time, there's so much going on, it's really hard. Is it necessary for us to bring him in and can we bring him in later? I said, why don't we do a VTC with the new equipment we have in your community? So they had to travel to their clinic, a few steps away from their house. I was able to get otoscopy, tympanometry, OA Es and did counseling with the family and confirmed the left OAE again and was able to convince them to come for automated in Nome. They had middle ear infections and I consulted an got them treated with amoxicillin immediately. I saw them one week later for the diagnostic ABR that showed profound hearing loss on the left.

And so while not perfect, right, because I'm not getting an ABR, automated ABR on that cart right away, there's a little delay. I still was able to get them in the system. I think that's the key there. So they got in the system, I hooked them in and we were able to get that diagnosis and then the ENT care, the CI, they're in route for a potential CI and we're in discussion for amplification right now. That whole gamut, they're in the loop and in the system. That's the takeaway. There are benefits and challenges to that. And Annette and I would be willing to talk about that afterward since we had such a late start. But infrastructure start‑up cost, training, one of the caveats necessary to do stuff like this and what are we balancing to make it happen. We have ways we're going to be expanding and we can talk about that offline for anyone interested. And here are our email contacts. Because obviously this is a short ‑‑ a very short talk, so we wanted to give you an opportunity, if you came in wanting something specific and we didn't have a chance to talk about it, we're happy to elaborate.

>> ANNETTE CALLIES: Okay. Thank you. I think we're over. But Samantha is... you know, you can communicate with her if you have other questions or me.

Thank you guys very much.

Thank you so much, Samantha.