

## Program Profile

# ConnectHear TeleIntervention Program

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## Introduction

“We wish we had that option in our area.”

“Wish we lived closer.”

“I wish I would have known.”

These statements, made by parents of children who are deaf and hard of hearing, illustrate a frustrating reality for many families—a lack of access to qualified professionals and specialized services to help children with hearing loss develop listening and spoken language. When access to communication options and qualified professionals is not readily available where a family lives, parents may not be given unbiased information and consequently informed choices about service options may not be made. In the state of Wisconsin, access to certified Listening and Spoken Language Specialists (LSLS™) was limited to a relatively small geographic region. The professionals at the Center for Communication, Hearing, & Deafness (CCHD) began to explore ideas to make all communication options, including listening and spoken language, accessible to families throughout the state no matter where they lived. The ConnectHear TeleIntervention Program was established to fulfill this commitment.

## About the Program

CCHD is a private nonprofit agency, near Milwaukee, Wisconsin. The center has worked with individuals who are deaf and hard of hearing for more than 85 years, and is considered a leader in providing quality, state-of-the-art services. CCHD offers choices across the continuum of visual and auditory approaches to meet the diverse needs and goals of the families served. The many dedicated professionals at CCHD include speech-language pathologists, audiologists,

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and teachers of the deaf and hard of hearing who are highly trained and experienced to provide quality services in a family's chosen communication option, and the only LSL certified professionals in the state. In addition to direct intervention with families, CCHD provides awareness, education, consultation, and professional training related to a listening and spoken language approach for early interventionist and other service providers.

The *ConnectHear* program is implemented by LSL certified professionals with experience and knowledge about offering a spoken language option, specifically auditory-verbal therapy, through the use of computers, web cameras, and high-speed broadband Internet. The program has the potential to reach families who would not ordinarily have access to LSL certified professionals in their local geographic region.

The auditory-verbal approach can be described as a comprehensive one-to-one therapy that focuses on audition for the development of listening skills as the foundation for all aspects of language and communication. The prominent tenants that facilitate the effectiveness of auditory-verbal services via telepractice are: parents as case managers and primary interventionists; parent guidance and coaching; diagnostic nature of the approach; and highly trained practitioners with specific knowledge, background, and experience teaching listening and spoken language skills in a family centered approach. The *Principles of LSL Auditory-Verbal Therapy*, as defined by the AG Bell Academy for Listening and Spoken Language (2012), provide more details.

Telepractice is a logical and advantageous pairing with auditory-verbal therapy as it relies on parents' active participation. Parent participation is key to the success of both auditory-verbal practice and telepractice.

### *Background*

In 2006, CCHD piloted what was then called a "long-distance auditory-verbal therapy service." The primary questions to be addressed were: (1) Would this type of service delivery be feasible? and (2) Could this service delivery model be effective for positive outcomes in auditory skill development and all aspects of spoken language? Essential to the start of this program were considerations regarding appropriate equipment, costs, fees, professional issues, and sustainability. Many additional questions were raised as well—How would parents respond to this model of service delivery? Would this be appropriate for children of varying ages? How would this model compare to in-person therapy? Could the same rate of progress and outcomes for both the child and family be expected? Would families feel appropriately supported? What equipment was needed by the facility and the family? What were the Internet connection options? Would there be acceptance of this service delivery model from other providers, such as early intervention Part C programs, early childhood and Part B programs, pediatric audiologists, and referral sources?

The initial list of questions seemed potentially overwhelming and endless. Fortunately, CCHD was a bit naïve and armed with optimistic determination.

Program developers decided to pilot this service delivery model with families who were currently receiving auditory-verbal therapy, committed to the principles of the approach, and already familiar with therapy expectations and implementation. The thought was to ensure a true pilot of the *service delivery model* for providing auditory-verbal therapy and not the therapy approach itself for a specific family. Three families participated in the initial pilot. Since that time, more than a dozen families have received auditory-verbal therapy through ConnectHear. The age at the start of therapy has ranged from 3 months to 16 years old. To date, the majority of clients are under 2 years of age when beginning telepractice and participate for an average of 2 ½ to 3 years.

## Challenges

Challenges and considerations encountered can be generally separated into two categories: technology and logistics for conducting a therapy session.

### *Technology*

Primary technology challenges include: equipment accessibility, high-speed broadband Internet accessibility, consistency of connections, and troubleshooting and technical assistance. As CCHD is a private, nonprofit agency and is not affiliated with a medical facility, a state or government agency, or a university or school, obtaining a private network or use of a closed-system videoconferencing network was not readily possible and cost prohibitive. Following exploration of technologies and Internet connection options, a variety of hardware and Internet connections were utilized by CCHD and the families. This included personal computers, laptop computers, portable devices (such as an iPad), web cameras, remote microphone and speakers, differing Internet platforms (Skype, iChat, etc.), and differing Internet connections (wired, wireless, satellite, etc.).

While many families own a computer, some do not. In the case of one such family, collaboration with the family's local birth-to-3 program enabled a computer to be purchased through an early intervention family grant program. At the beginning of the pilot in 2006, many families needed to upgrade their computer capabilities, Internet connection speeds, and/or obtain a web camera. This has changed as most computers purchased within the last couple years have the necessary minimum system requirements for adequate sound and video quality as well as integrated web cameras. Access to high-speed broadband Internet connections can still be a challenge in many locales. Some homes in rural areas simply do not have that service available. In these cases, problem solving where a family may be able to obtain Internet access is often necessary. Parents may need to seek the availability of adequate Internet access

at a local birth-to-3 agency building or a local community building, such as a library or a school. Collaboration with local service providers and programs has been invaluable in facilitating access to telepractice for these families.

Consistency of connection, and subsequently bandwidth, is often a defining variable in the ability to provide telepractice. In general, it has been found that hard-wired connections tend to provide the most bandwidth and a more consistent signal. Internet service provided via wireless and satellite has been challenging to date because of the variability of signal received. Families may need to upgrade their service with their Internet carrier to obtain and maintain bandwidth that allows an appropriate signal. Regardless of the connection type, when using the public Internet it has been found that consistency and quality of the signal is dependent on "Internet traffic." Specific times of day traditionally have more users accessing the Internet than other times of the day, and this can affect quality and consistency of the signal.

### *Logistical Considerations*

Considerations regarding the logistics of therapy implementation include increased planning, materials, a suitable physical space, audio time delays, a high demand for effective parent coaching, the need for management of many variables at once, and the potential for participants to feel overwhelmed.

CCHD has found that telepractice sessions can require more time in planning and consultation with the family prior to a session. This is supported by the experiences shared by the National Center for Hearing Assessment and Management (NCHAM) learning community (NCHAM, 2012; see also Behl, Houston, & Stredler-Brown, 2012, in this issue). The family's intended physical space for the session requires appropriate lighting and sound with limited environmental distractions as well as adequate physical space for parent, child, and materials within view of the camera. Communication with a family occurs prior to a session to discuss intended goals and targets to be addressed, possible strategies to be employed and practiced, and possible activities, materials, and toys to be used during the session. Toys and physical items within the home are preferred as their availability facilitates carry-over in daily routines. Occasionally, materials or references for materials will be sent to the family prior to the session. Examples may generally include finger-play/song lyrics, various art project ideas, copies for cut-outs, or a specific book title or item that may be found at a local library. As it can be helpful to use duplicate or similar toys and materials, ideas are discussed and modifications are made, when needed, based on the items available to the family and the professional.

During the session, the professional is able to guide and coach the parent regarding ways to make auditory information and spoken language as salient as possible for their child. The parent has ample opportunity to practice strategies, ask questions, and trouble shoot ideas for carry-over with the professional. However, participants may need to manage a large set of

unpredictable variables during the therapy session. This can be potentially overwhelming, especially for the parent or participant new to this delivery model. For example, the parent may need to simultaneously manage the computer and other equipment, acoustic time delays, the environment, toys and materials, and the child's motivation and behavior all while effectively implementing suggestions and practicing strategies to facilitate their child's language development. While effective parent coaching and guidance is essential to both in-person and telepractice sessions, there is an even higher demand when participating in telepractice. CCHD practitioners have learned that an effective telepractice professional will have a heightened awareness of anticipation and remote management skills to assist in obtaining the learning objectives of both the parent and child. As the ultimate goal of the session is parental knowledge and confidence in implementing strategies and objectives for integration into the family's daily routines and everyday experiences, it is paramount that parents feel supported in their efforts.

While ongoing monitoring and diagnostic assessment occur regularly during telepractice sessions, administration of standardized assessments may not be possible. Maintenance of validity and best practice may dictate that standardized assessment be completed in person.

## Evaluation

The *ConnectHear* program periodically asks parents to complete a survey regarding their thoughts and experience with telepractice. The number one reported reason for participation in telepractice is access to a spoken language option and, specifically, auditory-verbal therapy. A relatively high level of satisfaction is reported (a score of 4.5 out of 5) regarding the effectiveness of telepractice to address the child's auditory, language, and speech needs. Regarding the families who completed the survey (n =11 families, including 13 individuals), all report observation of progress in their child's skills and abilities as a result of participation in telepractice. These observations are confirmed by diagnostic monitoring as well as regular quarterly and annual assessments that are administered according to the protocol of the CCHD. Children receiving services via telepractice were found to demonstrate gains in auditory and spoken language abilities, both in amount of progress and rate of progress, comparable to children participating in traditional in-person sessions.

Additionally, parents report a high level of satisfaction (a score of 4.6 out of 5) regarding information gained and skills learned to competently and confidently facilitate their child's learning of auditory, language, and speech skills. When asked to comment, all respondents made positive statements regarding the professional's ability to support, listen, and address personal concerns, indicating an effective parent-professional partnership can be established and maintained using this delivery model. Further, all parents

reported positive benefits for both the child and parent/caregiver regarding participation in telepractice. While 2 of the 13 respondents (approximately 15%) stated a preference for in-person sessions, all stated they would encourage other families to consider telepractice to access a desired communication choice of listening and spoken language. Survey comments from parents include:

- “I think therapy via this service delivery model is extremely beneficial.”
- “This therapy model benefited me the parent because it equipped me, my child’s number one therapist, with the tools and strategies to work on my child’s auditory skills and language skills in our daily lives all week long. . . This delivery model made auditory-verbal therapy a possibility for our family.”
- “[The therapists] always made me feel listened to and supported. I always feel like I know exactly what I should be working on with our child.”

### **Pleasant Surprises**

CCHD, as well as members of the NCHAM learning community, has found that expectations of outcomes and progress for children and families participating in telepractice can be comparable to progress expected in traditional in-person sessions. CCHD practitioners have observed that parents appear to more readily assume their role as the primary facilitator of their child’s development, and subsequently parental abilities appear to improve at a faster rate. Some parents report they prefer telepractice sessions for this reason. Parental abilities to display creative thinking regarding the use of a variety of materials and situations to independently target goals appears to be enhanced with telepractice, and confidence can be gained as the parent, by necessity, must take primary control of the session. Parents, therefore, become competent in helping their child develop self-control and inner discipline (Cline & Fay, 1990; Colorosa, 2002; Fay & Fay, 2000) as well as become increasingly adept at implementing strategies for facilitating their child’s overall learning and development. Subsequently, the children benefit by the enriched interactions with their parents throughout their everyday activities.

Other advantages parents report include:

- Difficulties commonly experienced with scheduling and transportation can be reduced with telepractice, resulting in fewer cancellations, more consistent contacts, and less stress on the family.
- Sessions can still occur even when a sibling may not be feeling well.
- The family may choose to conduct a session in their home or in another location, such as the home of a grandparent or in the backyard, given appropriate technology access.

- Opportunities for siblings or extended family members to participate in sessions can increase consistency of expectations and beneficial learning opportunities for the child.

In addition, the application of telepractice has also included consultation to other service providers and programs allowing for increased coordination of services to support children and families. Remote consultations with teachers and/or speech-language pathologists have been conducted in the educational setting for the child who needs continuing support in their neighborhood schools. Increased opportunities for formal professional mentoring is also facilitated with telepractice. By assisting professionals to increase their personal knowledge and skills, the *ConnectHear* program furthers its purpose to provide access to trained professionals and quality listening and spoken language options.

## Conclusion

Two primary questions addressed at the start of the *ConnectHear* program were: (1) Would this type of services delivery be feasible? and (2) Could this service delivery model be effective for positive outcomes in auditory skill development and all aspects of spoken language? The experience with this program indicates that the answer to each question is “yes.” CCHD and the *ConnectHear* program are grateful to the families and children who have helped explore the feasibility of this service and learn about telepractice. As advances in technology and service delivery models continue, CCHD values the possibilities of telepractice. Additionally, program leaders are grateful for the opportunity to share experiences and continue learning through participation in the learning community organized by NCHAM (see Behl et al., 2012, in this issue). The *ConnectHear* program continues to strive to provide access to qualified professionals and a choice of listening and spoken language for all families of children who are deaf and hard of hearing. No matter where they live. The following comment by a parent of two children who are deaf illustrates that telepractice can be an effective option for some families:

“We are very grateful to be able to have this service delivery model available for our children. We live in an area that does not have access to this service without a very long commute. Receiving service via the Internet. . .has made a world of difference in their ability to speak and listen.”

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