ROUGH EDITED COPY

NCHA
Providers' Use of Coaching Behaviors in Telepractice
1:30 pm ñ 2:30 pm
November, 19, 2015

CAPTIONING PROVIDED BY:
ALTERNATIVE COMMUNICATION SERVICES, LLC
PO BOX 278
LOMBARD, IL 60148

* * * *

This 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

* * * *

>> William: Arlene, if you can read the title of your presentation.

>> Arlene: Good morning, the title of the presentation is

Providers' Use of Coaching Behaviors in Telepractice. This is just an opportunity to check our sound quality.

>> For those of you who have just signed on, you have signed on to today's webinar, that is brought to you by the National Center for Hearing Assessment and Management at Utah State University. I'm going to speak for a moment so you have an opportunity for you to adjust your volume on your speakers or headsets. Today's webinar is brought to you by the National Center for Hearing Assessment and Management at Utah State University. Today's assessment is title Providers' Use of Coaching Behaviors in Telepractice. Our instructor today is Dr. Arlene Stedler Brown, who is going to present for us and we will be looking forward to that. We will be starting in about nine minutes at the bottom the hour and now eight minutes. You can adjust the volume to your liking on your computer speakers or head sets. No need to worry about a microphone today as you will be interacting with a text field on your screen with today's presenter at a portion in the webinar, where our presenter is going to be accepting questions and comments.

Just to insure our audio transmission is in fact coming through well, for those of you who have conscientiously signed on early, if you can give us your feedback, we appreciate knowing our audio transmission is coming through well. It looks like from your responses here that we are actually being heard loud and clearly by most of you, so that's great. All of you, actually. So, great. Thanks for that feedback. If there's anybody who is having any kind of inadequate transmission, whether audio or visually today, it's likely due to a poor internet connection on your side, especially since we know everybody else is in fact receiving well. If you at any point experience that, you can always sign off and attempt to come back on. Sometimes that solves things. I do see one person who is indicating that they're not receiving audio, so I'm going to write a quick note to them.

Arlene, if you could go ahead and speak for a few minutes

while I do this, that would be helpful so they can continue to monitor their audio signal?

>> Arlene: Okay. Hello there. I have actually changed a little bit on my end. I want to be sure that you can all hear me well. I am glad to be here. A lot of people have signed on. Thank you for doing the waiting of our sound quality.

>> Okay. I'm just going to post a note in the middle of the screen for the one individual who indicated they weren't hearing us today. For that person's benefit I will continue to speak for a moment. Sorry this is redundant, everybody. We just want to make sure everybody has an opportunity to sign on and be sure to be hearing our audio transmission. So today's webinar is brought to you by the National Center for Hearing Assessment and Management at Utah State University. Today's webinar is being provided by Arlene Stedler Brown who actually

presented this in Louisville in 2015. Has agreed to do an encore presentation of this due to its high praise and interest levels we got in evaluations since that time.

So I'm rambling a bit just so a couple of people who are trying to adjust their audio have the opportunity to do that.

I'm also going to repost our technical support information in case they're not seeing that over to the side so those individuals having trouble with audio can contact Derek and get the support that they need. If you're facing any minor challenges, why don't you let Derek handle the one or two not receiving any audio, kindly let him handle that first. That would be great. Very good. Feel free to settle in for a few more minutes. I'm going to play some music now for those of you who have signed on just so you know you have a stable audio connection and we'll be starting in about four minutes.

[Music Playing]

>> It looks like we're approaching the bottom of the hour in another two minutes. We're going to start today's webinar. We will give it another minute or two for folks to be signing on as I'm seeing people coming on very rapidly. We had a very strong response to our registration for today's webinar, so we want to make sure everybody has a chance to sign on and get things adjusted. You can adjust the volume on your own end today to your liking with computers or headsets. No need to worry about a microphone today as you will be communicating with our presenter today through a question and answer field that will be displayed once our presenter has completed the formal portion of her presentation.

So just worry about getting your audio adjusted to your comfort level. Today's webinar is being brought to you by the national center for hearing management at Utah State University. Arlene, can due one last audio check before I start the recording for today's webinar.

>> Arlene: I sure can. Welcome, everyone. This is Arlen

Stedler Brown, talking to you from Boulder, Colorado. A beautiful day here.

>> Thank you. I will start the recording of today's meeting. Just sit tight for one second.

>> William: Good day, everyone. My name is William Eisner and I'm the director of NCHAM at Utah State University. It's my pleasure today to welcome you all to our webinar series. Today's webinar is entitled Providers' Use of Coaching Behaviors in Telepractice, which will be presented by Dr. Arlene Stedler Brown. Dr. Brown is currently on staff at the University of Colorado, Boulder, in the Department of Speech and Hearing Sciences where she is a co-investigator for a study funded by the National Institutes of health, to start the services delivered via tell practice to young children who are deaf. She has graduates degrees in hearing speech pathology and education in deaf and hard of hearing and doctor at degree in

special education. She publishing regularly on this topic. Dr. Stedler Brown conducts her research at the University of Colorado and also works as an adjunct faculty member at the University of British Columbia. Dr. Brown first made this presentation in 2015 in Louisville. We're delighted to feature this presentation again as part of NCHAM's webinar hearings for children who are hard of hearing and their families.

We will turn the mike over to Dr. Brawn. After she has had an opportunity to make her formal presentation, we'll open up a Q&A field for you to interact with Dr. Brown. Arlene.

>> Arlene: Thank you, William. Thank you to NCHAM. I'm glad that the talk in Louisville was well received. It's a pleasure to look at it a bit further. What I plan to do today is orient you to the study. The main data that I'm going to share is to look at how providers deliver early intervention in person and in telepractice and what similarities or differences there may be. I'll look at some future research I'm dealing with this data-set and then we'll discuss clinical applications of the findings because I'm always interested in training issues in our field.

I'll leave some time at the end for your questions and thank you all for being here.

Family center early intervention has been a topic I've been interested in my entire career. It's an expectation and in our law individuals with Disability Education Act, but more than an expectation, there's good research to show that it makes a difference between families are actively involved and what families want is recognized. The point of this topic today is to really look at how the early intervention is can identify and enhance what other family members and parents do with their children so good practices can be incorporated into their daily routine.

So where does telepractice fit in? It's intervention

delivered from a distance. It's very popular in the medical field and rehabilitation fields have caught on. Speech language pathology OT is very invested in telepractice. PT as well. Psychology quite a bit and work with children who are deaf and hard of hearing has kind of taken center stage from the early intervention perspective. A lot of that is because of the initiatives through NCHAM.

Let's talk a little bit about the terminology. I've been saying telepractice. It's the term that ASHA uses. For reimbursement, very iffy around the country, some reimbursed better than others.

Insurance companies tend to recognize the term hello-help. And we will be seeing discussions that was discussed at the ASHA meeting last week and NCHAM has coined what we do, teleintervention, it really speaks to what we do. In the long run we will see who is paying for the intervention and come up with a term everyone agrees to.

Now, to get started, I thought it might be interesting to ask all of you some questions. William has created some polling opportunities for us here. Let me start with this first question. The primary -- please answer, check your box. What do you think the primary reason to adopt telepractice is to reach families who live in remote or rural areas?

(Brief pause)

Okay. This is interesting. When I first got involved in this field of delivering services through telepractice, which was about 12 or 13 years ago, I would say the answers would have looked very different. People would have seen it primarily to reach families in remote and rural areas. It's interesting to see how many people here, 32% almost might see other applications besides just reaching hard to reach families.

Let's take a look at this question. Can a provider use the same family-centered strategies when therapy is delivered in telepractice and in person?

(Brief pause)

I think we have a pretty good idea here how those numbers are coming across. I for one would agree that for the most part the strategies are the same. What will be interesting to see is what's actually done, so stay tuned.

A third question. There's four all together. The third question is providers can be expected to use different amounts of the same strategies when therapy is delivered in telepractice versus in person. Would you use the same amount of those strategies in those conditions or might you have to adapt and use different amounts of those strategies?

(Brief pause)

Take note of those responses. I will ask this question again at the end and you might think about it at the end of the talk and see how this data corroborates your polling results. Thank

you.
Are we okay there, William, on sound?
>> William: Yes.
>> Arlene: The last question, speaking from your own question, I anticipate challenges on this scale should you start to apply what you do in person to the telepractice condition? What degree of challenge might you expect if you venture into telepractice or if you've already ventured into telepractice?
(Brief pause)
Very nice. Okay. Let's move on then to the study. This was actually my dissertation study, and I guess that defense really sticks in my mind. Here's what I decided to do. I looked at children who were deaf and hard of hearing with any degree of hearing loss, who were receiving intervention through telepractice. I asked for all the children to have bilateral degrees of hearing loss and be between birth and 36 months of age because that's when family center intervention is expected

to be done by all interventionists whereas some interventionists continue after 36 months to train parents but it's not regulated or mandated, as it is for birth to 36 months.
English was the primary language spoken in the home so I could code the videos. I was happy to engage any in the study using any communication approach, although as it turned out, most of the children in the study were learning to listen and talk.
And who were the providers that participated in this study?
Well, they were -- I will show you another slide that shows the demographics of the providers. There were 16 of them. Each provider sent in one session, one telepractice session they had digitally recorded. I then coded it and I will explain how, to look at the use of family center early intervention strategies.
So here's the participants. This is relevant to a couple of bits of data I'll share toward the end. There's a lot more about this that I can share another time. It was nice to have these groupings. I looked it up, the 16 participants. When it comes to their certification, I was looking at those who had listening and spoken language certification or didn't have that specific certification.
I looked at the highest degree and I put together of those of the 16 who had their highest degree, usually masters in speech language pathology or audiology and it was usually speech language pathology, and then six providers that their highest degree in deaf education, most with master's, some with bachelor's. I looked how much experience in years the 16 providers had delivering family centered early intervention. Those groups are fairly equal.
I looked at how much experience in number of children less

than 5 to 20 and more than 40, how many different children had the providers worked with in their career since graduating. The practicum experience was not included.

I looked at telepractice experience in two ways. Experience with all ages of children, fewer or more. And I looked at telepractice experience specifically with children birth to 36 months of age. Fewer clients and more children.

So, I had to define what family center early intervention behaviors were. This was tricky. What I decided to do was look at the three topics, these three types of behaviors, action oriented behaviors, inquiry types of behaviors, I'll show you in a minute and responsive types of behaviors, all behaviors the early interventionists would use.

This all came from the literature. What you will see under action, there is modeling of a strategy, facilitating parents' use of a strategy, prompting a parent. A provider can join the parent in an interaction. Join the parent in an interaction with the child. The provider can directly teach the child, and the provider can explain a task and teach it to the parents.

That's, I call direct instruction and that is one of the behaviors I chose. There are four in all.

Under "inquiry," there is the idea of asking for providing information. The provider can listen to the parents, the provider might discuss the child's development. The behavior that's in the literature that I chose was the provider ab serving the parent interacting with the child and I call it observation.

There are two more and they're both responsive types of behaviors. In the literature, there's this idea of coaching. I felt that was fairly broad so I looked more specifically and this is one of the four behaviors I selected where the caregiver, the parent was always the mom in the study, was practicing a strategy with their child and the provider gave feedback to the parents about what the parent was doing. Parent provider feedback is what PPF stands for. Another responsive behavior was commenting and another Ponce was help parents problem solve, give reflective suggestions, talk about what the parent is doing. I like all of these. I chose, as my fourth behavior, when the provider would watch the parent interacting with their child and give feedback to the parent. But this time that feedback is about the child's skills or the child's behaviors.

So we end up with four behaviors here. Observation, professionals observing the parent-child interaction, direct instruction, the providers explaining a task and teaching to it a parent, and two, responsive type of behaviors where the provider is reporting to the parent about what the parent was doing with their child, and the fourth behavior is the provider's still reporting to the parent but this time about

what the child's behavior was.

I really liked the feedback questions. I kind of feel like it's the essence of family centered early intervention. It was hard to pick just four behaviors. I only had 16 providers, I couldn't have too many behaviors or I'd never find significance anywhere. I thought these were easily measured and good intro reliability. When I went back and coded more than once I found I was consistent with myself. I think these four worked well.

I think observation is fairly obvious. Here's an example of direct instruction. The provider said in one of my -- instruction.

Go over to the sink and you can make a whole routine about turning the water on and saying wash wash wash your hands. The provider says to the parents, that's another one of those little routines you do a thousand times day with kids. When you're starting to hear that's going to be one of those little chants that he does. He's going to say wa-wa-wa, you know, wash your hands. I say get in that habit now.

You can see from the example, direct instruction is by the teacher to the learner, parent on the specific concept.

Giving feedback to the parent. Sorry about that noise. I'm hearing that I don't know if any else is hearing that on the audio.

Giving feedback to the parent is a way of giving encouragement. Provider said to the parent, as she's vocalizing more, you, the parent, are doing a great job of modeling for her and waiting.

Another example of giving feedback to the parents about the parent, that was good pause time. You're doing an excellent job of saying mama has this and this. What do you want? Giving her the models for it, her being the child. And then waiting. It's a good amount of time to wait for her to give a response.

So here the provider is acknowledging what the parent did in a very constructive way.

Then, when the provider is sharing information with the parent about the child, it might be something like this, the provider says to the parent. That was awesome! She, the child, did it that time. She stuck the article in. That was great! Or the provider says to the parent, he, the child, is a very consistent vocalizer and he's vocalizing with intent.

Okay. Those are the behaviors. What did I set out to do here? I created my own coding protocol, based on what I saw in different articles that I read. Many different articles that I read. I laboriously, but I think it's a very accurate way to go about this, looked at every video in 30 second intervals and I coded which of those four behaviors was the dominant behavior in the 30 second interval. I will show you a little later I re-coded everything, every 30 second interval, to look at any behavior that happened within a 30 second interval. Honestly, I

think the second way of coding is more meaningful. I will share a slide about that. In order to compare what I did, coding people working in telepractice with what has been published in the literature, which is professionals providing family centered early intervention in the in person condition, I had to do what the literature did, and every study in the literature coded only the predominant behavior in each 30 second interval. From all my reading, no one justified that. They just did it that way and I did it, too, and my comparisons in person and telepractice will be based on the predominant behavior in each interval.

There were other behaviors that occurred other than the four I chose. I'm sure most of you won't be surprised about this.

>> Modeling. Happened and I almost included that as part of my four and probably would again. Just conversation a common occurrence and Triadic play I didn't think would occur as much as it did. The parent and professional and child all playing together not in the same room physically but in the same room virtually. I did note when other behaviors occurred and those were the three that occurred the most frequently, other than the four I mentioned.

So the analyses. This is a little bit of descriptive statistics. I want to go over it a little bit because I think it's notable. We have number of 30 second intervals where these behaviors occur. Raw numbers. Look at observation here. Of the 16 videos I looked at, sometimes on the low end, there were 20 occurrences of observation, as the primary behavior in that 30 second interval. In some videos it occurred 112 times with the mean being, let's call it 70%.

Direct instruction in some videos it didn't occur at all and in some videos, it occurred 43 in 43 of the 32nd interval with a mean of 16%.

Giving feedback to the parent about the parent, occurred from one interval to 28 intervals with a mean of 13%. Giving feedback to the parent about the child in some videos it didn't happen at all and in some videos, it occurred in 50 different 30 second intervals. The mean was 16%.

Again, these are the predominant behavior in any 30 second interval. It seems to me observation is a logical consequence of telepractice. I think that's kind of logical.

And it's kind of interesting to see these three behaviors occur in somewhat similar amounts but a whole lot less than this. There's no judgment here as much as there's just an observation and awareness, perhaps, of what each of us does when we're providing intervention, whether it's in person or in telepractice. This is part of what I set out to do and where I'll spend the most time today, which was to look at how the use of these four behaviors compares when therapy is delivered in telepractice the 16 in my studies and how the same is

documented in literature when that therapy is done in person. So, here we have comparison for the mean number of observations. Telepractice, there's a lot more observation. A lot a lot more observation in telepractice. Remember, observation is a good family-centered strategy. It means that the provider is not working with the child, the provider is watching the parent work with the child.

The 17% in person reflects an average among five different studies where the range was from 6% in some studies to 36% in others. Here are the questions I encourage you to think about in your own practice. It seems the telepractice lends itself to use of more observations. Is that just because it's the telepractice platform? Is it what providers choose to do?

Does it reflect your comfort or discomfort as you move into telepractice? What are the benefits to the parents and the child when we as providers are observing more? This part is particularly intriguing for me. Which behaviors follow observation to make observation a really meaningful strategy. If you observe for, let's say two or five 30 second intervals, about three minutes, what do you do next? Food for thought. I will give you more data at the end to give you more food for thought.

At the end, there was one thing I found, in telepractice, slightly less instruction is given in my study compared to this other study. What's the value of direct instruction? Is 12% enough? Is 19% enough? How does that meet up with your expectations about yourself or what you're teaching students in your pre-service training program to do? Think about this. It looks like the providers are giving more feedback to parents in the telepractice condition compared to the in person studies. There were four studies. The range was less than 1%. That is less than 1% to 6%. This is not a perfect mean here, but for purpose of comparison with these two groups, it looks like the telepractice condition lends itself to more feedback to parents. What do you think about that strategy? When is feedback offered to parents? And, again, which behaviors go along with feedback to the parent?

In a session that was being given about telepractice by some people from Australia at ASHA, Elizabeth Ward, if any of you are familiar with her not in the field of deafness but in the field of telepractice, at the University of Queensland. One of the things she said in telepractice, you need to find the right time to politely butt in to interrupt the parent-child feedback. It was done in these three studies combined where the rang to in person condition was from not at all to less than 1%.

I rounded here.

Telepractice gives the opportunity for the provider to report much more about what the child is doing. Do you think

that's a good idea? How does it help parents? How does it help us as providers as we're watching a session and giving -- and training parents?

So with that data in mind, let me reflect on it and pose a couple of ideas. Based on a comparison with the published literature, the quantity of provider behaviors used in telepractice does differ, for the most part, for three of the four behaviors.

Observation is used extensively. Less direct instructions was provided. There was a small increase in the provider talking about what the parent did and how they did it. And there was a more interesting distinction in how much providers talk to the parent about the child.

The use of observation was the most predominant. The use of these three mean occurrences in the videos is somewhat similar. I can only ask you to think about what you do while you do it. If this is a good balance.

Among the behaviors, is it what you think you're doing? Are you surprised to see how much observation occurs? Have you ever filmed a session and watched it or listened to an audio recording of your sessions to know what you do? Are you satisfied? Food for thought.

Now, I mentioned that I was going to compare coding

strategies. I went through and coded the predominant behavior, so I could give you all of this information in those charts. But I went back and I looked at all the behaviors that occurred whether or not they were the predominant behavior in a 30 second interval.

My way of thinking and I talked to several people about it more than several, it seems more meaningful to code all occurrences of behavior. From a 30 second interval and let's say direct instruction happens for 20 seconds and feedback to the parent happens for 10, I think they're both meaningful. I don't see one as being more important than the other. So, I just looked at the mean and compared them.

Here is looking at observation as the predominant behavior and all these numbers change if I'm looking at all occurrences. So there's less observation, more direct instruction, a lot more feedback to the parent about the parent. And practically double the amount of feedback to the parent about the child.

So I would like to suggest that this is a better reflection of this. I couldn't make a comparison to the literature because no one code it that way.

Well, what would a study be without looking at what comes next? I must like coding 30 second intervals, because I'm launching into another study and doing the exact same thing. A different study on a different topic. I like the coding approach. It's used very prevalently in the literature.

So where would we go next? This is always an important

disclaimer. This was an exploratory study. A larger sample would be interesting. 16 people is good. My committee set out with the charge of 10. So I was happy to get 16 providers. If any of you are on the call, I am forever thankful to you for being participants.

Now, I'm going to tempt you a little bit with some additional analyses I've conducted since the dissertation was done. Some additional analyses.

I'm using something called logistic regression so I can look at the co-occurrence of behaviors. Some asked me to do just this. It seems more meaningful. It's a probability approach. What's the likelihood that if you give direct instruction, that it will be followed by feedback to the parent about what the parent did? Or what's the likelihood if you do some direct instruction, that you will follow up by giving feedback to the parent about how the child did? Or do observation and direct instruction co-occur? You observe, see a teaching moment and then due some instruction.

The easy answer to that one is, no, they do not follow one another, at least not in these 16 videos. And I just found that interesting, again, wondering what will I do when I'm doing my intervention.

Another way to look at logistic regression, is to look at the interaction between the characteristics of the providers

and their use of family centered behaviors, these four family centered strategies. I had shown you that slide at the beginning where I looked at providers in terms of how many were trained in speech path audiology and how many were trained as teachers of the deaf. Why would I want to know that. If one group versus another group is doing more-or-less of something and we think it's good practice that could impact our training or our mentoring so we could help one another to do more of something if we think it's a good idea.

One behavior that I looked at that might be worth mentioning is that the probability of giving feedback to the parent about the parent was associated with those providers who had more experience delivering telepractice to the birth to 36 age -- 36 month age group.

So is that saying then those providers with more experience are more comfortable using these coaching techniques?

I don't know. I'm just putting it out there for your consideration.

But these data from the logistic regression analysis are really much more powerful because you get a much larger data-set, because I'm looking at every 30 second interval in every videotape. Instead of looking at 16 providers, I now have a huge data-set of thousands of intervals I can look at trends in that data, which makes it a little bit more trustworthy.

What else?

I did this in the dissertation. I have never reported it actually. Here's my first go at it. I did something called parameter estimates, a way of using numbers, to get a practical interpretation of two groups of providers. I'll give you an example of those trained in communication disorders versus training of teachers of the deaf and hard of hearing and their use of these four strategies.

So, with my 16 providers, those trained as SLPs or audiologists use direct instruction 2 1/2 times more than the providers who were trained as teachers of the deaf.

So, when I teach at UBC, I will be mindful of this and I think direct instruction is a good strategy for providers to use and maybe it needs to be pointed out a little bit more to this group.

Here is another example. Those speech language pathologists or audiologists use speech back to the parent about the parents less often. .65% times as often as teachers of the deaf use that strategy. It's interesting to look at statistics. For individual providers you must be cognizant of what you do and maybe data help us to do that.

Another thing is look at how many behaviors serve as proxy for family center for early intervention. I picked four behaviors. I had a good reason to select them. I'm glad I selected them. But I don't know that I picked the four very best ones. I don't know they're the most representative of

family center early intervention. What about modeling and triadic interaction, parent, professional and child and interaction between parent and provider. Those are the three I did not code that happened quite frequently. Are those a proxy for good family centered early intervention? It's a good question. I don't have an answer. Ideally, I hope someone can go into this, maybe it will be me, to compare the individual therapists in both conditions. I compared 16 therapists in my study to hosts of other therapists in other studies.

It would be ideal to look at how different therapists do their work in person and in telepractice, the same therapists. And using the same children.

So, with that polling, again, the polling worked famously. I'm not going to poll this time, but I want to give you some answers to those questions. Our programs using telepractice primarily to reach families living in remote or rural areas, it seemed to me that was probably what got us into the field, providing equitable services statewide, nationwide. But, here's some interesting events. For instance, one state that happens to be Colorado, our state program is writing guidelines for state wide use of telepractice. Our state part C program. We just had a paper accepted for the EDI meeting. Our part Cor coordinator, Alice Ferguson, just took another job but the leading initiative along with that, they decided the

telepractice was a valuable alternative to get services to families quickly. Anywhere in the state. It's not just people in remote or rural areas who don't have easy access to therapy. It could be families with lots of kids or a child medically fragile. Providers can provide more consistent therapy if they don't have to travel to a home in Colorado going through a snowstorm or if the provider has a cold and wouldn't want to be infectious, you could still deliver the therapy remotely and not worry about that.

So a lot of programs are investigating telepractice with families who are in other than moat and rural areas, and your poll -- thanks for putting that up there -- you read my mind. Shows that a lot of you, 31% thought there were good applications, other than just delivering therapy remotely.

The next question, are providers able to incorporate family centered strategies when delivering intervention using telepractice. What did that poll say?

I think it was a pretty big percentage that said you can. There we go. 93% if we round it up, said, Yes. Based on the study, I agree. You can use the same strategies. The finding was corroborated, next step might be to train providers using telepractice and family centered early intervention, so that for those who find it a little trickier, we can have some training.

Do providers use different amounts of coaching behaviors, it seems they do. What did the poll say?

Observations looked different and feedback to parents looked different and instruction in the opposite way. It looks like I'd be curious how many of you have done telepractice or anticipating doing telepractice to see how your answers would be resoundingly supportive of you use different amounts of these strategies in telepractice and in person therapy.

The fourth question, are providers comfortable using a telepractice platform? Let's look at that poll on the scale. Well, maybe it's a little hard to find it. While we wait for that. I think the poll corroborated that not everyone is -- or stated that not all providers are comfortable. For some, it kept them from investigating or watching telepractice. There's help out there. In Colorado, as part C gets ready to launch this, there's a group developing training modules. The training will be required before you can provide therapy via telepractice. And NCHAM, as you probably know recently launched troisk modules for parents and providers and administrators. It seems training would be a logical answer to being comfortable. Training is available. Indeed, it's expected.

What constitutes a productive family center early intervention session? I didn't poll that question and it is one for everyone to think about. I love this statement that Kathy made. I'm sure it was before I gave the EDI talk and she had an

article about her center and she said, we really are in the business of empowering parents to be effective language teachers for the children. In addition to some other things, I'm sure. What constitutes a productive family center early intervention session? We don't really know empirically, but I home a lot of those behaviors listed, in addition to my four, could be some food for thought.

Here is another poll for you. Now that you have all this information. And this is just interesting for me, for projects I'm working on. How likely is it for you or your program to implement telepractice in the next year? So it's interesting to see how many people are already doing this and interesting distribution here of where everyone else feels we're headed. Let me ask you this question. You can take that down, William. This is an open ended question, if you would indulge me again for future work that I'm doing. Would you write one, one next step you intend to do, as you investigate the use of telepractice? That doesn't have to be something you're going to do if you launch into telepractice. It can just be what you're thinking you're likely to do if the time were to come that you were trying telepractice. And all of these answers are really interesting and they will be posted on the recorded webinar. I'm going to look at this with much more care. But okay want to give -- after the webinar is over. I do want to give you all a chance to answer. I think there is very helpful information.

William, when you see answers starting to slow down or can you maybe let people keep answering while you're gone, you can

tell me what's best. I see the answers coming in. I will give it just another few seconds. This is great. Thank you. You can keep polling. That would be fine, but I would like to move onto the next slide. William, can move the poll to the side? Thank you. I just want to leave you before we go to some questions from all of you, here's some resources, my new favorite when it comes to coaching and there's so much on coaching and I just got this book by Rush & Shelden. If you're looking at telepractice more of a theoretical perspective and what I might like to do and what I want to learn from people doing it, there are three items here that you can look at. If you want training, as I mentioned, take a look at these materials that are put out. Hats off to Diane Bell and Christie glazer for the work they did on those learning courses.

References for my studies, this is the studies -- some of the studies I looked at when I chose my four behaviors. I appreciated how people are investigating the family centeredness with providers.

We'll go to questions. I want to just say that I am again pleased NCHAM asked me to share this seminar. I shared pretty much what I had, what I presented in February, this idea of parameter estimates and logistic regression and other ways of

analyzing the data are fascinating to me. I will be publishing some of that at other conferences.

One other thing I wanted to mention is all of my work right now is supported by NIH. We are doing a study on child outcomes of in person therapy and telepractice. As interesting as it is for me, as it was for me to look at what providers are doing, I think that the bottom line is, for me, how the kids are doing, so it will be interesting to see what this study shows us about how the same children with the same therapist are doing, how much developmental change there is when therapy is conducted in the telepractice condition, when therapy is conducted in person.

So, on to question. There's a question here, can I define direct instruction, as it was coded in my study. Yes. I'm actually going go to the definition because it came from the literature. A specific outcome directed instruction by a teacher about a concept or skill to increase the performance of the parent. For instance, I am going to teach you, mom, or dad, a little bit about expansion, your child using single words, we want to move to the two-word level. Your child is 18, 20 months of age. Let me teach you how to do that. The provider might demonstrate it and have a little discussion about the importance of a strategy but most specifically about how to do it. Can I show the page of training sites? I need to get to my arrow. Down there are the URLs. Go to the two training sites, how do parents access technology for this?

Well, great question. You need three things. You need some type of a device. It can be as small as a smartphone, it can be

a mini pad, it can be a regular sized pad, it can be a computer, a computer plugged into a big screen, bigger is often better. But then you need, in addition to the hardware, you need software, you need some type of program and that needs to be HIPAA compliant. Today, we're using adobe connect. Some people connect through interactive video on Skype. Skype is not HIPAA compliant. You have to be mindful of that. There are a lot of other software programs that are HIPAA compliant. We talked about hardware and software and you need to be mindful of band width. How much band width is available and how much is being used in the home and provider's site. There's an easy way to check that. In a perfect well you can do everything in a telepractice session? You need to remind people I will be doing a telepractice session from 10:00 to 11:00, so everyone else please try to stay off the internet. I think that issue is resolving as technology gets better and better.

How do parents access the technology? I think that it's very specific to the state, the county, the city, the home, where the center is. There's some good information in both the Houston tech and monograph about that. Can I get a copy of the slides? Yes. NCHAM will post that on their site and

hearing.org. .

Can I look at how long the families have been in intervention. This would make a big difference on what you would observe.

>> I did not. That's a very good question. As I talked with the providers, some of the -- some of the providers who participated in my study, we had very nice conversations about this. How long a family is in intervention certainly could change. How much one observed, how much one teaches and each is different from one another. I'm sure as you look at my study's findings, it's just for behaviors with lots of different kids to 36 months.

16 different providers. I'm looking at news and sites. A take home message, people -- providers -- if you -- lots of providers around the country, some doing in person therapy and some in telepractice, they're using family centered strategies more. Our part C coordinator in Colorado who launched us into telepractice said that was pretty encouraging. That gave me more confidence in pursuing telepractice.

So I don't want to take a microlook at any one provider but rather look at these trends. Has -- audio -- language specifically ASL? Has research been done? Not that I'm a wear of. It can certainly be done with children using sign language. There is a big discussion with my committee when I made my proposal for the dissertation. I really had hoped to get families who sign and who use simultaneous speech and sign and listened to spoken language so I just took the first 16 that came my way about spoken language. I can't give any more information about this to families who sign. I see no reason at all it would be a problem other than band width not supporting good simultaneous communication. That, too, can be resolved. How do you overcome poverty and cultural issues.

One more minute. I will talk about this very briefly. Our group in Colorado part C is putting it together, is talking about what do they need to do to make hardware, software and band width available to some families who do not have it. Can we provide that equipment in their home? What would it cost? How many people need it? Another approach some people use is they invite families to go to a place nearby that does have the hardware, software and adequate band width and those places might be a library, a health chinic, a school, high school and middle school working its way to elementary school to a lot of places with good access to hardware, software and band width we can capitalize on. So I see that our time is over.

>> William: Arlene, thank you so much for your presentation today and thank you, everybody, for the excellent questions that contributed to Arlene being able to share her knowledge and experience doing this study and all of her experience working in this field.

Arlene's e-mail address is posted there if you have any other further questions or thoughts that you'd like to communicate with her about, and she's offered to have those kinds of interactions with you. You'll also note that this webinar has been recorded and will be posted on infant hearing.org within the next week.

So, again, thank you, Arlene, and please stay tuned and watch out for our next webinar as we always love to have you participate with us. Thanks again.

>> Arlene: Thank you!

>> William: As we sign off this meeting, you will be taken to the website in infanthearing.org.

* * * *

* * * *