Virtual Thoughts: Provider Voices on Teleintervention with Families of Young Children with Visual Impairment

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Abstract

Objective: The COVID-19 pandemic event created an opportunity for all early intervention (EI) practitioners to look at the development of remote practice standards and learn about the diverse ways to serve and support families. In addressing the use of teleintervention, it is critical for the field of visual impairment to learn which implementation strategies were most effective and what is practical moving forward from those who provide the EI services.

Methods: This study incorporated an event-driven mixed-methods methodology that included a quantitative online survey to collect broader national viewpoints and dynamic data from focus groups that took an evolutionary approach to the changing perspectives of the participants following COVID-19 on their teaching practices using teleintervention.

Results: The results of this study have identified positive and problematic features of teleintervention services when delivered to families of very young children with visual impairment.

Discussion: Exploring the successes of organizations and individuals providing these EI services leads to a greater understanding of the development of a high-quality protocol for teleintervention for this population and equity for families.

Application for Practitioners: The deep dive into the "virtual thoughts" of providers across the country allows them to voice their triumphs and concerns on developing suggestions for quality service delivery and preservice needs.

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Introduction

The present research collected event-driven case study data (Mills et al., 2010) generated between the months of March and August 2020. On March 11, 2020, the World Health Organization declared a global outbreak, or pandemic, of COVID-19, which is characterized by a respiratory illness caused by a coronavirus (U.S. Department of Health and Human Services, 2019). Soon after this announcement, most educational institutions and organizations were required to discontinue in-person learning due to the risks of community spread.

Consequently, individuals and early intervention (EI) organizations who support young children with visual impairment and their families were unable to provide in-person home visits and group programming. In response to the uncertainty of when physical distancing recommendations would end, many individuals and EI organizations began to look for and trial alternative modes of service delivery to ensure families in the EI system continued to receive services (Center for Connected Health Policy, 2021; Department of Education, 2020).

"Teleintervention" is one of many terms used to describe remote EI services for children aged birth through 3 years old who have been identified as having exceptionalities, delays in development, or the potential for experiencing delays in development (Cohn & Cason, 2012). Although some state EI providers had instituted approved teleintervention EI services prior to the COVID-19 pandemic (Cole et al., 2019), national participation was limited. Previous studies have shown that caregivers and practitioners found technology-based EI educational services, including services in the field of blindness and visual impairment (BVI), as achievable and effective as in-person consultations (Behl et al., 2017; Kelso et al., 2009; Olsen et al., 2012; Phangia Dewald, 2019; Phangia Dewald & Smyth, 2013). It is critical for the field of BVI to learn from those who participated in the event which implementation strategies were most effective, while addressing legal and ethical issues, and what is practical moving forward.

Best practices in EI encompass a philosophy of building the capacity and enhancing the strengths and resources of families (Dunst & Trivette, 2009). Research in virtual programs has shown increased use of the family-centered coaching model of intervention (Cason, 2011; Olsen et al., 2012). Teleintervention could help professionals working in the field of BVI address issues related to shortages in personnel and increase their efficiency in delivering family-centered services to children of all ages around their service area.

The aim of the present study was to examine the following about professional services in the field of EI BVI during the COVID-19 pandemic: (a) how the pandemic affected their provision of EI services to families; (b) what they did to increase their

knowledge about family-centered practices, specifically coaching, in teleintervention; (c) what specific strategies they used to support families; and (d) how teleintervention changed their practice. Research exploring the successes and challenges of organizations and individuals providing services using the service delivery model of teleintervention will lead to a greater understanding of the development of a high-quality protocol for virtual home visits for young children with BVI.

Method

Study Design

The research design for this study was an event-driven, dynamic case study (Mills et al., 2010) that used an evolutionary mixed-methods approach. The event in this case was the COVID-19 pandemic and its impact on the service delivery method of EI vision practitioners using teleintervention. Approval for this study was obtained from the institutional review board (IRB) at a university in the Rocky Mountain region.

The justification for using a mixed-methods research design is that one type of evidence may not completely address the problem at hand. Usually there are quantitative and qualitative components to mixed-methods studies, but the extent to how much each component contributes to the study depends on the intent of the researchers and when and where they want to mix the data collected (Creswell & Plano Clark, 2017).

The present study used a convergent parallel approach to the mixed-methods research design, which focuses on using concurrent timing to implement the quantitative and qualitative strands of the study during the same phase of the research process (Creswell & Plano Clark, 2017). The present study was conducted using the philosophical paradigm and assumptions of pragmatism, in which understanding is generated through knowing what is being done to address the problems and issues that are being investigated and examining what worked or did not work in the real world of practice.

Participant Selection

Purposive sampling (Rai & Thapa, 2015) was used to ensure that participants had the appropriate knowledge and experience needed to respond to the research questions. Individuals in five private organizations or statewide programs that provide EI services in the field of BVI accepted invitations to participate in regional focus groups over Zoom and completed IRB-approved consent forms. Focus group participants were recruited from different geographic areas to limit sampling bias (Emerson, 2015).

Snowball sampling methods (Merriam & Tisdell, 2016) were used to recruit individuals who work at organizations that provide EI services to young children with visual impairment for a survey during the time period of March 1, 2020, through

August 31, 2020. In addition, the survey link was distributed on social media. It is unknown exactly how many professionals were recruited due to the varied provision of EI services for young children with BVI in different states (Ely & Ostrosky, 2018, Ely et al., 2020).

Data Collection

Data were collected through an online survey and virtual focus group interviews. In an effort to give context to the researchers' perspectives and avoid personal bias, the following position statements were composed by the authors, who were also the researchers of the study.

Researcher Position Statements

First author: "My journey with teleintervention started when I had the opportunity to experiment with providing orientation and mobility (O&M) services in early intervention virtually to a child who was visually impaired in another state. The results of my dissertation that focused on providing O&M services virtually to children with BVI and their families in EI indicated that this service model was feasible and generally positive for both providers and families. I will continue to advocate for and support the use of teleintervention for young children with BVI through practice and research."

Second author: "My experience with teleintervention began as a home visitor working with families of young children with visual impairment. Early feasibility research indicated that the use of virtual home visits was a possibility in the field of visual impairment, and I believed we could champion the use of this model to address the lack of EI providers."

Third author: "I approached this research project through the lens of a statewide administrator of a Part C program through a state school for the blind that supports infants and toddlers with blindness and low vision and their families. Virtual home visits may be one solution; however, I believe that research and data are critical for informed decisions."

Survey

As part of the mixed-methods process, a survey instrument was developed by the researchers using Qualtrics software to collect informational data online due to low prevalence rates and geographic dispersion (Chan et al., 2018). The survey included sections on (a) demographics, (b) the range of EI services provided, and (c) confidence and competence measures see (Appendix A). Confidence and competence questions were rated on a four-point Likert scale. Questions addressed participant thoughts from both the beginning of the pandemic and after some time had passed to determine if

experience resulted in a change of opinion. The survey was available to participants from the beginning of June 2020 through the end of August 2020.

Focus Groups

Questions developed for the focus group sessions were generated by the research questions and sent to the participants in advance for review see (Appendix B). As all three researchers have intimate ties to those who consented to participate in the Zoom focus groups, the researchers rotated through the roles of facilitator or recorder. A total of five focus groups were conducted with five to seven participants per group. Both EI providers who supported teleintervention and those who did not were encouraged to participate and share their experiences. Focus group interviews began mid-August 2020 and concluded mid-November 2020.

Participants reaffirmed consent verbally prior to the focus group recording. All focus group sessions were audio- and video-recorded using the Zoom recording feature (Archibald et al., 2019) and lasted approximately 90 minutes. Audio recordings were stored in a secure Box file and sent to a third-party provider for verbatim human speech–to-text transcription to support rigorous analysis. To ensure greater confidentiality, identifying information was removed from completed transcriptions before analysis.

Data Analysis

Survey

Data analysis utilized Qualtrics software and cross-tabulation strategies (Abbott, 2011) to generate descriptive statistics from survey data. Demographics for survey respondents included a description of EI services provided to children and families. Descriptions of their self-reported confidence and competence levels were obtained regarding the utilization of teleintervention services before and during the pandemic time period. Categorical data was analyzed using cross-tabulation to compare relationships in the data set to obtain granular insights.

Focus Groups

Focus group analysis consisted of transcribing recorded audio and "organizing a systematic framework of meaningful units" (Brotherson, 1994, p. 114). Before coding, a copy of the transcription was sent to each participant for a "member check" (Merriam & Tisdell, 2016). The semi-structured focus group transcriptions were deidentified and reviewed by two of the three investigators, who independently coded the data. Data were condensed into themes with meaningful definitions using comparative content analysis (Greckhamer et al., 2018). A level of .60 kappa for interrater reliability was

required to confirm specific themes, and discussion led to three rounds of consensus to establish the final conceptual structure.

Mixed Methods Integration

The integration of qualitative and quantitative methods is the key process differentiating mixed methods research from research using multiple methods (Bazeley, 2012; Fetters, 2016). The point of integration is the pinnacle of a mixed-methods research design. The point of integration for this present study occurred during the overall interpretation of the results after the data analyses for the survey and focus group interviews were completed. Timing integration at this point of the study allowed the researchers to examine (a) the extent to which the two sets of results converged and diverged from each other, (b) how they related to each other, and (c) how they could be combined to create a better understanding in response to the study's overall purpose.

Findings

Demographics

As indicated in Table 1, the 98 respondents to the online Qualtrics survey were from 32 states across the United States. The most frequently reported locations (states) were Utah, Kentucky, Indiana, Colorado, and Washington. The majority were teachers of students with visual impairments (81.6%). In addition to the role of provider on the individual family service plan (IFSP), 88.7% of respondents had a state license, certification, or endorsement in education for students with visual impairment, and 67.3% had a state license, certification, or endorsement in early childhood education, EI, and/or early childhood special education. The number of years in service to education crossed the entire spectrum with 40.8% having more than 11 years of experience, including 24.5% with more than 11 years in the field of BVI. For those with fewer than 11 years of service (59.2%), 38.8% had between 1 and 5 years of educational experience and 18.4% had 6 to 10 years. The number of children with visual impairments on respondents' caseloads crossed the spectrum with 50% having between 10 and 29 children, 39.8% having fewer than 10, and 9.2% having more than 30 children they supported on their caseloads. Services were equally distributed across urban, suburban, and rural settings with 27.5% of the respondents serving families in all three types of communities.

Training in Virtual Home Visiting

Table 2 shows the training and experience respondents had for conducting virtual home visits. The majority of respondents (87.8%) received no training during their preservice university preparation, and 67.3% received no professional development

or in-service training. For those who did receive in-service training, 53.1% sought out training on their own. Prior to the pandemic, 19.4% of the respondents provided EI services through the use of teleintervention strategies with one respondent providing them for 11 years and the others providing teleintervention within the past 5 years.

Levels of Confidence and Competence

Table 3 demonstrates changes seen in event-level data. When responding to these questions, participants were allowed to choose more than one answer, and the percentage was calculated based on overall total responses rather than the number of respondents as in other sections of the survey.

At the beginning of the pandemic, when the respondents were required to provide teleintervention instead of in-person home visits, 35.7% reported that they felt competent or very competent to provide teleintervention. The majority (56.1%) felt somewhat competent and were willing to try, but 8.2% felt completely unprepared. Regarding the comfort level at which respondents felt with providing teleintervention, 75.5% were unsure but willing to try, 21.4% were comfortable, and 3.1% felt very uncomfortable. During the pandemic and at the time of the survey, the confidence and comfort levels showed significant growth with only one respondent reporting that they still felt very incompetent and uncomfortable providing teleintervention. The majority of respondents felt competent/confident or very competent/confident (82.7%), and 16.3% felt somewhat confident and were still learning to provide teleintervention support to families through videoconferencing tools.

Themes from Focus Group Interviews

Overall results from the qualitative focus group interviews provided both confirmation and surprises as themes evolved. Our original plan to compare the responses of providers who worked for state-based organizations with those who worked for private organizations changed when it became apparent that answers were similar across settings. As the themes developed, it became obvious that they were expressed in a positive or negative manner by the participants as evidenced in Table 4. Organization of the themes appeared clear when the researchers evaluated them in this way through categorization of quotes and insights.

Confusion

The feeling of confusion at the start of the COVID-19 pandemic was a prominent, consistent theme among the participants of all five focus groups. Individuals expressed

feelings of confusion and uncertainty in regard to not only what was happening within their organizations, agencies, and schools, but also what was going on in the world and how they were going to respond to the pandemic in their own personal lives. Many of the focus groups used the word "scrambling" to describe what it was like for them and their organizations/agencies to get things in place so they could provide services to their families.

> Nobody really knew what was going on that first week, but it was comforting to know that everybody was scrambling and trying to figure it out together. It wasn't even the work piece, just the whole piece of what we were dealing with. Nobody knew anything. It was a stressful time.

Initial guidance in how to respond to the pandemic was confusing. Although there was one focus group that indicated its governor's response to the COVID-19 pandemic was quick and clear (which made it easy for them to move forward), the other focus groups indicated they had to interpret guidance from their own administrators to formulate their responses to the pandemic restrictions in order to provide services to families.

> It was just confusion . . . there wasn't a lot of initial direction. A lot of questions came up and there weren't immediate answers for those.

> I actually feel like we've been pretty lucky in our state . . . I think we actually have had very clear communication from our governor from the very beginning.

Specific Agency Direction

All five focus groups demonstrated satisfaction with direction from their specific agencies as policies were created. Regardless of whether it was a state-driven agency or a private, nonprofit agency, focus groups indicated their immediate administrators had their best interests in mind.

> For us, it was a little bit different too because then we had to wait and get guidance from the state as far as the home visits and what we were doing with that.

Procedures and Accountability

The quickness of having to move from in-person services to virtual services sent EI organizations and agencies scrambling to figure out how to conduct visits and be accountable for them.

> It probably would have been helpful to have a list of acceptable video call software because I got the impression that people were scrambling with that for HIPAA compliance and, and all of that.

Some organizations told their providers that they could only use specific videoconferencing platforms that were deemed to be more secure (e.g., Zoom, Google Meet, Signal, WhatsApp) and specific methods and applications to collect signatures for consent and visit forms.

> The state was pretty prompt and they released their consent forms that parents were to sign, they listed guidelines, they had a virtual checklist, they had secure platforms.
>
> We have to get a signature from the family that we did the home visit with them to verify we were there. I think they were trying to figure out what form does it need to be in? Is electronic okay, do we have to mail to get a hand signature?

Some EI organizations and agencies ran into issues related to whether or not virtual visits, such as those conducted via email, text message, or phone, could be counted as visits and if they could be billed. Some of the focus group participants mentioned that this process was quick for them, whereas others noted that the process was arduous and took time to figure out.

> I think as far as it being part of the law and stuff like that, it is certainly a billable service on the IFSP. You're using the parent coaching model like you would in early intervention like is expected on the IFSP if you were going into their home and providing services that way as well. I'm not exactly sure, I guess, how telehealth is written into the laws as far as service provision.

Managing Visits/Learning Curve

All focus groups described their experiences with virtual visiting as ones with a learning curve with varying magnitudes. Many providers were unfamiliar with videoconferencing platforms and had to take the time to not only learn how to use them themselves, but also teach families how to use them.

> I remember those first visits were essentially just kind of, for me at least, were just touching base with the families, seeing if they had everything they needed, if they were all healthy, it wasn't so much about the kid's vision needs as the family as a whole.
>
> We spent a lot of time just helping parents get the right app. It was about the technical side of teaching the families how to do it and then trying to get signatures.

Only one focus group reported that their state already had telehealth infrastructure in place years prior to the COVID-19 pandemic to train early intervention providers in how to use telehealth with clients/families, legislation to regulate it, and procedures in how to bill for virtual visits.

> The fact that they had the training available and they encouraged us all to get the telehealth even before COVID and then, as soon as COVID hit, there were some real great instructions that came down through the state department that gave us step-by-step of where to get the training, how to log in, how to load up your certificate, and put it on the state EI website.

Scheduling seemed a bit easier for providers during this time, especially for those who were spending large amounts of their working hours traveling to see families.

> I think now it's a complete 180 from when we started. I'm very comfortable with the virtual sessions, and now, if this were to happen again, or like if we go back to face to face, but I have a family that's out of town and I can't get to them due to weather, then I can do a telehealth and I'll feel very comfortable in doing so.

Provider Collaboration

All focus groups indicated that provider collaboration among team members increased greatly during the need for virtual visiting. Prior to the COVID-19 pandemic, many providers missed these meetings due to scheduling conflicts, delayed or no notification of meetings, and travel.

> I feel like I've sat in more on IFSPs here lately. I feel like it's really brought the whole team because we are all available now. We all have that time to schedule it in and make sure every single member on that actual IFSP is present, so it's actually been amazing, I think, way better than it ever has in the past.

Additionally, all providers noted that they were able to meet and establish relationships with other EI providers on the child's team with whom they only had brief encounters or interactions before.

> Now that we're all working together to schedule on Zoom, 'cause it's hard for families to Zoom four or five different providers at different times, now I have relationships . . . with I don't even know how many people!
>
> I think the families are really appreciative of it too because it holds down on the number of the therapies that they are scheduling per week.

Coaching or Parents in the "Driver's Seat"

Parent coaching, or supporting caregivers to directly interact with their infants and toddlers, is a foundational strategy for effective EI with families (Ely & Ostrosky, 2018; Poole et al., 2022). Teleintervention is uniquely structured to encourage parent coaching as caregivers must carry out interactions and activities with the child. This places the parent or caregiver securely in the driver's seat.

> I was already doing the coaching model, but it lends itself; it's much easier to do it virtually than in the home.
>
> I really believe in the parent coaching method, so I was actually thrilled that this forces that more.
>
> I thought I was doing it before. I'm really doing it now, and I see parents owning it. So not just for vision, but for all the other early interventionists.

Individuals that had previous experience with parent coaching had either received training through their EI organizations or their specialized organization. Several providers were honest about feeling uncomfortable with this model of providing service, and many implied that learning about it was different than actually doing it.

> I felt very fortunate that I had been through the coaching program that EI was offering and I had already started my videos and doing Zoom sessions prior to the pandemic.

Other individuals in the focus groups learned about the parent coaching model during the COVID-19 pandemic.

> I'm much, much more comfortable, and I think it really has helped put the parents a little bit more in the driver's seat and put us more in a coaching seat.
>
> I could hear a little voice saying, "It's parent coaching." But the reality of it was, when it came, when we were forced to do that, I did not feel confident in doing that. It took like two or three telehealth visits before I really heard what I'd been told about this can be done and it turns into 100% parent coaching.
>
> I've seen some parents who before, when we did home visits, I saw them sit back, and now I see them become empowered and they are texting me about what they want to work on and they've got ideas, and I love that!

Technology and Equity

All participants in the five focus groups expressed concern regarding technology needs and accessibility of services for families. Although teleintervention provides

promise for families who live in rural areas that might not otherwise have access to EI services (Cole et al., 2019; Poole et al., 2022; Ramos, 2020), equity issues regarding accessibility and competence were mentioned by all of the focus group respondents. Previous research indicates that 3 in 10 adults in families identified as living under the federal poverty limit did not have access to a smartphone or a computer (Ramos, 2020). Those families that do have access to the necessary devices or connectivity have varying levels of confidence in the use of different software applications (Chazan-Cohen et al., 2021).

> I think, on a state level or even a federal level, there needs to be some funding to help this because this is a privileged situation, the way that I see it, and not all families and not all providers have the means to be able to provide it.
>
> It was really hard to see some of the families thrive and some completely not. And I think the biggest difference was access to technology and access to materials.
>
> A good example is part of the state where I used to work, there's a lot of Native American reservations. A lot of those families, as well as other rural parts of the state, don't have really good, reliable access to technology that'll let them have a telehealth visit. And so those agencies are seeing way fewer kids because they just can't, the families don't have the ability to do telehealth.

Results in the focus group discussions reflected the larger survey results that, even though providers improved their use of teleintervention over the course of the study, all participants indicated we should improve our technology infrastructure.

Future Training Needs

Focus group responses, when asked about what type of training was needed for the future, were consistent with other surveys in the early childhood field (Chazan-Cohen et al., 2021; Steed et al., 2021), indicating more knowledge is required to use teleintervention technology in an effective and standardized way. Individuals shared the following thoughts across focus groups:

> If I were an incoming student at the university level or I were a new hire, I would want some really intensive training on which tools does my organization use, what do I have access to, and what are the finer points.

Other ideas for future training included more supplementary needs:

> We need some more training about how to make it the most effective. How do you make this fun?
>
> I feel like I've watched every single webinar there was on how to do a tele-visit, how to be mindful, I feel like I was inundated with it, but again it was piecemeal, it was never anything that was exactly specific to our super-specialized job.

Finally, those providers that did not know about the parent coaching method were adamant about receiving this training. Using the parent coaching strategies for remote EI continues to be a need regardless of where and who is providing the services.

Discussion

The present study was an event-driven case study that looked at how the COVID-19 pandemic affected services provided by professionals working in the field of BVI with families in EI. The advent of a serious worldwide health event necessitated the review of strategies and processes of the teleintervention service model. Inductive analysis of the study's focus group themes corroborated with the survey results of a national sample with similar characteristics. Findings of this study supported past concerns expressed by professionals in the field of BVI who explored teleintervention services, such as difficulties with connectivity, discomfort with parent coaching techniques, and feeling disconnected from families.

Positive findings from both focus groups and the survey data supported new strategies and areas of need. Providers made overall progress regarding the use of necessary technologies and sought out resources from their coworkers. It was surprising and pleasing that everyone had so much to say about parent coaching. This is consistent with national parent responses in the Parent Voices study (Chazan-Cohen et al., 2021). Increased provider collaboration was unexpected during this time, and individuals indicated they hoped this new strategy continued as many individuals provide in-person services again. These authors are energized to think that the positive aspects of these experiences will carry over and be sustained in providing teleintervention for families as BVI services move forward.

One limitation of this study includes an unknown response rate for both the survey and the focus group recruitment. Due to the geographic distribution of those who provide EI services in BVI and the unique circumstances of the COVID-19 pandemic, it was necessary to reach out by any means possible, and often, that meant word of mouth. Many providers were working remotely from home and did not have

access to their organizational emails. Many of the participants in the study were unknown to the researchers, and although the positive findings were emphasized in this discussion, there was an equal amount of negative experiences that were expressed in the results. This was particularly evident in the thematic analysis of the focus group data and is summarized in Table 4.

In addition, another limitation is that there is no previous literature that addresses changes to EI services due to a pandemic. As data was analyzed from both survey and focus groups, it became obvious that any known challenges with teleintervention were simply exacerbated during this time of uncertainty.

Practitioner Applications

This study has been an education in gaining a better understanding of the reactions and practices of EI professionals in the field of BVI during a time of uncertainty and change. The COVID-19 pandemic required that all educators become flexible and creative in their work with families as well as reflective on the skills they have used in the past. Development of practitioner applications recommended by this study include the following:

- Development of consistent virtual protocols, processes, and infrastructure for teleintervention.
- Exploration of the impact of virtual visits on cost-efficiency for EI programs.
- Growth of training programs for EI BVI professionals in parent coaching and its current effectiveness.
- Investigation into the benefits and changes in provider collaboration.

In this study, it became obvious that inequalities in technology and connectivity continue to be a significant barrier for both families and the providers who work with them across the nation. Only one state (Cole et al., 2019) was noted to have required online training modules on how to make use of remote technologies; most participants reached out to their colleagues that had more experience with providing virtual home visits. This study contributes to this issue and perpetuates the need to resolve this critical situation.

The knowledge collected in this mixed-methods study gives voice to the virtual thoughts of a diverse population of professionals in the field of BVI for EI. Although the pandemic is over and many organizations have returned to providing in-person visits, this study reminds us that the benefits of virtual visits are many, and building on the successful aspects discovered here can improve practice.

Table 1. Demographics of online survey participants (N = 98).

	n	%
Years of experience		
1–5 years	38	38.8
11–20 years	24	24.5
6–10 years	18	18.4
21 years or more	16	16.3
Less than 1 year	2	2.0
State license or endorsement in education for visual impairment		
Yes	87	88.7
No	11	11.3
State licensure or endorsement in early intervention/early childhood special education or early childhood education		
Yes	66	67.3
No	32	32.7
Location of services provided		
Large urban, suburban, rural or remote	27	27.5
Large urban and suburban	18	18.4
Rural or remote	15	15.3
Suburban	15	15.3
Large urban	13	13.3
Suburban and rural or remote	10	10.2
Number of children with visual impairment on caseload		
less than 10	39	39.8
10–19	33	33.7
20–29	17	17.3
30–39	6	6.1
more than 40	3	3.1

Note. The 98 respondents were from 32 states across the United States. The most frequently reported locations (states) were Utah, Kentucky, Indiana, Colorado, and Washington.

Table 2. Training in teleintervention in vision early intervention (N = 98).

	n	%
Preservice training		
No	86	87.8
Yes	12	12.2
Prepandemic professional development training		
No	66	67.3
Yes	32	32.7
Concurrent pandemic professional development training		
No	30	30.6
Yes	68	69.4
Conducted teleintervention vision services prior to pandemic		
No	79	80.6
Yes	19	19.4

Table 3. Provider competence and confidence in providing teleintervention (N = 98).

	Before the pandemic		During the pandemic	
	n	%	*n*	%
Provider competency in using videoconferencing tools to provide teleintervention				
I feel very competent and fully prepared to use these tools.	9	9.2	29	29.6
I felt competent and ready to use these tools.	26	26.5	52	53.1
I feel somewhat competent, and I am still learning.	55	56.1	16	16.3
I feel completely unprepared to use these tools.	8	8.2	1	1.0
Provider competency about providing teleintervention services				
I have learned a lot about providing teleintervention.	74	75.5	66	35.3
I am comfortable providing teleintervention.	21	21.4	59	31.5
I am still uncomfortable providing teleintervention.	3	3.1	5	2.7
I need to learn more about providing teleintervention.[a]			20	10.7
I enjoy providing teleintervention.[a]			35	18.7
I feel teleintervention is inappropriate.[a]			2	1.1

[a] These items were not asked of participants before the pandemic, and during the pandemic, participants were allowed to choose more than one answer if appropriate.

Table 4. Teacher narrative voices: positive and negative virtual themes.

Focus group themes	Positive outcomes	Negative outcomes
Confusion	None	Individuals expressed feelings of confusion and uncertainty in regard to what was going on in the world and how they were going to respond to the pandemic in their own personal lives.
Specific agency direction	All participants felt their immediate administrators had their safety at heart.	Some states needed to take time to develop a virtual visit infrastructure.
Procedures/ accountability	States that already had a virtual visit infrastructure were able to support procedures more quickly.	Great variability in the time needed to set up billing and technology procedures. Emergency legislation was needed in some areas.
Managing visits/ learning curve	Most participants felt that their ability to schedule and conduct virtual home visits improved over the time of the study.	Professional and personal anxiety was present in the early days of the pandemic, and many felt overwhelmed by the many resources recommended to them.
Coaching or parent in the driver's seat	Some participants reflected that they were happy to have previous knowledge of parent coaching strategies. All participants were happy that parents took on more responsibility in working with their children during and in between home visits.	Some participants reflected that they needed to learn more about parent coaching strategies as they managed teleintervention.
Provider collaboration	All participants commented on increased opportunities to attend IFSP meetings and provide co-virtual visits with other providers during this time.	

Table 4. Continued

Focus group themes	Positive outcomes	Negative outcomes
Technology concerns/equity	Many providers improved their use of technology during this experience so that they could reach families.	All participants believed that the lack of access to technology is an equity issue for families. They believe there needs to be better technology connectivity and device access.
Future training needs	Some participants were already comfortable with remote technologies and could help others.	Many participants want more nuanced skills in using teleintervention, such as online collaboration, making it fun for families, and improved parent coaching.

References

Abbott, M. L. (2011). *Understanding educational statistics: Using Microsoft Excel and SPSS*. Wiley Publishing. https://dl.acm.org/doi/10.5555/2095770

Archibald, M. M., Ambagtsheer, R. C., Casey, M. G., & Lawless, M. (2019). Using Zoom videoconferencing for qualitative data collection: Perceptions and experiences of researchers and participants. *International Journal of Qualitative Methods, 18,* 1–8. https://doi.org/10.1177/1609406919874596

Bazeley, P. (2012). Integrative analysis strategies for mixed data sources. *American Behavioral Scientist*, *56*(6), 814–828. https://doi.org/10.1177/0002764211426330

Behl, D. D., Blaiser, K., Cook, G., Barrett, T., Callow-Heusser, C., Brooks, B. M., Dawson, P., Quigley, S., & White, K. R. (2017). A multisite study evaluating the benefits of early intervention via telepractice. *Infants & Young Children, 30*, 147–161. https://doi.org/10.1097/IYC.0000000000000090

Brotherson, M. J. (1994). Interactive focus group interviewing: A qualitative research method in early intervention. *Topics in Early Childhood Special Education, 14,* 101–118. https://doi.org/10.1177/027112149401400110

Cason, J. (2011). Telerehabilitation: An adjunct service delivery model for early intervention services. *International Journal of Telerehabilitation*, *3*(1), 19–30. https://doi.org/10.5195/ijt.2011.6071

Center for Connected Health Policy (2010–2021). *What is telehealth*? The National Telehealth Policy Resource Center. https://www.cchpca.org/what-is-telehealth/

Chan, T., Friedman, D. S., Bradley, C., & Massof, R. (2018). Estimates of incidence and prevalence of visual impairment, low vision, and blindness in the United States. *JAMA Ophthalmology*, *136*(1), 12–19. https://doi.org/10.1001/jamaophthalmol.2017.4655

Chazan-Cohen, R., Fisk, E., Ginsberg, I., Gordon, A., Green, B. L., Kappesser, K., Lau, S., Ordonez-Rojas, D., Perry, D. F., Reid, D., Rodriguez, L., & Tomkunas, A. (2021). *Parents' experiences with remote home visiting and infant mental health programs during COVID-19: Important lessons for future service delivery*. Perigee Fund. https://perigeefund.org/parentvoicestudy/

Cohn, E. R., & Cason, J. (2012). Telepractice: A wide-angle view for persons with hearing loss. *The Volta Review, 112,* 207–226. https://doi.org/10.17955/tvr.112.3.m.706

Cole, B., Pickard, K., & Stredler-Brown, A. (2019). Report on the use of telehealth in early intervention in Colorado: Strengths and challenges with telehealth as a service delivery method. *International Journal of Telerehabilitation, 11,* 33–40. https://doi.org/10.5195/ijt.2019.6273

Creswell, J. W., & Plano Clark, V. L. (2017). *Designing and conducting mixed methods research* (3rd ed.). Sage Publications, Inc. https://us.sagepub.com/en-us/nam/designing-and-conducting-mixed-methods-research/book241842

Department of Education (2020). *Questions and answers on providing services to children with disabilities during the coronavirus disease 2019 outbreak*. https://sites.ed.gov/idea/files/qa-covid-19-03-12-2020.pdf

Dunst, C. J., & Trivette, C. M. (2009). Capacity-building family-systems intervention practices. *Journal of Family Social Work, 12*(2), 119–143. https://doi.org/10.1080/10522150802713322

Ely, M. S., & Ostrosky, M. M. (2018). Applying the foundational concepts from early intervention to services provided to young children with visual impairments: A literature review. *Journal of Visual Impairment and Blindness*, *112*(3), 225–238. https://doi.org/10.1177/0145482X1811200302

Ely, M. S., Ostrosky, M. M., & Burke, M. M. (2020). Self-efficacy of providers of early intervention services to young children with visual impairments and their families. *Journal of Visual Impairment and Blindness*, *114,* 114–126. https://doi.org/10.1177/0145482X20913138

Emerson, R. W. (2015). Convenience sampling, random sampling, and snowball sampling: How does sampling affect the validity of research? *Journal of Visual Impairment & Blindness*, *109*(2), 164–168. https://doi.org/10.1177/0145482X1510900215

Fetters, M. D. (2016). "Haven't we always been doing mixed methods research?" Lessons learned from the development of the horseless carriage. *Journal of Mixed Methods Research*, *10*(1), 3–11. https://doi.org/10.1177/1558689815620883

Greckhamer, T., Furnari, S., Fiss, P. C., & Aguilera, R. V. (2018). Studying configurations with qualitative comparative analysis: Best practices in strategy and organization research. *Strategic Organization*, *16*(4), 482–495. https://doi.org/10.1177/1476127018786487

Kelso, G. L., Fiechtl, B. J., Olsen, S. T., & Rule, S. (2009). The feasibility of virtual home visits to provide early intervention: A pilot study. *Infants and Young Children, 22*, 332–340. https://doi.org/10.1097/IYC.0b013e3181b9873c

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey Bass. https://www.scirp.org/reference/ReferencesPapers?ReferenceID=2631333

Mills, A. J., Durepos, G., & Wiebe, E. (Eds.). (2010). *Encyclopedia of Case Study Research* (Vol.1, pp. 357–359). Sage Reference. https://dx.doi.org/10.4135/9781412957397

Olsen, S., Fiechtl, B., & Rule, S. (2012). An evaluation of virtual home visits in early intervention: Feasibility of "virtual intervention." *The Volta Review, 112*, 267–281. https://doi.org/10.17955/TVR.112.3.M.702

Phangia Dewald, H., & Smyth, C. (2013). Feasibility of orientation and mobility services for young children with visual impairments using tele-intervention. *International Journal of Orientation and Mobility, 6,* 83–92. https://sciendo.com/article/10.21307/ijom-2013-009

Phangia Dewald, H. B. (2019). *Providing orientation and mobility support via in-person and teleintervention home visits for children with visual impairment in early intervention*. Unpublished doctoral dissertation, University of Northern Colorado, Greeley. https://digscholarship.unco.edu/dissertations/594/

Poole, M. E., Fettig, A., Mckee, R. A., & Gauvreau, A. N. (2022). Inside the virtual visit: Using tele-intervention to support families in early intervention. *Young Exceptional Children, 25*(1), 3–14. https://doi.org/10.1177/1096250620948061

Rai, N., & Thapa, B. (2015). A study on purposive sampling method in research. *Kathmandu: Kathmandu School of Law*, *5*(1), 8–15. https://www.scirp.org/reference/referencespapers?referenceid=3433795

Ramos, M. F. (2020). *Covid virtual learning offers lessons on promoting equity in early care and education settings*. https://www.childtrends.org/blog/covid-virtual-learning-offers-lessons-on-promoting-equity-in-early-care-and-education-settings

Steed, E. A., Phan, N., Leech, N., & Charlifue-Smith, R. (2021). Remote delivery of services for young children with disabilities during the early stages of the COVID-19 pandemic in the United States. *Journal of Early Intervention, 44*(2), 1–20. https://doi.org/10.1177/10538151211037673

U.S. Department of Health and Human Services. (2019). *Coronavirus Disease 2019*. https://www.cdc.gov/coronavirus/2019-ncov/index.html

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